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## A SOCIAL SCIENCES

AA	PHILOSOPHY AND RELIGION
AB	HISTORY
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AE	MANAGEMENT, ADMINISTRATION AND CLERICAL WORK
AF	DOCUMENTATION, LIBRARIANSHIP, WORK WITH INFORMATION
AG	LEGAL SCIENCES
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## SELF-EFFICACY, MONITORING, EVALUATION AND WRITING

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This article was drawn up within the project of the Grant Fund of the Dean of the Faculty of Education, Palacký University, named Self-regulation of learning during production of text carried out by pupils of the upper elementary school.

**Abstract:** This study brings results of the first phase of research probe that monitors relation between the metacognition of pupils of secondary school and level of their writing. Qualitative research probe is focused on the pupils aged 14 to 15 and is based on the continuous monitoring of individual pupils. During the research, respondents worked with several monitoring and diagnostic tools. Research activity had also an experimental nature and supported pedagogical-educative process among the monitored group of pupils – it significantly influenced course of the classes (respecting the processual nature of writing) and approach to particular pupils, mainly within the area of diagnostics and evaluation.

**Keywords:** self-efficacy, self-regulation, writing

### 1 Introduction

The aim of this presented study is to present results of research survey carried out within the frame of *Self-regulation of learning during production of text carried out by pupils of the upper elementary school* project. Within the first phase of the research survey we defined required theoretical basis, it means we determined several factors that represent indicators of text competence adoption rate. Its monitoring allows us to describe relation between the level of pupils' metacognition and quality of his/her text.

Factor 1 represents metacognitive knowledge and level of self-efficacy. During the process of writing monitoring it is necessary to pay attention to factors of affectionate nature. In the first phase of the research probe we monitor personal relationship of the particular pupil to writing. In so doing, we rely on the general self-efficacy – pupil evaluates his/her self-efficacy in relation to tasks of any type or to problem situations. We consequently observe pupil's relationship to writing itself – it means how he/she approaches to a given task, how he/she perceives himself/herself as an author of the particular text (comp. Harris, 2009). Based on the earlier findings (comp. Bandura, 1994, Schunk, 2010) we can assume higher quality of texts among pupils with higher personal self-efficacy. Differences between pupils with higher and lower self-efficacy are evident even in the approach to a teaching task itself, in the efficiency of learning process and also in the nature of the resulting text. Metacognitive knowledge include knowledge about the task and strategies for its solution. This knowledge is directly exposed in the process of planning and monitoring and it influences its progression (Říčan, 2016).

Factor 2 is represented by metacognitive skills, it means ability to plan and monitor. The second indicator allows us to determine to which rate the pupil masters algorithm of the task = writing the text. We monitor how the pupil approaches to planning of independent steps and how the pupil uses self-regulation skills and strategic thinking – it means if the pupil continuously evaluates the writing process and if he/she adjust the following procedures based on the previous.

In particular, we monitor:

1. whether and how the pupil defines a goal;
2. whether and how the pupil thinks of the algorithm of a solution – it means if he/she structures the task, defines sub steps that will bring him/her to the goal;
3. whether the pupil considers complications and their potential influence on the change of a procedure.

Factor 3 covers pupil's self-assessment skills. Aim of this part is to monitor progress of self-assessment. Ability to evaluate progress of own educational activity belongs to very important metacognitive skills. Absence of self-assessment negatively influences both opportunity of possible development in the given area and transfer of knowledge, abilities and skills to the next educational and noneducational situations.

### 2 Research Methodology

Qualitative research probe that was carried out in autumn of 2018 was based on the systematic monitoring of group of 15 respondents aged 14 to 15. In the given development stage significant improvement of metacognition is taking place, we can observe domination of more complex and abstract thinking and we can also assume ability of strategy thinking (Krejčová, 2013). Is it the adolescent period where we can observe improvement of metacognition – pupils' thinking is more complex, abstract and executive functions are also being significantly developed (Krejčová, 2013; Fisher, 2011; Díaz, 2017).

For the purpose of monitoring of factor 1 we used General self-efficacy scale (GSE), in the second stage its modified version (M-GSE). GSE is a scale assessing rate of optimistic self-evaluation of pupils, perceived ability to manage problems and rate of their own belief of their responsibility in relation to tasks (Schwarzer, & Jerusalem, 1995). Modified version was created in order to specify levels of self-efficacy through concretization of a task.

Within the first stage pupils reacted to the following statements through distribution of values from 1 to 4 (not at all true, hardly true, moderately true, exactly true).

1. *I can always manage to solve difficult problems if I try hard enough.*
2. *If someone opposes me, I can find the means and ways to get what I want.*
3. *It is easy for me to stick to my aims and accomplish my goals*
4. *I am confident that I could deal efficiently with unexpected events.*
5. *Thanks to my resourcefulness, I know how to handle unforeseen situations.*
6. *I can solve most problems if I invest the necessary effort.*
7. *I can remain calm when facing difficulties because I can rely on my coping abilities.*
8. *When I am confronted with a problem, I can usually find several solutions.*
9. *If I am in trouble, I can usually think of a solution.*
10. *I can usually handle whatever comes my way.*

After the certain time period pupils worked with modified scale (M-GSE):

1. *I can always manage to write a difficult essay if I try hard enough when writing.*
2. *If something complicates my writing, I can find ways to overcome the obstacle and continue.*
3. *It is easy for me to write a good text.*
4. *I know how to write a good text thanks to my experience, possibilities and knowledge.*
5. *I believe in myself. I know that I can handle any unforeseen situations or complications I experience when writing a text.*
6. *I can write almost anything if I invest the necessary effort.*
7. *I can remain calm when facing difficulties during writing because I can fully rely on my coping abilities.*
8. *When I am confronted with a problem during writing, I can usually find several solutions how to cope with it.*
9. *If I am in trouble (I do not know how to continue, I need to change a part of the text, etc.), I can usually think of a solution.*
10. *I can usually handle whatever comes my way during writing.*



The second research stage is of highly educational character. Prior to writing the text itself (in case of monitored group of pupils these are essay texts) pupils create so-called chart, it means check-list. Based on the obtained materials we can identify a way pupils use to approach to planning and monitoring – through implementation of check-list these processes are activated (comp. Diaz, 2017). We thus find out what the level of their metacognitive ability is (factor 2).

Creation of check-lists is followed by the next research stage – production of text on a given topic. At the beginning of the activity pupils define how they feel through key words (this part is added to the modified GSE scale and allows us to perceive pupil's relationship to writing the text and pupil's momental „tuning“ for the given activity – factor 1). Text itself will be subject to detailed evaluation in these areas:

- text content + argumentation
- creative approach to the topic elaboration
- communication purpose
- language level
- structure of the text, cohesion and coherence

Further, for the purpose of monitoring of factor 3 we used method of unfinished sentences. Pupils were finishing following formulations: 1. *I handled ... well* 2. *I need to improve ...* 3. *My work was easier thanks to...* 4. *My work was complicated because of...* 5. *I had great success with...* 6. *Next time I would use different approach when.....* 7. *I learned...* 8. *I enjoyed...* 9. *I did not enjoy...* 10. *I will find ... valuable* 11. *I will probably not use....* The unfinished sentences have highly educational character – through this activity, pupils develop superinfection skills and not only in the area of evaluation of the carried-out activity but also in the area of transfer of learned subject.

Evaluation of the obtained research data is individualized – materials of each particular pupil are judged and evaluated in a complex fashion.

### 3 Research Results

Evaluation of GSE indicates that according to the given text pupils show average self-efficacy. After counting all values of the scale we vary between 10 to 40 points whereas low value represents high self-efficacy.

Monitored group of pupils varies between values 12 to 24. Only one respondent (Natálie) is close to the extreme value. Values of GSE were compared to values of M-GSE for every particular respondent. Comparison of results for both scales will allow us to determine rate of self-efficacy in connection with particular problem task, it means writing the text. Among half of the respondents no significant differences were observed – it means that general self-efficacy of the pupils does not differ from self-efficacy in relation to writing of the text. Among the rest of the respondents we observed disproportion of two types. Within the experimental group there are pupils that show generally higher rate of self-efficacy, however, this rate is decreasing with concretization of the task. Such pupils do not consider themselves to be good authors of texts, they are afraid of writing but they are confident in other learning situations. These respondents are marked with symbol yes /- (Karolína, Jakub, Roman). Among the rest of the pupils, disproportion of the second type was observed – among these pupils, general self-efficacy is at the average level, but it is increasing with concretization of the task – it means that pupils believe in their own abilities right in the given problem task. These pupils are marked with yes /+ (Petra, Tereza, Stela).

Respondent	GSE	M-GSE	Disproportion
Karolína	17	21	yes / -
Jakub	21	24	yes / -
Martin	24	23	no
Petra	20	16	yes / +

Roman	18	24	yes / -
Sam	25	24	no
Pavel	23	23	no
Tereza	20	16	yes / +
Mariana	19	21	no
Natálie	12	12	no
Nela	21	19	no
Magda	22	21	no
Jan	23	21	no
Stela	20	14	yes / +
Kačka	21	20	no

Table 1: Score for GSE and M-GSE

The second research stage monitored pupils' ability in the area of algorithm verbalization that is worked with during the text creation. During analysis of the check-lists we considered representation of individual stages of the writing proces, it means prewriting – writing – postwriting (Carroll, 2007; Šebesta, 2005; model of text production by Hayes and Flower; model of text production by Ludwig) and we did this by usage of three grades marking (yes, partially, no). In case of presence of deficits in area of planning we identified these certain deficits and monitored their influence on the text quality within the following research stage. Following table clarifies in which stages process of writing showed significant deficits.

Respondent	PREW.	WR.	POSTWR.	Deficit area
Karolína	partially	yes	yes	gathering information and its categorization
Jakub	partially	yes	yes	formulation of topic/purpose, planning of procedure, strategy
Martin	partially	yes	yes	formulation of topic/purpose, planning of procedure, strategy
Petra	partially	yes	yes	formulation of topic/purpose, planning of procedure, strategy
Roman	partially	yes	yes	formulation of topic/purpose, planning of procedure, strategy
Sam	partially	yes	yes	planning of procedure, strategy
Pavel	partially	yes	yes	formulation of topic/purpose, planning of procedure, strategy
Tereza	partially	yes	yes	categorization of information
Mariana	yes	yes	yes	---
Natálie	yes	yes	yes	---
Nela	partially	yes	no	formulation of topic/purpose, gathering information and its categorization, text editing
Magda	partially	yes	yes	planning of procedure, strategy

<b>Jan</b>	partially	yes	yes	planning of procedure, strategy
<b>Stela</b>	yes	yes	yes	categorization of information
<b>Kačka</b>	partially	yes	yes	formulation of topic/purpose, planning of procedure

Table 2: Results of check-lists analysis

Check-list analysis pointed out following facts:

- significant number of respondents shows partial deficits in one of the text production stages – only two respondents caught complexly algorithm of text production);
- most frequently the deficits proved in the prewriting stage – pupils frequently forget to form topic and communication goal. At the same time they rarely include stage of procedure planning into the process of writing – it means choice of solution strategy; part of the respondents do not mention collecting or categorizing of thoughts and information (see table 2);
- check-lists of respondents feature certain shortness, mainly within the description of writing and postwriting stages (respondents do not catch multilevel text control – reformulation, language level etc.) – therefore it is necessary to work with a presumption that text editing is carried out unsystematically;
- perception of process character of the text creation shows oftenly original graphic elaboration of check-lists – pupils compared text creation to running/driving a car from the start to finish, to riding a horse through obstacles, to sailing on the river or to a pirate adventure, to trip around the world, to a journey where they visit individual stations (topic – school, gathering information – library, topic selection – library, other planning – travel agency, writing – elementary art school, correction of mistakes – police).

Prior to writing the text itself pupils verbalized their feelings – based on their analysis we can assume what relation to writing pupils have. Among most of the pupils negative feelings prevailed – fear, anticipation, nervousness, aversion, stress (score of modified GSE among these respondents varies between 21 to 4 – these pupils believe in their writing skills far less and at the same time they show negative relationship to the given task). Positive emotions were shown among Petra and Tereza – determination, creativity, responsibility (these are respondents with higher modified GSE score – see table 1) and Natálie, Nela, Magda, Stela a Kačka – enthusiasm, curiosity, determination connected with anticipation (among these respondents modified GSE varies between 12 to 21).

Texts of pupils (essays with topics „Is fashion important?“, „Are we addicted to social networks?“, „I hate and love“, „World without rules“) were judged individually and they gave the teacher valuable information used for dynamic evaluation (it means evaluation of the whole process). As you can see in the following table, we evaluated texts in the five areas with grades A, B, C (in descending order). After this we calculated average value. We used the same values to mark scores within the modified GSE (B represents average value).

Based on the comprehensive analysis the following facts arised:

Only three pupils created structure of the text prior to writing itself (draft, mind map etc.) – text of all respondents except two (Tereza's text who worked with a draft and created clear picture of the structure of her future text) show composition faults – thoughts are sorted chaotically. We can see direct relation between absence of preparation steps and mistakes made in the structure of the text. This is also confirmed by comparison of deficit areas among individual check-lists to texts – pupils who did not include gathering and categorization of information and

planning of procedure/strategy into their check-lists create texts that show confused structure and chaoticness.

We can see relation between values gained through modified GSE and level of the text (see table 3 – colored cells). Gained values are among most of the pupils identical (it means if the average level is GSE, the level of the pupil's text is also average). Among smaller group of pupils the values do not match (two pupils show average GSE but created texts of level A; among three pupils the level of the text is lower than their GSE value).

<b>Respondent</b>	<b>GSE/M-GSE</b>	<b>M-GSE score</b>	<b>Quality of text</b>
<b>Karolína</b>	17/21	B	C
<b>Jakub</b>	21/24	B	B
<b>Martin</b>	24/23	B	C
<b>Petra</b>	20/16	A	A
<b>Roman</b>	18/24	B	B
<b>Sam</b>	25/24	B	B
<b>Pavel</b>	23/23	B	B
<b>Tereza</b>	20/16	A	A
<b>Natálie</b>	12/12	A	B
<b>Nela</b>	21/19	B	B
<b>Magda</b>	22/21	B	B
<b>Jan</b>	23/21	B	A
<b>Stela</b>	20/14	A	A
<b>Kačka</b>	21/20	B	A

Table 3: Relation between M-GSE level and quality of text

Self-reflection is necessary part of metacognitive knowledge. It gives a teacher important informatin about learning of the pupils, for the purpose of the following didactic intervention. It is valuable for the pupil himself/herself. Analysis of unfinished sentences brought following findings (we focus on the selected key areas):

Among many respondents we can see obvious connection between deficit areas and self-evaluation – these pupils carry out efficient self-reflection, they are aware of their own reserves. Most problematic areas were: deeper thinking about the topic, text clarity, explanation, sentence formulation.

Pupils considered creation of the check-lists as valuable. This method of work was innovative for them. We can say that monitoring of pupils itself had an educational dimension. Pupils thought about the writing as a process, they were aware of importance of the planning stage.

We consider transfer as problematic. Four pupils did not finish the given sentences (Kačka, Magda, Nela, Martin) – the others were unified in their formulations. They think that writing the essay and thinking itself can be used in writing of future texts within the school environment but not outside the school. Therefore we can assume that they are not enough aware of a possible transfer of general skills (ability to think deep, categorization of thoughts, argumentation etc.). We consider this area to be a key area in relation to further didactic intervention. The transfer (mainly outside the school environment) forms one of the basic parts of the mediated teaching.

#### 4 Conclusions

Carried out research probe allowed us to monitor process of pupils' writing, with focus on the relationship between self-efficacy, metacognitive skills and quality of text. Analysis of research data indicated several important facts. We can assume significant connection between GSE and quality of pupils' texts – it is didactical prosperous to support development of pupils' self-efficacy and internal motivation to writing as well as awareness of transfer of learned knowledge outside the school environment. We observed direct relationship between process of planning of the writing and quality of the text – if pupils do not monitor all stages of writing it oftenly leads to deficits in the text itself. Monitoring of the whole process allows teacher to precisely identify reasons for pupil's nonsuccess when writing

the text and it also allows teacher to modify further educational activity. At the same time monitoring represents suitable implementation of metacognitive strategies to the classes (for example through usage of check-lists and self-evaluation techniques) – pupils are led to writing that is managed and evaluated by themselves and at the same time we can assume improvement in their metacognition.

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## SOUND RECORDING TECHNOLOGIES AND MUSIC EDUCATION

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**Abstract:** The birth of sound recording technologies was closely connected to a need for the support and improvement of music education from the very beginning. It was Thomas Alva Edison who made the greatest efforts to achieve this goal, and his photograph brought about a worldwide revolution in the way how the sonority of musical compositions was perceived. Shortly after Edison's invention, sound recording technologies started to be used extensively as a didactic tool in music education at various levels. In the early twentieth century in Czechoslovakia, sound recording technologies were used extensively in education programmes broadcast over the radio. Currently are being established as a separate course which forms part of the training of professional audio engineers.

**Keywords:** sound, music education, audio recording

### 1 Introduction to the Development of Sound Recording Technologies and their Relationship to Music Education

French inventor Édouard-Léon Scott de Martinville (1817-1879) was the first pioneer of sound recording and managed to record sound waves depicted visually with his invention, the phonautograph. Scott worked on a device which could record sound but could not play it. A bookbinder by profession, he also dealt with stenography and logography, issuing a book of great significance on the subject, *Histoire de la sténographie depuis les temps anciens jusqu'à nos jours*.<sup>1</sup> The idea behind Scott's invention was to transcribe sound (human speech) or the musical phrases of a singer into written (visual) form.<sup>2</sup> He did not intend to reproduce the recordings in an aural form. Scott began working on his phonautograph in 1853<sup>3</sup>, but the political and economic situation in France did not make it possible for him to obtain significant funding for his research, so he worked under modest laboratory conditions.

To clarify why such an important invention, a device for recording sound, did not find wider support from governmental and academic institutions, we have to look into the conditions in France at that time. In the field of inventions and innovation, France had held a dominant position for a long time. However, in the latter half of the 19th century, research activities focused on other areas. The development of agriculture and the development of weapons dominated during the Franco-Prussian War of 1870 to 1871.<sup>4</sup> Another problem Scott faced in his research was the absence of relevant higher education at a Paris university, which would have secured the favour of the representatives of l'Académie des Sciences, the largest scientific institute in France at that time. In the scientific field of acoustics, Scott was an autodidact and, although he asked for funding from the Academy several times, he never received it. Moreover, the field of acoustic research did not enjoy priority at that time and the majority of the academicians rejected it completely.<sup>5</sup> To construct a phonautograph with the aim to patent it, he obtained funding only from the Société d'encouragement pour l'industrie nationale (Society for Encouraging National Industry).<sup>6</sup> He received the patent for his phonautograph on 18 May 1857. Later, in 1861, he delivered a set of visual recordings of sound (phonautograms) to l'Académie

des Sciences for demonstrational purposes, of which scientists from the Lawrence Berkeley National Laboratory managed to transcribe the visualization of the Au Clair de la Lune song into sound in 2010.<sup>7</sup> This is the earliest sound recording transformed in history. Thanks to the funding, Scott could sign a contract with German constructor Rudolf Koenig (1832-1901) who created a more developed model of the phonautograph. A few functional models were sold to laboratories and teachers (of unspecified fields).<sup>8</sup> Therefore, the phonautograph can be rightfully labelled as one of the first didactic tools to illustrate the way of recording and storing sound.

Another attempt at inventing and constructing a device for recording sound was carried out by French inventor and poet Charles Cros (1842-1888) twenty years after granting the patent for the phonautograph. His vision of recording sound differed from that of the phonautograph in the fact that he wanted to construct a device which would be able not only to create a sound recording but to play it as well. From this aspect, Cros's paleophone is actually the first evidence of an attempt to create a full-fledged sound recording in the way it is perceived today.<sup>9</sup> Just like Scott, he also tried to receive funding from the Academy in vain. The reason was his engagement in left-leaning politics and the absence of relevant education. The ideas and the construction designs of the paleophone remained only in writing, and the device was never constructed. He submitted sealed documents containing detailed information about the paleophone to the Academy on 30 April 1877<sup>10</sup>, preceding the patent of Thomas Alva Edison by eight and a half months. In 1878, Cros appeared in front of the Academy of physicists to protest, in vain, against the demonstration of Edison's phonograph which was to be carried out by Tivadar Puskás,<sup>11</sup> a renowned Hungarian inventor of the telecommunication system, invited by the academicians. This was Charles Cros's last activity in sound recording research before quitting this field for good.

The exceptional and pioneering inventions of Édouard-Léon Scott de Martinville and Charles Cros remained largely unnoticed due to the rigidity and formalism of the scientific community and academicians of France, and also due to the political and economic situation in the country at that time. On the contrary, the situation in the US worked in favour of American inventor Thomas Alva Edison to achieve global success in the field of the phonograph industry. In December 1877, the first sound recording device, a phonograph, was made which could not only record sound but play it as well. Edison got the idea to construct a phonograph while working on the design of a toy<sup>12</sup> in his research residence in Menlo Park, New Jersey.<sup>13</sup> While singing into the receiver of a telephone and holding its cable with a metal end in his hand, he found that the vibrations of the sound moved through the metal tip. He realized that, if he managed to record this movement, he would be able to reproduce it as well.<sup>14</sup>

Edison's approach to finding ways to utilize the phonograph exhibited all the features of entrepreneurial thinking. Scott and Cros could not compete with Edison and had no chance to succeed even if they had followed their inventions through. The financial, political and technological background of one of the most accomplished inventors of his time was so solid that, immediately after constructing the first prototypes of the

<sup>7</sup>ROSEN, Jody. Researchers Play Tune Recorded Before Edison, p.1.

<sup>8</sup>KENNEY, William H. Historical Influences on French Inventors of Recorded Sound, 1857-1914, p. 210.

<sup>9</sup>KENNEY, William H. Historical Influences on French Inventors of Recorded Sound, 1857-1914, p. 206.

<sup>10</sup>SCHOENHERR, Steven. Charles Cros, p. 1.

<sup>11</sup>KENNEY, William H. Historical Influences on French Inventors of Recorded Sound, 1857-1914, p. 212.

<sup>12</sup>KELLEHER, Kevin D. *The Contributions of Thomas Alva Edison to Music Education*, p. 42.

<sup>13</sup>WILE, Raymond R. The Edison Invention of the Phonograph, p. 5.

<sup>14</sup>*Edison and His Inventions* [online], p. 93.

<sup>1</sup>BROCK-NANNESTAD, George a Jean-Marc FONTAINE. Early Use of the Scott-Koenig Phonautograph for Documenting Performance, p. 6241.

<sup>2</sup>*The Phonautographic Manuscripts of Édouard-Léon Scott de Martinville*, p. 5.

<sup>3</sup>*The Phonautographic Manuscripts of Édouard-Léon Scott de Martinville*, p. 70.

<sup>4</sup>Franco-German War. Available at: <https://www.britannica.com/event/Franco-German-War>.

<sup>5</sup>KENNEY, William H. Historical Influences on French Inventors of Recorded Sound, 1857-1914, p. 3.

<sup>6</sup>ARSC Newsletter [online]. Available at: <http://www.arsc-audio.org/newsletter/nsr120.pdf>, p. 13.

phonograph, Edison started to look for ways to utilize it in the society. Initially, he made extensive use of the phonograph to present sound recordings in the form of organizing new types of concerts<sup>15</sup> where live musicians played long with the phonograph.<sup>16</sup> He found another area for its use in stenography where it was to make the work of stenographers easier by transcribing the aural form into written text.

However, Edison's main goal was to record sound, especially musical sound. The phonograph did not meet the criterium of transcribing sound directly into a visual form like de Martinville's phonograph did. In this respect, even de Martinville spoke out regarding the phonograph in his publication *Le problème de la parole s'écrivant elle-même* and labelled it as a failure compared to his own invention.<sup>17</sup> Therefore, Edison's phonograph did not replace the stenographers despite its massive advertising campaign, and remained only an aid. Regarding the above issue, it is worth mentioning that there is still no device that would be able to transcribe speech into text reliably and with a universal effect even 139 years after the invention of the phonograph. This task appears to be extremely complicated even at present. Consequently, the phonograph became most widely used as a technological device for listening to music and as a didactic tool in music education.

## 2 The Phonograph in Music Education

The phonograph, and other devices able to store and play sound recordings, were invented in the US at a time when discussions were going on and demand was rising for identifying American national culture all over the society. Establishing a national education system for teaching the arts also had to serve this purpose.<sup>18</sup> Already in the beginnings of the sound recording technology, it became evident that it would be one of the most important forms of the preservation of national elements and traditions of music.<sup>19</sup> The affordability of Edison's phonograph enabled almost anyone to record sound and music and, consequently, to create the cultural heritage of the nation. Edison was the first person to realize that the phonograph could succeed commercially only if it penetrated into people's homes. An article titled *The Song in The Silent House*,<sup>20</sup> published in one of the issues of the *Edison Phonograph Monthly*, aptly named the problem of the absence of listening to music in American households and attributed an almost supernatural and mystic power to the phonograph in "animating" a "dead" house with music.

The representatives of the phonograph industry could not have wished for a better situation in the society when women played an absolutely dominant role in the households. Their tasks included maintaining a certain cultural standard in the family life and making decisions on which pieces of technical equipment to buy for the household.<sup>21</sup> Moreover, in the late 19th century, women played a prominent role in the development of the cultural life of the American cities by their activities in women's clubs, and their task was to develop their own musical talent as well.<sup>22</sup> Housewives wanted to identify themselves with their favourite singers and now they had the opportunity to listen to them not only on the stage but also in their homes, on sound recordings. More and more women wanted to perfect their musical skills, especially their singing, but formal training in

institutions or by private tuition was costly for the majority of them, especially when compared to a phonograph.<sup>23</sup>

Consequently, the history of music education supported by sound recording technology started in the households and not in specialized educational institutions. Edison's phonograph was the first device to enter schools as a regular didactic tool. Thanks to the *Edison Phonograph Monthly*, issued from 1903 by the National Phonograph Company,<sup>24</sup> the general public and the educational institutions could come to know about the possibilities and use of the phonograph. An article titled *The Phonograph — How it May Help Music Teachers*, published in 1905 in the *Edison Phonograph Monthly*, says that, thanks to the phonograph, students can find out the composer's intention and learn the way in which the piece should be rendered. It also mentions, for example, the possibility to compare the renderings between students from other, more distant schools, which can ultimately widen their communication skills by a new element.<sup>25</sup> The success of the phonograph in education (and not only in music education; the phonograph was used e.g. for teaching languages, too) made Edison's company to manufacture a specialized model of the phonograph for schools, called the *Edison School Phonograph*, in 1912.<sup>26</sup> The new device was presented in the December 1912 edition of the *Edison Phonograph Monthly* and it differed from the standard phonograph in its metal structure equipped with wheels for better portability. For music educational purposes, the preferred pieces were primarily opera arias, orchestral works and chamber pieces. The presentation of the phonograph placed great emphasis also on an extremely important function of the phonograph: on recording sound.

In this regard, the phonograph was unique because, at that time, it was the only device that was able to create recordings and play them as well. However, in the competition with his greatest rival, the Victor Talking Machines company, Edison lost the battle to enforce recordings of musical performances. Realizing the huge advantage of the phonograph, Edison tried to point out in his battle with the Victor company the fact that, from the aspect of education, a recording of one's own rendering of a piece, whether played on an instrument or sung, can be a lot more important than listening to the recordings of prominent concert artists or opera stars.<sup>27</sup> However, thanks to the better marketing strategies of his competitor and the massive commercial campaign of certain music journals,<sup>28</sup> the concept of listening to opera recordings was permanently established from 1912 as the basis of music education. The concept of teaching with the help of the recordings of musical performances receded to the background.

Schools providing distant education in music were an exception, though. In the early 20th century, distant education gained a prominent role primarily due to the inadequacy of the infrastructure and transportation system. It was difficult to commute to better schools in big cities, so distant education became the only solution for a large number of people.<sup>29</sup>

The first school providing distance education was *Siegel-Myers Correspondence School of Music* which began its activities in 1903.<sup>30</sup> The school started its distant education in music in 1906<sup>31</sup> and used the phonograph for this purposes. Educational

<sup>15</sup>DYER, Frank L. a Thomas C. MARTIN. *Edison His Life and Inventions*, p. 213.

<sup>16</sup>KELLEHER, Kevin D. *The Contributions of Thomas Alva Edison to Music Education*, p. 48.

<sup>17</sup>DE MARTINVILLE, Édouard L. S. *Le Problème De La Parole S'Écrivant Elle-Même* [online], p. 10.

<sup>18</sup>*Introduction to American Studies*, p. 7.

<sup>19</sup>BOWERS, Nathan D. *Creating a Home Culture for the Phonograph: Women and the Rise of Sound Recordings in the United States, 1877-1913*, p. 26.

<sup>20</sup>EDISON, Thomas A. *The Song in the Silent House*, pp. 2 and 6.

<sup>21</sup>BOWERS, Nathan D. *Creating a Home Culture for the Phonograph: Women and the Rise of Sound Recordings in the United States, 1877-1913*, p. 55.

<sup>22</sup>WHITESITT, Linda. *The Role of Women Impresarios in American Concert Life*, p. 161.

<sup>23</sup>BOWERS, Nathan D. *Creating a Home Culture for the Phonograph: Women and the Rise of Sound Recordings in the United States, 1877-1913*, p. 241.

<sup>24</sup>KELLEHER, Kevin D. *The Contributions of Thomas Alva Edison to Music Education*, p. 73.

<sup>25</sup>CHRISTIE, Nimmo. *The Phonograph — How it May Help Music Teachers*, p. 11.

<sup>26</sup>EDISON, Thomas A. *Edison School Phonograph*, p. 4.

<sup>27</sup>BOWERS, Nathan D. *Creating a Home Culture for the Phonograph: Women and the Rise of Sound Recordings in the United States, 1877-1913*, p. 250.

<sup>28</sup>Especially *The Etude* and the *Musical America* journals.

<sup>29</sup>FOUNDER, Mark. *Band Lessons by Mail: A Look at Musical Correspondence Schools of the Early Twentieth Century*, p. 1.

<sup>30</sup>KELLEHER, Kevin D. *The Contributions of Thomas Alva Edison to Music Education*, p. 2.

<sup>31</sup>KELLEHER, Kevin D. *The Contributions of Thomas Alva Edison to Music Education*, p. 88.

courses focused primarily on singing, the piano and bowed instruments, which were the most popular musical instruments at the time.<sup>32, 33</sup> The teaching took place in a way that, with the phonograph, the teacher recorded a sample of the composition with which the student had to work and, in turn, the student recorded his rendering and sent it back to the teacher for assessment. This form of education became so popular that it attracted students not only from the US but also, for example, from Europe, Canada and New Zealand.<sup>34</sup> In the early 1920s, distant music education started to decline in the US, especially due to the development of the automobile industry and its affordability for the middle class.<sup>35</sup>

From a historical point of view, Thomas Alva Edison's contribution to music education has received little attention. According to Kelleher,<sup>36</sup> Edison's name is mentioned in connection with music education in several works mapping the history of education in the US only to a minimum extent, or not at all. It was the Victor Talking Machine Company that gained a dominant position in the field of music education supported by sound recordings, and not only thanks to its better marketing strategy than that of Edison's. In 1911, a prominent representative of novel educational trends in music education, Frances Elliott Clark, joined the company. In the same year, she established the Victor Educational Department, a division for music education, and focused on creating musical recordings for children of lower primary school age.<sup>37</sup> Contrary to Edison, she believed that the sound recordings of professional singers and musical ensembles can contribute to the musical development of children to a significant extent. The first catalogue of recordings for educational purposes was issued by the Victor company in 1911 and, thanks to an extremely positive feedback from the teachers, the catalogue already contained over 3,000 items by the end of 1924.<sup>38</sup>

In 1914, on the request of several teachers, recordings of professional renderings of children's songs were added to the list of recordings of songs from the classical repertoire to be used in music education. This requirement was voiced mainly by teachers who could not sing in a cultivated way (!). Performers with the right voice were selected by F. E. Clark herself and, in this way, she contributed to a new form of learning by imitation.<sup>39</sup> The Great Depression in the late 1930s affected the Victor company, too. Due to a collective layoff, the Music Education Division had to reorientate on the distribution of recordings by a new medium, the radio. In the early thirties, Clark created the first music broadcast for children.<sup>40</sup>

With the arrival of radio broadcasts, the phonograph industry moved somewhat to the background and the three key features of phonograph devices, i.e. portability, affordability, and repeatability of the sound recording,<sup>41</sup> gained a new dimension on the radio. The universality of this medium distributed by electromagnetic radiation and, consequently, the savings on the costs of physical carriers, made radio receivers affordable for a lot more people. While 12,917 pieces were sold of the modern version of Edison's phonograph in 1928,<sup>42</sup> the estimated sales of

radio receivers in the same year represented 9,500,000 pieces, with an impact on roughly 40,000,000 listeners.<sup>43</sup> The repeatability of the sound recordings broadcast over the radio was more reliable since the listeners did not have to physically handle the sound carrier, and the risk of mechanical damage was thus eliminated. In the following period, the potential and impact of radio broadcasting was immense, and it had a significant influence on music education as well.

### 3 Sound Recording Technologies and Education in the Czech Republic and the Slovak Republic

Technologies meant for creating sound recordings were developed in the US and imported to Europe. However, the approach to their use in education was different in Europe due to the different cultural and social situation. However, a connection may be seen in the starting point of their development: while the invention of the phonograph entered history in the US at a time when elements of the identification of the American national culture were sought, in Europe, it gained ground at a time of changes brought about by the post-war political situation and the new arrangement of the continent. These trends were especially prominent in one of the successor states of pre-war Austria-Hungary, in the First Czechoslovak Republic.<sup>44</sup> During the first public presentation of Edison's phonograph in the capital of Czechoslovakia, in Prague, representatives of the Edison Company noticed an intensive national revivalist atmosphere in newly formed Czechoslovakia.<sup>45</sup> Activities to raise national awareness stemmed from a need to integrate the idea of a uniform Czechoslovak nation into the environment of the ethnically diverse population of newly formed Czechoslovakia. Therefore, the production of sound recordings began to focus on national music.<sup>46</sup>

In the field of education, the recordings of the compositions of the major figures of 19th-century national music were a welcome impulse to patriotism in the situation that prevailed in Czechoslovakia. The Central Education Management Body, for good reason called the Ministry of Education and National Enlightenment, started to approve gramophone records as teaching aids for music education in government gazettes issued in the second decade of the existence of the Czechoslovak Republic, i.e. in the 1930s.<sup>47</sup> In this way, with the help of technology, the students of so-called national (primary and lower secondary) schools could become acquainted with the musical culture of the nation, represented by the compositions of Bedřich Smetana, Antonín Dvořák, or Josef Suk, on gramophone records.<sup>48</sup>

Listening to recordings of music was not an end in itself; appropriate explanations were to be added to it and it had to result in being acquainted with the most important compositions not only of local but also of foreign origin.<sup>49</sup> Signs of progressive thinking along the lines of the receptive music education that dominated in the US already in the 1910s manifested themselves in Czechoslovakia fully only in the curricula for lower secondary schools in 1932, in a new concept of the course that reflected itself in its name: after the name of the course as "singing", the term *music education* figured, for

<sup>32</sup>BOWERS, Nathan D. *Creating a Home Culture for the Phonograph: Women and the Rise of Sound Recordings in the United States, 1877-1913*, p. 250.

<sup>33</sup>FOUNDER, Mark. *Band Lessons by Mail: A Look at Musical Correspondence Schools of the Early Twentieth Century*, p. 1.

<sup>34</sup>FOUNDER, Mark. *Band Lessons by Mail: A Look at Musical Correspondence Schools of the Early Twentieth Century*, p. 3.

<sup>35</sup>FOUNDER, Mark. *Band Lessons by Mail: A Look at Musical Correspondence Schools of the Early Twentieth Century*, p. 7.

<sup>36</sup>KELLEHER, Kevin D. *The Contributions of Thomas Alva Edison to Music Education*, p. 1.

<sup>37</sup>KEENE, James A. *A History of Music Education in The United States* [online], p. 270.

<sup>38</sup>KEENE, James A. *Giants of Music Education* [online], p. 54.

<sup>39</sup>KEENE, James A. *A History of Music Education in The United States* [online], p. 271.

<sup>40</sup>KEENE, James A. *Giants of Music Education* [online], p. 60.

<sup>41</sup>KATZ, Mark. *Making America More Musical through the Phonograph, 1900-1930*, p. 450.

<sup>42</sup>Edison Disc Record and Phonograph Sales Statistics (1912-1928). Available at: [http://www.mainspringpress.com/edison\\_disc-sales.html](http://www.mainspringpress.com/edison_disc-sales.html).

<sup>43</sup>BAILEY, Ruth E. *Mechanical Sound-reproducing Devices: Their Use in Music and Education*, p. 48.

<sup>44</sup>The Czechoslovak Republic (1918 – 1939) came into being as a democratic successor state of the Austro-Hungarian Empire, the Dual Monarchy, by the self-determination of the Czech and the Slovak nation in the spirit of Wilson's doctrine and by both the nations subscribing to a common Czechoslovak state on 28 (declaration of independence in Prague) and 30 (declaration of the Slovak nation in Martin) October 1918.

<sup>45</sup>STRUŠKA, Jiří. *Mechanical Sound Recording in Czechoslovakia*, p. 811.

<sup>46</sup>STRUŠKA, Jiří. *Mechanical Sound Recording in Czechoslovakia*, p. 811.

<sup>47</sup>See e.g. Decree No. 47.415-I/1930 of the Ministry of Education and National Enlightenment, Regulating the Normal Curricula for Primary Schools, 1930, pp. 175 – 294; *Gazette of the Ministry of Education and National Enlightenment*, 1935, year XVII, pp. 26 – 27.

<sup>48</sup>The above gramophone records were approved by the Decree of the Ministry of Education and National Enlightenment as teaching aids in 1934. (*Gazette of the Ministry of Education and National Enlightenment*, 1934, pp. 26 – 27) and 1935 (*Gazette of the Ministry of Education and National Enlightenment*, 1935, p. 106).

<sup>49</sup>Decree No. 47.415-I/1930 of the Ministry of Education and National Enlightenment

the first time, in brackets in the curricula. The new dimension of the contents of the music education syllabus is revealed by the formulation of one of the goals of music education, according to which teaching music should “*awaken and continuously educate the perceptive and productive musicality of the youth*”.<sup>50</sup> The attributes *perceptive* and *productive* suggest a new approach to musicality as a skill not only to produce but also to perceive music. Under the influence of the reformed music pedagogy, the music education syllabi placed emphasis on the ethical influence of music and on cultivating an understanding of the musical compositions, so that singing and music became a cultural need of the personality. The influence of receptive music education manifested itself in prescribing listening to music on gramophone recordings and visiting school concerts and public concerts, as well as on a new medium, the radio, which was eager to reach the public in its beginnings even in the sphere of education, for which it reserved ample room.

With respect to the global development in the field of education, reacting to the invention of the radio as a new medium, the development in Czechoslovakia may be characterized as particularly progressive in this regard. In the territory of Czechoslovakia, the radio regularly broadcast from May 1923, and music and children's programmes figured among the programmes of the Czechoslovak radio broadcasting from the very beginning. The basic programme structure of the broadcasting consisted of news, lectures, recitals and concerts of live music. Music arranged into thematic cycles formed a separate part of the broadcasting.<sup>51</sup> The contents of the programmes meant for children listeners often had a distinct patriotic and national character,<sup>52</sup> with a more intensive inclination to the ideas of conscious citizenship and democracy in the 1930s.

Discussions about the establishment of a separate school radio whose broadcasting would be prepared in collaboration with specialists from the field, with teachers and with the state school administration, and which would take place according to the school timings of the national schools, began in Czechoslovakia in 1926.<sup>53</sup> The first attempt at broadcasting in line with the didactic principles was carried out on the occasion of the celebrations of the birth of Czechoslovakia on 28 October 1929. In the following year, a separate body, the School Radio Commission, was established under the Ministry of Education and National Enlightenment for the management of the radio.<sup>54</sup> From 1930, broadcasting for schools was carried out on a systematic, regular, long-term, and carefully worked out basis with respect to quality and organization.<sup>55</sup> The contents of the programmes were adjusted to the syllabi and the age of the listeners, and divided into a literary and musical part. The music programmes focused on various musical genres, instruments, composers and their works. The music programmes for the youngest listeners consisted of a simpler musical content, e.g. from simple musical motifs to practice singing in the programme called *The First Steps to Music Education by Singing*.<sup>56</sup> After 1935, a programme called *Let's Sing* was dedicated to pupils of the first to third year of primary schools.<sup>57</sup> For the generation of youth at secondary schools, programmes like *Rhythm in Music*, *Human Voices*, or *Musical Instruments*, and programmes on the history of music with samples from compositions were produced.<sup>58</sup>

The Ministry promoted the broadcasts by recommendations and by contribution to the purchase of radio receivers for the schools. A separate technical division of the School Radio Commission dealt with the technical issues connected with the operation of the receivers and the placement of the devices, taking into account the acoustic features of the school rooms. Listenership of the school programmes moved around 50% in the early phase of the school radio broadcasting.<sup>59</sup>

From 1925, the majority shareholder of the radio in Czechoslovakia was the Czechoslovak State Post under the Ministry of Posts and Telegraphs, which meant that radio broadcasting was at the hands of the state.<sup>60</sup> Due to the politically supported operations of the school radio in the environment of compulsory schooling,<sup>61</sup> music education aided by technologies and mass media became part of the platform on which the official ideology of the state functioned systematically. However, the condition of the facilities in Czechoslovak schools, especially in economically less developed Slovakia, often failed to reflect the progressive trends in education. Nevertheless, the above measures, applied on a systematic level based on school legislation documents and curricula, demonstrate that the use of technologies in music education at the general educational level played a role as a supporting tool to build the political and state system of Europe and were also part of the progressive movement of European music education in the first half of the 20th century.

In the field of education, the period of World War II, whose events brought about, among other things, the division of Czechoslovakia, was a time of stagnation and drawing upon the achievements of the dynamic development of the education system in the First Czechoslovak Republic. The phonograph acquired a new function even during World War II when it served as a tool to maintain the national awareness of the population.<sup>62</sup>

The broadcasting of the school radio, as well as the use of the gramophone in education, played a significant role at this time even in the territory of previously economically less prosperous Slovakia, compared to Czechia. This is documented by the contents of the methodical guide to the first coursebook of music education from the period of the First Slovak Republic (1939 – 1945), *Young Singer* by Ladislav Stanček and Jozef Vronč (1941). The broadcasting of the school radio continued to be part of the extracurricular music education. While a distinct nationalist element stands out in the contents of the above-mentioned teaching material which is, on the other hand, progressive from the didactic aspect, the broadcasting of the school radio reflects the historical realities of the “*aggressive interventions of propaganda, ideological manipulation and tensed undemocratic atmosphere*”.<sup>63</sup>

After the end of the war, the phonograph industry in Czechoslovakia continued to focus on the preservation of the cultural heritage of the nation and on raising national awareness.<sup>64</sup> Its business aspect, prevailing at that time in the US, was not much present.

#### 4 Conclusion

The historical connections of the birth of the sound recording technology and, especially, the reasons that led the inventors to these achievements, are yet to be researched in depth. The study of the materials of the time, and also of partial outputs from later periods, reveals that the most significant source of inspiration for

<sup>50</sup> Decree No. 69.485-I/1932 of the Ministry of Education and National Enlightenment

<sup>51</sup> KÍČKOVÁ, Andrea. Školský rozhlas alebo vzdelávanie a výchova prostredníctvom éteru [The School Radio, or Education by the Ether], p. 45.

<sup>52</sup> BORŠ, Tomáš. Hudba pre deti v rozhlasovom vysielaní na Slovensku [Music for Children in the Radio Broadcasts in Slovakia], pp. 153 – 164.

<sup>53</sup> KÍČKOVÁ, Andrea. Školský rozhlas alebo vzdelávanie a výchova prostredníctvom éteru [The School Radio, or Education by the Ether], p. 45.

<sup>54</sup> KÍČKOVÁ, Andrea. Školský rozhlas alebo vzdelávanie a výchova prostredníctvom éteru [The School Radio, or Education by the Ether], p. 47.

<sup>55</sup> BORŠ, Tomáš. Hudba pre deti v rozhlasovom vysielaní na Slovensku [Music for Children in Radio Broadcasting in Slovakia], 2012, p. 158.

<sup>56</sup> KÍČKOVÁ, Andrea. Školský rozhlas alebo vzdelávanie a výchova prostredníctvom éteru [The School Radio, or Education by the Ether], p. 49.

<sup>57</sup> KÍČKOVÁ, Andrea. Školský rozhlas alebo vzdelávanie a výchova prostredníctvom éteru [The School Radio, or Education by the Ether], p. 54.

<sup>58</sup> KÍČKOVÁ, Andrea. Školský rozhlas alebo vzdelávanie a výchova prostredníctvom éteru [The School Radio, or Education by the Ether], p. 59.

<sup>59</sup> KÍČKOVÁ, Andrea. Školský rozhlas alebo vzdelávanie a výchova prostredníctvom éteru [The School Radio, or Education by the Ether], pp. 47 – 61.

<sup>60</sup> KÍČKOVÁ, Andrea. Školský rozhlas alebo vzdelávanie a výchova prostredníctvom éteru [The School Radio, or Education by the Ether], p. 45.

<sup>61</sup> DOBROCKÁ, Soňa. Prekonávanie rozdielov systémů slovenského a českého školstva v medzivojnovom Československu [Overcoming the Differences in the Slovak and the Czech School System in Interwar Czechoslovakia], pp. 337 – 339.

<sup>62</sup> STRUŠKA, Jiří. Mechanical Sound Recording in Czechoslovakia, p. 811.

<sup>63</sup> BORŠ, Tomáš. Hudba pre deti v rozhlasovom vysielaní na Slovensku [Music for Children in Radio Broadcasting in Slovakia], 2012, p. 159.

<sup>64</sup> STRUŠKA, Jiří. Mechanical Sound Recording in Czechoslovakia, p. 811.

the birth of new technologies was an effort to support music education more extensively. In the twentieth century, sound recording technologies underwent several substantial changes in their development but, paradoxically, began to gradually disappear from the music education process. Currently, they are used primarily in the professional field, although more and more discussions are going on about educational programmes where they would become the object of education with the aim to train professional sound engineers.

In Slovakia, specialized institutional training of sound engineers began only by the establishment of the Film and TV Faculty of the Academy of Performing Arts in Bratislava in 1990<sup>65</sup> in spite of the rich history of this field reaching back to 1965 and to the beginnings of the Experimental Studio of the Czechoslovak Radio in Bratislava.<sup>66</sup> The Sound Department of the Film and TV Faculty of the Academy of Performing Arts trains sound engineers but focuses exclusively on the field of film sound and produces graduates to work in the film and television industry.

Education specializing on working with sound and on sound production was accredited in Slovakia only in 2016 at Constantine the Philosopher University in Nitra, and the course is called Music and Sound Design. The programme specializes on producing graduates with practical training in recording technologies and musical dramaturgy. The programme takes place on the bachelor as well as master level, and both consist of technologically oriented courses (basics of acoustics, spatial acoustics, information technologies, sound design) with music-theoretical and practically oriented courses (music theory, aural analysis, history of music, musical analysis). An important role in the Music and Sound Design study programme is played by practical music-making in the form of choir singing, and students with performance skills can choose to learn an obligatory musical instrument, too. The master programme focuses partly on the new field of intangible cultural heritage in the form of the preservation of the acoustic features of significant cultural monuments or of the historically significant recordings of music.

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## COMPARATIVE ANALYSIS OF FOOTBALL CLUBS - TRADITIONAL OR NONTYPICAL ENTERPRISE?

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**Abstract:** The article discusses the problems of football clubs as an example of one of the forms of functioning of enterprises. Similarities and differences between the football club in terms of a traditional enterprise and an extraordinary business idea have been proposed. The aim of the study is therefore a comparative analysis of the subject matter. The proposed article was divided into two main chapters, and these were further elaborated by in total four sub-chapters. The first part of the work concerns the theoretical approach of the company, while the second part deals with the football club. The theoretical analysis was supplemented with an empirical approach, in which five of the strongest football leagues in Europe in terms of selected indicators were examined. The basic statistical measures were used in the calculations.

**Keywords:** enterprises, football clubs, Pearson's correlation

### Introduction

Economic, social, political and technological changes over the last decades have directed the global economy to a new direction of development (KBE). One of its fundamental determinants is the globalization of economic activity. Another important feature of the changes is the constant increase in ambient turbulence. This changeability has led to the need to find new ways of organizing and managing business. Classic ways of managing enterprises can lead to developmental stagnation and even collapse. With this fact in mind, entrepreneurs increasingly redefine their ways of doing things and thus strive to achieve a high level of flexibility. There is a wide range of diverse enterprises operating in the current economic arena, among them football clubs have also developed their position. In this article, the subject of football clubs was undertaken in relation to enterprises operating in the economy. One can ask the question whether current football clubs with their activity characteristics fit into the canon of traditional enterprises, or maybe they are already an unusual form of business activity? The proposed considerations are aimed at conducting a comparative analysis, enriched with Pearson's correlation indicator.

### 1 Theoretical analysis of an enterprise

#### 1.1 The business development process

The enterprise is a historical product that appeared in economic life at a particular stage of its development. According to economists and economic historians, firms in the era of slavery and feudalism did not have the characteristics of a company. "Enterprises were created along with the development of goods and money relations. Creating lively commercial, banking and industrial enterprises became the foundation of the capitalist economy" (Godziszewski, Haffer, 2011, p. 16).

The dynamic development of the company led first in England and then in other countries to the industrial revolution. In the history of business development, they have become the first "center of application of the rational management principle, in which the goal and means are quantified, expressed in uniform units of measure such as money" (Godziszewski, Haffer, 2011, p. 16).

The turn of the Middle Ages and modern times is considered to be the establishment of the company. According to O. Lange, the company derives from medieval stalls, stores or warehouses. At the same time, the formation of the first commercial companies can be noted. At the turn of the 16th and 17th centuries large commercial companies began to appear, which undertook risky and costly overseas expeditions (Lange, 1998, p. 152). One can, therefore, speak of the merchant origin of many enterprises. In the case of enterprises established in England and North America, one should speak of industrial origin. In England, the

forerunner of the company was the manufacture. The entrepreneur gathered in it craftsmen, who from his raw materials, using basic tools, carried out production processes similar to those they did in their workshops.

In the 18th century, manufactories were transformed into factories. The reason for this was the displacement of manual work by machine works (Godziszewski, Haffer, 2011, p. 18). The first country in which factories were created was England, later they began to be established in other European countries and the USA. In the 19th century, railway networks were built that allowed transport of raw materials, finished products or semi-finished products (more on: Dyr, Ziolkowska, 2014, pp. 5-22). Even faster, the industry began to develop when steam engines were replaced by electrically driven machines.

In the 1920s, the development of an industrial enterprise contributed to the creation of a stream production, in other words - belt-system production. It consisted of "performing technological operations on sliding objects, in the rhythm imposed by the machines, from the position into the position" (Godziszewski, Haffer, 2011, p. 18). It allowed for a significant increase in work efficiency and reduction of manufacturing costs, and thus a reduction in product prices. These changes are related to the dissemination of Henry Ford's activity in the automotive industry, as well as other industries that until today are known in the world under the name of Fordism.

The enterprise development process continues uninterruptedly to the present day. Since the Industrial Revolution in England, countless forms, types and kinds of them have been created. It is also important to mention two evolutionary changes in both technology and management, the meaning of which is called epochal in the literature. They were mainly:

- a) since the early 1970s - implementation of IT solutions, computerization and development of the Internet,
- b) since the beginning of the 90s of the last century - globalization of the economy referred to as an economy without borders (Godziszewski, Haffer, 2011, p. 18).

#### 1.2 Presentation of enterprises - basic information

In the 1990s, it was decided to unify the definition of a company. The words that most often appeared in definitions, and the literature of the subject has them about 77 (Gaweł, 2007, p. 15), were: creating a new company, establishing, taking risks, seeking a profit, acquiring resources. It follows from the above that the term enterprise is understood very broadly, and the authors approach it in a different way. The reason for differentiation of definitions is a different approach to the enterprise as various scientific disciplines. Otherwise it is defined by the economy, in other words by management, law, or sociology, and yet by cybernetics.

One of the company's definitions is the one proposed by M. Nasilowski and it is as follows: "an enterprise is an economic entity that carries out production or service activities on its own in order to achieve certain benefits. It employs various factors of production, including labor, capital, land, in order to produce specific goods or provide specific services that it sells on the market to other enterprises, households, central or local authorities" (Nasilowski, 2002, p. 41). It can therefore be said that a company is an organizational unit that runs its own business. The unit is separate legally, territorially, organizationally and economically, and includes both financial as well as human, material and non-material resources. It can carry out service, production or commercial activities. The important information is that the company has legal capacity and the fact that its form and system is strictly defined in the legal system. In Polish law, the definition of entrepreneurship is in art. 55 of the Civil Code, "an enterprise is an organized set of

intangible and physical assets intended for conducting business activity" (Act, 1964, Article 55).

The company has many functions, of which the most important are listed below:

- development function - investments, research, training, modernization;
- production function - service and production processes;
- personnel function - staff, training, occupational safety and health, social issues;
- economic function - costs, prices, finances, technical and economic planning, analyzes, settlements, bookkeeping, balance sheets, reports;
- marketing function - procurement, sales, logistics (Moczyłowska, Pacewicz, 2007, p. 32).

The economy of each country is characterized by the existence of different types of enterprises. Observing the technological progress and the demand for services, it is clearly visible that their differentiation is progressing, that is why it is important to catalog them, because problems in managing them are solved differently. The basic classification of enterprises is based on the following criteria (Wolak-Tuzimek, Duda, Soloma, Lament, 2015, p. 27): property, legal form, listing or not noticing on the stock exchange, type and scope of activity, territorial fragmentation, scope of internationalization (Dąbrowski, 1995, s. 45).

## 2 Characteristics of the football club as a company

### 2.1 A sports club, an original or a traditional enterprise?

Nowadays, sports clubs are one of the types of enterprises. The PWN Encyclopedia defines them as "organizations established for the purpose of practicing various sports, organizing competitions and sporting events and promoting physical culture" (Encyclopedia of PWN, 2017). Sports clubs can take various organizational forms and can be associated with joint-stock companies or associations. They can also be single or multi-sectional. In order for the sports club to operate it must have a statute. Art. 3 of the Sport Act stipulates that "sporting activity is carried out in particular in the form of a sports club, while this one acts as a legal person" (Act, 2010, article 3). As it is clear from the above, the Act does not specify which sports club should have a legal form. Nor does he give its definition. The only important thing is that it must have legal personality, and the persons who sets it up must decide, depending on the possibilities and needs, about its legal form. Sports clubs can take many forms, such as:

- limited companies, i.e. limited liability companies registered in the National Court Register (more broadly: Sieradzka, 2014, pp. 100-103);
- joint-stock companies, i.e. enterprises conducting business activity, e.g. football clubs belonging to the first division (Noga, 2010, p. 142).

In view of the information about football clubs, it is noted that they have the ability to generate considerable revenues. In addition to the income from the sale of players, football clubs are often the owners of stadiums, which, in addition to the revenue from tickets, are also rented for the organization of not only sports but also cultural events. In addition, there are also investment outlays and costs borne by sports clubs, just like in an enterprise. They are divided into permanent and variable. There are employees who are employed, like: trainers, footballers, training staff, stadium staff, massage therapists; it pays off management staff. The club has clients and contractors, for example, fans coming to the match and buying tickets, television stations that acquire rights to broadcast, and also operates on the basis of the laws of the country. A sports club as well as an enterprise also has its own property, development strategy, brand and trademarks.

Sports clubs are required, as in the case of traditional enterprises, to have: mission, aim, values and vision.

It should be noted that contemporary professional sports clubs are most often production and service companies, because they are also their competitors and partners, and their activities are supervised and commented on by stakeholders. The product that is provided by the football club is TV law and advertising for institutions, as well as sports shows and souvenirs offered for individual clients.

More and more often, when looking at warehouse companies, it can be noticed that sports clubs are present on the trading floor, which, looking for new sources of investment, issue shares and introduce them to the stock exchange. Innovations in such an approach of club management were introduced by the British, namely the managers of Manchester United (Sport Marketing, 2017). This process causes that current valuation techniques must adapt to new conditions, which is the introduction of football clubs to the stock exchange. The vast majority of these methods were taken from the valuation of the company, which means that sports clubs are just one of its types (Noga, 2010, p. 143).

Recent years have shown that football is one of the most popular sports in the world, but also the most profitable. "As a result of economic and political and legal changes occurring over the years in the national economies of almost all countries, sports clubs have been forced to change their model of functioning, becoming sports enterprises" (Gajda, 2015, p. 188). Let us just take a look at the salaries of the most popular players, or investments such as building stadiums for hundreds of millions of EUR, to make sure that huge sums are involved. Financing such a large undertaking as the leading football clubs requires huge financial outlays, therefore more and more clubs are making decisions to raise capital from the stock exchange (eBiuletyn, 2017). The result is an increase in the capitalization of sports clubs.

The amounts used by football clubs suggest that their management requires appropriate knowledge and skills. The same is true for marketing. If the clubs want to stay in the world leading edge, they must take care of their financial condition and proper marketing. The football club is to be successful on the pitch, the team is supposed to run smoothly, win matches and play nice football. The same applies to enterprises. If they want to belong to the best, they look for a competitive advantage by maximizing their profits or having significant market shares. It is no different with strategy. In both cases, both clubs and companies work similarly. Both economic entities have people responsible for planning development strategies. In the football club it will be a training staff, which in a proper way must prepare the team for the season, develop tactics and determine actions. In the case of a company, these are managers, whose responsibilities include the development and implementation of its objectives and actions that will result in achieving the priorities set (Styś, 2002, p. 154). An analysis is used both in enterprises and in football clubs. In the case of a business unit, this analysis is designed to make the best decisions both outside and inside the company in the future. In football clubs, however, it is about taking a look and correcting mistakes in the players' game.

When comparing a football club to an enterprise, it should be mentioned that each of them has a key figure in its structures, the so-called leaders who give an example to their behavior, inspire and motivate to work. In order for the team to be able to work efficiently, the teams need to be convinced of their own strength and value, which is why both the training staff and managers should support their subordinates with a sense of security and belonging to the team (Gajda, 2015, p. 189). Success on the pitch or on the market depends also on the mental and physical condition of both entities. In the football club, necessary for this are appropriate facilities that are responsible for the rehabilitation of injured players, or biological renewal of the whole team. Thanks to this, the players are refreshed, relaxed



and full of energy. The situation is similar in the case of an enterprise where the management provides its employees with meeting rooms, relaxation rooms, and cafes where employees can rest and calm down. Thanks to this, their work will be more effective, which will increase profits or improve the position of the organization in the market.

The recruitment to the workplace is also a similar situation. In the case of football clubs, players can fill the gap on the pitch. Despite this, so-called Scouts are looking for young talents among players of football schools. In enterprises, however, people from HR departments look for talented, potential employees, while managers train apprentices who will take up a vacant position in the future (Styś, 2002, p. 155).

## 2.2 Football clubs - an empirical approach

The main elements of the financial success of sports clubs are presented below. Table 1 presents the income of football clubs from the highest class in the years 2011-2015. The statistics refer to the five strongest football leagues in Europe. For the sake of clarity of analysis, the proposed data was supplemented with own calculations, using basic statistical measures.

Table 1. Income of football clubs from the highest competition class in 2011-2015 (in millions of EUR)

Country / year	2011	2012	2013	2014	2015	Arithmetic average	Dynamics <sup>1</sup> 2015/2011	Structure <sup>2</sup> 2015
England* (A)	2500	2900	2900	3900	4400	3320	76%	36%
Spain (B)	1600	1800	1900	1900	2100	1860	31%	17%
Germany (C)	1700	1900	2000	2300	2400	2060	41%	20%
France (D)	1100	1100	1300	1500	1400	1280	27%	12%
Italy (E)	1500	1600	1700	1700	1800	1660	20%	15%
<b>Σ</b>	<b>8400</b>	<b>9300</b>	<b>9500</b>	<b>11300</b>	<b>12100</b>	-	-	-

\*In the British community, each league is treated as a separate economic entity. Source: Own calculations based on Deloitte reports, own calculations.

In football, clubs from the aforementioned leagues gradually increased their income (except for the French league, which between 2014 and 2015 dropped by EUR 100 million). The leader in this ranking is the English league, which over the past five years has recorded an increase in income of EUR 1.9 billion, from EUR 2.5 billion to EUR 4.4 billion. Such financial results are mainly related to the sale of television rights to show matches. No other league approached the results obtained by the English. The second in this respect, the German league, in 2015 recorded revenues of EUR 2.4 billion.

In many studies and literature devoted to issues related to the finances of sports clubs, their income is most often considered in terms of television rights, marketing and tickets revenues. The following analysis presents a slightly different view, namely the impact of such factors as GDP, unemployment, or earnings for the incomes of football clubs in Europe.

Table 2 presents changes in the GDP of individual countries in the period 2011-2015. England in this case will be treated as Great Britain (no access to GDP data with a distinction for the countries of the United Kingdom).

Table 2. GDP in the period 2011-2015 (in billion EUR)

Country/ year	2011	2012	2013	2014	2015	Arithmetic average	Dynamics 2015/2011	Structure 2015
England (I)	1880	2041	2017	2222	2580	2148	37%	24%
Spain (II)	1040	1055	1049	1058	1075	1055,4	3%	10%
Germany (III)	2700	2750	2809	2904	3030	2838,6	12%	29%
France (IV)	2060	2091	2114	2142	2180	2117,4	6%	21%
Italy (V)	1640	1615	1609	1616	1645	1625	0,3%	16%
<b>Σ</b>	<b>9320</b>	<b>9552</b>	<b>9598</b>	<b>9942</b>	<b>10510</b>	-	-	-

Source: Own calculations based on Eurostat data, own calculations.

<sup>1</sup> Single-element index of dynamics:  $i_{t0} = (y_t/y_0) * 100\%$ , where:  $y_t$  - the level of the phenomenon in the period considered,

$y_0$  - the level of the phenomenon from any period used as a basis for comparisons.

<sup>2</sup> Structure ratio:  $w_i = (n_i/n) * 100\%$ , where:  $n$  - the size of the whole collectivity,  $n_i$  - the number of the highlighted part of the collectivity.

The highest GDP indicator among the analyzed countries was characterized by Germany, because in 2011 they reached EUR 2,700 billion, and by 2015 increased it to EUR 3030 billion. The lowest GDP was recorded by the Spaniards, who are slowly but steadily trying to stave off the economic crisis. On the Iberian Peninsula, GDP in 2011 was EUR 1040 billion and in four years it increased by EUR 35 billion.

The next step in the analysis was to check the correlation between the GDP of the countries mentioned and the incomes of their football clubs, which is presented in Table 3.

Table 3. Correlation between GDP and club revenues

I and A	0,96
II and B	0,91
III and C	0,96
IV and D	0,84
V and E	0

Source: Own calculations.

In the case of England/Great Britain, Spain, Germany, the correlation between GDP and club incomes was plus/positive, and the dependence was very strong. For France, the Pearson correlation coefficient was  $r = 0.84$ ; which indicates a significant - strong correlation. Thus, both traits studied increased or decreased simultaneously, i.e. if the level of GDP increased, the incomes of the clubs increased automatically, whereas in the opposite situation, i.e. when the GDP of the surveyed countries dropped then football clubs recorded a drop in incomes. In the case of Italy, the analysis showed no relationship between the examined factors.<sup>3</sup>

On the next stage, the focus was on analyzing the unemployment rate in selected countries in the period 2011-2015, which is presented in table 4.

Table 4. Unemployment rate in 2011-2015 (in%)

Country/year	2011	2012	2013	2014	2015
England (I)	8,1	7,9	7,6	6,1	5,3
Spain (II)	21,4	24,8	26,1	24,5	22,1
Germany (III)	5,8	5,4	5,2	5	4,6
France (IV)	9,2	9,8	10,3	10,3	10,4
Italy (V)	8,4	10,7	12,1	12,7	11,9

Source: Own elaboration based on Eurostat data.

The highest unemployment rate was recorded in Spain, where from 2011 to 2013 the rate increased from 21.4% to 26.1%. However, already in 2014, the authorities from Madrid managed to reduce this level to 24.5%, and a year later to 22.1%. In turn, the country with the lowest unemployment was Germany, which since 2011, when unemployment was recorded at the level of 5.8%, is constantly reducing it, and in 2015 it was only 4.6%. The study of the correlation coefficient between unemployment and club incomes is presented in Table 5.

Table 5. Correlation between the unemployment rate and club incomes

I and A	-0,99
II and B	0,19
III and C	-0,97
IV and D	0,83
V and E	0,86

Source: Own calculations.

In the case of England/Great Britain, the correlation between the analyzed variables was  $r = -0.99$ , which means that it is minus/negative, and the relationship was very strong. In Spain, the correlation coefficient was  $r = 0.19$ ; in this case, the correlation is plus/positive, and the linear relationship is clear but low. Analysis of data from Germany shows that the relationship between the unemployment rate and club incomes was equal to  $r = -0.97$ ; that is, the correlation was minus/negative, and the dependence was very strong. Because if unemployment grows, clubs' incomes decrease, and vice versa.

<sup>3</sup>  $r_{xy} = 0$  - means no linear relationship between features; no linear correlation (when x grows, y sometimes grows and sometimes decreases), but it can then be a curvilinear correlation.

In the last two cases: France and Italy, the relations were plus/positive  $r = 0.83$  and  $r = 0.86$ , respectively, the relationships were therefore significant (strong).

The last stage of the research was to check the impact of annual net earnings to clubs' revenues. First, the values of earnings in the period 2011-2015 are shown, which is presented in Table 6.

Table 6. Annual net earnings in 2011-2015 (in EUR)

Country/ year	2011	2012	2013	2014	2015	Arithmetic average	Dynamics 2015/2011	Structure 2015
England (I)	20631	23186	22295	23804	26860	23355,2	30%	28%
Spain (II)	14040	14157	14220	14297	14635	14269,8	4%	15%
Germany (III)	18910	19337	19618	20054	20584	19700,6	9%	21%
France (IV)	17580	17909	18162	18327	18766	18148,8	7%	19%
Italy (V)	14180	14406	14639	15622	16066	14982,6	13%	17%
<b>Σ</b>	<b>85341</b>	<b>88995</b>	<b>88934</b>	<b>92104</b>	<b>96911</b>	-	-	-

Source: Own calculations based on Eurostat data, own calculations.

The highest earnings were recorded in England/Great Britain, where the average of five years was EUR 23355.2 per year. The least paid workers were in Spain, an average of EUR 14269.8 and in Italy EUR 14982.6 per year.

The results of the correlation between annual net earnings and club revenues determining the studied five countries are presented in Table 7.

Table 7. Correlation between annual net earnings and club incomes

I and A	0,93
II and B	0,94
III and C	0,98
IV and D	0,81
V and E	0,88

Source: Own study.

In all analyzed cases, the correlation is plus/positive, and the dependence is very strong or strong. It can therefore be concluded that, as the annual earnings of citizens of a particular country increase, the incomes of clubs increase.

### 3 Summary

After the analysis, it can be noticed that despite many common features between the company, in the classical form of this meaning, and the sports club, there is a certain common framework of functioning. However, the specificity of this other economic entity does not fully manage it in the same way as a traditional enterprise. Often, economic changes do not have to have such negative or positive effects on a football club as in the case of an enterprise. Currently, many teams are supported by private investors (from Saudi Arabia, Kuwait, Russia, China or the United States), who invest huge amounts of money without looking at the costs, which allows them to easily cope with, for example, the economic crisis occurring in a given country.

In the empirical part, five of the strongest football leagues in Europe were examined in terms of selected indicators. Among the examined leagues were those from the following countries: England, Spain, Germany, France and Italy. On the other hand, the analyzed indicators included: incomes of football clubs, GDP, unemployment rate and annual net earnings in selected countries. The research period was limited to five years, i.e. 2011-2015.

The highest income of football clubs in 2015 described the English league, as they amounted to EUR 4.4 billion, which accounted for 36% of all incomes from the five leagues tested. It is worth noting that this league was also characterized by the highest growth dynamics in the ranking of the last examined period, i.e. 2015 to the first, i.e. until 2011, it was exactly 76%. In the case of the second index - GDP, the leader turned out to be Germany, because their share in the total value obtained was 29%, however Germany was immediately followed by England and France with structure indicators, respectively: 24% and 21%. The largest growth dynamics again described the English league (37%).

In the case of the analysis of the unemployment rate the worst was Spain, because in 2015 this rate constituted as much as 22.1%, while the German economy was the most advantageous, because in this case the result was 4.6%. The last analyzed indicator was the annual net earnings and in this case again the English economy was the most favorable (structure ratio - 28%, and growth dynamics - 30%).

The culmination of the analysis was to examine the dependence of three indicators (GDP, unemployment rate, net earnings - five studied countries) in relation to the incomes of football clubs. In the case of GDP and incomes of football clubs, a very strong positive correlation was recorded in most countries (with the exception of Italy). However, when examining the relationship between the unemployment rate and the incomes of football clubs, it should be noted that in both England and Germany a very strong negative correlation was recorded. In the last analyzed case, i.e. considering the relationship between annual net earnings and the incomes of football clubs, unanimously in all cases, positive, strong or very strong correlation was obtained, which clearly determines the fact that annual net earnings were the most correlated with the incomes of football clubs in all the five countries studied.

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## THE IMPACT OF SELECTED FACTORS ON THE LEVEL OF INNOVATION IN EU COUNTRIES

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**Abstract:** The main point of the article is to extend the definition and multifaceted examination of the importance of chosen determinants of development in EU nations. The main method of analyse was critical analysis of literature, statistical data examination and the Pearson's correlation. Whole correlation results were plus/positive so studied factors have a consistent direction. As a result, GDP may increase as investment in innovation grows.

**Keywords:** Analysis, European Union, Innovation

### Introduction

There are numerous meanings of the subject in the writing, so it is imperative to locate their shared belief. While investigating the meanings of innovation, it is advantageous to display the importance of the word itself, which is gotten from Latin. Innovatio or innovare implies curiosities or recently presented things.

In the main years of working, the term innovation was found in the macroeconomic setting. It was investigated how innovative advancement influences the improvement of the economy. After some time, experts have moved far from seeing innovation in macroeconomic terms, and microeconomic investigation has started, where innovative improvement has been seen as a procedure.

### 1 Methodology

The article uses three main research methods. The first was related to the critical analysis of the literature on the subject. At this stage presented, the most important issues related to innovation. For this purpose, it was decided to present the research of the most important scholars of such issues as J. Schumpeter, R. Johnston or P. Drucker. Moreover, the analysis allowed to illustrate not only the essence, but also the function and role of innovation in shaping the economy.

Another method used in the work was the analysis of statistical data related to selected innovation coefficients of EU countries. This study refers to two periods of 2012-2014 and 2015-2016. Thanks to this approach, one can get to know a wider picture of innovation, by distinguishing short periods, shows their character. The statistics were taken from Eurostat, which updates its database on an ongoing basis.

The third method was to examine the correlation between individual macroeconomic indicators and selected elements related to innovation. This will allow us to observe the impact of innovation on such elements of the economy as GDP.

### 2 Theoretical way to deal with innovation

#### 2.1 The quintessence and meanings of innovation

The investigation of the issue of characterizing innovation is as following: among outside creators it is important to include: J. Schumpeter (Schumpeter, 1964), F. Machlup (Machlup, 1962), P. Kotler (Kotler, 1994), R.W. Griffin (Griffin 2005), S. Jobs (Gallo, 2011), P.R. Whitfield (Whitfield, 1979), R. Johnston (Johnston, 1966), S. Shane (Shane, 2003), P. Drucker (Drucker, 1992; Drucker 2004), Ch. Freeman (Freeman 1994), E. Helpman (Helpman and Grossman, 1993), M.E. Porter (Porter, 1990). Interestingly, among Polish creators taking up this matter, one can recognize, among others: Z. Pietrasinski (Pietrasinski, 1971), W. Grudzewski and I. Hejduk (Grudzewski and Hejduk, 2000), A. Pomykalski

(Pomykalski, 2001), Z. Madej (Janusz and Koziol, 2007), A. Jasiński (Jasiński, 2006) and M. Goławska (Goławska, 2004).

The idea of innovation was presented by the Austrian financial analyst Joseph Schumpeter at the beginning of the twentieth century. His definition is the establishment on which alternate terms are based, yet it is amazingly adaptable and current in the present day. The maker constructed the innovation in the following way (Wolak-Tuzimek, 2016):

- introduction of new merchandise that buyers have not yet known or some kind of new product;
- introducing another technique for generating a product that has not yet been used or tested in the specific business;
- opening up another market, i.e. a market where a given kind of industry of the applicable nation was not already presented, paying little mind to whether the market existed previously or not;
- gaining another wellspring of crude materials or semi-completed items, paying little mind to whether the source has already existed or must be made;
- conducting another business of an industry, for example, making an imposing business model or breaking it (Schumpeter, 1960).

Schumpeter's hypothesis can be condensed as the presentation of new techniques. Regularly, they were identified with innovation, yet the use of imitation, i.e. the scattering, usage and utilization of new techniques, was crucial. Innovation can likewise be viewed as a monetarily effective exploitation of new thoughts (Porter, 1990). The large number of various perspectives for innovations made F. Machlup to search for different solutions. He said that in these circumstances, we ought to have the capacity to adapt without using the word "innovation" in the event that we can discover more clear words (Machlup, 1962). P. Kotler expressed that innovation alludes to any product, administration or thought which is seen by somebody as new. The thought can exist for quite a while, yet it is an innovation for the individual who sees it as new (Kotler, 1994). R.W. Griffin said that innovation ought to be presented by an organization as an exertion meant for growing new items/services or making a radical new usage of items/services that as of now exist in the market (Griffin, 2005).

For S. Employments innovation does not allude just to technology, it likewise manages with ideas that are helpful in taking care of issues. The establisher of Apple thought there was no framework that could make innovation. He said that a man who compels themselves to imagine something innovative is "like somebody who's not cool trying to be cool. It's painful to watch..." (Gallo, 2011). S. Jobs made seven principles which could quicken making procedure of innovation:

- Do what you adore – let your heart and passion take control;
- Put a scratch in the universe – pull in other individuals who need to make stunning things;
- Make connections – get a wide ordeal and associate facts;
- Say no to 1 000 things – straightforwardness is an indication of modernity;
- Create madly extraordinary encounters – make profound, enduring emotions;
- Master the message – the dispatch of an item ought to be a type of art;
- Sell dreams, not items – make items that will enable individuals to satisfy their dreams (Gallo, 2011).

P.R. Whitfield has a fascinating method for characterizing development as he indicated the procedure of complex work that depends on discovering answers for issues. The impact of this is the improvement of curiosity (Whitfield, 1979).

Analysts likewise had an alternate assessment on whether development can be considered at the season of presenting a new

item, as Schumpeter and his impersonation are concerned, or advancement and additionally any further change of an existing item. The representative of the second standard was without a doubt R. Johnston (Johnston 1966).

Thus, in the western world, scientists in Poland have been thinking about how to characterize development. The primary works started in the 1960s. The examination was restricted to the technical setting in view of the specificity of the market in a communist state where the economy was halfway arranged.

Z. Pietrasinski, who said "innovations are deliberately introduced by human beings or by cybernetic systems designed by them, which are substituting previous states of things that are positively assessed in the light of certain criteria and which also create a progress" (Pietrasinski, 1971). Schumpeter's impression of innovation was likewise shared by W. Grudzewski and I. Hejduk, for whom development, each movement, or item, which is new, subjectively not the same as existing products was an innovation (Grudzewski and Hejduk, 2000). A. Pomykalski, then again, was inclining toward the Johnston's model, where advancement is a piece of change of given arrangement or an item (Pomykalski, 2001). Z. Madej trusted that innovation must not generally convey a positive load, influencing the improvement of the organization (Janusz and Kozioł, 2007). Consequently, his perception was past the system of the ideas that were introduced in the above cases. He made a definition that is fairly deviation of the old state of mind.

Looking at all the above condensed introduction of the term innovation is Table 1, which consists of the most famous specialists in innovation hypothesis and the catchphrases that are incorporated into their definitions. It can be seen that the premise of the greater part of the dissected definitions is "curiosity" and "item" - (they occurred seven times), it turns into the principle determinant of presenting the innovation in the enterprise. It is also very significant that among the eleven chosen scientists of this issue, considerably less incessant (4 times) "service" has showed up, and "improvement" just 3 times. By chance, such terms as "good", "idea", "imitation", "failure", "progress" and "commodity" were scattered.

Table 1. Keywords of the term innovation by selected authorities of economic sciences

Creator	Keywords
J. Schumpeter	novelty, product, commodity, imitation
F. Machlup	rejection of the word innovation
Oslo Manual	novelty, improvement, product, process
P. Kotler	novelty, good, service, idea, product
R.W. Griffin	development, novelty, product, service, use
S. Jobs	idea, lack of innovation system creation
P.R. Whitfield	workflow, problem resolution, novelty
R. Johnston	product improvement
W. Grudzewski, I. Hejduk	novelty, product, service, distinction from existing forms
Z. Madej	novelty, improvement, failure
Z. Pietrasinski	positive changes in products, services; progress

Source: Own analysis based on the literature of the subject.

## 2.2 The aspect and significance of innovation in the company

As of now, the pace of changes occurring in developed nations has prompted the development of postmodern economy, economy of network and, specifically, information based economy. These terms may have unique, maybe specific, implications, and every one of them can be comprehended in an variety of different ways, creating a view of the essence of the today's economic structure. The main object of attention of the developed nations economy is the expansion in the share of the services area in hiring and arrangement of GDP (supposed servitization of the economy). In addition, in the depicted structure, the crucial factor of economic development of the nation and the companies working in that matter are: information and innovations. So their part in the factor of building the financial structure of the nation is extremely valuable. It can likewise be noticed that the formal and casual relations of all the individuals working in the monetary space are critical.

The part of innovation being developed, not simply of companies but rather of the economy altogether, is undeniable, and numerous analysts can demonstrate that. For creators of Global Competitiveness Report 2016-2017, innovation is a piece of the twelve mainstays of financial rivalry (Schwab, 2016).

Realization of new items/forms that will be endorsed by consumers can generate expanded profits for sales, while the usage of process innovation can decrease the costs of production. In the present forcefully focused market, businesses must work on an abnormal state of innovation (Marakova et.al., 2016), which will make them recognizable among other monetary administrators and enable them to remain on the market.

The main part of innovation is to raise the value of the business (Wolak-Tuzimek et.al., 2015) that prompts its development. It ought to be borne as a main priority that the value of a financial substance ought to be related to what the organization can accomplish later on (Kuc and Paszkowski, 2007), that is the reason long-term arranging and development administration must be set up.

## 3 Results

The effect on the level of innovation can be impacted by elements, for example, GDP, PCT patent applications, SMEs implementing commodity or process developments, or outlay on innovative work. The connection between these components is examined beneath. There were attempts to present correlations between innovation indicators and selected macroeconomic measures in research. In particular, it focuses on two periods, the first is 2012-2014, and the second is 2015-2016.

Table 2 shows these aspects on the example of EU member states in 2012-2014. The largest average number of patents applied in Germany was 21.4 thousand and 9.000 in France, the lowest in Malta 5.19 and Cyprus 6.16. In Poland, the average for 2012-2014 was approximately 547. When it comes to innovative new products for the market, the highest percentage was recorded in Ireland 22.2 and in Austria 21.9. The lowest percentage share was recorded in Estonia 1.1 and Romania 1.3. Unfortunately, also Poland was in the group of countries whose index was one of the lowest and it was only 5.2%.

Table 2. Selected indicators of product innovation and macroeconomic measures for the EU-28 in 2012-2014

Country	The number of patents applied	Innovative new products for the market (in %)	Innovative new products for companies (in %)	GDP (in million EUR)	Expenditure on R & D (in million EUR)
Austria	1912.56	21.9	8.9	323357.93	9652.97
Belgium	1528.65	22	9.8	393339.00	9524.58
Bulgaria	40.36	5.7	5.2	42240.30	286.79
Croatia	17.48	8.2	10.6	43466.20	341.51
Cyprus	6.16	14.9	8	18384.20	83.75
Czech Republic	250.82	13.5	11.6	158611.97	2988.20
Denmark	1351.46	10.7	13.7	259517.73	7714.80
Estonia	25.28	1.1	9.9	18861.10	331.16
Finland	1658.61	20.4	14.2	202868.33	6676.03
France	9000.66	18.5	9.2	2114049.7	47306.08
Germany	21370.77	13.3	21.1	2836143.3	81098.01
Greece	107.93	15	8.4	183266.27	1430.67
Hungary	215.23	7	4.9	101840.73	1367.09
Ireland	324.38	22.2	13.4	183040.47	2822.81
Italy	4289.89	15.5	9.2	1613230.3	21258.88
Latvia	47.15	6.3	2.2	22839.50	149.69
Lithuania	40.70	8.9	12	34980.10	335.87
Luxembourg	64.50	18.4	10.3	46878.13	598.98
Malta	5.19	8.1	11.5	7741.20	59.78
Netherlands	3409.36	19	13.5	653640.00	12842.17
Poland	546.56	5.2	4.3	398359.90	3576.72
Portugal	119.25	14.5	13.9	170582.13	2270.28
Romania	86.21	1.3	2.3	142707.47	592.37
Slovakia	47.14	7.5	5	74273.27	621.91
Slovenia	129.90	17.5	7.7	36417.33	917.85
Spain	1514.71	5.7	5.5	1034139.0	13074.72
Sweden	3234.77	18.4	12.9	430594.63	13969.79
United Kingdom	5377.64	10.8	16	2124956.3	35087.50

Source: Own study based on (Eurostat, 2017).

When analyzing the level of new product innovations for enterprises, it ought to be noticed that the pioneer in the

positioning was Germany 21.1% and Great Britain 16%. The most minimal recorded nations in this regard were Latvia 2.2% and Hungary 4.9%. As on account of inventive new products for the market, Poland acquired the second last place in examination with the level of 4.3%.

Thinking about the level of GDP, it can be expressed that the most elevated esteems were acquired in such nations as: Germany (more than 2.83 trillion EUR) and the United Kingdom and France, whose esteem added up to: EUR 2.12 trillion and EUR 2.11 trillion individually. Table 3 introduces the aftereffects of the connection coefficient amongst GDP and individual advancement markers.

Table 3. Results of the correlation coefficient between GDP and individual innovation indicators in the EU-28 countries in 2012-2014

Number of patents applied and GDP	0.88
Innovative new products for the market (in %) and GDP	0.15
Innovative new products for enterprises (in %) and GDP	0.46

Source: Own calculations based on statistical data.

Pearson's connection coefficient with respect to the connection between the quantity of licenses submitted and the GDP of a given nation was  $r = 0.88$ . Connection is in this way positive, and the relationship is extremely solid. On account of the connection between an imaginative products new to the market and GDP, at that point  $r = 0.15$ , which demonstrates that the relationship is sure/positive and the relationship is extremely feeble. With respect to the connection between's an inventive new products for endeavors and GDP, it added up to  $r = 0.46$ ; which implies it is certain/positive and the relationship is reasonably solid. Figure 1 completes the examination, as the dissemination between the information was appeared.

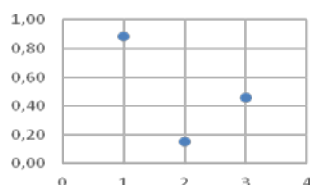


Figure 1. Correlation between GDP and individual innovation indicators in the EU-28 countries in 2012-2014

In the following stage, resulting conditions were analyzed, yet this time they were identified with R and D consumption. This additionally analyzed the quality of the connection between use on innovative work and chose three markers of advancement. It ought to be noticed that comparably as in the past investigation, every single positive aftereffect of the relationship coefficient were acquired, along these lines in each dissected case a positive connection happened. The proportion of the principal inspected reliance (i.e. between consumption on R and D and the quantity of licenses submitted) was  $r = 0.98$ ; the relationship is in this manner extremely solid. The examination of the connection between uses on R and D and creative new products for the market was portrayed by a relationship coefficient of:  $r = 0.21$ , in this way there was an extremely frail relationship. The last considered reliance was the one between consumption on R and D and imaginative new products for endeavors. The connection coefficient was at the level  $r = 0.55$ , in this manner the connection between these highlights is solid. The investigation of the examination is exhibited in Table 4 and Figure 2, which displays the spread between the information inspected.

Table 4. Results of the correlation coefficient between expenditures on R & D and individual innovation indicators in the EU-28 countries in 2012-2014

Number of patents applied and R & D expenditure	0.98
Innovative new products for the market (in %) and expenditure on R & D	0.21
Innovative new products for enterprises (in %) and R & D expenses	0.55

Source: Own calculations based on statistical data.

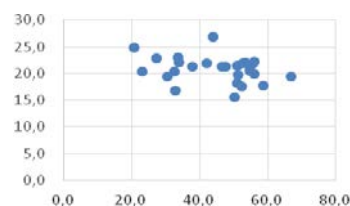


Figure 2. Correlation between expenditure on R & D and individual innovation indicators in the EU-28 in 2012-2014

The above examination recommends that for each situation, alongside the expansion, be it GDP or consumption on R and D, there is an expansion in all advancement coefficients contemplated. In any case, it ought to be recollected that for each situation the connections between specific components are not solid. As a rule, the improvement of advancement might be identified with the monetary circumstance of a given nation. In this way, the financial factor might be imperative, however its supplement ought to be, for instance, the information and experience of human capital. One might say that the thought and responsibility of representatives together with the suitable money related commitment are a fitting impetus for the rise of new products/forms. The next period in the analysis will be the years 2015-2016. Table 5 demonstrates these perspectives on the case of EU Member States in 2015-2016. The most elevated normal number of presenting products or process advancements enlisted in Belgium, it was 0.789% and in Finland 0.714%, while the least in Romania 0.000% and Poland 0.030%. As far as patent applications, the most astounding rate was recorded in Sweden at 1.000 PPS and in Finland at 0.977 PPS. The most reduced rate was recorded in Romania 0.170 PPS and Slovakia 0.244 PPS. Unluckily, Poland fell in the group of nations whose record was one of the lowest and amounted to only 0.249 PPS.

When analyzing the level of R & D expenditure in the business sector, it should be noted that the leader in the ranking was Sweden at 0.854% of GDP and Austria at 0.846% of GDP. The lowest recorded countries in this respect were Cyprus with 0.022% of GDP and Romania with 0.063% of GDP. Poland, as in the case of patent applications, came in second to last with 0.170% of GDP.

Considering the GDP level, the highest values were obtained in countries such as Germany (over € 3.09 trillion) and Great Britain and France, whose values were €2.49 trillion and €2.21 trillion, respectively. Table 6 presents the results of the correlation coefficient between GDP and individual innovation indicators.

Table 5. Selected indicators of product innovation and macroeconomic measures for the EU-28 in 2015-2016

Country	SMEs introducing product or process innovations (percentage of SMEs)	PCT patent applications per billion GDP (in PPS)	R&D expenditure in the business sector (percentage of GDP)	R&D expenditure in the public sector (percentage of GDP)	GDP (in million EUR)
Austria	0.622	0.738	0.846	0.815	348895.05
Belgium	0.789	0.612	0.684	0.597	416741.8
Bulgaria	0.045	0.253	0.231	0.115	46707.55
Croatia	0.275	0.255	0.152	0.289	45403.3
Cyprus	0.453	0.282	0.022	0.171	17932.25
Czech Republic	0.448	0.345	0.416	0.798	172518.8
Denmark	0.530	0.830	0.728	1.000	274633.4
Estonia	0.314	0.380	0.250	0.709	20723
Finland	0.714	0.977	0.797	0.916	212598
France	0.521	0.678	0.562	0.658	2211550
Germany	0.712	0.842	0.759	0.871	3093850
Greece	0.479	0.245	0.108	0.479	175255.65
Hungary	0.049	0.383	0.381	0.227	112226.85
Ireland	0.681	0.522	0.420	0.244	268802.25
Italy	0.564	0.488	0.286	0.457	1666337.65
Latvia	0.045	0.260	0.067	0.339	24639.9
Lithuania	0.307	0.292	0.108	0.653	38047.45
Luxembourg	0.665	0.438	0.258	0.513	52553.35
Malta	0.414	0.350	0.144	0.227	9608.8
Netherlands	0.710	0.806	0.432	0.821	693049
Poland	0.030	0.249	0.170	0.406	428017.45
Portugal	0.669	0.282	0.227	0.569	182494.3
Romania	0.000	0.170	0.063	0.104	164945.9
Slovakia	0.125	0.244	0.118	0.608	80025.2
Slovenia	0.397	0.598	0.686	0.423	39627.35
Spain	0.157	0.415	0.244	0.468	1099260
Sweden	0.669	1.000	0.854	0.955	457107.7
United Kingdom	0.432	0.607	0.426	0.446	2497636.55

Source: Own study based on (Eurostat, 2017).

Table 6. Results of the correlation coefficient between GDP and individual innovation rates in the EU-28 countries in 2015-2016

GDP and R&D expenditure in the public sector (percentage of GDP)	0.24
GDP and R&D expenditure in the public business (percentage of GDP)	0.33
GDP and PCT patent applications per billion GDP (in PPS)	0.42
GDP and SMEs introducing product or process innovations (percentage of SMEs)	0.27

Source: Own calculations based on statistics.

Pearson's correlation coefficient for the relationship between the country's GDP and R&D expenditure in the public sector was  $r = 0.24$ . Correlation is therefore plus / positive, and the relationship is very weak. In the case of the relationship between GDP and R&D expenditure in the public sector,  $r = 0.33$ , which proves that the correlation is plus / positive and the relationship is very weak. As for the correlation between the GDP and PCT patent applications per billion GDP, it was  $r = 0.42$ ; which means that it is plus / positive, and the relationship moderately strong. In the last case correlation coefficient for the relationship between the GDP and SMEs introducing product or process innovations was  $r = 0.27$ . Correlation is plus / positive, and the relationship is very weak. Figure 3 is a supplement to the analysis because the scattering between the examined data is shown.

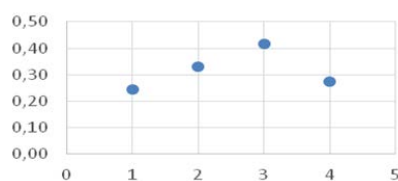


Figure 3. The relationship between GDP and individual innovation rates in the EU-28 countries in 2015-2016

In the following stage, facilitate conditions were explored, however this time they concerned PCT patent applications. The quality of the connection between PCT patent applications per billion GDP and R and D consumption were likewise analyzed. It ought to be noticed that, as in past examination, all positive connection coefficients were acquired, so that in each investigated case a positive relationship was gotten. The coefficient of the principal tried relationship (i.e. between PCT patent applications per billion GDP and R and D consumption in people in general division) was  $r = 0.73$ ; so the relationship is extremely solid. The examination of the connection between

PCT patent applications per billion GDP and R and D consumption in business area was portrayed by a relationship coefficient of:  $r = 0.91$ , and subsequently an exceptionally solid relationship. The examination is point by point in Table 7 and Figure 4, which demonstrates the dissipating between the studied information.

Table 7. Results of the correlation coefficient between PCT patent applications per billion GDP (in PPS) and R &amp; D expenditure in EU-28 countries in 2015-2016

PCT patent applications per billion GDP (in PPS) and R & D expenditure in the public sector (percentage of GDP)	0.73
PCT patent applications per billion GDP (in PPS) and R & D expenditure in the business sector (percentage of GDP)	0.91

Source: Own calculations based on statistics.

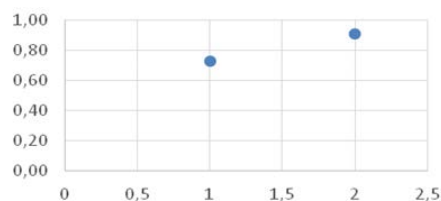


Figure 4. The relationship between PCT patent applications per billion GDP (in PPS) and R &amp; D expenditure in EU-28 countries in 2015-2016

In the following stage, advance conditions were examined, yet this time they concerned SMEs presenting products or process developments. The quality of the connection between SMEs presenting products or process developments and the two chose R and D markers were additionally inspected. It ought to be noticed that, as in past examination, all positive connection coefficients were gotten, so that in each investigated case a positive relationship was acquired. The coefficient of the main tried relationship (i.e. SMEs presenting products or process developments and R and D consumption in people in general segment) was  $r = 0.58$ ; so the relationship is solid. The examination of the connection between SMEs presenting products or process developments and R&D use in the business part was portrayed by a relationship coefficient of:  $r = 0.62$ , and consequently a solid relationship. Nitty-gritty of the investigation is in Table 8 and Figure 5, which demonstrates the scrambling between the overviewed information.

Table 8. Results of the correlation coefficient between SMEs introducing product or process innovations (percentage of SMEs) and R &amp; D expenditure in EU-28 countries in 2015-2016

SMEs introducing product or process innovations (percentage of SMEs) and R & D expenditure in the public sector (percentage of GDP)	0.58
SMEs introducing product or process innovations (percentage of SMEs) and R & D expenditure in the business sector (percentage of GDP)	0.62

Source: Own calculations based on statistics.



Figure 5. The relationship between SMEs introducing product or process innovations (percentage of SMEs) and R &amp; D expenditure in EU-28 countries in 2015-2016

The above analysis suggests that in every case, together with increasing GDP or PCT patent applications, there is an increase in all tested innovation ratios. However, it should be borne in mind that in each case the relationships between the individual elements are strong. In many cases, the development of innovation may be linked to the economic situation of a particular country. Therefore, the economic factor may be significant, but its complement should be, for example, the knowledge and experience of human capital. It can be stated that

this idea and the involvement of employees together with adequate financial contribution are the appropriate catalyst for the formation of new products / processes.

#### 4 Discussion

Developments are available in each part of life today. They mirror the dynamic changes occurring on the planet. One can get the feeling that each progressive products or each next idea is identified with advancement, and subsequently the importance has to some degree been deteriorated. This word is regularly utilized by advertising organizations, which in the powerfully creating markets are endeavoring to overwhelm the opposition.

Comparative analysis of selected determinants of innovation in EU countries has been started with three indicators of innovation, namely: R & D expenditure, PCT patent applications and SMEs introducing product or process innovations. The research was limited to two periods (i.e. 2012-2014 and 2015-2016) and the innovation rates were reported by twenty-eight EU countries. The expressed motivation behind the discourses was accomplished by applying factual examination, with specific accentuation on the Pearson's connection coefficient. The examination was separated into three stages. The primary concentrated on showing the quality of the connection amongst GDP and (independently) the three chose markers of advancement. Then again, the second piece of the investigation was to decide the size of reliance between PCT patent applications and R and D uses in the general population and business part. The third phase of the examination was to show the quality of the connection between SMEs presenting commodity or process advancements and R and D consumptions in general society and business part.

Correlation analysis enabled us to distinguish the most critical development determinant of all the overviewed ones. The most grounded connection was with the quantity of PCT patent applications. For both in the primary case, while inspecting the connection record between the quantity of PCT patent applications and R and D use in general society and business division, were examined, relationship coefficients demonstrating an extremely solid relationship between the tried factors were acquired. There was a positive connection, so the two highlights developed or reduced a similar way.

Tolerably solid relationship delineated SMEs presenting products or process developments and R and D consumption in general society and business part. Then again, the most reduced connection coefficient comes about were acquired when contrasting R and D use in general society part and GDP and SMEs presenting products or process advancements and GDP. So there was an exceptionally powerless association between these highlights. Along these lines, based on the acquired outcomes, it can be expressed that the inventive products new for the market are the minimum vital determinants.

The above investigation exhibits that the nation's GDP isn't as solid factor improving advancement as it is appeared to the overall population cognizance. Clearly, as the Gross Domestic Product develops, the file of advancement is developing, however their effect isn't as expansive.

In any case, it is critical for SMEs which are presenting imaginative products or procedures and patent applications to have budgetary help from open associations or government. It will include more specialists and give extraordinary equipment to inquire about focuses and research centers that will enable specialists to plan and execute new thoughts and products.

The proposed investigation does not debilitate the totality of the inspected matter, but rather it means that the rightness to proceed further and expand the exploration in this field.

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## RISK BEHAVIOR AND PSYCHOPATHY OF ADOLESCENTS IN THE SYSTEM OF HIGHER SECONDARY EDUCATION IN SLOVAKIA

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**Abstract:** In the paper we presented the psychopathy as an important concept of the psychology. In this contribution we concerned on Hare's concept of psychopathy. We were interested in the relation between the psychopathy and risk behavior production. Our sample consists of 175 students from higher secondary education. We used two methods: Questionnaire of Risk Behaviour (QRB) and Questionnaire of Interpersonal Patterns of Behavior (QIPB), which is method modified on the base of PCL-R (Psychopathy Check List – Revised) developed by Hare. We compared three research groups: (1) with high risk behavior, (2) with moderate risk behavior, (3) with low risk behavior. The results showed the relation between the risk behavior production and psychopathy, especially in female subgroup.

**Keywords:** adolescence, psychopathy, risk behavior, screening.

### 1 Introduction

The psychopathy is a psychological concept which is important for the psychology from the start of its modern history. Koch is considered for the first author who focused the clinical attention on the psychopathy. In 1891-1893 he published three volumes of the *Psychopathic Inferiorities* (Die Psychopathischen Minderwertigkeiten). In these publications he presented the psychopathy as the insufficiency, not as a mental illness (Gutmann, 2008).

Cleckley was also very important personality on the field of psychopathy (Hare, 2014). Analogous to Koch, Cleckley mentioned that psychopathic people are relatively normal, especially in social situations. They are charmers and they try to take the advantage from the situation. But they also miss the empathy, interest in others feeling, life goals and plans, emotions. In 1988 Cleckley published the 5<sup>th</sup> edition of the book *Mask of Sanity* (Cleckley, 1988) (1<sup>st</sup> edition was published in 1941) in which he summarised his knowledge about the psychopathy. Hare continued in the work of Cleckley. He was his student. He responded to the needs of the clinical praxis which reposed on the reliable diagnostics. In the present Hare is the most cited author in the context of the psychopathy.

Hare is well known by the PCL (Psychopathy Checklist) (Hare, 2014). It is method developed from 80's years of 20<sup>th</sup> century. At the beginning of the 21<sup>st</sup> century he published PCL-R (Psychopathy Checklist-Revised). It consists of 20 dimensions which are divided into 4 factors (Hare, Neumann, 2008). Interpersonal factor consists of these dimensions: glib/superficial, grandiose self-worth, pathological lying, conning/manipulative behavior. Affective factor consists of these dimensions: lack of remorse or guilt, shallow affect, callous/lack of empathy, fail to accept responsibility.

Lifestyle factor consists of these dimensions: stimulation seeking, impulsivity, irresponsible, parasitic orientation, lack of realistic goals. Antisocial factor consists of these dimensions: poor behavior controls, early behavior problems, juvenile delinquency, revocation of condition release, criminal versatility. Two dimensions don't belong to the present structure: promiscuous sexual behavior, many short-term partner relations. It seems they don't have the discriminant value.

The view on the psychopathy is not unique. Some authors intended to drop out the concept of psychopathy from the psychology, e.g. Karpman, Humbert, Schneider (Horvai, 1968). The meaning of the concept is shuffled with other psychological concepts, e.g. antisocial personality in DSM-5 (Raboch, et al.,

2015), dissocial personality in ICD-10 (WHO, 2016), moral insanity in Prichard theory (Whitlock, 1967) or offensive depravants in theory of Koulík & Drtilová (2006).

According to estimations there is 1 % of the psychopathic people in the population. But in some profession, e.g. top managers, the fraction of the psychopathic personalities is higher and it is near to 5-7%.

Koulík & Drtilová (2006) defined two types of psychopaths. The first types are the mass murderers and non-mass murderers which finish their lives in the penitentiary or death penalty. The second types are "successful psychopaths" who live the relatively normal life. They are the majority of the psychopaths and we can meet them in everyday life. They have some symptomatic characteristics. They don't know what is the real love, the altruism, the personal value of the things, the understanding of tragedy. They love the freedom, but freedom without the creativity and responsibility. The meaning of their life is the power.

Charny (1997) defined 11 attributes of the people with the excessive power-seeking:

1. Intense and extensive power strivings,
2. Lack of empathy,
3. "Street smart" alertness,
4. Ruthlessness,
5. Scapegoating and projection of blame,
6. Corruption by power and addiction to power,
7. Demands of other people to be dependent on one's powerful personality,
8. Emphasis on contradictory symbols,
9. A basic disrespect for the lives of others,
10. An absence of conscience,
11. A homicide/suicide orientation.

All these attributes express the egoistic orientation which is the opposite of the healthy interpersonal style. We can say these people are not prosocial. And it is the basic problem of the social interaction focused on the bilateral personal growth. Cited attributions are good conditions for the risk behavior production in the whole spectrum from truancy, delinquency or psychoactive substances abuse to squatting, xenophobia, extremism or subcultures (Nielsen Sobotková et al., 2014).

The risk behavior is the actual problem approximately from the age of 12 years. According to Smart et al. (2004), 50 % of the adolescents behave in a way that can be considered as risky. It means that a lot of adolescents confront themselves with the authorities, the socio-cultural expectations and the contents of the social roles. They try to find their place in the world and to define own personality. But the other people often interpret their efforts as problematic because of the form of their behavior. In many cases the form of the adolescent risky behavior can be determined by the psychopathic features. So we ask if there exists the relation between the psychopathy and risk behavior production.

Based on the cited findings we assumed that the individuals with high tendency to produce the risk behavior will have the higher level of the psychopathy.

### 2 Research sample

The research data were acquired from 175 higher secondary education students in Slovakia, 79 men and 96 women in the age from 17 to 20. They study at three types of the schools: the grammar school, the pedagogical and social academy and the secondary vocational school.



## 2.1 Methods

In our research we used two methods. Questionnaire of Risk Behaviour (QRB) is the method developed by Čerešník (2016). It consists of 40 items which are derived from the clinical indicators of the risk behaviour. They are divided into seven subscales: (1) family relations and rituals, (2) school and friendship, (3) addictive behaviour, (4) delinquent behaviour, (5) bullying, (6) eating habits and activities, (7) sexual behaviour. Participants evaluate the items through “yes” or “no” answers. In this research we used only the total score of the questionnaire. Questionnaire of Interpersonal Patterns of Behavior (QIPB) is method modified on the base of PCL-R (Psychopathy Check List – Revised) developed by Hare (2014). QIPB was formulated as self-evaluating method which consists of 83 items. They are divided into 14 subscales: glib, grandiose self-worth, stimulation seeking, pathological lying, conning, lack of guilt, shallow affect, lack of empathy, parasitic orientation, poor behavior control, early behavior problems, lack of realistic goals, impulsivity, irresponsibility. Participants evaluate the items through 4-point Likert scale, where “1” means complete disagreement and “4” means complete agreement. The goal of the method transformation was the possibility of the psychopathy diagnostics in the population which is not the clientele of penitentiary.

We formulated following statistical hypotheses:

- H1: We assume that the adolescents with higher level of risk behavior will have the higher tendency to glib.  
 H2: We assume that the adolescents with higher level of risk behavior will have the higher tendency to grandiose self-worth.  
 H3: We assume that the adolescents with higher level of risk behavior will have the higher tendency to stimulation seeking.  
 H4: We assume that the adolescents with higher level of risk behavior will have the higher tendency to pathological lying.  
 H5: We assume that the adolescents with higher level of risk behavior will have the higher tendency to conning.  
 H6: We assume that the adolescents with higher level of risk behavior will have the higher tendency to have the lack guilt.  
 H7: We assume that the adolescents with higher level of risk behavior will have the higher tendency to shallow affect.  
 H8: We assume that the adolescents with higher level of risk behavior will have the higher tendency to have the lack of empathy.  
 H9: We assume that the adolescents with higher level of risk behavior will have the higher tendency to parasitic orientation.  
 H10: We assume that the adolescents with higher level of risk behavior will have the higher tendency to have the poor behavior control.

H11: We assume that the adolescents with higher level of risk behavior will have the higher tendency to have the early behavior problems.

H12: We assume that the adolescents with higher level of risk behavior will have the higher tendency to have the lack of realistic goals.

H13: We assume that the adolescents with higher level of risk behavior will have the higher tendency for impulsivity.

H14: We assume that the adolescents with higher level of risk behavior will have the higher tendency for irresponsibility.

## 3 Results

The obtained data were analysed in the SPSS 20.0 programme. We used the t-test for two independent samples and the Kruskal-Wallis test. The standard level of significance ( $\alpha \leq 0.05$ ) was used.

We compared three research groups: (1) group with low level of risk behavior, (2) group with moderate level of the risk behavior, (3) group with high level of the risk behavior. These three groups were created on the base of the descriptive values of the risk behavior score obtained by QRB. We used the average mean and standard deviation to create these groups. We used the following formula:  $AM \pm SD$ . The first group score below the value  $AM - SD$ . The second group scored between the value  $AM - SD$  and  $AM + SD$ . The third group score over the value  $AM + SD$ .

The results of the analysis are presented in the tables 1 – 4. The differences between the men and women (tab. 1) were significant in all measured variables. The men always scores higher than the women. This is the reason why we present the results of the men and women separately (tab. 3, 4). In the whole sample we identified the statistically significant differences among the compared groups in 11 from 14 measured variables (tab. 2). The differences were not identified in glib, parasitic orientation and lack of realistic goals. The values of the Kruskal-Wallis test were in the range from 7.905 to 19.246. The values of the significance were in the range from 0.019 to  $<0.001$ . In the subgroup of the men (tab. 3) we don't identified the significant difference among the compared groups. In the subgroup of the women (tab. 4) we identified the significant difference in these variables: grandiose self-worth, stimulation seeking, pathological lying, conning, poor behavioral control, early behavior problems, irresponsibility. The values of the Kruskal-Wallis test were in the range from 6.423 to 13.184. The values of the significance were in the range from 0.040 to 0.001.

Table 1 Comparison of men and women in the subscales of psychopathy (QIPB)

gender		GLI	GRA	SS	PL	CON	LOG	SA	LOA	PO	PBC	EBP	LRG	IMP	IRR
men	N	79	79	79	79	79	79	79	79	79	79	79	79	79	79
	M	12.81	11.25	17.91	10.04	18.94	12.91	12.47	18.63	5.33	16.99	12.42	8.28	13.49	7.56
	SEM	.250	.305	.346	.301	.467	.412	.312	.493	.195	.480	.339	.280	.307	.227
	SD	2.225	2.715	3.077	2.677	4.155	3.666	2.773	4.383	1.737	4.268	3.015	2.486	2.731	2.018
women	N	96	96	96	96	96	96	96	96	96	96	96	96	96	96
	M	11.83	8.43	16.24	8.02	15.61	9.63	9.78	14.94	4.66	14.76	11.19	7.47	11.98	6.63
	SEM	.212	.232	.321	.223	.334	.216	.229	.331	.126	.393	.238	.194	.264	.206
	SD	2.076	2.270	3.145	2.186	3.275	2.114	2.244	3.244	1.230	3.846	2.327	1.897	2.591	2.022
t		2.999	7.500	3.534	5.488	5.914	7.415	7.086	6.402	2.992	3.627	3.045	2.443	3.755	3.037
p		.003	.000	.001	.000	.000	.000	.000	.000	.003	.000	.003	.016	.000	.003

Legend: N = frequency, M = mean, SD = standard deviation, SEM = standard error of the mean, t = value of t-test, p = significance; GLI = glib, GRA = grandiose self-worth, SS = stimulation seeking, PL = pathological lying, CON = conning, LOG = lack of guilt, SA = shallow affect, LOA = lack of empathy, PO = parasitic orientation, PBC = poor behavior control, EBP = early behavior problems, LRG = lack of realistic goals, IMP = impulsivity, IRR = irresponsibility

Table 2 Comparison of psychopathy subscales (QIPB) according to level of risk behavior production (whole sample)

whole sample		GLI	GRA	SS	PL	CON	LOG	SA	LOA	PO	PBC	EBP	LRG	IMP	IRR
high risk behavior	N	25	25	25	25	25	25	25	25	25	25	25	25	25	25
	M	12.44	11.12	18.44	10.28	18.60	12.76	12.16	19.00	5.56	18.32	13.48	8.16	13.32	7.76
	SEM	.444	.527	.462	.344	.978	.758	.650	.983	.332	.932	.659	.489	.585	.445
	SD	2.219	2.635	2.311	1.720	4.890	3.789	3.249	4.916	1.660	4.661	3.293	2.444	2.926	2.223
moderate risk behavior	N	125	125	125	125	125	125	125	125	125	125	125	125	125	125
	M	12.37	9.74	17.13	8.98	17.38	10.98	11.03	16.62	4.87	15.79	11.72	7.77	12.82	7.20
	SEM	.199	.256	.292	.244	.330	.301	.249	.361	.134	.359	.217	.204	.247	.181
	SD	2.224	2.862	3.270	2.731	3.687	3.366	2.788	4.036	1.497	4.015	2.428	2.276	2.766	2.020
low risk behavior	N	25	25	25	25	25	25	25	25	25	25	25	25	25	25
	M	11.64	8.08	14.88	7.36	14.32	10.12	9.64	14.16	4.80	13.08	10.12	7.84	11.24	5.56
	SEM	.395	.432	.546	.378	.736	.401	.395	.574	.271	.544	.511	.325	.409	.283
	SD	1.977	2.159	2.728	1.890	3.682	2.007	1.977	2.868	1.354	2.722	2.555	1.625	2.047	1.417
H		3.184	15.09 1	17.45 1	18.93 1	19.24 6	7.905	9.857	18.72 6	4.297	19.17 3	17.49 4	1.400	8.322	17.86 5
p		.204	.001	.000	.000	.000	.019	.007	.000	.117	.000	.000	.496	.016	.000

Legend: N = frequency, M = mean, SD = standard deviation, SEM = standard error of the mean, H = value of Kruskal-Wallis test, p = significance, GLI = glib, GRA = grandiose self-worth, SS = stimulation seeking, PL = pathological lying, CON = conning, LOG = lack of guilt, SA = shallow affect, LOA = lack of empathy, PO = parasitic orientation, PBC = poor behavior control, EBP = early behavior problems, LRG = lack of realistic goals, IMP = impulsivity, IRR = irresponsibility

Table 3 Comparison of psychopathy subscales (QIPB) according to level of risk behavior production (men)

men		GLI	GRA	SS	PL	CON	LOG	SA	LOA	PO	PBC	EBP	LRG	IMP	IRR
high risk behavior	N	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	M	12.41	11.47	18.65	10.29	20.29	13.88	12.94	19.82	5.71	19.18	13.65	8.59	13.35	8.12
	SEM	.549	.648	.549	.460	1.121	.882	.552	1.243	.435	1.075	.776	.665	.696	.535
	SD	2.265	2.672	2.262	1.896	4.620	3.638	2.277	5.126	1.795	4.433	3.200	2.740	2.871	2.205
moderate risk behavior	N	59	59	59	59	59	59	59	59	59	59	59	59	59	59
	M	12.93	11.34	17.75	10.02	18.64	12.71	12.44	18.39	5.27	16.47	12.17	8.20	13.59	7.42
	SEM	.290	.342	.432	.374	.483	.474	.375	.534	.221	.530	.357	.316	.350	.253
	SD	2.227	2.624	3.315	2.874	3.713	3.644	2.878	4.098	1.700	4.070	2.743	2.427	2.692	1.941
low risk behavior	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	M	12.67	8.33	17.00	9.00	17.00	11.33	10.33	16.67	4.33	14.67	10.33	8.00	12.33	7.00
	SEM	1.453	2.404	1.000	1.732	5.132	2.603	1.764	3.283	1.333	2.333	3.333	1.732	2.028	1.528
	SD	2.517	4.163	1.732	3.000	8.888	4.509	3.055	5.686	2.309	4.041	5.774	3.000	3.512	2.646
H		0.629	2.163	2.000	0.574	2.092	1.960	2.625	1.638	2.203	5.465	4.721	0.925	0.737	1.611
p		.730	.339	.368	.750	.351	.375	.269	.441	.332	.065	.094	.630	.692	.447

Legend: N = frequency, M = mean, SD = standard deviation, SEM = standard error of the mean, H = value of Kruskal-Wallis test, p = significance, GLI = glib, GRA = grandiose self-worth, SS = stimulation seeking, PL = pathological lying, CON = conning, LOG = lack of guilt, SA = shallow affect, LOA = lack of empathy, PO = parasitic orientation, PBC = poor behavior control, EBP = early behavior problems, LRG = lack of realistic goals, IMP = impulsivity, IRR = irresponsibility

Table 4 Comparison of psychopathy subscales (QIPB) according to level of risk behavior production (women)

women		GLI	GRA	SS	PL	CON	LOG	SA	LOA	PO	PBC	EBP	LRG	IMP	IRR
high risk behavior	N	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	M	12.50	10.38	18.00	10.25	15.00	10.38	10.50	17.25	5.25	16.50	13.13	7.25	13.25	7.00
	SEM	.802	.905	.886	.491	1.195	1.085	1.570	1.485	.491	1.732	1.302	.491	1.146	.779
	SD	2.268	2.560	2.507	1.389	3.381	3.068	4.440	4.200	1.389	4.899	3.682	1.389	3.240	2.204
moderate risk behavior	N	66	66	66	66	66	66	66	66	66	66	66	66	66	66
	M	11.86	8.32	16.58	8.05	16.24	9.42	9.77	15.03	4.52	15.18	11.32	7.38	12.12	7.00
	SEM	.260	.278	.388	.275	.406	.264	.247	.402	.147	.479	.252	.255	.328	.256
	SD	2.111	2.261	3.153	2.236	3.296	2.142	2.006	3.267	1.193	3.894	2.047	2.074	2.663	2.083
low risk behavior	N	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	M	11.50	8.05	14.59	7.14	13.95	9.95	9.55	13.82	4.86	12.86	10.09	7.82	11.09	5.36
	SEM	.410	.408	.584	.356	.556	.332	.399	.491	.266	.544	.441	.313	.394	.242
	SD	1.921	1.914	2.737	1.670	2.609	1.558	1.870	2.302	1.246	2.550	2.068	1.468	1.849	1.136
H		2.079	6.423	9.687	13.184	9.407	1.895	0.332	5.634	3.086	7.129	8.385	2.099	4.250	11.958
p		.354	.040	.008	.001	.009	.388	.847	.060	.214	.028	.015	.350	.119	.003

Legend: N = frequency, M = mean, SD = standard deviation, SEM = standard error of the mean, H = value of Kruskal-Wallis test, p = significance, GLI = glib, GRA = grandiose self-worth, SS = stimulation seeking, PL = pathological lying, CON = conning, LOG = lack of guilt, SA = shallow affect, LOA = lack of empathy, PO = parasitic orientation, PBC = poor behavior control, EBP = early behavior problems, LRG = lack of realistic goals, IMP = impulsivity, IRR = irresponsibility

#### 4 Discussion and conclusion

As the results showed, in the whole sample we can support all formulated statistical hypotheses except the hypothesis 1, 9 and 12. In the subgroup of the men we can support none of the hypotheses. In the subgroup of the women we can support the hypothesis 2, 3, 4, 5, 10, 11, 14. We can mention that our transformation of the PCL-R was useful and can be used in the population of the adolescents. In the non-differentiated population it discriminated the value of the psychopathy in the relation to the risk behavior. The subgroup of the men seems to be homogenous. It has the relatively high level of the psychopathy and this level is higher than in the subgroup of the women. But the psychopathy doesn't have the relation with the risk behavior. In the subgroup of the women we identified the relation between the risk behavior and the psychopathy, especially grandiose self-worth, stimulation seeking, pathological lying, conning, poor behavioral control, early behavior problems, irresponsibility. It means that the strong effect has the interpersonal dimension of the psychopathy (3 identified subscales), lifestyle dimension (2 subscales) and antisocial dimension (2 subscales). The affective dimension was not represented in the psychopathy of the women. The result about the higher psychopathy of the males is in accord with the researches, e.g. Forth et al. (1996), Hillege, Das, & de Ruiter (2010). But the connection between the risk behavior and psychopathy was not explored. On the other hand Guay et al. (2018) suggested that the psychopathy of females enlarges in last decade. This finding can support our non-standard result about the relation between the risk behavior and psychopathy of females.

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#### Primary Paper Section: A

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# CUSTOMER-BASED BRAND EQUITY OF A TOURISM DESTINATION: AN EMPIRICAL STUDY OF THE LIBEREC REGION

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**Abstract:** The aim of this contribution is to explore the demand-side of the tourism destination and to investigate whether the destination brand could be evaluated by the model of customer-based brand equity for a tourism destination (CBBETD). The presented study is focused on the Liberec Region as a destination. The data was gathered by the means of the structured questionnaire and exploratory factor analyses were run to test and reduce the items within the sub-dimensions of CBBETD. It was found that CBBETD for the Liberec Region consists of four sub-dimensions – awareness, image that includes four factors (outdoor, technical attractions, entertainment and non-traditional recreation), perceived quality including two factors (cleanliness and services) and loyalty

**Keywords:** branding, tourism, destination, brand-equity, marketing, customer

## 1 Introduction

According to 2016 UNWTO report, there has been 4% increase in the number of global tourist arrivals during the last decade with a record of 1.2 billion tourist arrivals in 2015. This has increased inter-destination competition and has prompted destination planners to differentiate their destinations with strong unique selling propositions. It is very important for destination planners to implement useful strategies for branding destinations in order to behave differently as a viable choice of destination when addressing potential and loyal tourists.

The main purpose of this paper is to present the concept from tourists' point of view. The question is whether a customer-based brand equity methodology, traditionally developed for product brands and partly for services and organizations, can be transferred to destinations. Another question is application of the proposed dimensions regardless of a destination. Thus, it is relevant to ask whether a destination's image, as the single measure brand equity, represents the most vital element in the destination evaluation. Most of the previous studies have focused on the brand equity of a tourist destination at the national level rather than a regional one. The presented empirical study was conducted in the Liberec Region that lies in the north of the Czech Republic. Although the region consists of four tourist regions – Českolipsko, Jizera Mountains, Krkonose Mountains and Bohemian Paradise, the destination marketing is managed by the tourism department of the Regional Authority of the Liberec Region.

## 2 Literature Review

### 2.1 Branding

Modern branding is often traced back to the early nineteenth century (Room, 1992). Accepting Kotler's (1991) definition of a brand, "... a name, term, sign, symbol or design...intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors", branding as a concept is applied not only to commodities and companies but also to fields of tourism. Branding of the destination is one of the main topics in tourism marketing in terms of enhancing differentiation and competitiveness, but establishing a strong brand has increasingly been of significant concern because of fierce competition between places for visitor expenditures.

A brand receives its value from customers by providing a clue to product stability, performance and other traits in reaction to a company marketing strategy. That means you know what to expect in the way of performance. Keller (1993) termed this response "customer-based brand equity". Destination brands differ from product brands.

Destination branding is a relatively new field of study in tourism. For that reason destination branding faces the problem of using the same and already accepted branding principles and their transfer to destinations. Destination brands significantly differ from product brands in a numerous ways. Destinations provide other quality than material or financial that can be refunded. Destinations are places of life and change. Change is measure of brand stability, one of the main elements of branded consumer products. Destinations are multidimensional and provide different experiences to different tourists (Konecnik, 2010).

Therefore destination brands burden themselves with high risk of change of the brands' constitution. Potential modification may easily occur, sometimes intentionally and sometimes by natural or human influences. Other key differences are that destinations are not sold in the marketplace and they are unique.

### 2.2 Brand Equity in Tourism

Brand equity is a fundamental, basic concept in brand management (Aaker, 1996; Keller, 1993, 2003). From a marketing perspective, according to Aaker (1991, 1996) and Keller (1993), brand equity is described as "the value of the brand in the consumers' minds and, in particular, is defined as the differential effect exerted by brand awareness on the response of the consumer towards the brand (Keller, 1993, 2016), or as the perceived utility and overall superiority of a product because of its brand name, in comparison with other brands. Since its appearance in the 1990s (Aaker, 1991; Keller, 1993), the concept of brand equity has become a significant topic in tourism marketing literature. Brand equity is a straightforward concept as it refers to the value of a product attached to a specific name. Equity is derived from what the sale of the branded product would bring in the marketplace over and above the sale of an essentially similar product but without the added value of the brand name (Simon and Sullivan, 1990 from Keller, 1993). In the past, branding research was mostly associated with tangible goods (Marshall and Keller, 1999). Lately research focused on analyzing services brands (de Chernatony and McDonald, 2001) and corporate brands (Dowling, 2002). Finally, destination branding arose as the newest research area (Cai, 2002; Konecnik, 2004; Tasci, Gartner and Cavusgil, 2007). Experts have naturally discussed the extent to which the product branding principles could be used to service and corporate brands.

The first studies on brand equity in tourism were applied to hotels (Cobb-Walgren et al., 1995), restaurants (Kim and Kim, 2007) and airlines (Chen and Tseng, 2010).

The world of tourism image studies was quickly transforming into a world of destination brand studies since the Cai (2002) study. The concept of brand equity has evoked a huge interest among marketing researchers during the last two decades (Aaker, 1991 and 1996; Keller, 1993 and 1998). In comparison with number of work on the tourism destination image concept, including a quality dimension too, the other dimensions of brand equity have been less intensively studied. Destination brand equity was introduced in the work of Konecnik and Gartner (2007). In this study, destination brand is analysed from the consumer perspective as a multidimensional concept consisting of brand awareness, image, quality, perceived value and loyalty.

While applying the concept of brand theory to destinations, (Gartner & Ruzzier, 2011) it is essential to take into account that destination branding is more complex and difficult apart from branding products. Proper management and marketing of destinations is inevitable because there is a very little and limited involvement of the destination marketers and various related agencies in the process (Same & Vasquez, 2014). It is very

important for destination managers to implement useful strategies for branding destinations in order to behave differently in addressing potential and loyal tourists and to become a more favourable choice of destination (Atadil, Turk & Altintas, 2015). Pike and Bianchi (2016) also argued in favor of destination branding for creating destinations with high customer based brand equity (Mar, Carmen & Arturo, 2015) leading to high destination awareness and positive tourist associations. For destinations, the concept of brand-equity stresses the importance of destination branding in developing marketing strategies for destinations to produce positive emotional values based on previous tourist's experience with the destination.

### 2.3 Customer-based Brand Equity

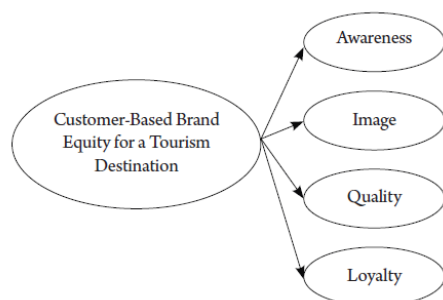
As a relatively newly developed concept, the idea of customer-based brand equity (CBBE) has attracted great interest in the last two decades. One of the most commonly accepted definitions of the CBBE concept was introduced by Keller (1998), who defined it 'as the differential effect that brand knowledge has on consumer response to the marketing of that brand'. Moreover, according to Keller, knowledge about brand is constructed by an associative network memory model in terms of two dimensions, brand awareness and brand image. Since that time, many interesting studies on CBBE have been issued. However, some authors pointed out the fact of insufficient theoretical background and variety of attitudes to this matter (Yoo and Donthu, 2001). Thus it is possible to say that the former interest in brand equity evolved later in a broader field of study in marketing (Barwise, 1993).

It is necessary to research customer-based brand equity of a tourism destination (CBBETD) from the perspective of tourists and their experience of the destination. CBBETD evaluates two wide aspects of a destination from visitors' point of view. The first assessed aspect is the measurement of tourists' perceptions of brand image, brand awareness, and brand associations. The second researches tourists' behavior which considers loyalty aspect for the destination (Baker & Cameron, 2008). Keller (1998) was the one who framed the concept of customer-based brand equity and described it as "the differential effect that brand knowledge has on consumer response to the marketing of that brand".

Pike (2007) introduced the concept of CBBETD to measure the effectiveness of a destination brand based on the brand values to the consumer. This way was filled the gap between past marketing efforts and conceptualizing CBBE for a destination as the hierarchy of brand characteristic, brand associations, brand resonance and brand loyalty.

Followingly work of Konecnik and Gartner (2007) listed awareness, image, quality and loyalty dimensions of destination as antecedents to CBBETD. They state that tourists from different backgrounds sense various dimensions of destination distinctly. The customer's evaluation of a brand includes awareness, image, quality and loyalty dimensions (see Figure 1).

Fig. 1: Customer-based brand equity for a tourism destination



Source: own processing.

The four proposed dimensions with respect to destinations are elaborated below.

### Destination Awareness

This term comes from behavioural studies of consumer and was thoroughly described in the tourism decision process by Goodall (1993). Although awareness is the first and necessary step in the decision process, and may lead to initial or repeated visit of destination, it is on the other hand insufficient, because the very awareness provides only a set of choice (Goodall, 1993). Awareness implies that an image of the destination exists in the minds of potential tourists (Gartner, 1993). If a destination desires becoming tourist preferred, it must first achieve tourist destination awareness and second a positive destination image.

### Destination Image

However the research of the destination image dates back to 1970s (Gunn, 1972; Hunt, 1975) and Pike (2002) found almost 150 articles observing destination image topics over last three decades, still there is missing a common frame that would cover this area. While mostly studied in marketing, the term also crosses over other disciplines, such as anthropology, geography, sociology, and semiotics (Gallarza et al, 2002). According to Gartner (1993) these various studies lack the theoretical and conceptual framework for what constitutes a destination's image, its formation process (Gartner 1993), and its operationalization (Echtner and Ritchie, 1993). For the purpose of the presented survey the destination image is understood as "an interactive system of thoughts, opinions, feelings, visualizations, and intentions toward a destination" (Tasci et al, 2007). Although it is uneasy to support the term destination image with researchers' theories, it might be undoubtedly acknowledged that the destination image is important in tourists' evaluation and selection process.

### Destination Quality

Destination quality is another key aspect of CBBETD, nevertheless quality measurement is a very complex process. In order to achieve results on quality it is necessary research tourists' evaluation of a destination products and services and tourists' experience (Prichard and Smith, 2000). All these elements are constituents that affect consumer behaviour and preference. According to Konecnik (2010) the aspect of destination quality is the most important component. When researching destination quality, a distinction between perceived quality and tourists' satisfaction should be taken into account (Prichard and Smith, 2000).

### Destination Loyalty

The concept of destination loyalty is by Oppermann (2000) inevitable for destination brand research. The destination loyalty affects tourists in their future decisions and their choice of destination. However, Opperman (2000) states that destination loyalty should be examined in a long-term range and then it can serve as a useful tool for prediction of future destination choice.

The concept of CBBETD has been tested for many destinations by various researchers. For example, Boo, Busser, and Baloglu (2009), Ford and Purwanegara (2013) and Far (2014) measured the customer based brand equity for tourist destinations for Las Vegas and Atlantic, Indonesia, and Kish Islands respectively and all argued in favour of treating destinations as brands for unique differentiation (Pike & Bianchi, 2016; Mar, Carmen & Arturo, 2015).

## 3 Research Methodology

The purpose of the presented study was to further develop and test the CBBETD model in the context of the Liberec Region. The research methodology uses the concept for the CBBETD developed and further refined by Konecnik (2010). The concept includes four sub-dimensions – awareness, image, perceived quality and loyalty. Three attributes for the dimension awareness and three for the loyalty were borrowed as they present factors applicable regardless of destination. However, the CBBETD scale was developed and tested for other destinations. Therefore some modifications within the sub-dimension image and perceived quality were necessary to reflect the appropriate aspects of the Liberec Region. For this purpose three focus

groups with total 30 potential respondents were realized. The aim of these focus groups was to generate the attributes specific for the Liberec Region that affects its image and perceived quality. Respondents were not presented any attributes so their opinions were not affected. Personal subjective perception, expectations and experience was determining. The result of the interviews was 32 attributes that were assigned to sub-dimensions image and perceived quality.

The data for the main research were collected by the means of the structured questionnaire in form of face-to-face interviews across various tourist locations in the Liberec Region. Apart from the attributes for CBBETD model the questionnaire included other characteristics regarding the travelling to and in the Liberec Region (such as frequency of visit, purpose of visit, length of stay and travel companions). Totally 38 attributes transformed in the statements about the Liberec Region were measured on the scale from 1 to 5 where 1 was strongly disagree and 5 strongly agree with the statement.

Tourists aged older than 18 years were invited to participate in the survey. Quota sampling based on the gender and age was used so that the sample complied with the profile of the visitor of the Liberec Region monitored by the tourism department of the Regional Authority. The data was processed in the IBM SPSS Statistics using the methods of the descriptive statistics. The factors determining the sub-dimensions were identified by the exploratory factor analysis using the principal components and the Varimax rotation method. The appropriateness of exploratory factor analyses was determined by examining the correlation matrix of CBBETD attributes. Bartlett's test of sphericity showed that the correlation matrix has significant correlations (significant at 0.000 for all conducted analyses). Table 1 shows the Kaiser-Meyer-Olkin (KMO) value. Since the KMO values varied from 0.664 to 0.902, all of the variables can be considered as valid. Cronbach's Alpha coefficients to reflect the reliabilities associated with each of the sub-dimension are shown in Table 1. The coefficients (from 0.763 to 0.909) mean acceptable to excellent results.

Tab. 1: Validity and reliability check

	KMO	Total Variance Explained	Cronbach's Alpha
Awareness	0.708	72.14	0.805
Image	0.902	57.08	0.909
Quality	0.854	53.00	0.822
Loyalty	0.664	67.96	0.763

Source: own processing.

There were 263 completed questionnaires. Nevertheless the elimination of problematic questionnaires reduced the sample size to 251. Although the Liberec Region is visited also by foreign tourists (especially German and Polish), the survey focused only on the Czech tourists. In terms of gender of the visitors, 51 % were male and 49 % female. Out of total respondents, 31 % tourists were in the age group 31-40 years, 28 % were 18-30 years, 23 % of respondents were in the age group 41-50 years, 12 % were 51-60 years and 6 % were older than 61 years. Occupation analysis revealed that 49 % were employees, 21 % entrepreneurs, 17 % students, 10 % retired or on maternity leave and 3 % unemployed. As per the monthly netto income of the household it was found that 38 % earned in the range of 25 001 CZK – 45 000 CZK, 34 % lower than 25 000 CZK, 21 % in the range of 45 001 CZK – 65 000 CZK and 7 % earned more than 65 000 CZK in a month.

#### 4 Data Analyses and Discussion

Factor analysis was run to test and reduce the various items within the four sub-dimensions of CBBETD. The first sub-dimension that was examined was awareness. Respondents' awareness of the Liberec Region as a tourism destination is

actually quite high as can be seen in Table 2 (mean for given variables from 3.87 to 3.99). Three variables were found to load highly on a single factor ("awareness"). These three items are able to explain 72.14 % of the variability and the reliability is reasonably high at 0.805 (see Cronbach's Alpha in Table 1).

Tab. 2: Awareness

Variables	Mean	Factor Loading
Attractive and known TD	3.93	0.871
Popular destination	3.87	0.842
Characteristics of TD	3.99	0.834
<b>% Variance extracted</b>		<b>72.14</b>

Source: own processing.

The second sub-dimension to examine was image. The factor analysis results can be found in Table 3. In this case the factor analysis was run five times with consecutive eliminating variables that were not part of any factor. The aim of this procedure is to eliminate items with low factor loading (lower than 0.500) and to explain possible highest percentage of the variability. Fifth factor analysis suggested four factors that explain 57.08 % of variability. The first one can be named as "outdoor" and includes mountains, nature, towns and villages, architecture, historical attractions and sport activities. The second factor named as "technical attractions" comprises variables such as technical sights, small breweries, museums and cultural attractions. Two items – friendly people and weather – were also added to this factor. They are related to the aforementioned variables as visiting technical sights or museums might be connected with the weather (that was not seen very high by the respondents – mean 3.24) and often people – personnel that creates the experience of tourists. The third factor identified as "entertainment" includes entertainment facilities, gastronomy facilities, local food and shopping facilities. The last factor named as "non-traditional recreation" includes non-traditional experiences, spa resorts and connection with famous personalities. Looking at the means for variables within the sub-dimension image, it is obvious that respondents evaluated very high nature (4.33), mountains (4.32) and sport attractions (4.04). On the other hand measures such as pleasant weather (3.24) or modern health resorts (3.13) were perceived to be poor. Similar results were supported by the qualitative study (focus groups) in which participants put value on diverse countryside in the Liberec Region, good conditions for practicing various sport and recreation activities. Furthermore the qualitative work did indicate bad weather making outdoor activities more difficult. On the contrary according to the respondents' opinion, the Liberec Region offers numerous activities and sights (especially technical) that can be visited in case of bad weather conditions.

The third sub-dimension that was examined was perceived quality. The factor analysis identified two factors that explain 53 % of the variability (Table 4). The first factor "cleanliness" includes cleanliness, infrastructure, safety, accommodation facilities and unpolluted environment. The second factor "services" consists of quality of gastronomy facilities, ease of visit access, service quality and good value for money. The most positive reactions were for the ease of access to the region (3.93) that reflects the fact that the center of the region (Liberec) is accessible in one hour drive from Prague. Nevertheless the quality of infrastructure achieved lower value (3.43). These views of the quality of the region by the tourists create a need to look more deeply into these perceptions and consider upgrading transport infrastructure around the region in order to achieve a better overall impression for future and present visitors.

Tab. 3: Image

Variables	Mean	Factor loading			
		Outdoor	Technical attractions	Entertainment	Non-traditional recreation
Beautiful mountains	4.32	0.816	0.109	-0.012	0.072
Beautiful nature	4.33	0.791	0.196	0.017	-0.018
Good opportunities for recreation activities	3.97	0.716	0.133	0.267	0.049
Lovely towns and villages	3.83	0.713	0.138	0.210	0.120
Interesting historical attractions	3.87	0.712	0.229	0.213	0.077
Interesting architecture	3.76	0.673	0.196	0.247	0.102
Good sport attractions	4.04	0.533	0.426	0.180	-0.015
Technical attractions	3.55	0.129	0.684	0.113	0.225
Pleasant weather	3.24	0.211	0.674	-0.062	0.021
Small breweries	3.60	0.071	0.606	0.189	0.349
Museums	3.63	0.320	0.561	0.200	0.265
Interesting cultural attractions	3.73	0.274	0.521	0.435	0.115
Friendly and hospitable people	3.49	0.168	0.517	0.190	-0.001
Good nightlife and entertainment	3.61	0.282	-0.001	0.758	0.072
Wide range of gastronomy facilities, local food	3.76	0.120	0.405	0.649	0.060
Good shopping facilities	3.94	0.218	0.227	0.583	0.218
Connection with famous personalities	3.29	-0.013	0.125	0.110	0.841
Modern health resorts	3.13	0.189	0.217	-0.069	0.702
Non-traditional experiences	3.37	0.028	0.073	0.391	0.653
<b>% Variance Extracted</b>		21.09	14.66	10.93	10.40

Source: own processing

Tab. 4: Perceived quality

Variables	Mean	Factor Loading	
		Cleanliness	Services
High level of cleanliness	3.37	0.761	0.066
High quality of infrastructure	3.43	0.731	0.085
High level of personal safety	3.52	0.620	0.297
High quality of accommodation	3.66	0.582	0.312
Unpolluted environment	3.71	0.515	0.316
High quality of gastronomy	3.56	0.094	0.819
Ease of visit access	3.93	0.141	0.762
High quality of services	3.69	0.428	0.649
Good value for money	3.69	0.458	0.526
<b>% Variance extracted</b>		28.05	24.95

Source: own processing.

The final sub-dimension was loyalty. The factor analysis results can be seen in Table 5. The conducted analysis showed high loadings on a single factor ("loyalty"). The reliability measured by Cronbach's Alpha (0.763) was acceptable (Table 1). Tourists visiting the Liberec Region would recommend it their friends and relatives (mean 4.12), speak of very high of the Liberec Region regarding services and facilities (mean 3.90) and intent to visit the Liberec Region again (4.29). These three variables were able to explain 67.96 % of the total variance.

Tab. 5: Loyalty

Variables	Mean	Factor Loading
Recommend TD to friends	4.12	0.875
Speak highly of services and facilities in TD	3.90	0.808
Visit TD in the future	4.29	0.788
<b>% Variance extracted</b>		67.96

Source: own processing.

## 5 Conclusion

In conclusion, the model of customer-based brand equity for a tourism destination was found to be adaptable for the Liberec Region and with some modifications appropriate for use in this context. Nevertheless, the sub-dimension image needed to be highly modified to reflect the specifics of this tourist destination. The sub-dimension image includes outdoor, technical attractions, entertainment and non-traditional recreation. It was also found that there were two separate

dimensional factors for the sub-dimension perceived quality – cleanliness and services.

The use of this model is helpful since it provides strategic options for the Liberec Region to improve its positioning and competitiveness in the tourist market. Although the Liberec Region (especially Liberec) is known for its above-average rainfall, it was proved that there exist alternative tourism sights or activities for case of bad weather such as technical sights or museums.

What needs to be mention is that this model is based only on perspective of tourists. To get a comprehensive view of the brand equity of a tourist destination it is necessary to take also perceptions of other stakeholders (citizens, local business, employees etc.) into consideration. This should be the subject of future research.

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**Primary Paper Section: A**

**Secondary Paper Section: AE, AH**



## THE BEGINNINGS OF RADIOPHONY IN SLOVAKIA AND THE SCHOOL RADIO

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**Abstract:** The beginnings of radiophony in Slovakia reach back to 1924 when the first radio receivers appeared in Bratislava. The subsequent growth in the number of radio licensees led to the construction of two transmitters in Slovakia which were branches of the Radiojournal of Prague in Bratislava (1926) and Košice (1927). Based on the extant archival records of the Division of the Ministry of Education and National Enlightenment (MENE) in Slovakia in the Slovak National Archive in Bratislava, and on the Journals of the Radiojournal Prague, we can reconstruct the beginnings of the school radio aimed at educating children and the youth. Two facts are undoubtedly interesting: a) the birth of the school radio was directly connected to the broadcasting of the Košice branch and to the dedicated work of E. Rusko, b) the popularity of the school radio among the teachers in turn influenced the actual development of radiophony by massive funding by the MENE for the purchase of radio receivers and the training of responsible teachers/technicians.

**Keywords:** radio broadcasting, Radiojournal, Slovakia, school radio

### 1 The Birth of Radio Broadcasting in Czechoslovakia

The beginning of regular radio broadcasting in Czechoslovakia in 1923 was the actual birth of radio broadcasting in the country. It was a time when the first radio stations were being established in the world, this new medium was being promoted and explained, and the first pieces of experience with broadcasting in America were being examined and utilized. Radiophony aroused interest and fascinated amateur radio operators, sought and found enthusiasts and pioneers/technicians, employed industrialists as well as statesmen, brought along new tasks, led to international collaboration, gradually gained recognition and secured its own place in public life.

The Czechoslovak Radio was one of the first radio stations in Europe<sup>1</sup>; what is more, Czechoslovakia launched regular broadcasting earlier than all the other neighbouring countries: the broadcasts of the Czechoslovak radio station reached the ether a year after launching broadcasting in London (which gained a leading position in radio broadcasting)<sup>2</sup>, at the time when France broadcast from the Eiffel Tower sporadically, when Germany broadcast only experimentally at times from Königswusterhausen, and a small station was only being built in Vienna.<sup>3</sup>

Czechoslovakia did not lag behind the global trend in launching radiophony. Already in the first post-war years, academic institutions and industrial corporations tried various ways of the remote wireless transmission of sound.<sup>4</sup> After the war, telegraph communication fell within the competence of the Ministry of National Defence, therefore it was the military administration that was commissioned to establish new connections. The first Czechoslovak radiotelegraph station was built up in Petřín,

Prague, in late 1918, from where the first radiotelephone broadcast was transmitted in 1919. It was a programme with recitals, singing and violin music. Professor Augustin Žáček listened to in the physics room of Charles University in Prague. In November 1920, non-military telegraphy went into the competence of the Ministry of Posts and Telegraphs.<sup>5</sup> In late 1922, journalists and entrepreneurs from *Rádioslavia, akciová spoločnosť pre telegrafiu a telefóniu bez drátu v Prahe* [*Rádioslavia, Public Limited Liability Company for Wireless Telegraphy and Telephony in Prague*], which was established shortly before that and was selling radio receivers, joined forces.<sup>6</sup> Their efforts resulted in regular radio broadcasting starting from May 1923, which gained an institutional form as a private limited liability company called *Radiojournal*.

The Ministry of Posts and Telegraphs of the Czechoslovak Republic also supported the efforts to establish radio stations by actively promoting them and taking normative measures:

- the first legislation was Act No. 60/1923 Coll. on Telegraphs of 23 March 1923, regulating the operation of radiophony (transmission and reception) as the exclusive and sovereign right of the state, i.e. a state monopoly;<sup>7</sup>
- a law was issued on 20 December 1923 regulating the production, sale and possession of radiotelegraph and radiotelephone devices, as well as the rules of their import from abroad.

Radio broadcasting was only provisory until December 1923 when the legal grounds of its existence were formed. Only these two laws provided the basis for the production and sale of the first radio receivers in Czechoslovakia.

Some historical facts about the birth of radio broadcasting in Czechoslovakia:

- the first experimental radiophonic concert was organized on 29 March 1923 by the Ministry of Posts and Telegraphs for members of the parliament, diplomats and representatives of authorities (the receiving device was supplied by *Rádioslavia* and the lecture was delivered by Ing. Jozef Strnad from the Ministerial Council of the Ministry of Posts and Telegraphs);
- the second radiophonic concert took place on 15 May 1923 and it was a public one, containing, among other items, presentations by the Cultural Union on radiophony in the lecture room of a boys' school in Vladislavova Street in Prague;
- regular broadcasting from the provisory Klebská Station began on 18 May 1923 (i.e. before the radio corporation was established and the law on telegraphs was published);
- the Czechoslovak Radio Corporation was founded on 7 June 1923 with a capital of 500,000 Czech crowns (for comparison, the BBC in England started its operations in 1922 with an 11-million budget); its main initiators and founders named it *Radiojournal*,<sup>8</sup> společnost s. r. o. pro československou službu radioelektrickou [*Radiojournal*,

<sup>1</sup> The first attempt at wireless broadcasting was carried out in the garden of inventor Guglielmo Marconi (1874 – 1937) in the 1890s in Bologna and, ever since, there has been a continuous line of inventions and perfections of wireless transmission. The first wireless transmission of human voice (radiotelephony) meant for the general public took place on 24 December 1906 when an American engineer of Swedish origin, Reginald Aubrey Fessenden (1866 – 1932), broadcast a short programme from Brant Rock in Massachusetts, USA – the transmitted information was accompanied by an artistic programme, including music. At a distance of 320 kilometres, telegraphers could listen to readings from the Bible, violin playing, Händel's *Largo* and, in the end, Fessenden wishing merry Christmas. The first radio transmission, carried out by inventor Lee de Forest (1873 – 1961), took place in 1910 from the Metropolitan Opera in New York.

<sup>2</sup> The British Broadcasting Company was established in 1922 (British Broadcasting Corporation from 1927).

<sup>3</sup> The first radio station in today's sense of the world (i.e. an institution which runs regular radio broadcasts for profit) was the American KDKA in Pennsylvania which launched its regular radio broadcasting on 2 November 1921 at 6 pm in Pittsburgh. See KDKA's licence at [https://en.wikipedia.org/wiki/File:KDKA\\_-\\_first\\_license\\_-\\_October\\_27,\\_1920.pdf](https://en.wikipedia.org/wiki/File:KDKA_-_first_license_-_October_27,_1920.pdf) (25/12/2018).

<sup>4</sup> Draxler, V.: *Začiatky bratislavského rozhlasu. [The Beginnings of the Radio of Bratislava]* Študijný zosbit Metodicko-výskumného kabinetu. [Study Brochure of the Methodological Research Department No. 17] Bratislava: The Czechoslovak Radio, 1975. pp. 6 – 9.

<sup>5</sup> Jirounek, J.: *Počátky bezdrátové techniky v Československu. [The Beginnings of Wireless Technology in Czechoslovakia]* In: Patzaková, J. A.: *Prvních deset let Československého rozhlasu. [The First Ten Years of the Czechoslovak Radio]* Prague: Radiojournal, 1935. pp. 758 – 761.

<sup>6</sup> *Rádioslavia* was established as a group of three factories: Krížik a spol. (Českomoravské elektrotechnické závody / Czech-Moravian Electrotechnical Plants), Telegraphia (with Josef Strnad and other government officials in its board of directors) and Compagnie générale de télégraphie sans fils (a French company which exported radio devices to Czechoslovakia). Podľa Čabelová, L.: *Radiojournal. rozhlasové vysílání v Čechách a na Moravě v letech 1923 – 1939. [Radiojournal: Radio Broadcasting in Bohemia and Moravia in the Years 1923 – 1939]* Prague: Charles University in Prague, 2003. p. 130.

<sup>7</sup> It was one of the first laws in the world which regulated the rights of the new field of radiotechnology. After: Draxler, 1975. p. 7.

<sup>8</sup> *Radiojournal* – as a synthesis of the names “*Rádioslavia*” and “*journalists*”. Ing. Richard Gemperle (replaced in December 1923 by Dr. Ladislav Šourek, director of *Rádioslavia*) became the president of the board of its executive directors, Ing. Eduard Svoboda became its technical director, and Miloš Čtrnáctý the programme director.

Private Limited Liability Company for Czechoslovak Radioelectric Services];

- in early July 1923, *Radiojournal* received a concession from the Ministry of Interior Affairs to organize programmes and the Ministry of Posts and Telegraphs leased a concession to it to broadcast programmes and also leased the Kbelská Station to it.<sup>9</sup>

The broadcasting studio was set up in Kbely in a scouts' tent borrowed from the Prague Vacation Colony and, in winter, it was replaced by a wooden building. The radio broadcasts were carried out by a minimal number of staff. The broadcasting crew consisted of technician Ing. Eduard Svoboda, lawyer JUDr. Ladislav Šourek (the director of *Rádioslavia*) and Miloš Čtrnáctý, editor of the *Národní politika* [National Politics] periodical. The first transmitter of signals was an ordinary telephone microphone (borrowed from the Ministry of Posts and Telegraphs) and the first musical instrument was an upright piano. The office of the Radiojournal was set up in the official rooms of the *Rádioslavia* in Národní třída Street in Prague, in the Choděra House. In winter, there was a bus connection between the city and the Kbely transmission station and, in winter, the first performers travelled there by an electric railway. Information about the beginnings of radio broadcasting can be found in the bulletin/programme periodical of the *Radiojournal*, which started to appear in September 1923 and contained a number of interesting writings about the beginnings of radiophony and the programme of the first broadcasts.<sup>10</sup>

The first radio programmes in 1923 did not attract the attention of the general cultural public but it was not their aim, either. They had an impact mainly on the technical world: the sound (speech as well as music) coming from the first amplifiers was sensational and, for technicians, it was a means to constantly verify loudspeakers. The Kbelská Station, originally meant for telegraph services, was adapted for broadcasting only provisionally. Until late 1924 when a new studio was opened in the Procurement building of the Post in Fochova třída Street in Prague and, in fact, until late 1925 (when a modern French broadcasting station was opened in Strašnice), radio broadcasting had to tackle not only technical problems but the disinterest of the general public and inadequate funding, too. The licence fee was 50 Czech crowns, which was a high amount at that time, and there were few listeners/subscribers. Therefore, the company raised funds by selling radio receivers.

It should be noted at the outset that the most efficient form of programme broadcast was music. Musical sound was the most perfect one in transmission: it was more differentiated than speech which used to report news and books. Also, speech was largely distorted in the first transmissions and often became unintelligible. Music was welcome and, in the very beginning of radiophony, gained an exclusive privilege in radio broadcasting even before the microphone was seized by reporters, newsreaders, poets or playwrights.

Of course, the broadcasting time was limited: it was an hour daily from 8:15 p.m. when the conditions for broadcasting were the best ones and there was no interference for the signal. The initial one-hour programme consisted of:

- songs and music,
- sports news from the whole world
- weather forecasts of the State Meteorological Institute,
- stock exchange news (every day except for Saturdays and Sundays).<sup>11</sup>

We may wonder what the radio could offer to its listeners in this first, provisory stage, with experiments with the microphone

(which was not able to reproduce pure and undistorted sound), in a wooden studio (which could not be adapted acoustically) and without any auxiliary and monitoring devices.

The music items were on a most diverse level and were determined by the technology and the environment: they started with the piano, the violin and singing, and with musicians who happened to be in the immediate vicinity of these first experiments with broadcasting. The first programmes reached the general public by their promotional reproductions in the Sanssouci Cinema in the Nové Město district of Prague and in the concerts of the Cultural Union. The orchestra players of the Sanssouci included the first radio performers (violinist Hašek, cornetist Emil Čermák, cellist František Voženilek)<sup>12</sup> and the radio corporation procured other performers from among the students of music schools and singing schools. According to a news from the bulletin of the Radiojournal of 5 June 1926, these were mostly students of Josef Bastař at the State Conservatory of Music:

*"The growing need for musical forces led me to my old friend, professor of the State Conservatory J. Bastař, who eagerly recommended some of his students – violinists to me..."* (Miloš Čtrnáctý).<sup>13</sup>

As the programme director, Miloš Čtrnáctý tried to avoid the radio becoming just pure "fun" and strived to maintain certain standards so that the mission of the radio was put into the service of culture and arts, practical life, and the education and edification of the people (bulletin of the Radiojournal):

*"The Czechoslovak Radio has to correspond to the cultural traditions of our artistic development and successfully fit into the framework of our public life. Radiojournal wants to lent its own character to the programmes, one that would reflect our different local conditions."*

*"While German stations help themselves out with gramophones and serve foxtrots and shimmies to their listeners, Radiojournal excluded the gramophone completely and tries to provide truly artistic delights to its subscribers, having regard to all the layers of its listenership."*<sup>14</sup>

However, obviously, it was not simple to achieve these goals, as can be seen also from an article in their Bulletin (January 1924):

*"If the quartet consists only of bowed string instruments and the piano, the wireless transmission is very good. However, if the quartet or quintet contains a flute besides the string instruments, the same unpleasant phenomena of sound interference, and the consequent noises, keep coming up regularly. So far, it is impossible for us to invite more than two or three artists for one night because there is not enough space..."*<sup>15</sup>

Hence, not only good artists were needed for the programmes but funds were to be raised for a new, independent station, and these were sought really everywhere. To raise the interest of the general public in the new medium, promotional concerts were organized and, from October 1923, there were regular broadcasts on Sundays in front of the National Politics building at Wenceslas Square in Prague.

The foundations of carefully planned radio programmes which fulfilled primarily a strictly edifying function and included all the genres of classical as well as popular music were laid down already in 1924. At the same time, the staff of the Radiojournal

<sup>9</sup> To obtain the concession, the applicant had to fulfil a number of conditions, including the submission of a document certifying his political reliability. Precaution in issuing the concession was understandable at that time – till then, broadcasting had been connected to the military events of the previous years. After Draxler, 1975, p. 7.

<sup>10</sup> See Patzaková, A. J.: *Prvních deset let Československého rozhlasu. [The First Ten Years of the Czechoslovak Radio]* Prague: Radiojournal, 1935, pp. 17 – 34.

<sup>11</sup> After Patzaková, 1935, pp. 22 – 25.

<sup>12</sup> See Hubička, J.: *Jak to začalo: s rozhlasovým archívem do roku 1923. [How it Started: With the Radio Archive until 1923]* [online] Available at: [https://www.rozhlas.cz/archiv/zivotsrozhlasem/\\_zprava/jak-to-zacalo-s-rozhlasovym-archivem-do-roku-1923-1061340](https://www.rozhlas.cz/archiv/zivotsrozhlasem/_zprava/jak-to-zacalo-s-rozhlasovym-archivem-do-roku-1923-1061340) (25/12/2018).

<sup>13</sup> After Patzaková, 1935, p. 25.

<sup>14</sup> After Patzaková, 1935, p. 28.

<sup>15</sup> After Patzaková, 1935, p. 30.

began to be differentiated and specialize on specific fields within the radio.<sup>16</sup>

Only suitable premises could move these Kbely programmes to the next level. The last broadcast from the Kbely studio took place on 1 December 1924 and, on Tuesday 2 December, the radio broadcast from a new studio built up in the premises of the Procurement building of the Post in Fochova třída Street in the Vinohrady District of Prague. Originally, the studio was to be placed in the premises of the transmission station in Strašnice but the 1/2 kW transmitter purchased in that year from the French Société Française Radioélectrique (S.F.R.) took up the major part of the original studio. The technical equipment of the studio in the Procurement building of the Post, an electrodynamic microphone with a 5-level microphone amplifier and a 4-level control amplifier, was also supplied by this French company. The long-time dreams of the founders of the Radiojournal were slowly coming true.

The Radiojournal entered the new season of 1925/1926 with new resolutions and changes. The most substantial one took place in March 1925 when the state became its direct majority shareholder, its board of executive directors was approved, and new programme goals were set.<sup>17</sup>

Already in the first years of broadcasting, *Radiojournal* took into account children and the youth, and took the educational and edifying function of the radio very seriously. It engaged specialist teacher Jan Vavřík for children's shows, and he remained in charge of this part of radio broadcasting for many years. He addressed small listeners as "Uncle Wenceslas" for the first time when he narrated "To the New School Year" (1 Sept 1925) and soon built up a new base of young listeners. Another novel programme in that year was *theatre for children*. The first such programme was the theatre of "artistic education" which acted in the lecture hall of a girls' school in Sliezská Street in the Vinohrady District of Prague. This puppet theatre performed not only plays but operas as well, so it was competent to work in the radio. It launched its radio performances on 3 September with Czech puppet classic Matej Kopecký's play *Pan Franc zo zámku* [*Sir Frank from the Castle*] and regularly performed every Saturday early evening.

Already at that time, Eduard Svoboda<sup>18</sup> wrote in the Bulletin of the Radiojournal (1925, vol. 3, no. 6, p. 7) that the radio had the means by which it would be able to complement teachers' efforts and presented the idea of a school radio.

*"Maybe, in the future, the radio will play a major role also in schools, in mass education. However, the receiving stations are not so perfect yet so as to be used for public listening in schools."*<sup>19</sup>

At the beginning of the 1926/1927 school year, director Eduard Svoboda approached the idea of the school radio within the organization as a new field of radio service. In his article *Výchova mládeže rádiem* [*The Education of the Youth by the Radio*] (Bulletin of the Radiojournal, 1926, vol. 4, no. 29, 11 Sept 1926), he wrote that:

*"It is appropriate to consider what role the radio could play in schools and how it would affect the children. I think radio presentations will become an integral part of the teaching process as soon as the radio becomes widespread and ceases to*

*be just an interesting novelty. The children could listen to the greatest authorities of any field in the radio... The Radio leads thousands of children at their most perceptive age to contact with the greatest men of contemporary science and arts. Combined with school, teaching foreign languages, for example, can become much easier and better... The general influence of the radio on children can be likened to the effects of a large public library available to one and all: here, too, the result will show only by time."*<sup>20</sup>

Svoboda's extensive article outlined the educational possibilities of the radio and teachers responded to it eagerly. They demanded that the programme was arranged in a way that enabled children to participate in it, i.e. either during the school hours or immediately after them. Therefore, broadcasting was reorganized and, from 29 November 1926, the radio broadcast for schools every day: from 10:00 a.m. to 11:00 a.m. for Czech schools and from 11:00 a.m. to 12:00 a.m. for German schools. However, it took place without an agreement with the school administration, even regarding the programme broadcast. Till then, the radio had no direct contact with the teachers and broadcast programmes for those who wanted to use them, with no specific goal or focus. The Bulletin of the Radiojournal (1926, vol. 4, no. 39) says:

*"All our radio stations: Prague, Brno, Bratislava, will broadcast a special school programme on weekdays from 10:00 to 11:00. Therefore, it is up to the local organizers to ensure that the schools could listen to this programme, if possible through an amplifier. However, people will certainly be found who will lend their own station with an amplifier to the school in places where the school does not have its own station."*<sup>21</sup>

## 2 The Beginnings of Radiophony in Slovakia

The beginnings of radiophony in Slovakia reach back to 1924 when the first radio receivers appeared in Bratislava and the number of their owners slowly grew. The initial modest presence of radio receivers followed from several facts: a) almost no availability of radio transmitters (even the transmitter in Kbely was not really audible in Slovakia)<sup>22</sup>, b) high cost of the radio receivers (the price of a radio receiver was a multiple of the monthly income of the population in Slovakia in well-paid jobs)<sup>23</sup>, c) high fees of operating the radio receivers. Therefore, a radio receiver was a "luxury" and, by October 1924, only about 10 licences had been issued in Bratislava.<sup>24</sup> Nevertheless, radiophony began to gradually gain ground in Slovakia.

The first amateur radio operating attempts date back to 1925 in the town of Košice. However, regular radio broadcasting is connected with the radio station in Bratislava (Bratislava branch of the Radiojournal) which started its first experimental broadcasting on 3 August 1926 from the Government Building but started to broadcast regularly only on 1 October 1926 (or 28 October when it was ceremonially handed over by Minister of Posts and Telegraphs Fr. Nosek). It should be noted that it was the Ministry of Posts and Telegraphs that took care of building radio transmitters, and its interest was primarily to cover Prague and central Bohemia. However, Brno and Bratislava also spoke up. Since there were no companies in Czechoslovakia interested in building transmission stations, the ministry had to turn to foreign companies. Brno worked with the unfit German Hurth station, and the original MD50-type Strašnice Station with 1/2 kW output made by the French R.F.S. company was transferred

<sup>16</sup> Conductor A. N. Nademlejnský (1898 – 1985) was responsible for opera and operette evenings, members of the Czech Philharmonic for classical concerts, Radio-trio and Hanžl's Orchestra for lighter genres, G. Hertl took care of theatre evenings and A. Dobrovolský (1869 – 1934) of recitals. After Patzaková, 1935, p. 50.

<sup>17</sup> See the documentation between the management of the Radiojournal, the Ministry of Posts and Telegraphs, and the management of the Ministerial Council of the Czechoslovak Republic from late 1924, from 1925 and from 1926 about the "Reorganization of the Radiojournal Radio Corporation in Prague", no. 1188/XI-25. The documentation is deposited in the Slovak National Archive, Collection of the MENE Div., box 29, no. 134 – 191.

<sup>18</sup> See also Hubička, J.: *Zakladatelé rozhlasu v Československu*. [*The Founders of the Radio in Czechoslovakia*] [online] Available at: [https://www.rozhlas.cz/archi-v/zamikrofonem/\\_zprava/zakladatele-rozhlasu-v-ceskoslovensku--798525](https://www.rozhlas.cz/archi-v/zamikrofonem/_zprava/zakladatele-rozhlasu-v-ceskoslovensku--798525)

<sup>19</sup> After Patzaková, 1935, pp. 90 – 91.

<sup>20</sup> After Patzaková, 1935, p. 133.

<sup>21</sup> After Patzaková, 1935, p. 134.

<sup>22</sup> At that time, a "three-lamp" radio receiver with accessories (accumulator, anode battery, loudspeaker, headphones, small equipment, assembly fees) cost almost 10,000 Czech crowns, and a "five-lamp" one almost 14,000 crowns. After Draxler, 1975, p. 27.

<sup>23</sup> Licensees paid two fees: an annual recognition and registration fee to the Ministry of Posts and Telegraphs (60 Czech crowns) and a monthly fee for listening to the radio to Radiojournal (30 Czech crowns). Even though the broadcasting fee was lowered to 20 Czech crowns in the autumn of 1924, it still represented a relatively large portion of a family budget. See Bulletins No. 49/1924 and No. 76/1924 of the Ministry of Posts and Telegraphs.

<sup>24</sup> However, it did not deter amateur enthusiasts from assembling radio receivers, although they risked imprisonment for 1 to 5 years, or a fine of 2,000 to 10,000 Czech crowns, for violating the laws on telegraphy. After Draxler, 1975, p. 28.

to Bratislava. The ministry's decision to use a low-performance transmitter for the territory of Slovakia was justified at that time by the small number of licensees (about 2,000 licensees). Stations were bought from the revenues from licence fees. In this case, however, the ministry underrated the rapidly growing interest of licensees which became evident immediately after the installation of the Strašnice Station. On the other hand, this decision by the ministry had its advantages, too – broadcasting could begin almost immediately: the transmitter was situated in the building of the Police Directorate in Bratislava, on the roof of which there were 15-metre posts with a three-wire antenna on top. The actual transmitting equipment was situated on the ground floor of the building.<sup>25</sup>

Soon, the Bratislava newspapers announced to the general public that: “3 August will again be one of the significant days for Slovakia. Tonight, at 6.30 p.m., radio listeners will hear ‘Hello, Bratislava!’ for the first time. There are a few fortunate ones who have already participated in tests, especially of a technical nature... However, today, on Tuesday, Bratislava will broadcast a pre-announced programme for the first time.”<sup>26</sup>

The first programme, consisting of the melodies of F. Giordani, G. B. Pergolesi, P. G. Martini, R. Schumann, P. I. Tchaikovsky, H. Joycelyn, B. Smetana, H. Eccles, M. Sch. Trnavský and D. Popper, was broadcast from a studio on the stage of the Great Hall of the Government Building in Bratislava.<sup>27</sup> For two months (August and September), there were broadcasts only twice a week. Daily broadcasting started on 1 October 1926. Musical programmes were provided by Miloš Ruppeldt (1881 – 1943) and Oskar Nedbal (1874 – 1930), presentations were taken care of by former district administrator and director of the branch, Ladislav Moyš (1867 – 1950). The Bratislava branch of the Radiojournal very quickly underwent the same course of development as the stations in Prague and Brno and, as early as in January 1927, it began to exchange its programmes with Brno (in February 1927, it developed this kind of regular collaboration also with Prague).

A year later, on 17 April 1927, the Košice branch of the Radiojournal also began to broadcast. The Post administration had a much easier situation in Košice: there was a post station in Haniska near Košice with space for two stations. The timing of the programmes of the Košice branch of the Radiojournal was very limited:

11:00 a.m. – noon only on Sundays: *matinée*,  
7:50 p.m. – 8:00 p.m.: Agricultural radio (Sundays and Wednesdays), presentations, news of the Czechoslovak Press Office (ČTK),  
8:00 p.m. – 9:00 p.m.: concert,  
9:30 – 10:00 p.m.: reproduced music or news of the ČTK.<sup>28</sup>

While music was supplied mostly by Kozák's Quartet (sometimes by Kozák's String Orchestra) and salon music by his quintet or sextet, Emil Rusko (1900 – 1961) was in charge of the literary programmes and focused not only on presentations and fairy tales for children but soon introduced the school radio too, the first one in Czechoslovakia.

The Košice branch, away from the centre, had to work independently for a relatively long time (compared to Bratislava and Brno). However, it became gradually connected with the western parts of the republic through Bratislava and Brno, and that moment was the starting point of the development of simultaneous broadcasting by the Czechoslovak Radio.

### 3 The School Radio

Interest in the youth significantly increased within a few years of the birth of radio broadcasting in Czechoslovakia. Based on the broadcasting experience of the North American Union and England, programmes for children and the youth gradually improved in Czechoslovakia, partly thanks to E. Svoboda. In addition to *Children's Shows* and *Half-hours for the Youth*, which were the first attempts at radio bands and radio editing for the youth, there were also puppet theatres in the radio which became gradually independent of the *Art Education* (ensemble) and were joined also by members of the *Student Stage*. With this theatre, the Czechoslovak Radio gained primacy among European broadcasting stations.

From these first experiments, it was only a small step to the execution of the *School Radio* and to the fulfilment of Svoboda's vision. In 1928, the school administration carried out the first negotiations about the school radio.<sup>29</sup>

It is undoubtedly interesting that, independently of the negotiations in Prague, the first branch of the Radiojournal to introduce the broadcasting of the school radio was its Košice one which built on local needs. The Košice branch tested the interest in radio broadcasting in a new environment very promptly and enterprisingly. Its literary director Emil Rusko, who came from eastern Slovakia, introduced a novelty into the relatively poor programme. As a former teacher, it was difficult for Rusko to accept that the average citizens in the east know little about school, undervalue schools and are reluctant to send their children to school. The Košice experiments with the school radio were successful and attracted the attention of not only the Prague management of the Radiojournal but also of the Division of the Ministry of Education and National Enlightenment in Slovakia. The archival records of the Division of the Ministry of Education and National Enlightenment reveal that, in late 1929, the Košice branch of the Radiojournal informed the given Division about the programmes being prepared for the school radio, and asked for a notification of the respective school inspectorates by a circular.<sup>30</sup>

What were the contents of the first programmes?

4 Dec 1929: *A Lesson in Homeland Education: A Short-lived Dream of the Independence of Slovakia in the 14th Century – Matúš Čák of Trenčín*;

11 Dec 1929: *Teaching in the Studio: Homeland Education: Heating – Wood, Coal, Peat*;

21 Dec 1929: *Teaching in the Studio: Homeland Education – Christmas, the Festival of Love*;<sup>31</sup>

In January 1930, the programme went on and the Division of the Ministry of Education and National Enlightenment in Slovakia was notified that the following programme would be aired:

22 Jan 1930: *Teaching in the Studio: Homeland Education – Birds in Winter*;

With respect to the profiling of music, it is interesting to mention that an “*Hour of Entertainment*” was also prepared in Košice besides this programme: “*Introduction / Cheerful Compering / Short Edifying Drama / Driml: Music for Children / Orchestra / Children's Solo and Choir Songs / Recital for the Youngest / From the Age / Songs for Children, Passages from Travelogues, Excerpts from the Life of the Animals, Riddles etc.*” In addition, Jaroslav Křička's (1882 – 1969) children's opera *Ogari [Lads]* (1919) was also prepared from this studio, “... *Exclusively for use by the said radio*”.<sup>32</sup>

<sup>25</sup> See Draxler, 1975, pp. 40 – 56; also, Patzaková, 1935, pp. 142 – 143.

<sup>26</sup> Zahájenie slovenského rozhlasu. [The Launch of the Slovak Radio] In: *Slovenský denník [Slovak Daily]*, vol. 9, no. 175, 3 Aug 1926. After Draxler, 1975, p. 63.

<sup>27</sup> The first performers included: Alojz Urban (singing), Eduard Pollák (cello), Zdenko Hoblík (piano). See Draxler, 1975, p. 64.

<sup>28</sup> After Patzaková, 1935, pp. 146 – 147.

<sup>29</sup> Ibid.

<sup>30</sup> Slovak National Archive, Collection of the MENE Div., Section I, Box 81, B.I.14, inv. unit 197.

<sup>31</sup> Ibid.

<sup>32</sup> News from 1 Jan 1930. Radiojournal Košice for the MENE Div., no. 10 Slovak National Archive, Collection of the MENE Div., Section I, Box 81, B.I.14, inv. unit 197.

The Division of the Ministry of Education and National Enlightenment in Slovakia noticed the broadcasting activities of the Košice radio and the following evaluation can be found in the archives:

*"The programmes broadcast hitherto are from all parts of Slovakia. The interest is unexpected. School administrations are noticing these radio novelties very critically and, in their written reviews, they touch not only upon the technical aspect of the broadcasting but also on its pedagogical purposefulness. We already have several interesting writings at hand, which are highly motivating stimuli for us for the future."*<sup>33</sup>

As part of the broadcasting, Emil Rusko invited children to the microphone and improvised a full lesson. In these select lessons, he presented a demonstrative guidance on how a teaching unit should look like, from the first up to the last year of national schools. It was only natural that the Košice branch attracted the teachers' attention very quickly, and they demanded better technical facilities for the broadcasting, or a transfer of the broadcasting to Bratislava which had a more efficient transmitting station:

*"For example, we have a 5-lamp, well-functioning radio device, and still we could not receive Košice on 4 December 1929 because of its strong capture by the Bratislava transmitting station".*<sup>34</sup> The conclusion of the MENE Division based on several reports was the following: *"It follows from the above that this experiment with a school radio aroused great interest of the teachers and it would be recommended to carry out preparations in this direction for broadcasting from Bratislava"* (signed by the school inspector of Trnava).

The reaction of the Ministry of Education and National Enlightenment (MENE) of Prague did not take long. On 1 August 1930, Decree No. 107.560/V was issued on the school radio:

*"The development of radiophony and its influence on the adults and the youth requires the school bodies and school employees to take careful notice of it and to bring the school youth in contact with radiophony. For this reason, from the initiative of the MENE, a School Radio Board is being established, which will collaborate with the Czechoslovak Radiophonic Corporation, 'Radiojournal', and will take care of the school radio meant for school children at the age of 6 – 14 years. The role of the radio is not to replace teaching in schools but to complement it with suitably chosen materials connected to the school curricula, which they are based on, and to contribute to the acquaintance of the children with radiophony."*<sup>35</sup>

It is followed by a detailed description of the organization of the broadcasting and the requested proposals from Košice and Bratislava for the above-mentioned School Radio Board.

Besides the far-reaching significance of the introduction of the school radio for the education of children and the youth, this initiative from Košice had another dimension, too: a de facto direct promotion of the development of the radiophonic industry in Slovakia. Why?

On 30 April 1931, the Division of the MENE issued Circular No. 69/31 titled *Action for the Purchase of Radio Devices for National State Schools in Slovakia*, in which it requested detailed information from the respective school inspectorates (57) about the condition of radio receivers in national state schools: how many radio devices (including amplifiers) were owned by the school, what types, what electrical current they used, where the devices were placed, how much they had been bought for, what funds the school had bought them from (who had donated them

to the school) and what their experience with their use was. The detailed survey and reports from the school inspectorates reveal that the prices of the radio receivers were somewhere between 2,000 Czech crowns (the simplest devices) and 6,000 Czech crowns (e.g. the 4-lamp Zenit from Přelouč in the State Lower-Secondary Mixed School in Revúca).<sup>36</sup>

To make the teachers acquainted with the new medium and its operation, to build a positive attitude to radiophony, to promote it locally and, of course, to utilize it in the teaching process, the Division of the Ministry of Education and National Enlightenment in Slovakia (MENE Division) organized a two-day course for teachers who were to work as "technical trustees of the school radio" in the second half of August 1931 in collaboration with the Radiojournal.<sup>37</sup>

The agenda included practical issues connected with radiophony:

1. the essence of radiophony,
2. the receiving device,
3. repairs and faults in the receiver,
4. technical issues of the school radio,
5. a visit to the experimental and transmission station,
6. projection of a specialist film.

Knowing that teachers never had much money, the MENE Division funded this course by 50 Czech crowns per person per day and arranged for a discount from the railway ticket for the teachers with the railway administration.<sup>38</sup>

The speed with which the MENE Division took up the task assigned to it by the Prague MENE is amazing even in today's electronic age. Why? Based on the evaluation of the reports of all the school inspectorates, it went on to carry out another action, too: to purchase radio devices for schools recommended by the inspectorates. It set aside a considerable amount, 400,000 Czech crowns, for their procurement. However, it soon lowered this amount to 300,000 Czech crowns saying that the newly established schools have to be equipped with other facilities, too. In the end, it lowered the amount even further.<sup>39</sup>

Nevertheless, it can be concluded that the school radio, with the Košice branch of the Radiojournal and teacher and editor Emil Rusko considered to be its founders, contributed significantly not only to the dissemination of typically radio genres and arrangement techniques but also played a major role in the overall development of radiophony in Slovakia.

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**Primary Paper Section: A**

**Secondary Paper Section: AJ, AM**

# MOTIVATIONAL STRATEGIES IN FOREIGN LANGUAGE TEACHING AND YOUNG LEARNERS

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**Abstract:** The paper deals with the issue of motivation and teachers' motivational strategies used in foreign language classes, whose aim is to increase the learners' motivation to foreign language learning. Motivation is an important factor affecting the quality of education and can influence the life-long attitude of learners towards learning foreign languages and to the language itself. The aim of the study was to find motivational strategies that teachers consider most important in foreign language teaching and compare them with the real frequency of their use in foreign language classes.

**Keywords:** motivation, motivational strategies, foreign language teaching young learners, questionnaire survey.

## 1 Introduction

The question of learner motivation to foreign language learning is in spite of its importance still a field that needs to be studied in more detail (Alrabai, 2014; Oga-Baldwin et al., 2017; Guilloteaux, Dörnyei, 2008).

According to Kuruc (2017), learners are motivated to better achievements mainly by the fear of bad marks, or by knowing they do not master something. The results of his research studying 1,500 learners indicate that with 73% of the learners the extrinsic motivation was the dominant component. The issue of learner motivation to foreign language learning is being a topic for multiple discussions of all participants of the process of education. Dörnyei and Csizér (1998) claim that motivation is the most important factor determining the success in foreign language acquisition in primary education. In addition, motivation represents the driving force to persist in learning a foreign language. Within the present study, following questions were asked and the answers were being looked for: Which motivational strategies are the most important according to teachers? What is the relation between the importance of such strategies and the real frequency of their use?

The objective of the study was to find out which motivational strategies are perceived by the teachers as being the most important; which of the motivational strategies in question are used most often, and what the relation between the perceived importance and the actual use is.

## 2 Quality of education and motivation

Foreign language teaching in primary education should seek for the quality, not the quantity of the knowledge mastered. Various authors see quality of education in various ways. Janík (2010) describes the quality of education as something without absolute value which can be expressed only using other characteristics. In order to be able to measure the quality, these characteristics have to be measurable, as well. Průcha (1996) sees the quality as a set of individual areas which need to be described in order to be comparable. Nevertheless, most models of quality education contain motivation as one of the factors affecting the overall quality (Janík, 2010; Helmke, 2003; Walberg in Janík, 2010; TIMSS in Janík, 2010).

Learner motivation represents the key factor in foreign language teaching and learning, since it determines the learning process and affects indirectly the quality of foreign language knowledge (Jurišević, Pižorn, 2012). It has a great impact also on creating and the pace of creating the memory traces (Škoda, Doulik, 2011).

In order to assure the efficiency and quality of education, it is inevitable to excite learners' interest in foreign language learning. Young learners are inherently curious and if their curiosity is naturally maintained, it can be a source of the key factor for a successful learning process (Gadušová, 2004). In order to maintain the learners' curiosity, the teacher has to know how to motivate the learners appropriately and accordingly. In general, motivation answers the question, why people behave the way they behave. Motivation determines the direction and the intensity of human behaviour; in other words, it directs the selection of the specific activity, perseverance in the specific task and the effort (Dörnyei, 2013).

Learners' motivation in foreign language learning and identification of factors affecting the learning process was studied by the Canadian psychologist Gardner (2001). Within his studies, he proposed socio-pedagogical model of foreign language learning, which contained four main factors:

- Impact of the external environment
- Individual differences among learners
- Environment and context, where the foreign language learning takes place
- Achievements in foreign language learning.

Within this model, the teacher's motivational strategies can be perceived as the impact of the external environment, where the foreign language learning takes place. According to his studies, motivation to foreign language learning is understood as a specific type of motivation or the behaviour in foreign language classes. Later studies into motivation in foreign/second language learning have pointed at the insufficient nature of the above mentioned model (Dörnyei, 1994; Oxford, Shearin, 1994), since the Gardner's model emphasised the general components of motivation associated with the social environment, not with the environment where the foreign language learning takes place. In addition, Gardner's model missed more detailed specifications of the cognitive aspect of motivation to learning. Following studies into motivation in learning various foreign languages in various contexts and with various age categories, Dörnyei (1994) claimed that the specific character of social and paradigmatic dimension of motivation to foreign/second language learning depends on who learns, what language and where. Following this premise, he created a concept of motivation to foreign language learning containing three levels: language level, learner level and situation specific level.

Motivation (Guilloteaux, Dörnyei, 2008) as one of the most important psychological concepts is extremely important also in foreign language education. Motivation provides the initial impetus necessary for starting the learning process; furthermore it serves as the driving force to persist on the long and often tedious process of foreign language learning. Professional literature dealing with the motivational strategies in foreign language teaching presented such strategies at the theoretical level, however, the verification of their actual impact on the efficiency of the learning process was not studied thoroughly, since such verification requires experiments in designing the education process and/or extensive observations (Guilloteaux, Dörnyei, 2008).

Alrabai (2014), similarly as the above mentioned authors, claims that motivation is considered one of the most important conditions for succeeding in foreign language acquisition. Harmer (1991) sees learners' motivation as the highest and single factor affecting their success.

Guilloteaux and Dörnyei (2008) characterise motivational strategies as teacher's interventions aimed at evoking and stimulating learners' motivation and self-regulatory strategies used by learners to control the level of their own motivation.

### 3 Results of the questionnaire survey

The questionnaire survey was focused on investigating the perceived importance of 50 motivational strategies and compare the results with the frequency of actual use of the same motivational strategies. The research sample contained 66 and 64 primary school teachers of the English language in Slovakia, who expressed their opinions on the importance and frequency of actual use of 50 motivational strategies, respectively. The reason for dividing the sample into two groups was to avoid the unwanted influence of the opinions. It could have happened that if a teacher labelled a strategy as important, they could label it also as often used also if that was not true.

Both questionnaires were administered electronically and included 50 motivational strategies proposed by Dörnyei and Csizér (1998). The strategies were translated into the Slovak language and checked and modified from the stylistic point of view. Both questionnaires were in the form of Likert scale with numbers 1-7 (importance questionnaire: 1 – not important, 7 – very important; frequency questionnaire: 1 – used hardly ever, 7 – used very often).

In the case of both questionnaires the average scores and standard deviations for individual strategies were calculated. The importance and frequency of the use of individual strategies were subsequently compared using the standardised score (*z*-score). In order to be able to compare the perceived importance and the frequency of actual use of the motivational strategies, we had to calculate the difference of the average frequency of use of each strategy and the average frequency of use of all strategies. This number indicated whether a specific strategy is used more often or less often regarding other strategies. Another indicator was the relative frequency, which was calculated as the difference of standardised importance and frequency score. This value shows, whether the relative frequency of an item is the same as its relative importance. A negative value shows that the perceived importance of a strategy is higher than the actual frequency of its use and vice versa.

Table 1 Comparison of the average importance score and average frequency score of individual strategies (*z*-diff – relative frequency, *x*-diff – difference between the overall average frequency of all items and average frequency of the specific item)

Strategy	<i>z</i> -diff	<i>x</i> -diff
Give clear instructions	-0.60	0.76
Develop a good relationship with your learners	-0.10	1.16
Create a pleasant atmosphere in the classroom	-0.19	1.12
Show a good example by being committed and motivated	-1.10	0.19
Bring in humour, laughter and smile	-0.50	1.14
Have games and fun in the class	-0.83	0.25
Vary the activities	-0.18	0.78
Constantly encourage your learners	-0.01	0.84
Prepare for the lessons properly	-0.07	0.75
Give positive feedback and appraisal	0.26	0.94
Encourage questions and other contributions from the learners	-0.21	0.50
Encourage creative and imaginative ideas	-0.24	0.34
Select interesting tasks	-0.18	0.34
Try to behave naturally and be yourself in the class	-0.07	0.44
Make sure that learners experience success regularly	0.07	0.56
Make tasks challenging to involve your learners	-0.36	0.16
Help learners realise that it is mainly effort that is needed for success	0.33	0.69
Help maintain the set of classroom rules that learners accepted	0.44	0.78

Be as sensitive and accepting as you can	-0.42	-0.03
Provide guidance about how to do the task	0.61	0.84
Choose interesting topics and supplementary materials	-0.06	0.19
Besides the grades, give the learners other rewards	-0.04	0.16
Help learners to get know each other	0.51	0.62
Avoid any comparison of learners to one another	0.51	0.62
Involve learners in creating their own classroom rules	-0.51	-0.28
State the purpose and the utility of every task	-0.16	-0.03
Use authentic materials	0.04	0.09
Have game-like competitions within class	0.33	0.25
Select tasks that do not exceed the learners' competence	0.64	0.34
Offer a variety of materials	0.62	0.28
Emphasise the usefulness of the language	0.67	0.28
Build on learners' interests rather than test or grades, as the main energizer for learning	0.55	0.00
Help the learners develop realistic expectations about their learning	0.07	-0.53
Include regular group work in your class	0.30	-0.34
Share as much responsibility to organise the learning process with your learners as possible	0.48	-0.19
Invite native speakers to some classes	-2.21	-2.50
Increase the group's goal orientedness	0.42	-0.28
Raise learners' curiosity by introducing unexpected or exotic elements	0.10	-0.59
Allow learners to create products that they can display or perform	0.70	-0.09
Set up several specific learning goals for the learners	0.30	-0.47
Demystify mistakes: they are a natural part of learning	0.82	-0.03
Be an ordinary member of the group as much as possible	0.35	-0.56
Regularly review the classroom rules with your learners	0.33	-0.63
Familiarise the learners with the cultural background of the language they are learning	0.66	-0.34
Help learners design their individual study plans	-0.77	-1.81
Do a needs analysis about the learners' language goals and needs	-0.33	-1.44
Try and fill the task with personal content that is relevant to the learners	1.15	-0.19
Encourage the learners to decorate the classroom	1.33	-0.13
Organise extracurricular activities	0.01	-1.50
Find penfriend for your learners	-0.30	-2.91

Following the data presented in Table 1, it can be stated that most strategies have a negative value indicating the lower frequency of their use in spite of a high importance attributed by the teachers. The lower the negative value, the underused the strategy is relative to its attributed importance. The least used strategy is the strategy *Invite native speakers to some classes* with the lowest relative frequency value -2.21, i.e. it is hardly ever used in spite of the attributed importance. This situation can be caused by the limited possibilities of Slovak schools. A visit of a native speaker represents a naturally motivating situation since it demonstrates the need and purpose of learning the English language. As this strategy is not often used in the Slovak environment, it is inevitable to compensate it with other strategies focused on culture that would emphasise the main aim of learning a foreign language, which is achieving a certain level of communicative competence by creating a natural situation in the given language and learn the culture through the language, as well.



Strategy with the second lowest score is the strategy *Show a good example by being committed and motivated* (-1.10). The result was alarming, since the teacher should be motivated to learning, working with the language and its presentation. Furthermore, the teacher poses a strong motivational factor for young learners and by showing their own enthusiasm for the language and culture they create the best conditions for learners to like the foreign language, too.

Significantly low score can be seen also in the case of the strategy *Find penfriend for your learners* (-0.30). The results of this strategy shows its underused potential, since writing in a foreign language is also a natural communication situation highlighting the usefulness of a foreign language in everyday life. The progress in communication technologies (various communication applications) makes it easier to implement this strategy into teaching practice. Considering the result, it is highly recommended to implement this strategy into teaching the English language in primary school classrooms.

From the area of *Culture* the most balanced score of importance and frequency of used is seen with the strategy *Familiarise the learners with the cultural background of the language they are learning* (0.66). This strategy is in practice used more often by the teachers than its attributed importance. It is a positive indicator, since foreign language teaching highlights the connection between the language and the target culture and learning about the target culture should be an inseparable part of the teaching and learning process (Lenčová, 2011). On the other hand, the study results indicate that many respondents did not reflect the need for implementing the cultural elements into the teaching process and the strategies focused on culture are underused, since almost all strategies from this field had a negative score.

On the contrary, a positive score of comparing the attributed importance and frequency of use was achieved by the strategies *Try and fill the task with personal content that is relevant to the learners* (1.15) and *Encourage the learners to decorate the classroom* (1.33). The former strategy is important as the education process should be learner oriented. The latter one is in wider context associated with the climate and thus the results is very satisfying mainly due to the fact that strategies focused on climate (e.g. *Create a pleasant atmosphere in the classroom; Bring in humour, laughter and smile; Have games and fun in the class*), all achieved a negative score, which means their attributed importance is much higher than the actual frequency of their use. A positive social climate and a friendly atmosphere in the classroom, both affect positively the emotions closely associated with motivation.

Another strategy with a positive final score of comparing the attributed importance and frequency of use is the strategy *Give positive feedback and appraisal*. It is absolutely important for the learners to realise their progress and experience success important for building a positive relationship towards the language. Success is one of the most significant impulses for motivation and demotivation in the school environment, and therefore the teacher should create such situations that would enable each learner to succeed (Elliot, 1999). The strategy *Demystify mistakes: they are a natural part of learning* achieved a highly positive value, which is very optimistic. The respondents realise that the mistakes can move the learners ahead and do not always have to be "punished". On the contrary, learners have to know that we all make mistakes and they help us improve and advance. The strategy *Emphasise the usefulness of the language* (0.67) was placed among the strategies whose actual frequency of use was higher than the importance attributed by the teachers – respondents. For the learners is important to know that they do not learn English because of their parents or to get good marks, but they will use and need it in their real lives.

It was surprising to find negative values in cases of important strategies *Give clear instructions* (-0.60); *Prepare for the lessons properly* (-0.07); *Be as sensitive and accepting as you can*

(-0.42); *Develop a good relationship with your learners* (-0.10); *Create a pleasant atmosphere in the classroom* (-0.19); *Bring in humour, laughter and smile* (-0.50); *Have games and fun in the class* (-0.83). All these strategies show huge deficits and it is important to improve the situation because all the areas mentioned represent natural motivational elements for evoking the learners' interest in increasing their motivation.

#### 4 Conclusion

It can be concluded that in spite of high attributed importance many strategies are used rarely in the actual English language classrooms in primary education. These results provide space for improvements and further empirical research. Several strategies with significantly negative score of relative frequency should be given more attention and should be used more in the classroom (*Show a good example by being committed and motivated; Invite native speakers to some classes; Bring in humour, laughter and smile; Give clear instructions; Find penfriend for your learners*).

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**Primary Paper Section: A**

**Secondary Paper Section: AM**

# DETECTION OF MUTUAL CONNECTIONS BETWEEN PROSOCIAL BEHAVIOR AND EMOTIONAL INTELLIGENCE IN YOUNG ADULTHOOD

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**Abstract:** The aim of our research was to find out the relationship between pro-social behavior and emotional intelligence within young adult people. We have used the TEIQue-SF questionnaire to measure emotional intelligence traits in the practical part of the thesis. To measure pro-social behavior we have used the Helping Attitudes Scale (HAS) questionnaire, which detects the pro-social tendencies. Our research sample was composed of 70 respondents, who have been working in human resources. The respondents were aged between 25 and 30 years. The results we reached in the research did not confirm the relationship between emotional intelligence and pro-social behavior. However, they confirmed the relationship between emotional intelligence and self-control.

**Keywords:** Prosocial behavior, emotional intelligence, their connections, young adulthood

## 1 Introduction

The basis of good interpersonal relationships is prosocial behavior, which can be described as behavior focused on helping others. It consists of a wide range of expressions – from regular everyday little things performed for others or with respect to others (Potášová, 2012). The cognitive and affective aspects of empathy may have different functions in prosocial behavior. The affective component of empathy represents the affective excitement resulting from the identification of the emotional state of the other person and provides the primary motivation to act pro-socially (Terfassa, 2014). Emotional intelligence is defined as the certain ability of a person to be aware of his/her own feelings, to motivate himself/herself and not give up when dealing with difficult situations, the ability to control his/her own affections and postpone satisfaction till a more appropriate time, the ability to avoid anxiety and nervousness, the ability to feel the situation and feelings of another person, and above all, the ability to not lose hope (Potášová, 2012, Salbot, Nábělková, Kaliská, 2012). Based on individual research, there is a link between personality variables and prosocial behaviors in different contexts. Brackett, Mayer, Warner (2004) have confirmed that emotional pro-social behavior is conceived in an oriented direction to help others in an emotionally evoking circumstances (Terfassa, 2014). There was also research on whether the individual components of emotional intelligence can predict aggressive and pro-social behavior (Sousa, R. (2014)). Similarly, a study investigating the relationship between EI and prosocial behavior has confirmed that the level of emotional intelligence significantly correlates with a score in two of five factors, mainly altruism, where it is found that there is a statistically significant relationship between EI and altruism. (Charbonneau, Nicol, 2002). The issue of the connection between emotional intelligence and prosocial behavior is not a highly much discussed topic, but instead every concept is handled separately or in conjunction with another concept. That is why we have decided to find out the links between these terms. Based on the research performed in the area of emotional intelligence and prosocial behavior (Terfassa, 2014, Svetlova, Nichols., Brownell, 2010, Brackett et al., 2004 and Charbonneau and Nicol, 2002, Aknin, Broesch, 2015), we have identified the hypothesis and research question as follows.

**H:** There exists a statistically significant relationship in the positive direction between emotional intelligence and prosocial behavior.

**VO:** Is there a statistically significant positive relationship between the level of emotional intelligence and self-control?

## 2 Methods

### 2.1 Population and method of processing

The research set was selected through deliberate selection. The research sample was comprised of employed people in the state administration from the age of 25-30 years from the town of Piešťany, Trenčín and Trnava. These were the professions of workers in the humanitarian sector who come into personal contact with the client, thus a helping profession in close association with the term “prosocial behavior”. These were professions such as social workers and clerks at the Labor Office. The sample consisted of 70 respondents, who were comparable in terms of wage conditions, working hours, age, and the number of years they worked in the given job position.

Table No. 1. Distribution of the research set on the basis of gender

Gender	Number
Women	38
Men	32

(source: authors of the work)

### 2.2 Materials and apparatus

We work with 2 terms in our work. Operationalization of the first one is not simple, given the ambiguity of its understanding among the researchers themselves. We will try for the purposes of our research.

We define prosocial behavior as a kind of behavior aimed at the benefit of another individual, and not based on our enrichment. This kind of behavior may not always be altruistic. We used the HAS questionnaire for its measurement.

Emotional intelligence is a construct comprised of the abilities of the personality, which allow people to adequately handle their own emotions and the emotions of other people. These include: the ability to recognize emotions in other people, verbalizing of emotions, situationally conditioned emotions and reactions, internal and external regulation, emotional management and empathy. We used the Trait Emotion Intelligence Questionnaire – Short Form (TEIQue-SF) for this research.

The first questionnaire is the Helping Attitudes Scale (HAS), focused on prosocial behavior consisting of 20 statements and 5 points of the scale. It measures perceptions, feelings and behaviors associated with helping. Since this is a non-standardized questionnaire, we found its Cronbach alpha, which was in all cases higher than 0.70, i.e. a questionnaire.

The second questionnaire named the Trait Emotion Intelligence Questionnaire – Short Form (TEIQue-SF) focused on EI consists of 30 statements responding to a 7-point scale. This abbreviated form of the questionnaire is comprised of 30 items with a 7-degree scale from (1) full disagreement, to (7) complete agreement. The questionnaire also offers the opportunity for the assessment of the four factors of EI: well-being, emotionality, sociability and self-control. The questionnaire is standardized for our population (Salbot, Nábělková, Kaliská, 2012).

### 2.3 Research plan

As the method for obtaining data, we have chosen the questionnaire method. We used the Spearman nonparametric correlation coefficient to process the results. Two questionnaires were used in this research. These are questionnaires aimed at the feature of emotional intelligence and prosocial behavior.

We determine the dependency rate according to the following scheme:

Value to 0.3 .....mild dependence  
 Value from 0.3 to 0.6.....medium dependence  
 Value over 0.6.....strong dependence

## 2.4 Procedure

We used correlation research. We used the SPSS 20 statistical program to process and analyze the data obtained from both groups. Relationships between variables were determined by the Spearman coefficient based on normality tests. In the same manner, we also proceeded to determine the level between EI (emotional intelligence) and self-control.

## 3 Results

When evaluating the results, we did not confirm the normal distribution of the population.

Table No. 2 - Descriptive Analysis

	N	Minimum	Maximum	Average	Standard Deviation
EI	70	3,50	6,30	5,02	0,66
PB	70	2,70	4,60	3,69	0,35

We first used a descriptive analysis of the obtained data. We calculated the minimum, maximum, average, and standard deviation from two questionnaires, which measure emotional intelligence and pro-social behavior.

Table No. The 3-Spearman correlation between EI and PS

		PS
EI	Spearman Correlation	,012
	Sig. (2-tailed)	,925
	N	70

The Spearman's correlation coefficient is 0.012, sig. p. is 0.925, i.e. sig. p. > 0.05, meaning there is no statistically significant relationship between the variables. Based on the obtained results, we can see that there has been no significant relationship between the variables of emotional intelligence and prosocial behavior, i.e. we reject H

Table No. 4 – Spearman correlation between EI and self-control

		Self-control
EI	Spearman Correlation	,796**
	Sig. (2-tailed)	,000
	N	70

The Spearman's correlation coefficient is 0.796, sig. p. is 0.00 i.e. sig. p. <0.05, meaning that there is a statistically significant, strong positive relationship between the variables. On the basis of the obtained results, we can see that there has been a significant relationship between the level of emotional intelligence and self-control.

## 4 Discussion

### 4.1 Interpretation of results

Our aim was to find out whether there is a statistically significant link between these two variables. Emotional intelligence was measured using a TEIQue-SF questionnaire and we measured prosocial behavior with a HAS questionnaire. We calculated the minimum, maximum value, average, and standard deviation from TEIQue-SF and HAS questionnaires, which measure emotional intelligence and prosocial behavior as part of the descriptive analysis of the obtained data. The number of respondents was 70. For emotional intelligence, we have a mean of 5.02 and a standard deviation of SD = 0.66. For prosocial behavior, the mean was 3.69 and SD = 0.35. To compare the values from the Emotional Intelligence Questionnaire the value was SD = 0.71, which we did not consider a significant difference compared to our results. The mean value was AM =

4.94, which is also not a significant difference from the average in our research.

In our first H hypothesis, we found out whether there is a statistically significant relationship between emotional intelligence and prosocial behavior. Here we have found, using the Spearman correlation, that there is no relationship between these variables. Our finding is in contradiction with the Terfassa research (2014), in which it was found that this relationship exists. The Spearman correlation coefficient is 0.012, sig. p. is 0.925, i.e. sig. p. > 0.05, meaning there is no statistically significant relationship between the variables. On the basis of which we did not accept the conceived hypothesis. This result can be interpreted by the fact that prosocial behavior is formed throughout life and its level can always change. Different findings can be interpreted by the fact that the HAS was not standardized in our population and some of the questions could have been unintelligible to the respondent. We compared our results with Gemech Terfass (2014), which aimed to identify the relationship between emotional intelligence and prosocial behavior. The research had a larger number of respondents compared to us, and 4 could have caused differences. To measure prosocial behavior, the Prosocial Tendency Measure (PTM) was used, which consists of 20 items. Similarly, research into the relationship between EI and prosocial behavior was conducted by Charbonneau and Nicol (2002), where they found that the level of emotional intelligence significantly correlated with scores in two of the five factors, altruism ( $r = 0.25$ ,  $p < 0.01$ ), meaning that there is a statistically significant relationship between EI and altruism. The second factor was civic virtue, with  $r = 0.24$ ,  $p < 0.01$ , which also means a statistically significant relationship between EI and civic virtue. Since altruism and prosocial behavior are not synonymous, we did not have to record a statistically significant relationship between the variables. Notwithstanding the fact that we did not record a statistically significant relationship, it is possible to say that there is a positive relationship between the variables, which is a finding that could be stimulated when designing programs to stimulate the given variables.

In VO, we determined whether there is a statistically significant relationship between the level of emotional intelligence and self-control. We dealt with this factor in the theoretical section, and thus we have decided to involve it in relation to the research on emotional intelligence. We found this on the basis of a research question, since in the framework of self-control we did not find appropriate scientific research. In Table No. 4, which describes the Spearman correlation between emotional intelligence and self-control, the value  $r = 0,796$  and sig  $p = 0.00 < 0.05$ , thus confirming a statistically significant, strong relationship between the level of emotional intelligence and self-control. Thus we can say that we responded positively to the VO because the relationship between the level of emotional intelligence and self-control has been confirmed. Our findings demonstrate that emotional intelligence has an effect on self-regulation to a large extent. This is a generic term used to indicate multiple processes through which the human psyche performs the control of its functions, internal processes and states (Baumeister, Vohs, 2004, Forgas, Baumeister, Tice, 2009). In a simplified manner, we can define self-control as control an individual has over him/herself. Also, this concept is perceived as personality, cognitive structure and ability, and includes control strategies, thoughts and self-regulation. It is an adaptive ability to behave in society according to standards and rules, and overcome so-called selfish impulses (Vavricova, 2012).

### 4.2 Limitations of research

The limits of our research include the use of the questionnaire method of data collection. The disadvantage of this questionnaire method is the great subjectivity in answering the individual items in the questionnaire; Also, the lesser veracity that can occur if the respondent does not fill in, or skips some of the items in the questionnaire.

Another limit is without doubt the number of our research sample. We focused mainly on the adult population of people working in state administration and in specific workplaces. If our sample had included more respondents, it could have had a larger age range and focus, for example, on the comparison of developmental periods in conjunction with emotional intelligence and prosocial behavior.

The insufficient focus on the variables on the participant's side such as his/her health condition, insufficient motivation and fear of testing was also limiting, which could have led to distortions of the results. It would have been different to have given each participant enough time in person and find out all these variables.

### 4.3 Future Aims

In the future, we will conduct our research through a different questionnaire on prosocial behavior. We will extend the individual aspects of our interest to the personality of the participants with whom we would work with in the research. It would be suitable to find out which personality characteristics can predict prosocial behavior itself. On the basis of this knowledge, a systematic program aimed at stimulating human behaviors could be developed. In future research, we could experimentally verify the effectiveness of our program.

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### Primary Paper Section: A

### Secondary Paper Section: AN

# THE CHANGING METHODOLOGY OF THE GLOBAL COMPETITIVENESS INDEX AND ITS IMPACT ON SLOVAKIA

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**Abstract:** As national competitiveness is a complex issue, the methodology of the indexes trying to capture its essence is crucial. After a decade of stability, the Global Competitiveness Index introduced a major methodological change in 2018. The aim of this article is to discuss the changes in the methodology of the index and to assess whether the new methodology is able to better capture the real competitiveness of nations in an exceedingly complex global economy. The paper also tries to assess the impact of the new methodology on the national competitiveness of Slovakia and its position in the global rankings of national competitiveness.

**Keywords:** national competitiveness, global competitiveness index, methodological changes, Slovakia

## 1 Introduction

The concept of national competitiveness has gained a lot of popularity over the past two decades. Introduced by Michael Porter in the early 1990s (Porter, 1990), the modern view on the competitiveness of nations raised a lot of discussion in the economic literature. To measure national competitiveness, several indexes have been constructed with the Global Competitiveness Index (GCI) being the most widely accepted and discussed. This index is produced every year by the World Economic Forum and it is published in their flagship publication The Global Competitiveness Report (GCR). The position of countries in the annual global rankings of national competitiveness is closely scrutinized by analysts and policymakers and its recommendations are often used to improve economic policies.

As national competitiveness is a complex issue, the methodology of the indexes trying to capture its essence is crucial. The Global Competitiveness Index introduced a major methodological change in 2018 after a decade of stability. The aim of this article is to discuss the changes in the methodology of the index and to assess whether the new methodology is able to better capture the real competitiveness of nations in an exceedingly complex global economy. The paper also tries to assess the impact of the new methodology on the national competitiveness of Slovakia and its position in the global rankings of national competitiveness.

## 2 The theoretical framework of national competitiveness

The concept of national competitiveness is a relatively novel concept in economics. Competitiveness was originally studied on the corporate level in the 1970s and the 1980s and it was raised to national level only in 1990 by Michael Porter in his renowned book *The Competitive Advantage of Nations*. Porter devoted a lot of effort to examine the concept of competitiveness on the corporate level, so it was a logical step for him to raise the examination of competitiveness to the national level since states and their institutions have a significant impact on the competitiveness of domestic corporations.

Michael Porter states that national competitiveness is a dynamic model and identifies the basic stages of its development. Porter distinguishes three main phases of the development of national competitiveness: a factor-driven, investment-driven and innovation-driven (Porter, 1990, p. 545). In economies that are factor-driven, competitive advantage comes solely from the factors of production (available natural resources, land suitable for agriculture and a large number of less educated but cheap labor). Companies in these economies build their competitiveness on low prices and operate mainly in technologically undemanding sectors (Porter, 1990, p. 546-547).

In investment driven economies, national competitiveness is based on the state's willingness to invest aggressively, with the use of new technologies acquired from abroad (through the purchase of licensing or joint ventures). The competitiveness of local firms is based not only on factors of production but also on more advanced business strategies. The highest level of development of national competitiveness is the innovation-driven phase. At this stage of economic development, competitiveness is based on innovation, unique business strategies of domestic companies and on globally recognized products and brands. Significant outward foreign direct investments emerge at this stage, as domestic companies seek to exploit their competitive advantages abroad (Porter, 1990, p. 552, 554).

Certainly, the examination of national competitiveness cannot be limited to the works of Michael Porter. Indeed, in recent years interesting alternatives to the model were created by various authors. However, currently the field of study is largely fragmented and there is not a universally accepted definition of national competitiveness today. The problem is that the concept of national competitiveness can be defined in different ways and can be influenced by several different factors. For example, Michael Porter defines national competitiveness strictly based on productivity. According to him, this is the only relevant perspective to national competitiveness (Porter, 1998, p. 160).

Other authors have different approaches to the concept of national competitiveness. However, in the variety of definitions, we can find some unifying ideas and themes. For example, Scott and Lodge define national competitiveness as "a country's ability to create, produce, distribute, and/or service products in international trade while earning rising returns on its resources" (Scott and Lodge, 1985). Blaine uses a similar approach to national competitiveness when he describes it "a nation's competitiveness refers to its ability to produce and distribute goods and services that can compete in international markets, and which simultaneously increase the real incomes and living standards of its citizens" (Blaine, 1993). Lastly, a very similar definition of national competitiveness can be found in the World Competitiveness Yearbook. This defines it as the country's ability to create added value and thereby increase the wealth of the nation (IMD, 2006).

## 3 The changing methodology of the Global Competitiveness Index

During the last two decades, The Global Competitiveness Report published by the World Economic Forum emerged as the leading publication to provide an international comparison of national competitiveness. As this concept was still evolving in the 1990s and the early 2000s, the methodology to assess national competitiveness has undergone several changes. Initially, the assessment of national competitiveness was based on the work of Michael Porter, Jeffrey Sachs, and John McArthur. The Current Competitiveness Index provided a microeconomic approach focusing on firm-level data using the framework of Porter and the Growth Competitiveness Index pioneered by Sachs and McArthur was based mostly on macroeconomic indicators (WEF, 2002).

The 2004-2005 edition of The Global Competitiveness Report introduced a new complex index of national competitiveness called the Global Competitiveness Index. This index has been developed by Xavier Sala-i-Martin and Elsa V. Artadi and presents a holistic approach of national competitiveness (WEF, 2004). After a transition period The Global Competitiveness Report abandoned the previous indexes designed by Porter, Sachs and McArthur and from the 2006-2007 edition the GCI became the main tool to measure and compare national competitiveness (WEF, 2006).

The GCI introduced a new concept of national competitiveness based on nine pillars that evolved into a twelve-pillar structure used until the 2017-2018 edition of the report. The last edition of the GCI before the major methodology change in 2018 was based on 114 indicators sorted into the 12 main pillars (see Table 1). The twelve pillars were divided into three main groups (basic requirements, efficiency enhancers, and innovation and sophistication factors) to sort the participating countries that are on various levels of economic development into three distinct phases of national competitiveness – factor-driven, efficiency-driven and innovation-driven. For each group of countries, different weights were applied for the 12 main pillars to get a better picture of national competitiveness (WEF, 2017). In case of a less developed country, the basic requirements are more important than in case of a modern innovation-based economy.

The indicators used in the GCI have been a mix of hard data obtained from various international organizations and soft data collected via the global Executive Opinion Survey conducted by the World Economic Forum and its local partner institutions in the participating countries. If we analyze the data sources, it is visible that most of the indicators (77 of the 114 total) were obtained by the Executive Opinion Survey. Out of the 12 main pillars of competitiveness according to the GCI, only four contain more hard data than data obtained from the global questionnaire (see table 2). On the other hand, some of the pillars contain no or almost no hard data (ex. institutions, financial market development or business sophistication).

The creators of the index argue that only the global questionnaire can provide insight into areas, where the availability of the hard data is scarce, but we can object the objectivity of the survey data, as for smaller countries a relatively small sample size is used to calculate the national data. In the case of Slovakia, the sample size for the 2017-2018 edition was only 110 respondents, so there is a chance that various biases can get into the questionnaires. Moreover, the Executive Opinion Survey comprises of 150 questions in many different areas ranging from health issues, corruption or safety to innovation or business sophistication. The question is whether managers filling out the questionnaire have sufficient expertise to answer all the questions.

Table 1 The pillar structure of the GCI in the 2017-2018 and in the 2018 edition

GCR 2017-2018 edition	GCR 2018 edition
<i>Basic requirements</i>	<i>Enabling Environment</i>
1. Institutions	1. Institutions
2. Infrastructure	2. Infrastructure
3. Macroeconomic environment	3. ICT Adoption
4. Health and primary education	4. Macroeconomic Stability
<i>Efficiency enhancers</i>	<i>Human Capital</i>
5. Higher education and training	5. Health
6. Goods market efficiency	6. Skills
7. Labor market efficiency	<i>Markets</i>
	7. Product Market
8. Financial market development	8. Labor Market
9. Technological readiness	9. Financial System
10. Market Size	10. Market Size
<i>Innovation and sophistication factors</i>	<i>Innovation ecosystem</i>
11. Business sophistication	11. Business dynamism
12. Innovation	12. Innovation Capability

Source: WEF, 2017 and 2018.

To remedy this situation and to adapt the Global Competitiveness Index to the new challenges of the global

economy, the team working on the Global Competitiveness Report decided that deeper changes are needed in the methodology of the GCI. The new methodology has been presented in the 2017-2018 edition of the GCR and was fully implemented in the next (2018) edition of the report. The new index is called GCI 4.0 to reflect the ongoing fourth industrial revolution. Although the new index retains the 12-pillar structure, the methodological changes are all but trivial.

Firstly, although the GCI 4.0 is still based on 12 main pillars, many of these pillars have been changed, and not only in their label but also in their content. The new index also abolished the grouping of pillars into three main groups and introduced four new groups – enabling environment, human capital, markets, and innovation ecosystem. The new groups clearly show the changing focus of the GCI 4.0 as it puts a bigger emphasis on the capacity to adapt to a changing economic environment and respond to internal and external economic shocks (WEF, 2017).

Table 2 Hard data and soft data in the 12 main pillars of GCI in the 2017-2018 edition

GCR 2017-2018 edition	Hard data	Soft data
<i>Basic requirements</i>		
1. Institutions	1	20
2. Infrastructure	3	6
3. Macroeconomic environment	5	0
4. Health and primary education	9	1
<i>Efficiency enhancers</i>		
5. Higher education and training	2	6
6. Goods market efficiency	5	11
7. Labor market efficiency	2	8
8. Financial market development	1	7
9. Technological readiness	4	3
10. Market Size	4	0
<i>Innovation and sophistication factors</i>		
11. Business sophistication	0	9
12. Innovation	1	6

Source: WEF, 2017.

Secondly, the new index discontinues the three stages of economic development on the weight of the individual pillars on the final index. Instead of using a changing weight associated with the stages of economic development the GCI 4.0 uses a system, where all the pillars are weighted equally (8.3 %). The goal of the new concept is to help less developed countries with a better-developed innovation ecosystem and to penalize countries that neglect key factors of competitiveness. Additionally, almost all pillars have been modified with individual indicators being added, deleted, modified or reshuffled. For example, the former pillar Health and primary education have been broken up and an individual Health pillar has been introduced and some indicators from the primary education part have been moved to the new pillar called Skills. In some cases, the number of individual indicators has been decreased and less complex indicators have been replaced by more complex ones. The Health pillar now consists of only one indicator (health-adjusted life expectancy) which replaced the previous eight health-related indicators.

Thirdly, the new GCI 4.0 puts more emphasis on hard data. Although the new index uses slightly fewer indicators as the previous one (98 vs. 114), but the creators of the GCI 4.0 considerably increased the number of indicators based on hard data collected from various international organizations. Unlike its predecessor, GCI 4.0 contains 54 indicators based on hard data in comparison with 44 indicators based on the Global Executive Survey. If we compare the methodology of GCI 4.0 with the previous edition, it is clearly visible that most of the

main pillar is now more hard data based than in the past. For example, the pillar Institution was almost exclusively questionnaire based in the previous edition (20 indicators based on the Global Executive Survey from the total 21 indicators). Now it contains a balanced mix of indicators (10 indicators from the Global Executive Survey and 10 data-based indicators) with data from United Nations, Legatum Institute or the World Bank group (WEF, 2018). Only two pillars rely more heavily on soft data from the global questionnaire (Skills and Labor market), which is a complete opposite of the previous edition of the GCI.

Table 3 Hard data and soft data in the 12 main pillars of GCI 4.0 in the 2018 edition

GCR 4.0 2018 edition	Hard data	Soft data
<i>Enabling environment</i>		
1. Institutions	10	10
2. Infrastructure	7	5
3. ICT Adoption	5	0
4. Macroeconomic Stability	2	0
<i>Human Capital</i>		
5. Health	1	0
6. Skills	3	6
<i>Markets</i>		
7. Product Market	4	4
8. Labor Market	4	8
9. Financial System	6	3
10. Market Size	2	0
<i>Innovation and sophistication factors</i>		
11. Business sophistication	4	4
12. Innovation	6	4

Source: WEF, 2018.

### 3 The impact of the introduction of the GCI 4.0 on the position of Slovakia in the global ranking

It is understandable that such a significant change in the methodology of the GCI impacts the total scores of the individual countries and their position in the global ranking of national competitiveness. The authors themselves warn in the appendix of the 2017-2018 edition of the Global Competitiveness Report that the proposed changes can significantly impact the performance of a country in individual pillars and indicators. They state that changes are possible also in the overall index, although it is difficult to isolate and quantify the effects because of the many overlapping and interconnected changes (WEF, 2017). Obviously, the methodological changes also ruined the backward compatibility of the GCI 4.0. To remedy the situation the authors of the 2018 edition of the GCR calculated the GCI 4.0 also for the previous year, but it will take several years to have a reasonable time series for the current version of the index.

The question is, how deep impact did the change of methodology have on the global ranking of national competitiveness. Before we examine the case of Slovakia, let us have a look at the top 10 countries in the 2017-2018 and the 2018 edition of the global rankings. Despite the significant changes in the methodology of the GCI the top 10 in the 2018 edition of the GCR is virtually the same as in the 2017 edition using the previous methodology. 9 of the 10 countries from 2017 retained their position in the top 10, only Finland dropped out (fell to the 11<sup>th</sup> place) and was replaced by Denmark (12<sup>th</sup> place in 2017). If we broaden the comparison to the top 20 countries, we get similar results. In the 2018 edition of the global rankings, 17 countries retained their top 20 positions from the previous year based on the old methodology. The only newcomers are Australia, France, and Republic of Korea, that are countries that almost made the top 20 in 2017 (21<sup>st</sup>, 22<sup>nd</sup> and 26<sup>th</sup> position).

As we can see, the methodological change to GCI 4.0 did not produce major changes in the leading positions of the global ranking of national competitiveness. In the next part, let us have a look at the case of Slovakia. After the global economic crisis of

2008/2009, Slovakia's competitiveness started to suffer, and the country fell from the 48<sup>th</sup> position in the global ranking (2008) to the 78<sup>th</sup> place in 2013. At that point, Slovakia became the least competitive country in the V4 region (Slovakia, Czech Republic, Hungary, and Poland). Since 2014, the competitiveness of Slovakia started to improve, but not very spectacularly. According to the 2017-2018 edition of the global ranking, the national competitiveness of Slovakia was on a similar level as the competitiveness of Rwanda, Botswana or Jordan. However, macroeconomic and socio-economic indicators suggest, that Slovakia is a more developed country than these countries with a considerably higher quality of life. The question therefore was, why did Slovakia achieve so underwhelming results in the national competitiveness according to the GCI. The most probable explanation is that the managers participating in the Global Executive Survey in Slovakia have an overly critical attitude towards the political and economic situation of the country and this attitude is translated into the GCI index via the 77 indicators based upon this survey.

Table 4 Position of the V4 countries in the global ranking of competitiveness between 2014 and 2018

	2014	2015	2016	2017	2018
Methodology	GCI	GCI	GCI	GCI	GCI 4.0
Slovakia	75	67	65	59	41
Czech rep.	37	31	31	31	29
Poland	43	41	36	39	37
Hungary	60	63	69	60	48

Source: World Bank TCdata360 database.

If this assumption is true, that means that Slovakia should achieve better results in the new GCI 4.0 based more on hard data. The 2018 edition of the global ranking based on the new methodology seems to support this assumption. In this edition, Slovakia improved 18 positions in the global ranking of competitiveness, as it jumped from the 59<sup>th</sup> position to the 41<sup>st</sup> position. It is clearly visible, that fewer indicators based on the Global Executive Survey meant a considerably better position in the global rankings. Instead of Rwanda and Botswana, Slovakia now borders with Latvia and Lithuania, what seems a much more realistic assessment of the Slovak national competitiveness. Further proof for the significance of the hard data is visible in the first pillar of the GCI 4.0 called Institutions. According to the current methodology, this pillar contains 10 indicators based on hard data and 10 indicators based on the Global Executive Survey. It is clearly visible, that the position of Slovakia is considerably better in the indicators based on hard data (average ranking of 48 from the 140 participating countries) as in the indicators based on the questionnaire data (average ranking of 94).

If we compare Slovakia with the other three V4 countries, we can see that in the case of the Czech Republic and Poland there was no significant change in their position in the global ranking after the introduction of the GCI 4.0. The reason for this could be that the general mood in the business sector was much better than in Slovakia in the last years, what transformed into better results in the Global Executive Survey. On the other hand, the position of Hungary in the global ranking improved in a similar way to Slovakia after the introduction of GCI 4.0 (see table 4). The difference could be in the Global Executive Survey also in this case, as the Hungarian entrepreneurs are very critical of the Hungarian government led by Viktor Orbán. Once again, fewer indicators based on the global survey lead to a better position in the global ranking of national competitiveness.

### 4 Conclusion

The aim of the article was to assess the methodological changes that have been introduced to the Global Competitiveness Index in the 2018 edition of the Global Competitiveness Report. As this index is the basis of the most widely recognized global ranking of national competitiveness used by policymakers and analysts, any methodological changes in the creation of the index



are very important. It is interesting to see, what kind of effects are the changes having on the global ranking of national competitiveness.

The analysis of the methodological changes shows that the new index (called GCI 4.0) is more hard data-driven. More than 50 % of the indicators used in the GCI 4.0 are based on hard data, what is a step in the right directions, as the data obtained from the Global Executive Survey could introduce various biases into the index. The case of Slovakia is a good example, as a hard data-driven index improved the position of the country in the global ranking of national competitiveness by 18 places between 2017 (old methodology) and 2018 (new methodology). Although it is too early to make a final evaluation of the new methodology after one year, the first impression is that it provides a more objective picture of the national competitiveness of the analyzed nations. However, we will need to revisit the topic in the next years to make a more nuanced assessment of the new methodology.

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**Primary Paper Section: A**

**Secondary Paper Section: AH**

# STIMULATION OF CREATIVITY AS A PREREQUISITE OF PERMANENT SUSTAINABILITY FOR PERSONALITY DEVELOPMENT OF GIFTED LEARNERS

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**Abstract:** The study focuses on the presentation of the results of the verification of educational processes aimed at development of creativity among gifted learners. This creativity development among gifted learners is perceived as a prerequisite for permanent sustainability of systems for complex growth of learners. Strategies that are verified in the study focus on development of divergent thinking, creative problem solving, figural fluency, flexibility and originality among academically talented learners and they are also part of a complex programme called Sophia which is designed for gifted learners and taught in programmes with enriched and expanded educational content. The key source of the programme was Model ALM - Autonomous Learner Model designed by G. Betts and J. Kercher (1999) and is suitable for ISCED 2 and 3. The results of the verification showed the positive effect of the Sophia Programme on monitored creativity parameters.

**Keywords:** Giftedness, Level of Divergent Thinking, Creative Problem Solving, Figural Fluency, Flexibility and Originality, Autonomous Learner Model (ALM).

## 1 Introduction

Systematic education of a human being and other influences of external social understanding, support, acceptance, possibly oppression, reduced tolerance and disrespect gradually stimulate the internal environment that participates in generating human authenticity. This can have both positive and negative influences.

Errors in recognizing authenticity and the desire for sameness, the uniformity on one hand or the effort of parents to achieve success and prestige through their skilled children that they themselves did not achieve promptly lead to social problems, emotional problems, mental imbalance, desperation of a gifted child. (for more see Mudrak 2015). The policy of "adaptation" also contributes to similar problems. It causes irreparable and unjustified injustice towards individuals and groups. The label "gifted" cannot be categorized by society (although it happens so often) only as cognitive abilities and to define needs of gifted children that are primarily related to thinking regardless of feelings, survival, attitudes. Cognitive skills are an integral part of a personality as a whole; therefore, we believe that educational models for talented people that have the potential for permanent sustainability must be inevitably oriented toward the complex development of the personality of a gifted child. Leading theorists (Taylor 1992, Betts 2003) consider this dimension as irreplaceable in the formation of authentic identity and formation of values of a human being; furthermore, they argue that the perception of differences in human personalities has a moral meaning in that the perception of one's own distinction in the context of capabilities and performance has for the life and future of the gifted person extremely important moral and human breadth and depth. In this context we have developed an educational programme for academically gifted learners at an eight-year grammar school using "SOPHIA" which follows the stated intention, to develop the complex personality of a gifted learner and to facilitate his/her authenticity and autonomy. In its structure and philosophy the Sophia programme establishes/follows the Autonomous Learner Model (Betts & Kercher 1999), which we analyze in the theoretical background of the study.

## 2 Theoretical Background of the Solved Problem

Giftedness is considered to be a very complex phenomenon whose multiple factors are caused by a variety of determinants that affect the process of its formation and the quality and

quantity of its manifestations as an integral whole. Giftedness and its genesis could also be seen in the context of the history of human society (for more see Dočkal, 2012) and although Slovakia does not belong to one of the largest countries within Europe we can consider the system around gifted people in the segregated, integrated as well as in a compromised variant as relatively well developed. Legislative measures and the inclusion of gifted learners into the group of learners with special educational needs also contribute to this situation. A gifted learner as an exceptional individual has many specific educational needs which are highly individualized due to his/her personality. The individual characteristics of gifted learners and their specific educational needs are elaborated in the works of following authors: B. Clark (1992), F. J. Möns (1993), J. J. Gallagher & S.A. Gallagher (1994), J. VanTassel-Baska (2000), E. Winner (1996), R. Manstetten (1995), V. Dočkal (2005), J. Laznibatová (2012), J. Duchovičová (2007), V. Dočkal, J. Duchovičová, (2017), J. Jurášková (2006), Portešová, S. (2011), L. Silverman (1993) and others.

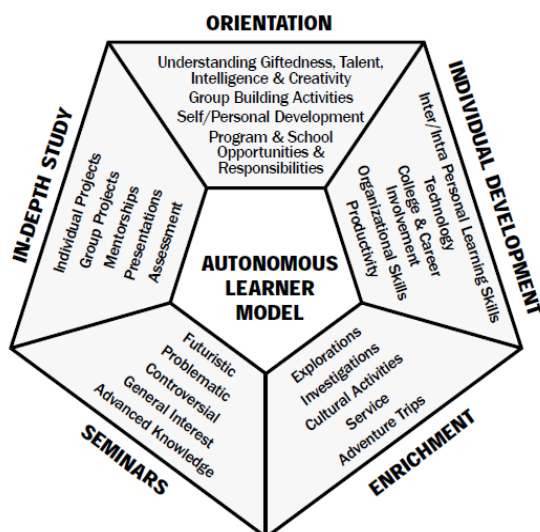
Giftedness is necessarily seen as personal capital and internal potential but in the societal view also as social capital, as a production tool, something in which to invest (Směkal 2012). This awareness develops very slowly while the usual attitude is to consider the support of giftedness as useless elitism.

The eight-year grammar schools could be considered as a kind of external differentiation of learners as there is an option to choose a more demanding type of school than the second level of elementary school. A detailed view of the education of gifted learners is elaborated by K. A. Heller (2002). A relatively early selection of learners is a controversial issue and subject to the OECD disputation. The lack of research and studies that would address this type of school in terms of monitoring and education of academically talented learners suggests that our research field has been minimally analyzed to date. The accepted view of the eight-year grammar schools is that whoever enrolls in this type of school is considered to be an over average prosperous and successful learner in terms of achieved learning outcomes. He/she presents with excellent results and high performance which stems from the high level of internal motivation in a subject. By combining these characteristics a learner excels in one or more school subjects as compared to his/her peers. To repeat – our goal is to verify the educational project regarding academically talented learners at eight-year grammar schools. The intention of this project is also to contribute to the development of academically gifted learners in the field of creativity and positive self-evaluation. We have drawn from the multidimensional models of talents based on the characteristics of the structure of a talent which is determined both by internal (biological and psychological) and external – environmental elements (Duchovičová, J., Šabo, A., Babulicová, Z., 2009). In these models IQ is not the only critical criterion but in the intersection of multiple components namely: intelligence, creativity, motivation, non-intellectual factors such as personality (enthusiasm, personality strength, willingness to sacrifice short-term satisfaction to meet long-term goals), emotionality, self-concept and psychomotor area, sensory area, imagination, family, school, peer groups, critical events, happiness factor, opportunity (random events that trigger changes in the direction of an individual).

A key resource for structuring the proposed model by us was the ALM model for an autonomous learner appropriate for ISCED 2 and 3. It is an educational model specifically developed for gifted learners. It starts from the term autonomous learner – a learner who solves problems by combining divergent and convergent thinking with minimal external leadership in selected areas of his or her studies.

According to ALM the principles of optimizing the abilities of gifted learners should include objectives aimed at: support of

self-image and self-assessment; understanding of one's own abilities in the context of society; development of effective interpersonal relationships; support to explore diverse areas; development of critical and creative thinking; support of decision making and problem solving; integration of activities that ease the emotional, social and physical development of a learner; development of individual areas of interest; development of responsibility for one's own learning and performance not only at school but primarily in life (Life-long Learners).



Picture 1: Autonomous Learner Model (1996 by Betts & Kercher)

ALM puts emphasis on the area of cognition, emotional development, social development and physical development. It develops five superior dimensions as given below.

1<sup>st</sup> dimension: Orientation - it is crucial for an autonomous learner to understand the gist of his/her abilities, to be able to work in a group and to develop cooperative competences, to focus on further education and a profession to prepare for lifelong learning and to understand everything necessary for the development of one's own individuality. It includes 4 areas:

- *Understanding the essence of a talent, intelligence, creativity (by learners, teachers and parents)* – it is realized by the method of studying and analyzing of biographies of important personalities in history and their mutual introduction (the method is called “Night of the Notables”).
- *Creation of active groups* - focuses learners on acquisition of group roles, group strategies and effective group activity.
- *Individual/personal development* – orientates learners in understanding of themselves, their own being, leads to self-respect and self-understanding, understanding of their abilities, strengths and weaknesses and the possibilities for their improvement.
- *The programme and the school, the possibilities and the duties* – it orientates learners in principles and in the essence of the model itself. It is based on a discussion so that students understand the direction and procedure of lifelong learning. It leads toward the improvement of mutual interaction of teacher and learner and their equal roles, to the involvement of the learner in the school community and to the creation of his/her own educational plan.

2<sup>nd</sup> dimension: Individual development – was designed to develop individual concepts, attitudes and discovering the possibilities of self-realization. It contains six areas:

- *Inter/intra personal development* – extends individual personal development.

- *Learning Skills* – focuses on the development of critical thinking, cognitive processes, creative thinking and problem solving.
- *Technologies* – focus on development of competencies to work with different technologies and their use in learning.
- *Further education and career* – involves learner's (student's) orientation in the choice of a study programme at the next level of education, choice of specific activities, finding options of work in the field of education. This is career planning and engagement in the field of interest.
- *Organizational skills* – learners learn various organizational methods and strive for personal life management (Life-Management).
- *Productivity* – relates to the mastery of personal potential for the creation of diverse products (Producers of Knowledge).

3<sup>rd</sup> dimension: Enrichment – to enrich the content and to plan one's own differentiation in content, process and product. It includes the writing of one's own study plan and it is the essence of autonomous learning. It contains 5 specific areas:

- *Research* – means short-term or ongoing investigations in different areas. Parents, grandparents, a home library and others may be of help.
- *Survey* – has a wider dimension than exploration and leads to acquisition of an in-depth analysis of problems. Students are led to independent planning and organizing of their own research.
- *Cultural activities* – an area developed to allow students to experience overlapping situations (learning in the museum, by playing games, reading poetry, etc.)
- *Service* – teaches learners to understand themselves and their relationships with the environment in a human context. The service includes various humanitarian activities in which to participate.
- *Adventurous Travelling* – includes three stages: road planning, participation and evaluation.

4<sup>th</sup> dimension: Seminars – contains topics that are interesting and attractive for students, focused on the development of critical and thoughtful thinking. Learners have the opportunity to demonstrate their skills, knowledge together in small groups. These focus on *futuristic themes, problem areas and problem teaching, controversial themes, progressive knowledge and the main interests of learners*. The two hour per day seminar is prepared by learners together with teachers for two weeks. Examples of topics: cognition of other cultures, parapsychology, mental disorders, women in history, conspiracies and theory, creativity, prosecution and trial process, etc.

5<sup>th</sup> dimension: Deepening study. As part of deepening study, learners process the following:

- *Individual or group projects* (maximum number of members in the group is 3). They can use *mentoring* – consultations with experts in a particular project area. If they have a problem to find a suitable counsellor, older students can mentor projects of younger ones. Short-term projects and in-depth analyses of problems *are presented* to the audience during the study and at the end of the study each student presents a two-year project.
- *Assessment* – students are led to objective self-assessment and evaluation of other projects, both the creative process and its final product.

Within the applied model we have prepared learners for a higher level of education and achievement at the high educational level intended for gifted learners. The significance is attributed to the model especially in the context of a learner's preparation for life, accepting oneself and his/her difference, seeking truth, friendship and the joy of seeking the unknown. Autonomous learner is in accordance to the model seen as:

- a learner developed in the area of attitudes and emotionality (self-confidence, self-acceptance, enthusiasm, acceptance by others, supported one, willingness to know and learn,

anticipating failure, having internal motivation, accepts others and looks for personal satisfaction).

- a learner developed in the area of *behaviour* (adequate social skills, independence, setting short-term and long-term goals, does not seek the consent of others, thinks creatively and critically pays increased attention to his/her interests, does not tolerate condemnation, flexible and persistent, produces knowledge, understands himself/herself – has own motives and accepts own personality).
- a learner with developed sociability that is assessed as successful in various areas, with anticipated success in the future, has positive relationships with classmates and has a positive impact on them, parents see him/her as a competent and responsible individual, accepted by adults and admired for his/her skills.

### 3 Research Problem

The aim of the research was to find possibilities and perspectives for the development of academic talent at eight-year grammar schools through the projection and application of an educational programme for academically talented learners based on the above analyzed Model of the Autonomous Learner (ALM). This was modified (Sophia Project) according to the school curriculum of the chosen eight-year grammar school. The main subject of the research was to verify the possibilities and perspectives of the development of academic talent at the eight-year grammar schools where we actually considered the development of an adequate upbringing and education programme for these learners as a starting point. We believe that one of the conditions for securing the complex development of the personality of these academically gifted learners is the projection and implementation of upbringing and an educational programme that respects the specific educational needs of the gifted. Within the stated aim we designed the SOPHIA Programme and verified its effectiveness on selected personality characteristics (*the areas of self-perception, creativity and social status*) of academically talented learners. In this study we present the results identifying the impact of the Sophia Programme on the level of the gifted learners' creativity.

*Research problem: The impact of the projected and implemented programme of upbringing of academically talented learners "SOPHIA" on the level of pupils' creativity?*

*The research problem solves the causal relationships of the operational variables which are: the level of divergent thinking, the creative solution of problems, the level of fluency, originality and flexibility in the area of figural creativity.*

*Hypothesis. In our process of programme verification we assumed that the Project of upbringing and education of academically gifted learners at eight-year grammar schools has a positive impact on the level of learners' creativity.*

*In regard to the operationalized constructs of the concept of creativity we have decided in the design of the research to verify the following partial hypotheses:*

- H1 We assume that the applied Sophia Programme has a positive influence on the level of divergent thinking of learners.
- H2 We assume that the applied Sophia Programme has a positive influence on the level of creative solution of learners' problems.
- H3 We assume that the applied Sophia Programme has a positive influence on the level of figural fluency of learners.
- H4 We assume that the applied Sophia Programme has a positive influence on the level of figural originality of learners.
- H5 We assume that the applied Sophia Programme has a positive influence on learners' figural flexibility.

*Sample Selection:* We conducted the research probe at an eight-year grammar school in the region of Banská Bystrica. The selection of this grammar school affected the fulfilment of the condition that the grammar school does not provide segregated or integrated education of generally intellectually talented learners (nor did it happen in the past). The second condition was a reasonable material choice and realistic time frame for implementation of the experimental project. Within the project we worked with class 3 o. g. (13-14 years). A sample selection

was available. From the basic research sample of 27 learners, 11 academically gifted research subjects were discovered in the programme through the learners' autonomous questionnaires and nominee questionnaires completed by teachers.

*Research Methods:* To obtain the research data we used the *quasi-experiment*. This kind of experimental verification was chosen due to the absent option to ensure random selection of the research subjects (since the individual learners were purposely selected/identified) and due to the absence of a control group. Through the quasi-experiment (to be called simply "experiment" from this point onward), we verified the elaborated project of education and upbringing of academically gifted learners at eight-year grammar schools. The project was oriented towards the development of the following areas as they related to the learner's talent:

- creativity - a battery of different tasks and activities aimed at facilitating creativity,
- self-perception - using activities, worksheets and subsequent discussions on various topics,
- social status - through interviews with gifted learners, exploring relationships within the group, using pair and group work.

In the pre-test and post-test of the experimental group in relation to the identification of the defined constructs of constructive thinking we used the following *Test Methods*: test for creative solution of problems, test for divergent thinking, test for figural creativity and the test for creative personality. The time period for conducting the research probe lasted approximately 6 to 7 months. Responsible consideration of all factors led us to the decision to project and plan a SOPHIA Programme on four basic dimensions of the Autonomous Learner Model: 1. *orientation dimension*, 2. *individual development dimension*, 3. *enrichment dimension*, 4. *seminars dimension*. A detailed description of the Sophia Programme's activities can be found in the publication by A. Sabo (2011). Statistical analysis was processed in the WinStat programme through a Student Pair Test (t-test for correlated files) groups of subjects of academically gifted learners (pre-test and post-test) and the Pearson Correlation Analysis (simple Pearson's correlation) through which we examined the correlations of the experimental group data outcomes of the post-test and pre-test.

### 4 Research Results

The impact of the verified Sophia Programme on the creativity of academically gifted learners has been evaluated using these factors: *level of divergent thinking, creative solution of problems, fluency level, originality and flexibility in the area of figural creativity*. The measured score in relevant tests has testified to the qualitative changes in the creativity of the subjects in the respective area, these changes in the test have obtained a quantity character. We statistically processed the data gathered from the figural creativity test, the divergent thinking test, the creative problem solving test, and the creative personality test in the pre-test and post-test of the experiment. We assumed that the *project of upbringing and education of academically talented learners at eight-year grammar schools has a positive impact on the level of learners' creativity. We proceeded from the assumption that in the post-test results of the surveyed group it would be possible to follow a significant (at the level of 5%) positive shift in creativity compared to the pre-test results of this group.*

Therefore, we have verified the individual partial hypotheses H1 to H5 in order to confirm the complex main hypothesis.

#### *The partial H1 hypothesis*

Here we assumed that the applied Sophia Programme has a positive influence on the level of divergent thinking of learners; thus, there will be a significant difference between the results of the pre-test and the post-test of the group of examined learners in the area of divergent thinking.

Table 1 T-test of Results of the Divergent Thinking Test

Variables:	Pre-test	Post-test		
	N		Mean Difference	Standard Deviation
	11		-0,136363636	0,067419986
	T		Degree of Freedom	P
	-6,70820393		10	5,31018E-05

As from applied statistical methods it can be claimed that the partial hypothesis H1 has been confirmed. It is true then that Sophia Programme has a positive impact on the level of divergent thinking of learners and by its application can be facilitated to provide the development of divergent thinking of gifted learners.

Table 2 Correlation Analysis of Divergent Thinking Test

Pre-test	Pre-test	Post-test
Correlation Coefficient	1	0,804469
	11	11
One-way Significance	0	0,001415
Post-test		
Correlation Coefficient	0,804469	1
	11	11
One-way Significance	0,001415	0
Cronbach's Alpha	0,886878	

#### Partial Hypothesis H2

In this hypothesis we assumed that the applied Sophia Programme had a positive impact on the level of creative solving of learners' problems, meaning that there would be a significant difference between the results of the pre-test and the post-test of the group of surveyed learners in the area of creative problem solving.

Table 3 T-test of Results of the Creative Solution of Problems

Variables:	Pre-test	Post-test		
	N		Mean Difference	Standard Deviation
	11		-0,236363636	0,102691064
	T		Degree of Freedom	P
	-7,63386285		10	1,77059E-05

Table 4 Correlation Analysis of Test for Creative Solution of Problems

Pre-test	Pre-test	Post-test
Correlation Coefficient	1	0,773895
	11	11
One-way Significance	0	0,002594
Post-test		
Correlation Coefficient	0,773895	1
	11	11
One-way Significance	0,002594	0
Cronbach's Alpha	0,868182	

Based on t-test and correlation analysis results it can be claimed that partial hypothesis H2 has been confirmed. It is true that the Sophia Programme has a positive impact on the level of creative solving of learners' problems and by its application can be facilitated the ability of gifted learners to creatively solve problems.

#### Partial Hypothesis H3

We assumed that the applied Sophia Programme has a positive effect on the learners' figural fluency, meaning that there would

be a significant difference between the results of the pre-test and the post-test of the learners in the field of figural fluency.

Table 5 T-test of Results of the Figural Creativity Test -Fluency

Variables:	Pre-test	Post-test		
	N		Mean Difference	Standard Deviation
	11		-0,2636364	0,191168655
	T		Degree of Freedom	P
	-4,57388216		10	0,00102016

Based on t-test and correlation analysis results it can be claimed that the partial hypothesis H3 has been confirmed. It is true that the Sophia Programme has a positive impact on learners' figural fluency levels. Its application at the eight-year grammar schools can foster the fluency in figural creativity for gifted learners.

Table 6 Correlation Analysis of Test for Figural Creativity – Fluency

Pre-test	Pre-test	Post-test
Correlation Coefficient	1	0,962080762
	11	11
One-way Significance	0	1,11559E-06
Post-test		
Correlation Coefficient	0,962080762	1
	11	11
One-way Significance	1,11559E-06	0
Cronbach's Alpha	0,979781723	

#### Partial Hypothesis H4

In connection to this hypothesis we assumed that the applied Sophia Programme had a positive effect on the level of figural originality of the learners and that the difference between the results of the pre-test and the post-test of the surveyed group of learners in the area of figurative creativity originality would be significant.

Table 7 T-test of Results of the Figural Creativity Test - Originality

Variables:	Pre-test	Post-test		
	N		Mean Difference	Standard Deviation
	11		-0,178181818	0,116517654
	T		Degree of Freedom	P
	-5,0718687		10	0,000483504

Table 8 Correlation Analysis of Test for Figural Creativity – Originality

Pre-test	Pre-test	Post-test
Correlation Coefficient	1	0,802565625
	11	11
One-way Significance	0	0,001473261
Post-test		
Correlation Coefficient	0,802565625	1
	11	11
One-way Significance	0,001473261	0
Cronbach's Alpha	0,855673889	

Based on the t-test and the correlation analysis results it could be claimed that the partial hypothesis H4 has been confirmed, therefore, the Sophia programme has a positive impact on the level of figural originality of learners and its application at eight-year grammar schools can support originality in the field of figural creativity among gifted learners.

### Partial Hypothesis H5

We assumed that the applied Sophia Programme has a positive impact on learners' figural flexibility and that the difference between the pre-test and post-test results of the group of surveyed learners in the field of figural creativity flexibility would be significant.

Table 9 T-test Results of the Figural Creativity Test - Flexibility

Variables:	Pre-test	Post-test	
N			
	11		
		Mean Difference	Standard Deviation
		-0,09181818	0,068675786
T		Degree of Freedom	P
		10	0,001265717
	-4,434262409		

Table 10 Correlation Analysis of Test for Figural Creativity – Flexibility

Pre-test	Pre-test	Post-test
Correlation Coefficient	1	0,859149758
	11	11
One-way Significance	0	0,000351422
Post-test		
Correlation Coefficient	0,859149758	1
	11	11
One-way Significance	0,000351422	0
Cronbach's Alpha	0,91310465	

Judging from t-test and the correlation analysis results it can be claimed that the partial hypothesis H5 has been confirmed. It is true that the Sophia programme has a positive impact on learners' figural flexibility, thus by applying an experimental project concerning the education of academically talented learners at eight-year grammar schools it is possible to support flexibility in the field of figural creativity of gifted learners.

We used the Creative Personality Test as a supplementary method. It focused on diagnosing the personality of subjects in relation to the potential of creative production. Gathered results indicate a high level of significance at 1%.

Table 11 T-test of Results of Creative Personality Test

Variables:	Pre-test	Post-test	
N			
	11		
		Mean Difference	Standard Deviation
		-0,552727273	0,240544836
T		Degree of Freedom	P
		10	1,79665E-05
	-7,62099		

From the t-test and the correlation analysis results we found out that the application of the Sophia Programme in the education of academically gifted learners at eight-year grammar schools can support the development of the personality of academically gifted learners in the area of creative production.

Table 12 Correlation Analysis of Creative Personality Test

Pre-test	Pre-test	Post-test
Correlation Coefficient	1	0,919411
	11	11
One-way Significance	0	3,12E-05
Post-test		
Correlation Coefficient	0,919411	1
	11	11
One-way Significance	3,12E-05	0
Cronbach's Alpha	0,947835	

In conclusion it can be stated that the hypothesis regarding the positive change in the field of creativity of the subjects of the experimental group due to the influence of the Sophia programme was confirmed through all partial hypotheses.

## 5 Conclusions and Discussion

The statistical analysis of the pre-test and post-test results of the group of academically gifted learners who were involved in the quasi-experiment clearly proves that all partial hypotheses were confirmed, therefore, we allow ourselves to state that the SOPHIA Project can be primarily applied in didactic work with academically talented learners at eight-year grammar schools. The project in line with the research assumptions facilitates positive changes in the field of creativity for academically talented learners and that in all studied areas included: level of divergent thinking, creative solution of problems, level of fluency, originality and flexibility in figural creativity area. We assume that the suitability in the choice of this project is gaining importance in connection to the development of gifted learners who are otherwise marginalized in groups, possibly classes and thus it contributes to the sustainability of the programme in the education of gifted learners.

On the basis of the results we recommend that teachers as well as parents of talented learners pay attention to all of the elements of a gifted personality. Facilitating activities should encompass the dimension of orientation which includes understanding the essence of a talent, intelligence and creativity, the support of learners' ability to collaborate effectively in a group through group strategies, roles in the group and processes within, the focus on gifted learners and their own concepts, self-confidence, understanding of self-excellence, one's own talent as well as weaknesses, options to develop and use one's own talents after studies. Understanding of one's own self leads gifted learners to better develop their abilities and potential. Within this dimension we recommend finding ways to involve talented people in the life of the school and the society in which they live with a subsequent evaluation by teachers and the school community. The creation of opportunities and activities for a thorough understanding of the programme and its goals as a starting point for acquisition of strategies of lifelong education and learning. Scrupulously make the parents, teachers, leaders and learners themselves aware of the phenomenon of a talent, its nature and the possibilities for its development. To broaden the concept of one's self, self-confidence, self-respect and ability to work effectively with others through activities and communication with talented people. (in addition to the lectures we used "The Official Logo of Gifted Students Group", Activity "I Am ..." Worksheet of multiple intelligence, Profiling sheet of multiple intelligence, Self Profile creation activity, discussion and essay writing for questions: What do you perceive when you hear the term intelligence? How does an intelligent person manifest? Do you think intelligence is the same as wisdom? Who do you think is intelligent? Search for information within different sources about the relationship between intelligence and personality.

We also recommend facilitating individual development and learning abilities especially through the inclusion of learning taxonomies (Anderson & Krathwohl 2001) for the development

of cognitive processes and different types of thinking. Place emphasis on the implementation of creative and critical thinking strategies and problem solving learning, the use of technology in learning and gathering the information (planning of future steps in relation to further studies or career after the end of studies, the development of organizational skills by incorporating methods of organizing the day, week, month, year, supporting productivity for example by creating projects, classroom or school magazines etc.) The dimension of the model is primarily devoted to furthering the personality development of a learner; therefore, we recommend the inclusion of an activity for the development of self-knowing, self-confidence and construction of a positive self-image. The dimension of the model is primarily devoted to further personality development of the learner, so we recommend the inclusion of activity for the development of self-knowing, self-confidence, construction of a positive self image. For the enrichment dimension we recommend short- and long-term research (For example: what are the three most favourite books of a librarian in the library? Read them), inquiry with the provision of entrance instructions, the inclusion of cultural activities such as visits to museum, theatres, excursions and other events organized by learners as well as the involvement of learners in various services for society e.g. collecting garbage in the park, collecting food or clothing for the poor, spending time in a retirement home, and similar activities. This activity enables the learner to understand himself/herself and others in the context of society as well as learn about humanism and its impact on society. This enrichment can also include adventure travel: activities should include finding answers to questions such as: Why travel there? How to get there? What do we want to learn there? How much money do we need? The dimension of enrichment is not only reduced to enriching the curriculum for gifted learners but also to enrich the emotional and social component of personality, activities developing aesthetic feeling, creative approach and cultural identity.

Within the next dimension we recommend planning and organizing seminars on topics based on learners' interests, including futuristic, problematic, controversial themes related to the general interests of the group and knowledge. Seminars are designed for gifted learners to demonstrate their ability to learn and work in a group. The dimension of seminars ensures not only the development of the area of interest of the learner but also offers possibilities for confrontation with other learners, possibilities for argumentation, logical reasoning etc. It also includes the development of the organization of time and place of the seminar. This dimension plays an important role in the process of transformation of learners into autonomous learners, gaining feedback in relation to one's own strengths and weaknesses, elements of peer learning and peer presentation evaluation appear. In the context of deepening the study we recommend the implementation of individual and group projects, to motivate learners to work with a mentor and create space for presenting the results of their own projects related to the evaluation and self-evaluation of their own autonomy. (Responding to the main project question: Am I autonomous? Was I able to plan, participate, complete and evaluate the project? Assessment of the learning process and the product are integral components of learning through an autonomous learner model. From the evaluation of the Sophia Programme by the learners included in the project we selected the following comments: "It's good, I've learnt a lot about things I did not know about." Message for the author of the project: "A good idea, it will help many people to find out more about themselves". The project helped me "to find out what I did not know about myself".

Personal experience of implementing the programme leads us to the conclusion that the fundamental principle of designing every modern project of education and teaching talented learners must include the multiple facilitation of the emotional and social component of the personality.

## 6 Conclusion

The results of empirical research prove that the Project SOPHIA as an experimental project regarding the upbringing of children and education of academically gifted learners at eight-year grammar schools can be considered as one of the ways of developing academic talent in this type of school and the tool for the sustainability of gifted learner education within the Slovak educational system. Its primary focus on the creative, social and emotional area of gifted learners is considered as very beneficial. We also place this fact among the significant benefits of this project. The focus of the project on the emotional and social spheres of the personality of academically gifted learners also degrades a certain degree of egoism by society in relation to these gifted individuals. A disproportionately high preference for learning performance often indicates insufficient development of the emotional, social and creative components of the personality of talented individuals. Among these learners this deficit is at the expense of the development of dominant personality development.

We believe that today's society has resources in the form of a variety of programmes to develop emotionality and social side of the gifted people for who we can provide adequate options to survive his/her life as a full member of human society.

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**Primary Paper Section: A**

**Secondary Paper Section: AM**



## THE CONTEXT OF COOPERATION BETWEEN SCHOOL AND FAMILY OF PUPILS WITH ADHD AND ADD AT COMMON PRIMARY SCHOOLS.

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**Abstract:** The aim of our article is to deal with specific aspects of cooperation between school and family of pupils with ADHD and ADD. The article presents the analysis of conditions which influence the quality and intensity of this cooperation. The answers and opinions of parents, teachers and other specialists belong to the most significant results of our research. They describe the level of cooperation between family and common primary school.

**Keywords:** a pupil with ADHD and ADD, cooperation between family and school, attention deficit.

### 1 Introduction

Children with the Attention Deficit and Hyperactivity Disorder are usually considered to be restless or unconcentrated at school. They often have intensive reactions or fast changes in mood. Excessive activity is a typical expression of their natural character.

However, there are several problems mainly in the area of education which should be solved in such a way that these children with ADHD would be able to use their auto-regulative mechanisms in order to be included in the society. It is very important to recognize the attention deficit in its early phases not only in the education but also in the learning process. The cooperation between family and school is not always easy. In this process we should take into consideration the healthy and individual development of children (with ADHD) so that we could help them in the area of education and instruction as soon as possible.

The main aim of our research was the analysis of conditions and factors which have an impact on the quality and intensity of this cooperation between school and family of children with ADHD and ADD. After the research we designed a model of cooperation between family and school and we identified the most significant factors.

Another objective of our research was the formulation of main categories which include particular factors and conditions. We focused on specific groups of people - parents and specialised employees of school. We included there teachers, special pedagogues, headmasters, psychologists and assistants of teachers. Based on our experience in the given area, we would like to suggest suitable practical recommendations to improve this cooperation between school and family of pupils with ADHD and ADD.

In order to fulfil our aim, we had to achieve several partial aims. These were the following ones:

- to examine the atmosphere at schools. We talked with the specialists dealing with children with ADHD and ADD. It is very important to know their attitudes to these children and their parents,
- to find out the attitudes of parents of pupils with ADHD and ADD to teachers and other specialists who provide help not only to their children, but also to them,
- to compare the opinions of parents, teachers and other experts about this cooperation between school and family,
- to study specific aspects of this cooperation between school and family of pupils with the attention deficit,
- to analyse conditions influencing the quality and intensity of the cooperation between school and family at common primary schools.

After defining our aims, we wanted to get answers to these research questions:

- How does the atmosphere at school influence the attitudes of teachers and other specialists to pupils with ADHD and ADD and their parents?
- Which attitudes do parents of these children have to teachers and other specialists?
- What do parents, teachers and other specialists think about this cooperation between school and family?
- How do they evaluate the level of cooperation when taking into consideration all specific features of pupils with ADHD and ADD?
- Which ones are the preferred forms of cooperation between school and family of children with the attention deficit at common primary schools from the point of view of parents, teachers and other specialists?

Answers to these research questions helped us to formulate our own opinion, and we were able to agree or disagree with other studies about the cooperation between family and school. Many authors, such as A.R. Barkley (2005), C.L. Bradbury – M. Thompson (2016), E.M. Cantwell (2012), D. Grant (2017), N. Hernandez (2005), A.K. Langley (2004), M. Mandella (2009), B.L. Corbett – N. Glidden (2000), J. Heller (1999), J.F. Taylor (2012), S. Young (2017), G. Kewley (2011), E. Chovancová (2016), P. Verhaeghe (2011) think that one of the most important factors of successful cooperation between family and school is the amount of time spent with children with the attention deficit and hyperactivity disorder. They all agree that effective cooperation is based on the relationship and mutual help not only between parents and teachers, but also on the help of other specialists who have a lot of experience in this problematic area and they deal with these disorders in their professional practice.

### 2 Research and research methods

We adapted the choice of research methods to our research aims and questions. Based on the analysis of conditions of cooperation between family and school and our personal experience, we focused on the qualitative analysis. We used the method of semi-structured interviews in order to collect the research data because we consider this method to be the most suitable one for this purpose.

We divided the process of our research into the following steps:

- preparation of methodological tools and semi-structured interviews (creation of questions),
- selection of the research sample (usage of available selection),
- realization of the research: collecting of data, recording of interviews, transcription of records and subsequent analysis of results,
- formal processing of obtained data, design of the model of cooperation between family and school, formulation of categories and subcategories,
- interpretation of obtained data, publication of research results, final summary, theoretical and practical recommendations.

We used semi-structured interviews to collect the research data. In order to process our results that we had obtained by means of the qualitative method of interviews, we applied the grounded theory approach by A. Strauss – J. Corbin (1999) whose principles enable us to formulate theories based on the empirical point of view.

The free coding method helped us to design a model of cooperation according to the obtained data during their interpretation. We divided the statements from the interviews into several categories and, subsequently, we formulated their subcategories. We designed a model consisting of four areas based on the categories that we had selected from the obtained

statements of parents, teachers and other specialists. These particular areas emphasize the factors which our respondents think to be the most important ones when dealing with problems of children with the attention deficit.

We used the free coding method from the grounded theory approach in our analysis of the obtained data. Subsequently, we compared the statements within one category (interviews with parents) or within two categories (parents - teachers). Free coding is an analytical process consisting of defined concepts (categories) in terms of their dimension and qualities. The basic analytical processes include asking questions, comparing similarities and differences in particular cases, sharing of experience, etc. The aim of asking questions in the free coding method is to consider all possible categories (subcategories and their division), their aspects, dimensions and different points of view. For example, we used these types of questions: "Who?", "When?", "How?", "How many?", "How long?", "Why?".

In order to name these categories, we used the statements from the interviews which helped us to define the required concepts when we were designing the model of cooperation. We added specific meanings to the given concepts which were related to the experience with the cooperation between school and family of children with ADHD and ADD.

When taking into consideration our research aims and questions, we focused our attention on such people who are in a daily contact with children with ADHD and ADD, and they accompany them during their childhood. Our research sample consisted of parents and specialised employees of schools. Teachers working with integrated pupils with the attention disorder represented one group in our research sample. The other groups of specialised employees were formed by special pedagogues, psychologists, educational consultants, pedagogical assistants and school headmasters. The special pedagogues and psychologists worked not only at school, but also in the centres of pedagogical - psychological consulting and prevention.

We carried out our research at these common primary schools and centres of pedagogical-psychological consulting and prevention in Levice:

- Primary school of Andrej Kmeť, Ul. M.R. Štefánika 34, Levice
- Primary school, Ul. sv. Michala 42, Levice
- Primary school, Pri Podlužianke 6, Levice
- Primary school, Saratovská ul. 43, Levice
- Primary school, Saratovská ul. 85, Levice
- Centre of pedagogical-psychological consulting and prevention in Mierová ul, Levice
- Private Centre of special-pedagogical psychology, J. Švermu 2262/8 in Levice.

### 3 Research results

We were able to fulfil our aims and we tried to design a model of cooperation between family and school. We based our categories on the data acquired from the interviews.

The qualitative analysis of our research and interviews with the respondents emphasized 5 key categories. These are the following ones:

- a) the area of communication: communication between parents and teachers, communication with pupils, communication of other specialists with parents, teachers and pupils with ADHD and ADD. Communication is a very significant area and we consider it to be the key area in the cooperation between school and family of pupils with ADHD and ADD. As an example, we can mention the way of informing parents about the behaviour and studying results of their child by the school. Reactions of parents confirm our statement:

*"... The teacher's way of communication has a strong impact on me and my son. According to her behaviour we know if she is willing to help us with the given problem or not..."*

*"In my opinion, communication is very important. Who can we speak with if we do not have a chance to speak with the teachers? They inform us about other specialists, too"*

These statements point out at the real situation in the cooperation between parents and the institution of school.

- b) the area of personal qualities: teachers, assistants of teachers, special pedagogues and school psychologists show their personal qualities at their work. There are present many factors which are influenced by personal qualities and characteristic features of particular participants in this cooperation. The ability to achieve a compromise is a crucial requirement in this area. We mention several statements from the interviews with parents:

*"... In our cooperation there is reflected the way teachers deal with us. For us, the teachers of our child represent the most significant people at school. And their personality, behaviour and the way of dealing with us are very important as well..."*

We mention also an example from the interviews with teachers:

*"... reactions of parents influence this cooperation in a significant way. They have an impact on our attitudes and the way of dealing with them..."*

*"... I cannot force the parents to cooperate with me. This is mainly about their personalities, their personal motivation to make a progress with their child and their willingness to solve the given problems..."*

Based on these statements, it is evident that personal qualities of parents, teachers and other specialists represent a very important factor in this cooperation between family and school. This fact was confirmed by the research we carried out and also by the statements we mentioned above.

- c) the area of working with children: the area of (un)concern for children with the attention deficit where this cooperation between parents, teachers and other specialists is very important. In this area we will mention mainly the answers of teachers and special pedagogues who emphasize the importance of working with these children:

*"We provide parents with contacts to special pedagogues and psychologists. At the same time, we try to find the best solutions for their child..."*

*"I am a special pedagogue and when I start working with children with ADHD and ADD, I am interested in all the primary and secondary factors. Then I determine the aims and options that could be useful for these children and their families during the education and learning process."*

The concern for these children is a significant category because it influences the attitude of other people to them. Children cannot make a progress on their own.

- d) the area of re-education or therapy: the way of providing help, early diagnostics of the attention deficit and hyperactivity disorder, and early intervention that takes into consideration all the needs of the given child.

We mention several examples from the interviews with special pedagogues who talk directly about the re-education of children with ADHD and ADD:

*"I am a special pedagogue and I have to wait for the diagnostics elaborated by the neurologist who will confirm or reject the diagnosis of ADHD and ADD. I also need the diagnostics from the psychologists and all the available information about the*

given child from the teachers. Then I am able to determine specific ways of working with this child..."

"I consult all the therapeutic ways of working with these children with their class teachers, parents or other specialists..."

"We consult all possible ways of helping to these children with other participants in this cooperation - with the class teachers, the school psychologist, and their parents. They know their children the best..."

All these statements confirm not only the importance of re-education and therapy for children with ADHD and ADD, but also the possible cooperation between parents, school and other specialists who look at this problematic area in a more professional way.

- e) conditions at school and in family which influence the quality and intensity of their cooperation: here we included such conditions that appeared in particular interviews and do not belong to the previous categories. The following examples from the interviews with parents point out at these conditions:

"Our confidence to the teachers depends on their way of communication with us ..."

"... if we talk about the confidence, the teachers really try to explain us the problems of our child and they want to find a suitable way of solving the given problem or unpleasant situation. They even recommended us to speak with a special pedagogue..."

We also refer to the statements of teachers who are cooperative partners for the family:

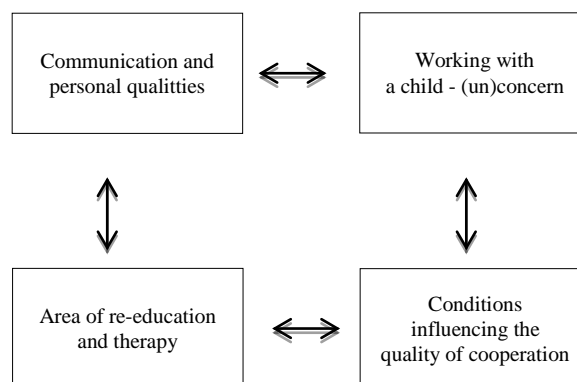
"I try to create the atmosphere of confidence in a friendly way. I try to help the given family as much as I can. Of course, I do not let them exploit me. Each of us should know our own possibilities and limitations. According to me, good cooperation is successful."

"... I think that teachers do not have problems to have a good relationship with the family of pupils or with other specialists. I suppose that teachers have something in their personality that automatically earns respect of other people. This attitude creates the right atmosphere that enables them to work with children with the attention deficit and hyperactivity disorder and their parents."

All the mentioned statements confirm the importance of all participants in the cooperation between school and family of children with ADHD and ADD. Without their good relationship they cannot cooperate effectively so that they could help these children to become successful.

Model of cooperation between school and family of pupils with ADHD and ADD:

1. Communication and personal qualities
2. Working with a child - (un)concern
3. Area of re-education and therapy
4. Conditions influencing the quality of cooperation



We interpreted the obtained results according to the aforementioned statements and we divided interviews into two categories. The first category consisted of parents of children with ADHD and ADD. The second category included teachers and other specialists who are with these pupils in a daily contact. The results can be divided into two parts - "school from the point of view of parents". For them, the most significant factors in this cooperation are the following ones:

- personal maturity and professionalism of teachers,
- relationship of the class teacher to parents of pupils with ADHD and ADD,
- regular active meetings of teachers and parents,
- teachers should be initiators of successful cooperation,
- teachers should focus on positive qualities of these children.

These mentioned aspects were the most frequent ones in the interviews with parents. They influence the cooperation between school and family of pupils with ADHD and ADD in a significant way.

These factors can be compared to the data from the interviews with teachers and other specialists. They stated the following aspects influencing this cooperation:

- all participants in this cooperation should be willing to communicate,
- personal qualities of particular members in the cooperation,
- willingness of parents to help them,

We would also like to emphasize the research findings from the interviews with the headmasters of schools. From their point of view, the following aspects are the most decisive ones in this cooperation between school and family of pupils with ADHD and ADD:

- headmasters as consultants should be informed about the ways of solving the given problems,
- controlling and concern for employees of school (teachers, special pedagogues, etc.),
- impartiality and objectiveness,
- school activities

Our research confirms that this cooperation is gradually improving and all participants are more willing and interested in solving problems of children with the attention and hyperactivity disorder.

These children need to be praised also during the course of any specific activity and not only at its end. After our qualitative analysis we can offer several recommendations for successful and effective cooperation.

#### 4 Conclusion

Our recommendations for pedagogical theory and practice are based on the research findings from the interviews. Some of

these recommendations were directly expressed, or even required. We would like to specify the ways of helping to children with the attention disorder at school in the following recommendations:

- on the desk there should be placed only such objects the child needs at the moment,
- the child should be adequately motivated to participate not only at the beginning, but also during the course of particular activities,
- the teachers can achieve adequate concentration of the child with ADHD and ADD when they gradually explain and repeat the instructions,
- the learning style of children is mainly visual and, therefore it is important to choose suitable teaching aids, e.g. to show them instructions, or to motivate them after fulfilling the given tasks,
- short-term memory can be strengthened with frequent repeating or by means of dictionaries, manuals, pictures, tables, etc.

We named the most frequent measures which are required in providing help for these children with the attention deficit and hyperactivity disorder at school. We also offer recommendations for the family environment:

- frequent controlling of child's activities. The child does not have to know about this parental controlling. It is possible to do it in a playful way,
- visualization of activities for the child. We mentioned this fact in school activities but this can be useful also in doing homework. We will show all tasks to the child and we will cross them off the task list after doing them,
- it is important to have active breaks for relaxing and change the activities frequently,
- contradictory educational opinions between the parents of the child, or between teachers and parents are not suitable. They should be able to achieve a compromise for the best of the child,
- the child should not be excluded from the family chores and obligations. We recommend active participation of the child in the daily family life.

Our recommendations for school and family environment are based on the personal experience of parents, teachers, special pedagogues and psychologists from our interviews.

Supporting and creation of positive relationships between school and family represent a very important area of the educational practice. This mutual cooperation and its significance are even more important in the case of children with the attention deficit and hyperactivity disorder.

The aim of our research was to analyse factors which influence the cooperation between school and family of pupils with ADHD and ADD at primary schools. We focused on the specific aspects of this cooperation. Our intention was to design a model that will help us to identify the most significant factors. They can be further supported and developed in order to achieve more successful and effective cooperation. With our obtained results we would like to contribute to the improvement of pedagogical theory and practice. At the same time, we would like to help to reduce the labelling of these pupils as "problematic", "lazy" or "unconcentrated" pupils.

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#### Primary Paper Section: A

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## IDENTIFICATION OF LINKS BETWEEN SOURCES AND CONSEQUENCES OF WORK-RELATED STRESS

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**Abstract:** Workplace stress affects the quality of work, efficiency and effectiveness, relationships, physical and mental health of employees. The paper presents the results of a research aimed at identifying the links between the sources and the consequences of work-related stress. Data analysis on the sample of 208 respondents confirmed the existence of several statistically significant links between the sources and the consequences of stress. In general, the sources of stress are related to the experiencing of its consequences, such as perceived work overload, lack of concentration, feeling tired, sleep problems, postponing important tasks, loss of interest in work, mood swings, and physiological symptoms. The results support the necessity to eliminate the stress sources in the workplace, or to coach the employees to help them cope with stress, making the organization contribute to higher productivity and motivation.

**Keywords:** Stress, work-related stress, sources of work-related stress, consequences of work-related stress

### 1 Introduction

The concept of stress appears and has been given increased attention since the 1940s in connection to the Second World War and the problem of warfare neuroses (Grinker & Spiegel, 1945; Szabo et al., 2017). Stress situations characterized as extreme, critical, and often on the edge of life threatening, were defined by Selye (1936; 1950) at the outset of his research. Later, Selye (1956; 1976) shifted the concept of stress to a wider complex of situations that affect the organism. According to Atkinson et al. (1999), stress events are most often considered individually as being uncontrollable and unpredictable at the limit of human abilities. The stressfulness of the situation is the result of subjective perception. Individual assessments differ in assessing the degree at which a situation is stressful (Lazarus & Folkman, 1985). Work-related stress is a generic term that refers to work stimuli (stressors) that can lead to physical, psychological, or behavioral consequences that affect the health and well-being of an employee (Glazer & Liu, 2017).

### 2 Sources of work-related stress

Work-related stress is, according to Jain and Barta (2015), a reaction to extreme pressure that an individual is unable to handle for various reasons arising in the working environment. According to Greenberg, Baron (2008), and Cox (1993), work-related stress is such a state in which the employees perceive that the conditions and claims they face exceed the limits of their abilities and persistence to deal with them. According to Cox (1993), stress occurs particularly in situations characterized by low levels of control and support. Kożusznik, Rodriguez and Peiro (2015) add that what also contributes to stress are many aspects such as the organization's environment, policies, procedures and processes, remuneration methods, as well as employees themselves.

Stress situations that may occur in the work environment are characterized by Copper & Marshall (1978) on the basis of six areas of work-related stress, such as internal work environment, organization environment, social environment, career prospects, organizational culture, work and family life. Work-related stress is, according to Bonde (2008), one of the factors contributing to the mental suffering of employees.

Stress in the workplace, according to Michie (2002), is becoming common and its level is constantly changing. Siegrist

(2010) says poor working conditions, bad relationships and emotional sterility in the workplace, criticism and bullying, as well as sedentary work increasingly contribute to cardiovascular diseases. As stated by Dopkeen & DuBois (2014), stress in the workplace has a negative impact not only on individuals but also on the organization in the form of reduced labor productivity.

Bloisi et al. (2007) report the four main sources of work-related stress: working role, insufficient use of staff potential, responsibility for other workers, and inappropriate working conditions, while according to Oksanen & Ståhle (2013), the physical work environment has a great impact on welfare, creativity, attitudes and perceptions, but also interactions of individuals with others. The most common sources of stress are described by Michie (2002) as unclear job assignment, inappropriate working roles, strict and tight deadlines, relationships and conflicts in the workplace, poor organizational culture, the inability of personal development and career growth, and job insecurity. Another source of stress is the critical, demanding managers who do not support or who even bully their subordinates, thereby reducing the positive social dimension of work and good teamwork.

A suitable recommendation for addressing the issue of workplace stress sources is provided by Siegrist (2010), who claims that these findings together justify the need for further recognition and management of harmful stressors in the work environment. Organizations should look for ways to prevent them, or implement the policies and mechanisms to help employees deal with their stressful states.

### 3 Consequences of work-related stress

The consequences of work-related stress cannot be clearly separated from the stress sources. Contrarily, the consequences of stress alone can reinforce the effects of stress sources. A lot of stress causes anxiety, depression, aggression and bad mood, reduced immunity and fatigue. After a lot of stress, a certain amount of rest is needed, and that causes absenteeism of employees in the organization. The lack of stimulating stress prevents the development of personality and the activation of adaptation mechanisms (Kilby & Sherman, 2016). Chandola et al. (2010) describe short-term stress reactions such as: behavioral, affective and physiological, which can cause physiological or mental problems. Greenberg & Baron (2007) report three categories of stress consequences: psychological (fears, bad memory, frustration, chaos, panic), physiological (muscle tension, palpitations, vomiting, palm sweating), and behavioral or social (restlessness, sleep disorders, closure). Chandola et al. (2010) and Nieuwenhuijsen et al. (2010) agree on the claim that work-related stress leads to physical illness, psychological suffering and mental illness. Brun & Martel (2005) list the physiological consequences of stress in the workplace: migraines, sleep disorders, high blood pressure, increased cholesterol, cardiovascular diseases, dermatological problems, and gastrointestinal disorders. Psychological consequences are manifested by depression and anxiety, dissatisfaction, pessimism and frustration, aggression and low self-confidence. Behavioral consequences are manifested by absenteeism and lack of interest in work, isolation, conflicts and bad relationships, and frequent mood swings.

### 4 Research studies on work-related stress

Already in 1984, the Canadian Mental Health Association survey found that 56% of the respondents felt the penetration of work into private life. The respondents perceived the amount of time spent at work and the poor and irregular layout of work changes significantly negatively. These interventions of work in private life affect the whole family, responsibilities for the household and even the upbringing of children. Employees are also at odds with leisure activities and social life (Cox 1993).

In the research by Bhui et al. (2016), the authors focused on identifying the consequences of work-related stress as well as the individual, organizational and personal interventions used by staff to cope with stress. The qualitative research was conducted through interviews with 51 employees from public, private and non-governmental organizations. The employees considered especially unfavorable working conditions and management procedures to be the main and most common sources of stress. Other mentioned stressors were also the practices of managers, for example, unrealistic demands, lack of support and unfair treatment, lack of decision-making space, unfair remuneration for work done, lack of recognition, poorly assigned tasks, lack of transparency and communication. In order to reduce the causes and prevent work-related stress, the authors recommend, in particular, the improvement of management styles, providing sufficient time for performing work tasks, and sufficient physical activity.

In their 1997 research, Tice and Baumeister focused on the consequences of stress, where procrastination among students was examined in two longitudinal studies. The procrastinating students reported lower levels of stress and less illness than the non-procrastinating ones at the beginning of the semester, but they reported higher levels of stress and more illness later on towards the end. Also, they were overall more ill. The procrastinating students also received lower grades on all assignments. Procrastination therefore seems to represent a self-defeating behavior pattern marked by short-term benefits and long-term costs.

Hoboubi et al. (2017) used a sample of employees of an Iranian petrochemical company to conduct a research on the levels of job stress, job satisfaction, and productivity. According to the results, the levels of employees' perceived job stress and job satisfaction were moderate-high and moderate, and their productivity was evaluated as moderate. Although the relationship between job stress and productivity indices was not statistically significant, the positive correlation between job satisfaction and productivity indices was statistically significant. The productivity was significantly associated with shift schedule, role insufficiency, role ambiguity, and supervision.

According to Health and Safety Executive (2017), work-related stress, depression or anxiety continue to represent a significant ill health condition in the workforce of Great Britain. The occupations and industries reporting the highest rates of work-related stress, depression or anxiety remain in the health and public sectors of the economy. Workload, lack of managerial support, and organizational change are cited as the primary causes of stress.

The statistical data of Statistica (2017) describe the reasons for stress at work among employees in North America in 2017. Of the surveyed participants, 39% mentioned workload, 31% issues at work, 19% juggling work and personal life, and 6% mentioned lack of job security as a source of stress, and only 5% marked either none of the above or "not stressed".

The aim of the research by Fan et al. (2015) was to examine the impact of psychosocial stress at work and at home on anxiety and depression. In the sample of medically healthy, employed men and women (aged 30–60), serial regression analyses were used to determine the independent association of psychosocial stress at work and at home with depression symptoms and anxiety symptoms. Serial regression analyses in 129 subjects revealed that job insecurity and home stress were most strongly associated with depression and anxiety symptoms. Work and home stress were associated with anxiety and depression symptoms among both men and women. Based on these results, it could be concluded that both work and home stress should be considered in the studies evaluating anxiety and depression in working populations.

Moaz et al. (2016) examined the impact of job stress on job performance in the education sector, particularly the organizational role factors that cause stress (workload, role

ambiguity and role conflict). The research objective was to determine the impact of these organizational factors on the performance of employees in the education sector in the Sultanate of Oman. The results showed that workload has a statistically positive impact on job performance, while role conflict has a statistically negative impact on job performance. Role ambiguity did not significantly affect the job performance.

The presented findings on stress, its sources and consequences point to the necessity of multidimensional understanding of this issue and the interdisciplinary study of stress, including work-related stress in various contexts.

## 5 Research methodology

The aim of the research was to identify the links between the identified sources of work-related stress and its consequences.

The data needed for the analysis were obtained by means of an original questionnaire *Zdroje a dôsledky stresu/Stress Sources and Consequences (SS&C)*, which focuses on the study of two areas of work-related stress:

1. *Sources of stress*: Sufficient time to fulfill the work tasks. Friendly work environment. Conflicts in the workplace. Adequate working hours. Sufficiently evaluated work performance. Open communication with the superior. Time pressure. Fear of losing the job. Excessive control by the supervisor. Unambiguous definition of tasks. Tasks corresponding to the employee's abilities. Good working conditions.

2. *Consequences of stress*: Excessive workload. Insufficient concentration. Feeling tired. Symptoms of stress. Problems with sleep. Postponing important tasks. Loss of interest in work. Mood swings.

The research participants were to respond on the scale from 1 to 6 to what extent they agree with the given statement (1 = definitely no, 2 = no, 3 = rather no, 4 = rather yes, 5 = yes, and 6 = definitely yes).

The research sample consisted of 208 respondents, of whom 131 were men (63%) and 77 were women (37%) aged between 18 - 63 years, with an average age of 38.92 years,  $SD=10.917$ . By means of random sampling method, we collected data from the employees of three economic areas: Education (73 respondents, 35.1%), Aviation (65 respondents, 31.3%), and Bus transport (70 respondents, 33.7%). 44 managers (21.15%) and 164 employees (78.85%) participated in the research.

The data obtained were processed and interpreted using the Pearson correlation, Spearman correlation, Barlett's Test of Sphericity and Factor analysis of principal components and Varimax rotation with Kaiser normalization. The results were processed by the mathematical-statistical methods in SPSS 20.

## 6 Research results

Based on the Kaiser-Meyer-Olkin Measure of Sampling Adequacy – .805 and Barlett's Test of Sphericity – 1363; significance .000, Factor analysis of principal components and Varimax rotation with Kaiser normalization was applied to specify the internal factor structure of the methodology. Two factors were extracted to account for 46.8% variance (Table 1). These factors can be specified content-wise as follows:

- *Sources of work-related stress* – respondents who score higher in this factor perceive individual sources of work-related stress more negatively. They assess the insufficient time to fulfill the work tasks, unfriendly work environment, conflicts in the workplace, inadequate working hours, insufficiently evaluated work performance, unopen communication with the superior, time pressure, fear of losing the job, excessive control by the supervisor, ambiguous definition of tasks, tasks not corresponding to

the employee's abilities, and bad working conditions more negatively. Cronbach's alpha: .818.

- *Consequences of work-related stress* – respondents who score higher in this factor perceive individual consequences of work-related stress more negatively. They perceive excessive workload, insufficient concentration, feelings of tiredness, muscle tension, palpitations, palm sweating, sleep problems, postponing important tasks, loss of interest in work, and mood swings. Cronbach's alpha: .822.

Table 1 Factor analysis of principal components of the SS&C methodology

	<i>Factors</i>	
	<i>Consequences of work-related stress</i>	<i>Sources of work-related stress</i>
Insufficient time to fulfill the work tasks		.459
Unfriendly work environment		.745
Inadequate working hours		.611
Insufficiently evaluated work performance		.672
Unopen communication with the superior		.531
Ambiguous definition of tasks		.653
Tasks not corresponding to the employee's abilities		.650
Bad working conditions		.785
Perceived excessive workload	.726	
Insufficient concentration	.646	
Feeling tired	.800	
Muscle tension, palpitations, palm sweating	.700	
Sleep problems	.473	
Postponing important tasks	.629	
Loss of interest in work	.487	
Mood swings	.687	
<i>Eigenvalues</i>	3.821	3.674
<i>Variance explained</i>	23.884	22.961

The Pearson correlation coefficient was calculated based on the Skewness and Kurtosis values, which confirmed the normal distribution of data for these indices, to verify the links between the aggregate index of work-related stress sources and the aggregate index of work-related stress consequences. The aggregate index representing the work-related stress sources statistically positively correlated with the aggregate index which represents the work-related stress consequences. This means that if employees generally perceive the sources of work-related stress negatively, then they also evaluate the work-related stress consequences more negatively (Table 2).

Consequently, the links between the aggregate index representing the sources of work-related stress and the individual consequences of this stress were analyzed (Table 3). Based on the Skewness and Kurtosis values for individual work-related stress consequences, which did not confirm the normal distribution of data, the given links were analyzed by Spearman's correlation coefficient. Even within this analysis it means that if the employees generally perceive the sources of work-related stress more negatively, they also assess the individual consequences of this stress more negatively.

Table 2 Links between the aggregate index of work-related stress sources and the aggregate index of work-related stress consequences

	<i>Aggregate index of work-related stress consequences</i>
<i>Aggregate index of work-related stress sources</i>	.509
<i>p</i>	.000

Table 3 Links between the aggregate index of work-related stress sources and the individual consequences of stress

<i>Aggregate index of stress sources</i>	<i>Consequences of work-related stress</i>							
	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>	<i>D5</i>	<i>D6</i>	<i>D7</i>	<i>D8</i>
	.534	.414	.408	.379	.352	.299	.475	.314
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000

D1: Perceived excessive workload.

D2: Insufficient concentration.

D3: Feeling tired.

D4: Muscle tension, palpitations, palm sweating.

D5: Sleep problems.

D6: Postponing important tasks.

D7: Loss of interest in work.

D8: Mood swings.

The aggregate index representing work-related stress sources correlated statistically positively with all the studied consequences of this stress. This means that the more negatively the employees perceive the individual sources of stress, the more negatively they also evaluate the consequences of stress (Table 3). Negatively evaluated were the feelings of excessive workload, concentration problems, feeling tired, more frequent palpitations, sweating, sleep problems, more procrastination, decreased interest in work, and mood swings.

This analysis of the links between the aggregate index of work-related stress sources and the studied consequences of this stress was subsequently supplemented by an analysis of the links between the evaluation of the specific sources of work-related stress and the perceived consequences of work-related stress (Table 4). The performed correlation analysis confirmed, with some exceptions, statistically significant positive correlations between the evaluation of the individual sources of work-related stress and the perceived consequences of this stress.

Table 4 Links between the sources of work-related stress and the consequences of work-related stress

<i>Consequences</i>	<i>D1</i>	<i>D2</i>	<i>D3</i>	<i>D4</i>	<i>D5</i>	<i>D6</i>	<i>D7</i>	<i>D8</i>
<i>Sources</i>								
Insufficient time to fulfill the work tasks	.432	.228	.296	.397	.181	.274	.223	.116
<i>p</i>	.000	.001	.000	.000	.009	.000	.001	.096
Unfriendly work environment	.420	.242	.310	.259	.251	.356	.432	.368
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000
Inadequate working hours	.445	.284	.256	.265	.053	.197	.220	.032
<i>p</i>	.000	.000	.000	.000	.450	.004	.001	.642
Insufficiently evaluated work performance	.430	.325	.321	.273	.279	.215	.305	.263
<i>p</i>	.000	.000	.000	.000	.000	.002	.000	.000
Unopen communication with the superior	.421	.287	.307	.268	.372	.249	.400	.366
<i>p</i>	.000	.000	.000	.000	.000	.000	.000	.000
Ambiguous definition of tasks	.278	.161	.211	.230	.140	.037	.250	.047
<i>p</i>	.000	.020	.002	.001	.043	.598	.000	.500
Tasks not corresponding to the employee's	.188	.398	.161	.180	.236	.290	.458	.258

abilities								
<i>p</i>	.006	.000	.020	.009	.001	.000	.000	.000
Bad working conditions	.312	.334	.287	.246	.242	.172	.414	.278
<i>p</i>	.000	.000	.000	.000	.000	.013	.000	.000

In the absence of time to perform work tasks, employees experience greater workload, fatigue, and do not sufficiently concentrate on their job. Insufficient time to fulfill tasks is also associated with feeling the stress symptoms such as muscle tension, palpitations, or palm sweating, as well as mood swings. An aspect of time is also related to the postponement of important tasks or procrastination. If an organization does not provide sufficient time for its managers and employees, they lose interest in their work.

The unfriendly work environment is associated with feeling overloaded with work, fatigue and lack of concentration. Among the individuals, who do not feel the sense of belonging and friendship, tendencies towards the feeling of stress symptoms, mood swings, sleep problems, as well as postponing important tasks, and loss of interest in work have been observed.

An aspect that involves inadequate working time is associated with the feelings of excessive workload, then feeling tired and stressful. If employees have an inappropriate working time, their concentration and focus on work decrease. Postponing of tasks and losing the interest in work appear again if the individuals do not have an adequate working time.

Individuals who consider work performance to be inadequate have been associated with a feeling of excessive workload, lack of concentration, and fatigue at work. Insufficient evaluation of work is associated with the symptoms of stress and mood swings. If they feel underestimated, they also increase the postponement of their obligations, lose interest in their work, and have trouble sleeping.

The aspect of unopen communication with superiors is related to the feelings of excessive workload, lack of concentration, mood swings, or muscle tension. If there is an inefficient communication in the organization, employees experience fatigue and sleep problems, which ultimately lead to lower performance, efficiency and workplace attention. By inadequate communication, employees lose interest in their work and often postpone important tasks.

If the supervisor does not provide a clear job definition for his or her staff, then the employees feel overworked, do not concentrate enough on their job, are more tired, have trouble sleeping, and feel physiological symptoms of stress. The issue of an ambiguous definition of a job role is related to the loss of job interest, which suggests that if employees do not get a clear and comprehensible job assignment, their interest in work declines. If work tasks do not match employees' abilities, they experience excessive workload, feel tired, have problems with sleep and experience mood swings. Another consequence of this source of stress is an inadequate concentration on the given job, and the subsequent loss of interest and procrastination.

Poor working conditions make a significant contribution to the inconvenience of employees at work. In this case, a connection has been demonstrated between the inappropriate working conditions in the workplace and the feelings of excessive workload, lack of concentration, feeling tired and sleeping problems. In a bad working environment, employees suffer from mood swings, lose interest in their work, procrastinate, and physiological symptoms of stress develop.

## 7 Discussion and conclusion

The results obtained confirm the existence of statistically significant links between the identified sources and consequences of work-related stress. Based on the research

conducted, we can state that the following findings that emerged from the analysis confirm the fulfillment of the stated goal.

Under time pressure, employees experience greater workload and fatigue, consequently they fail to concentrate sufficiently in their work and their motivation and interest are declining. Insufficient time is also associated with the feeling of physiological symptoms of stress and contributes to mood swings. This aspect of lack of time is related to the procrastination at the workplace, which was dealt with by Tice and Baumeister (1997) in their longitudinal study. Similarly, in the case of inadequate working hours or inappropriate distribution of labor changes, there is a negative effect in the form of increased stress, fatigue and feeling of stress symptoms. Another consequence is lack of concentration, focus and interest in work. Postponement of the tasks appears here as well, while procrastination was also the focus of a 1984 Canadian Mental Health Association research, the results of which showed that the respondents perceived the amount of time at work and poor working time layout negatively.

Insufficient evaluation of employees is also pointed out by Bhui et al. (2016), whose research corresponds to our findings. If an organization fails to evaluate employees, then there is a presumption that they will experience greater workload, and their concentration, motivation, and interest in work will decline. They may have problems sleeping, causing them to be tired and disinterested at work. This aspect also involves the symptoms of stress and mood swings. If they feel unappreciated, postponing obligations also increases.

Poor working conditions of employees may result in feelings of excessive workload, inadequate concentration, tiredness, and sleep problems. In a job where employees do not have the ideal conditions to perform their work, they experience mood swings, they lose interest in their work, and the procrastination begins to appear.

An interesting finding is that if employees do not have clearly defined tasks, or vice versa, if work tasks do not match their abilities, they experience a feeling of excessive workload and physiological symptoms of stress may appear. They are tired at work because of lack of sleep. Another consequence of these sources of stress is the lack of concentration on the job, the subsequent loss of interest and procrastination.

In an environment where there is no friendly atmosphere, employees can experience excessive workload and symptoms of stress. Their sleep is not sufficient, which is due to fatigue and lack of concentration and interest in work, and also to the intensification of important tasks. This source of stress also affects employees in the form of changes in their mood. Similarly, if there is an insufficiently developed and infiltrated open communication between managers and employees, their workload perceptions increases, and concentration, motivation, and interest in work decrease. Staff moods often change and they feel fatigue in this environment, probably as a result of insufficient sleep.

All of the abovementioned sources of stress contribute to consequences that have various negative impacts on the health, well-being, performance, concentration and motivation of employees. To help eliminate stress in the workplace, the organization can try to develop appropriate working conditions, open communication, and fair and equal approach. The organization should provide employees with sufficient time to perform tasks, and eliminate stereotypical tasks through a friendly and supportive work environment.



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**Primary Paper Section: A****Secondary Paper Section: AE**

# SELF EFFICACY OF A TEACHER AND ITS INFLUENCE ON THE CLASSROOM CLIMATE

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**Abstract:** Teacher has pedagogical and didactic skills that are indicators of his work. The level of self efficacy of the teacher is the teacher's belief in these abilities and has an impact on several aspects of school activity. The presented work investigates the impact of subjectively perceived ability on the classroom climate

**Keywords:** self efficacy, class climate, pupil, teacher

## 1 Introduction

The demand of the society on the personality and professional work of the teacher are more and more challenging. The teacher should be able to develop pupils' abilities, motivate pupils, create a favorable environment for pupils which will lead to pupils' self-education. It is not just what the teacher proves externally, but important is, how the teacher perceives his abilities and how he evaluates his pedagogical activity. S. Takahashi (2011) says that the teacher's belief in his abilities and possibilities to implement pedagogical practices leading to pupil learning and teaching can be described as teacher's perceived ability. The way a teacher assesses his qualities is the most important self-regulatory element in his work and greatly influences his approach to pupil development and the quality of classroom activities.

## 2 The Self-Efficacy Theory

The concept of self-efficacy was introduced by American psychologist A. Bandura (1997) and is based on his theory of socio-cognitive learning. The view on the theory of personally perceived ability in our conditions was dealt with by J. Mareš (2013), P. Gavora (2008), A. Wiegerová, a kol. (2012) and others.

Self efficacy is a set of attitudes of an individual to oneself and integrates three components: cognitive, emotional, and congenial. The cognitive plane includes self-knowledge, knowledge of one's qualities and self-affirmation as a need to maintain an image of oneself. The emotional plane includes self-esteem, the feelings that one has (self-pity, disappointment ...). The conceptual plane includes self-realization, self-enforcement and self-control (Kosišková, V., 2011).

The founder of this term, A. Bandura (1997), understands this concept as the conviction of man about the ability to organize and perform the activities necessary to achieve certain results. It is therefore about persuading people about their abilities to exercise control over their own being and the events that affect their lives. Teacher perceived ability is how he assesses his potential in the planning and realization of teaching, it is a belief in how it works on pupils and what teaching performance it can do. The issue of self-efficacy is not a unified concept, because high self-efficacy of a teacher in one area does not mean that it will also be perceived in different area. The development of this ability is already being developed during the undergraduate study and is further developed during the practice. Teaching self-efficacy may vary depending on subject, classroom, and environment.

Teacher self efficacy is a significant factor influencing the teaching process, its climate, approach to pupils, difficulty and student requirements. This fact is confirmed by P. Gavora (2012) and distinguishes didactic self-efficacy, self-efficacy for class leadership and self efficacy for student engagement.

Teacher self-empowerment is a significant factor which influences the teaching process, its climate, approach to pupils,

demandingness and pupil requirements. This is confirmed by Gavora (2012).

I.A. Friednam and E. Kass (2002) propose a new definition of self-efficacy, according to which the perceived professional ability of a teacher is the teacher's perception of his ability to perform:

- required professional activities and regulate relationships involved in the process of pupil education (classroom efficacy)
- organizational tasks, becoming part of the organization and its political and social processes (organizational efficacy).

This definition regards the teacher as part of the organization in which he or she works in the area of pupils and class, where he presents as a leader and tries to guide pupils to achieve cognitive and social goals.

He or she also works in the area of colleagues and management, in which he/she is a member of the group, acts in the way as to achieve and enforce the goals of the organization (In Lukáčová, V., 2016).

In this way the teacher also profoundly shapes the self-conception of pupils. As we have already mentioned, the teacher is an important factor in creating a positive climate in the classroom. He or she influences it not only with the pedagogical competences but also with the positive relationship to the pupils, teaches them to acceptance, tolerance and respecting different opinions and beliefs.

## 3 Research

The aim of our research was to find the level of professional competence of teachers and its impact on the classroom climate.

**Methods:** The research tool by which we determined personally perceived professional ability is called The Ohio State Teacher Efficacy Scale (called OSTES). The original version of authors by A. Woolfolk Hoy and M. Tschannen-Moran (2001). Our research was based on a three-factor model - the ability to use educational strategies, the ability to manage the class, the ability to motivate pupils. We used another research tool to determine the climate in the studied classes. The author of the questionnaire My Class Inventory (MCI) is J. Lašek (2012). We focused on the variables of satisfaction, disputes, learning difficulty, competitiveness and coherence in the questionnaire.

Methods of correlation analysis and variance analysis were used for statistical data processing. Research file: The research sample consisted of 93 teachers working in 15 schools in the Nitra region. In the research participated 221 pupils (48% of boys, 52% of girls) who completed the MCI questionnaire and we were able to examine the climate in 23 classes.

### 3.1 Research of the self efficacy of a teacher

Table 1: Averages of subscales to the OSTES questionnaire (self efficacy of teacher)

	Average	SD	Cronbach's alpha
F1: Ability to use teaching strategies	7,65	0,89	0,88
F2: Ability to manage the class	7,47	0,98	0,87
F3: Ability to motivate pupils	6,98	1,07	0,86

Table 1 lists the average values in subscales of OSTES questionnaire. According to the results, the highest average of 7,65 was achieved in the ability to use educational strategies. A slightly lower average of 7,47 was achieved in the subscale of

the ability to manage the class and the lowest average of 6,98 in the subscale was of the ability to motivate pupils.

In our research sample, teachers were the most confident in the category of teaching strategies. These are ways in which the teacher tries to make the teaching process more effective, he uses adequate teaching practices, a suitable way of explaining the subject.

The ability to manage the class shows in the plane as how the teacher keeps calm atmosphere during the lesson, how he can create appropriate groups during activities, and how he or she can plan activities. The ability to motivate pupils is shown in the level of raising pupils' interest in the curriculum and the interest in activity so that the pupils give the teacher questions about the curriculum.

It should be emphasized that perceived professional ability is the teacher's belief about his activity. It's not his real ability nor the picture of his real acting in class.

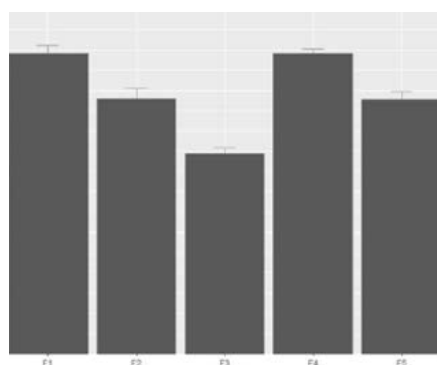
### 3.2 Class climate and research findings

By class climate, we mean the atmosphere in the classroom. It is connected to the quality of teaching. There is a specific climate in each class, because there are factors that affect it in each class. Whether the climate is positive or negative, it mainly affects pupils' performance, pupil-to-pupil relationships, and pupil-teacher relationships. The teacher and other factors have an irreplaceable role in shaping of the social climate in the class, such as the nature of teaching practices, the participation of pupils in teaching, the expectations of the teacher. We measured the following research data in the classroom research.

H. Grecmanová (1998) points at factors that are necessary to create a positive climate from pupils' perspective: if learners can discover themselves, requirements are placed according to pupils' abilities, accepting a pupil, the pupil can experience success, fair approach to all pupils, opportunity to give an opinion on different situations.

Table 2: Climate in classes

	Excellent	Good	Weaker	Inappropriate
Satisfaction	0 (0%)	21 (92%)	1 (4%)	1 (4%)
Coherence	0 (0%)	18 (78%)	5 (22%)	0 (0%)
Disputes	1 (4%)	16 (70%)	5 (22%)	1 (4%)
Competitiveness	0 (0%)	8 (35%)	15 (65%)	0 (0%)
Difficulty	3 (13%)	20 (87%)	0 (0%)	0 (0%)



Graph 1: Average values of the Climate in classes (questionnaire MCI), F1- Satisfaction, F2- Disputes, F3-Competitiveness, F4- Difficulty, F5- Coherence

The result of the Tukey test with the Bonferroni correction shows, that statistically significantly highest average values achieved the pupils' satisfaction and learning difficulty (medial values of these variables are not statistically significant ( $p =$

0,999)), followed by disputes and pupils' coherence (medial values of these variables are not statistically significantly different ( $p = 0,999$ )). The lowest average values were achieved in the case of pupils' competitiveness. The equivalence of medial values for all other pairs of variables is statistically significant at the significance level of 0,001.

### 4 The relationship between teacher's subjectively perceived professional ability and classroom climate

The relationship between the teacher's personally perceived professional ability expressed by three subscales of the OSTES questionnaires (F1 - ability to use educational strategies, F2 - ability to manage the class, F3 - ability to motivate pupils) and by the class climate expressed by the five variables (satisfaction, coherence, disputes, difficulty, competitiveness) in the 23 classes were evaluated by correlation analysis. From the correlation coefficient values shown in Table 4 results, that at the importance level of 0,05, none of the correlation coefficients is statistically significantly different from zero. The numbers in the table represent Spearman's correlation coefficient.

Table 4: Correlation matrix of subscales OSTES and MCI variables

	Satisfaction	Disputes	Competitiveness	Difficulty	Coherence
F1: the ability to use educational strategies	-0,39	0,11	0,37	0,19	-0,36
F2 the ability to manage the class	-0,35	0,12	0,11	0,17	-0,13
F3 the ability to motivate pupils	-0,39	0,16	0,42	0,32	-0,33

D. de Vaus (2002) states that if the value of the correlation coefficient reaches a value in the range of 0,10 – 0,29, the dependence can be interpreted as low to medium and in the range from 0,30 to 0,49 as medium to substantial, which also happened in our case.

Table 4 shows that the higher professional ability of the educator correlates with the lower satisfaction of the pupils in the class. A low correlation can also be seen in the variable competitiveness and the F2 subscale - the ability to manage the class. This means that a teacher with a higher professional ability in the field of classroom management does not have a major impact on pupils' competitiveness.

On the contrary, in the F1 subscale - the ability to use educational strategies and F3 - the ability to motivate pupils, are the results more significant. This means that the higher the teacher's professional ability to use educational strategies and the ability to motivate pupils, the greater the competitiveness among pupils.

The results point to the fact that the higher teacher's level of professional proficiency, the lower the level of satisfaction of the pupils in the class. Furthermore, the higher the teacher's professional ability to motivate pupils, the greater the competitiveness between the pupils and the pupils perceive the educational activity as difficult.

A surprising conclusion is that the higher the ability of the educator to use educational strategies and to motivate pupils, the lower the coherence of pupils in the classroom.

### 5 Conclusions

The results of the research show that teachers with higher professional ability in our examined sample showed a worse climate in the classroom, resulting in increased pupils' competitiveness, poor coherence and high teacher demands on

pupils. There are a few reasons that may have a negative impact on the class's climate.

By the fact that the teacher has a high level of subjective professional competence, he / she is sufficiently confident in his abilities, he likes to experiment, gives the pupils more challenging and divergent tasks, thus places higher expectations on pupils. This can lead to an increase in competitiveness among pupils, because everyone desires success and wants to excel. The teacher must count on the fact that the pupils observe the successes and failures of their classmates and compare their performance with them. By increasing demands on pupils also increases the severity of educational activities, the difficulty in assessment and self-assessment of pupils. Pupils do not have to feel comfortable in the class, by competing with each other arise conflicts, and decreases classroom coherence as a group. The teacher tries to lead the pupils to the maximum extent by using cognitively more challenging tasks. The pupils can perceive the difficulty of the tasks by the teacher negatively, especially when other teachers do not have such expectations.

The unfavorable climate in the classroom may be the result of a rigorous approach and educational process of the teacher to a pupil. School should be the place where the child develops in all its aspects, from the cognitive, affective and psychomotor point of view.

School is the place where a child spends a long time. Educational activity develops all the components of pupil's personality. Based on the research evidence we believe, that teachers should pay more attention to the development of the social side of teaching, participate in creating a favorable social climate to make children feel comfortable and safe. A pleasant learning environment makes interaction in the classroom easier and helps to develop interpersonal relationships and also creates the appropriate foundation for effective achieving of educational and social goals.

It follows that although the teacher believes in his ability to manage the teaching process, the learner does not always have the same feeling. An important step is to get feedback from pupils, so the teacher can create a current picture of their abilities. In order to form a positive climate, the teacher can work as follows: not to expose pupils to stressful situations, give space for self-realization, accept pupils, arouse enjoyment by their activities, be fair. Finally, it should be remembered that each pedagogical worker must be aware of the appropriate teaching practices in order to achieve effective and motivating teaching and to realize the positive climate in the classroom. This process also leads the teacher to a real self-image of his abilities.

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#### Primary Paper Section: A

#### Secondary Paper Section: AM

# CODE NOTATION AS A SIGNIFICANT MOTIVATIONAL ELEMENT IN THE BEGINNINGS OF TEACHING PLAYING THE ACCORDION

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**Abstract:** Today, accordion is a relatively popular instrument and interest in learning it is still evident. In pedagogical practice, when teaching the accordion to beginners, we often face the problem of insufficient motivation. The first enthusiasm to learn to play the instrument often recedes after the first lessons because the pupil has to learn several skills in a relatively short time. Notation, awareness of the rhythmic values, correct control over the heavy instrument, coordination of the right and the left hand, pulling the bellows, orientation over the right and the left manual without looking – for a beginner, all this is complicated. Slovak pedagogue Miroslav Košnář tried to develop a methodology which would enable the pupils to overcome the difficult beginner phase and he created a so-called code notation.

**Keywords:** Accordion. Beginners. Code notation. Miroslav Košnář. Motivation.

## 1 Accordion in the Territory of Slovakia and the History of Teaching the Accordion

Accordion<sup>1</sup> is a relatively young musical instrument, with its origins dating back to the second half of the 19th century. In Central Europe, the diatonic type of accordions enjoyed popularity until the end of the 19th century,<sup>2</sup> while chromatic button accordions became more popular in the early 20th century.<sup>3</sup>

In the territory of Slovakia, the accordion was long regarded as an instrument for cheap entertainment which belongs only to the sphere of utility music. This was due to the wide use of the heligonka<sup>4</sup> in folk music. Thanks to its easy control, the heligonka became a solo instrument whenever an original string band of bowed instruments was unavailable. Folk musicians liked that they could play the melody and simultaneously create a harmonic or rhythmic accompaniment, and even sing to it. The position of the heligonka in folk music was so strong that even the accordion started to be viewed as a folk instrument, which prevented its penetration into other fields of music. The biggest boom of the diatonic heligonka took place in the 1920s and 1930s. Subsequently, the chromatic accordion came to the fore.<sup>5</sup>

In the 1940s, the popularity of the accordion rose<sup>6</sup> mainly due to the popularity of the tango.<sup>7</sup> Moreover, accordionists began to perform as soloists in various entertainment shows and variety

shows. Ján Ondruš was such a performer in Slovakia.<sup>8</sup> After World War II, the development of accordion playing followed the Soviet model.<sup>9</sup> In practice, this meant that the accordion was mostly used for playing chastushkas and socialist mass songs.<sup>10</sup> Thanks to the connection of the instrument to the cultural ideology, accordion received wide support in education and, besides the violin and the piano, the accordion was also started to be taught in the newly established schools of arts.<sup>11</sup>

It was also in the 1950s that the first Slovak accordion coursebook (1952) was written. Its author was Jozef Vašica.<sup>12</sup> However, there were not enough qualified teachers to teach the accordion, so it was taught mainly by pianists or organists who introduced the methodologies of their own instruments into the teaching process of accordion playing. Changes in accordion methodology took place only in the late 1960s when Marta Szőkeová's<sup>13</sup> book *Akordeón [The Accordion]* was published (by the Regional Institute of Education, Bratislava, 1967). She drew on the lectures of German teacher Imgaard Slota-Krieg. The methodology was groundbreaking because it accented work with the bellows as a significant factor of producing the sound on the accordion. Thanks to the production of the sound with the bellows, performance became more refined and it had a significant influence on differentiation between the various periods and styles on the accordion. Another change in the field of accordion methodology occurred only in the 1990s when Miroslav Košnář, based on his practical experience, created a so-called code notation which significantly facilitates the work with beginners.

## 1.1 Miroslav Košnář's Personality

Slovak accordionist, pedagogue and enthusiastic promoter of the accordion Miroslav Košnář was born on 6 July 1938 in Nové Mesto nad Váhom. He studied the accordion from 1953 to 1959 at the Conservatory in Bratislava and began to teach at Music School IV in Bratislava as external staff already during his conservatory studies. In this way, he had the opportunity to confront the acquired theoretical knowledge with pedagogical practice and gradually developed his own methodology for

<sup>8</sup> Ján ONDRUŠ (1922 – 1974) was a performer and teacher at the Conservatory in Bratislava. In collaboration with Františka Machalíčková and Ilja Havlíček, they created an accordion coursebook and he authored several instructive compositions. In: VÍČAR, J. pp. 81 – 83.

<sup>9</sup> KATINA, P.: Accordion. In: *Hudba*. Košice: Evhethia, 2008. 3, No. 4, p. 9.

<sup>10</sup> Chastushkas and socialist songs (peace songs, mass songs) used to be the most prominent musical genre after 1945 when the political regime changed in Czechoslovakia. In: MATZNER, Antonín – POLEDNÁK, Ivan – WASENBERGER, Igor et al.: *Encyklopedie jazzu a moderní populární hudby I.* [Encyclopedia of Jazz and Modern Popular Music I.] Prague: Supraphon, 1983. pp. 221 – 222.

<sup>11</sup> In the 1950s, after a reform of the education system, public schools of arts were established to provide basic music education. Besides the music schools, departments of education were established in Bratislava, Žilina and Košice which, along with specialist artistic training, focused also on the methodological training of their students. Accordion playing was included into the curriculum at both types of schools. In: GREGOR, Vladimír – SEDLICKÝ, Tibor: *Dejiny hudobní výchovy v českých zemích a na Slovensku.* [History of Music Education in the Czech Lands and in Slovakia] Prague: Supraphon, 1990. pp. 209 – 216.

<sup>12</sup> Jozef VAŠICA (1909 – 1975) studied the violin at the Conservatory in Brno. His interest in popular and dance music made him establish his own salon orchestra where he familiarized himself with the accordion as well. After World War II, he started to teach the accordion at the Music School in Bratislava. His *Practical Coursebook of Accordion Playing* of 1952 (last published in 1990) is still in use in the music education process. In: KRÁSENSKÁ, Milada. 2010. *Analýza a reflexe vývoje kulturního života v Bystřici nad Pernštejnem* [Diplomová práce]. [Analysis and Reflections over Cultural Life in Bystřice nad Pernštejnem] [Thesis]] Brno: Masaryk University. 2010. pp. 30 – 37.

<sup>13</sup> Marta SZŐKEOVÁ (1920 – 2002) was a pedagogue at the Conservatory in Bratislava. It was her achievement that the accordion was included into the curricula of the Academy of Performing Arts in Bratislava in 1971, the only academy of arts with the accordion in its curriculum in Czechoslovakia at the time. She authored two methodological publications: *Akordeón – dejiny a stavba nástroja* [The Accordion: History and Construction of the Instrument] (1967) and *Artikulácia a frázovanie na akordeóne* [Articulation and Phrasing on the Accordion] (1970). Thanks to her, the progressive German bellows methodology focusing on detailed work with the bellows and refinement of the resulting sound began to be used even in Slovak accordion education. In: KISSOVÁ, Magdaléna – FITUŠOVÁ, Agneša: *Hudobníci okresu Nové Zámky.* [Musicians in the District of Nové Zámky] Nové Zámky: Anton Bernolák Library in Nové Zámky, Bibliography and Regional Science Section and Department of Music, 2000. p. 26.

<sup>1</sup> The English term *accordion* [accordeon, accordian, squashbox, squeezebox], (French *accordéon*, German *Akkordeon*, *Handharmonika*, *Klavier* – *Harmonika*, *Ziehharmonika*, Italian: *armonica a manticino*, *fisarmonica*, Russian: *bayan*, *garmonika*, *garmoschka*) is applied to a number of polyphonic free-reed aerophones whose common features include the existence of two bodies with manuals controlled by the fingers. These two bodies are connected by bellows driving air to the reedplates which then vibrate and emit a sound. In: HARRINGTON, H. S. – KUBIK, G.: *Accordion*. In: *The New Dictionary of Music and Musicians: A to Aristotle*. Vol. 1. : Editor Stanley Sadie – 2. Edit. New York : Oxford University Press, 2001. p. 56.

<sup>2</sup> The diatonic accordion is a polyphonic diatonic instrument which has two different reeds for each button so that the pitch changes with the movement of the bellows. In: VÍČAR, Jan: *Akordeon a jeho hudební uplatnění.* [The Accordion and its Musical Scope] Prague : Panton, 1981. p. 9.

<sup>3</sup> By the term accordion, Ján Vičar means a chromatic instrument which has two identical sounds for each key/button, and the tone does not change with pulling or pushing the bellows. VÍČAR, Jan. p. 8.

<sup>4</sup> Heligonka is a Czech innovation of the Viennese accordion. The Hlaváček brothers, Czech instrument makers who owned a factory in Louny, began to equip diatonic accordions with so-called helicon basses with a powerful sound. In: UKROPCOVÁ, Ljdia: *Heligónka – nástroj a ľudový hudobný repertoár.* [Heligonka: The Instrument and its Folk Music Repertoire] In: *Musikologica Slovaca X: slovenská ľudová nástrojová hudba a ľudové piesne*. Bratislava : VEDA, 1985. p. 50.

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<sup>6</sup> According to Jozef Šamko's research in 1943, the accordion (harmonica) was the second most popular instrument (the violin being the most popular and the piano ranking number three). In: ŠAMKO, Jozef: *Hudba a hudobnosť v spoločnosti.* [Music and Musicality in the Society] Bratislava : DOBA, 1947. s. 40.

<sup>7</sup> Instrumental ensembles playing tangos typically included the Spanish guitar and the accordion (or the bandoneon). In: MATZNER, Antonín – POLEDNÁK, Ivan – WASENBERGER, Igor et al.: *Encyklopedie jazzu a moderní populární hudby I.* [Encyclopedia of Jazz and Modern Popular Music I.] Prague : Supraphon, 1983. p. 350.

playing the accordion. From the academic year of 1964/1965, he taught at the Conservatory in Žilina and, at the same time, deepened his knowledge by attending Františka Machalícková's button accordion lessons in Ostrava (Czech Republic).<sup>14</sup> Later, he became a student of Polish teacher Joachim Pichura at the Państwowa Wyższa Szkoła Muzyczna in Katowice (1971 – 1974), learning to play the accordion with melodic basses.<sup>15</sup> From 2002, Miroslav Košnář taught at the University of Žilina, at the Private School of Arts in Žilina, and at the Primary School of Arts in Rajecké Teplice. He was the founder and art director of the international accordion festival for young accordionists called *Euromusette – Goldentango*<sup>16</sup> in Rajecké Teplice and also initiated the *Accordion Festival in the Rhythm of Various Genres*<sup>17</sup> in Kysucké Nové Mesto where students compete in performing dance music. Even at an advanced age, he enthusiastically pursued his pedagogical activities and took active part in organizing accordion festivals. He transferred his enthusiasm to his students as well and, thanks to his innovative teaching methods, he raised not only professional performers but also a number of amateur musicians who played happily for their own pleasure and for the pleasure of their environment despite not making it to concert stages. Miroslav Košnář passed away on 2 October 2016 in Žilina.<sup>18</sup>

## 2 The Beginnings of Learning the Accordion

Pupils in Slovakia can learn to play the accordion privately or at public or private primary schools of arts. According to Act No. 245/2008 Coll. on Education and Training (the Education Act), schools of arts organize preparatory courses, primary courses, courses with an extended number of lessons, shortened courses, and courses for adults. Pupils of the lower grades of primary schools who begin to learn the accordion are assigned to the preparatory course, while adults who take up learning the instrument can join the adult course. The preparatory course is meant even for talented preschool-aged children, and it consists of maximum two years. The adult course consists of maximum four years.<sup>19</sup>

### 2.1 Preparatory Course

Primary Schools of Arts (hereinafter referred to as PSA) organize two forms of preparatory courses: preparatory course “A” and preparatory course “B”. Preschool-aged children and

children of the first year of primary schools may be admitted to preparatory course “A” which lasts for two years. Pupils who complete this course may apply for admission to the first year of the primary course of music specialization at PSA. Preparatory course “B” is meant for 6 or 7-year-old pupils who did not attend preparatory course “A”. This course lasts for one year and, after its completion, the pupils may apply for admission to the first year of the primary course of music specialization at PSA.<sup>20</sup>

Children aged five to seven may be admitted to the preparatory course. From the aspect of a child's musical development, this period is characterized by their rapidly increasing skills to differentiate between pitches and between musical forms. Children are able to grasp the movement of the melody, differentiate between various means of musical expression, and synchronize body movements with musical rhythm. At preschool age, music education should take place primarily by musical games. Pedagogical activities should be based on the child's anatomic, physiological and mental characteristics.<sup>21</sup>

The organ of hearing dominates in a child's perception of music, although very often the supportive function of the visual and the motoric analyzer also play a role. Graphic depictions with various drawings make musical perception more precise especially for children with less developed musical hearing.

Pupils of the preparatory course who start the primary school of arts with the aim to learn to play the accordion face several problems. With respect to their physical dispositions, the instrument they are trying to learn is heavy.<sup>22</sup> The pupils cannot bear to play for long, and they have to have frequent breaks during the lesson. Holding the instrument in the correct way<sup>23</sup> presumes playing without visual control, and the pupils have to orient themselves on the left body of the instrument exclusively by touch.<sup>24</sup> Also, beginners often face problems connected with controlling the bellows because they have to concentrate on changing its direction in the right way. Changing the direction of the bellows may be complicated for the pupils with respect to the anatomic disposition of their left hand, since controlling it downwards may cause pain in the arm in the beginning. Another problem is reading the music and connecting the notation with playing the pitches on the keyboard of the instrument. Pupils must often focus on several actions at the same time: reading the notation, controlling the instrument, and coordinating their right hand and left hand. Too many new stimuli may appear confusing, and the initial motivation of the pupils may decrease rapidly.

Accordion coursebooks used according to the valid Slovak curricula<sup>25</sup> start with playing in a so-called five-finger position of the right hand (the thumb is on C4 and the little finger on G5). Since holding the instrument correctly requires playing with a loose wrist while the elbow is raised and should not drop downwards, the position containing sounds in the upper part of

<sup>14</sup> The treble of the button accordion is formed by buttons arranged into three to five rows, while the fourth and the fifth row are repetitions of the first and the second one. The range of the button accordion and the number of the rows may change depending on the size of the accordion. On a concert button accordion, compositions ranging from E<sub>2</sub> to G<sub>7</sub> can be rendered. The button accordion offers much richer rendering possibilities than the piano accordion. In: HARRINGTON, H. S. – KUBIK, G.: *Accordion*. In: *The New Dictionary of Music and Musicians: A to Aristotle*. Vol. 1.; Editor Stanley Sadie – 2. Edit. New York: Oxford University Press, 2001. pp. 59 – 60.

<sup>15</sup> On the left body of concert instruments, we can find *melodic basses* beside the *standard basses*. By a converter, the system of several octaves coupled above each other can be switched to melodic basses. After switching, the identical buttons which sounded as full chords before sound as specific tones in a chromatic range from E<sub>2</sub> to C<sub>8</sub>. On an instrument with melodic basses, the performer can play the melody as well as the harmony by both hands, several octaves simultaneously, in a dense texture. The logical arrangement of the manuals enables technically precise and virtuoso playing. In: EICHELBERG, Heinz: *Das Akkordeon mit 162 Bildern*. Leipzig: VEB Fachbuchverlag, 1964. pp. 12 – 55.

<sup>16</sup> The Euromusette-Goldentango accordion competition has been regularly organized since 2001 in the first week of June in the town of Rajecké Teplice and is meant for pupils of primary schools of arts and students of faculties of arts at universities and colleges. Thanks to the approval of its rules of organization, the competition gained an international character in 2008; for 15 years, it was dedicated to the memory of accordionist Michael Ganián. After the death of its founder Miroslav Košnář, the festival has been dedicated to his memory since 2016. In: *Euromusette – Goldentango* [Bulletin + result sheets]. [online]. 2017 [Retrieved on 27/10/2017]. Available at: <https://sites.google.com/site/euromusette/euromusette-2012/bulletin>

<sup>17</sup> The Accordion Festival in the Rhythm of Various Genres began in 2002 and is organized by the Primary School of Arts in the town of Kysucké Nové Mesto. It is meant for pupils of primary schools of arts under 18 in solo playing and under 19 in chamber music. In: *Akordeónový festival* [Propozície]. *Accordion Festival* [Propositions] [online]. 2017 [Retrieved on 27/10/2017]. Available at: <http://www.zusknm.sk/dokumenty/sutaze/akordeon/pozvanka/propozicie-akordeon-ovy-festival.pdf>

<sup>18</sup> In: RAJTEKOVÁ, Andrea – KOŠNÁŘ, Igor: *Miroslav Košnář – významná osobnosť akordeónovej školy na Slovensku. [Miroslav Košnář – A Significant Personality of Accordion Playing in Slovakia]* [Thesis]. Banská Bystrica: Matej Bel University, 2003. pp. 52 – 60.

<sup>19</sup> According to Article 51 of Act 245/2008 Coll. on Education and Training (the Education Act). Available online: <https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2008/245/20180901>

<sup>20</sup> *Innovated State Educational Programme for Primary Schools of Arts – Addenda nos. 1, 2, 3*. [Framework Curricula – since 1 Sept 2018]. [online]. 2018. [Retrieved on 11/11/2018]. Available at: <http://www.minedu.sk/data/att/12827.pdf>

<sup>21</sup> SEDLÁK, František: *Didaktika hudební výchovy I. [Didactics of Music Education I.]* Prague: Státní pedagogické nakladatelství, 1985. pp. 40 – 41.

<sup>22</sup> A 48-bass accordion of the Weltmeister brand, suitable for young pupils, weighs 5.5 kg. In: *Weltmeister Akkordeon Manufaktur* [Weltmeister Perle]. [online]. 2018. [Retrieved on 10/11/2018]. Available at: <https://www.weltmeister-akkordeon.de/shop/akkordeons-harmonikas/weltmeister-perle-die-perle-unter-den-akkordeons/>

<sup>23</sup> The pupil has to sit while playing, and the weight of the instrument rests on his left leg. The accordion is fastened to the player's shoulders by straps and is fixed by a so-called cross-connector. The player's back should be straightened and the neck should not be bent as a result of the visual control of the right hand. The right hand has to be relaxed and the elbow raised so that the wrist can move freely (if the elbow is dropped, the wrist becomes stiff). In: SZÓKEOVÁ, Marta: *Akordeón. [The Accordion]* Bratislava: Krajský pedagogický ústav, 1968. pp. 25 – 27.

<sup>24</sup> To facilitate orientation, the bass buttons on the left manual of the instrument are marked as follows: root bass C is marked with a concave depression, root basses Ab and E are marked with a grid (on the instruments of the Delicia brand) or also with a concave depression (e.g. on instruments of the Weltmeister, Pignini or Hohner brand).

<sup>25</sup> E.g. Jozef Vašica's coursebook: *Praktická škola hry na akordeón [Practical Coursebook of Accordion Playing]* or the coursebook of the authors Machalícková – Havlíček – Ondruš: *Škola hry na akordeón. [Coursebook of Accordion Playing]* In: *SVP pre základné umelecké školy [Učebné osnovy hry na akordeón]*. [State Educational Programme for Primary Schools of Arts [Accorded Curricula]] [online]. 2018. [Retrieved on 10/11/2018]. Available at: [http://www.statpedu.sk/files/\\_sk/svp/statny-vzdelavaci-program/svp-zakladne-umelecke-skoly/uo\\_hry\\_na\\_akordeon.pdf](http://www.statpedu.sk/files/_sk/svp/statny-vzdelavaci-program/svp-zakladne-umelecke-skoly/uo_hry_na_akordeon.pdf)

the keyboard may be difficult and painful. Pain while playing, or while practising, may be demotivating.

## 2.2 Adult Course

The adult course enables adults of all ages to start learning the instrument. One of the reasons why adults want to learn to play the accordion is the existence of folklore ensembles where the accordion is used as an accompanying instrument. Consequently, these people are mostly dilettantes in music whose priority is not to perform on concert stages but to make music for pleasure among their family and friends. In these cases, the syllabus contains mainly folk songs, folkish songs and popular songs.

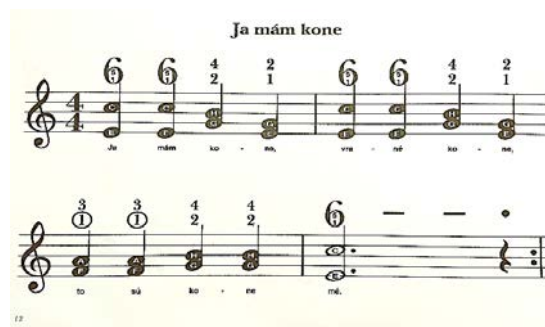
Even though the students are adults, they face several difficulties in the early stage of learning. Problems arise mainly from the coordination of the right and the left hand and from reading the notation. The students of this group are very enthusiastic but, after the first problems, their enthusiasm starts to vanish. Due to the other priorities in their life, they do not have that much time for practising and want to learn to play as fast as possible. The classic methodological procedure based on perfecting the fingering technique by exercises of an étude character appears to be ineffective and code notation seems to be a more suitable method for this group of learners.

## 3 Code Notation

Based on his experience gained by teaching, Miroslav Košnář tried to develop a methodology which would arouse the pupils' interest in playing the accordion and not make the early phase of learning more difficult by reading the notation. By a synthesis of the classical notation in G-clef and numeric representations of the finger placements in the various positions of the accordion keyboard, he created a so-called code notation<sup>26</sup> which is a set of numeric codes where each code represents an interval of traditional notation. Košnář arranged Slovak folk songs into this code notation and published a collection of *50 Folk Songs Not Only for Beginners*, progressing systematically from simpler to more complicated folk songs. The main didactic objective of the collection was to motivate the pupils to play the accordion or another keyboard instrument.<sup>27</sup>

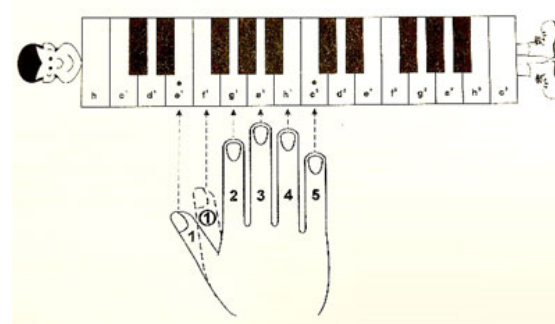
### 3.1 Advantages of the Code Notation

By code notation, pupils can learn the finger placements, based on which they become aware of the position of the tones and their graphic image in the form of notation. While, in the classic methodological process for developing the fingering technique, the pupils must first read the notation while concentrating on the position of the various tones on the keyboard, in code notation, they orientate themselves only by finger placements marked by numbers. The names of the notes are written in the note heads, so the children subconsciously memorize the pitches as well as their position on the staff (Example 1). Playing songs in code notation eliminates the problems connected with reading the notation.



Example 1: Košnář, M.: *Akordeón – 50 ľudových piesní nielen pre začiatočníkov* [50 Folk Songs Not Only for Beginners], notation of a song.

The basic position of the hand on the right body of the instrument (Example 2) is based on the position of the right hand on the  $E_4 - C_5$  sixth (thumb – little finger), while the thumb takes care of playing two keys. The hand moves roughly in the middle of the accordion keyboard, which makes it much easier to adopt the correct position of the hand on the right body of the instrument. When placing the hand on the  $E_4 - C_5$  sixth (thumb – little finger), it is easier to keep the elbow straight and, consequently, to keep the wrist relaxed, as this position is more natural with respect to the anatomic features of a pupil's hand than the classic five-finger position.



Example 2: Košnář, M.: *Akordeón – 50 ľudových piesní nielen pre začiatočníkov* [50 Folk Songs Not Only for Beginners], basic position of the right hand and finger markings

1 - thumb in basic position, ⊙ - thumb moved to the forefinger, 2 - forefinger, 3 - middle finger, 4 - ring finger, 5 - little finger

Thanks to the easiness of learning the finger placements, the pupils do not have to concentrate on the fingering but can focus on the right movement of the bellows and on changing its direction. Indeed, it is controlling the bellows that may cause the biggest problems in the beginning of learning.

The biggest advantage of the code notation is that the pupils do not learn to play tedious études and, still, they can render a folk song in an interesting way after just a few lessons. This fact significantly motivates not only young beginners but also adult students who are learning to play the accordion to be able to render folk songs as fast as possible.

### 3.2 Disadvantages of the Code Notation

The code notation is based on playing two-finger placements. Their playing, however, increases the risk of stiff playing because the pupils play with two fingers and keep subconsciously pressing into the keyboard. In this way, the hand gets fixed in an unnatural position. Therefore, increased attention has to be paid to relaxing exercises so that the tendons and nerves of the right wrist of the pupil's hand do not get damaged.

Since code notation involves learning the finger placements by numeric codes, it can happen that the pupils learn them

<sup>26</sup> Efforts to make learning the instrument easier appeared already in the early 20th century when various coursebooks were published for autodidacts due to the popularity of the heligonka. Such coursebooks were produced even by heligonka manufacturers, for example the Hlaváček brothers. These materials made use of a numeric notation. This appeared to be an optimal solution to notate the music for dilettantes who could play the instrument only mechanically, without preliminary knowledge of music theory. In: VICAR, J. p. 70.

<sup>27</sup> Due to the same position of the hand, the code notation can be used for teaching any keyboard instrument



mechanically and do not connect the numeric representations of the finger placements with the classical notation in G-clef. The teacher should also remember to use the classical notation in G-clef and F-clef, and connect the knowledge gained by code notation with learning the classical notation.

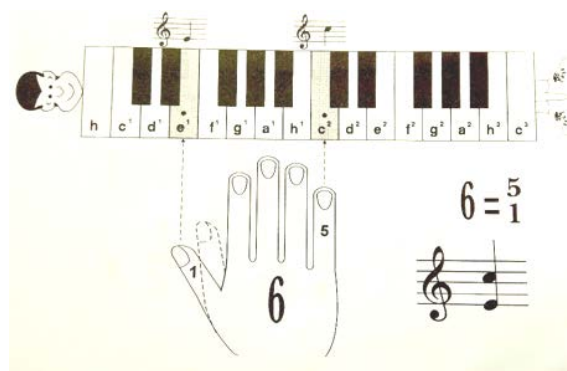
The main didactic purpose of the code notation is to arouse the pupils' interest in playing the instrument. Therefore, it does not focus on the development of the fingering technique and the bellows technique but on enabling the pupils to learn to play as fast as possible and, consequently, to increase their interest in practising the instrument at home, too. However, without proper fingering technique and bellows technique, more demanding compositions cannot be performed. Therefore, the right method to teach playing the accordion appears to be a combination of the code notation (arousing motivation) and the classic accordion methodology (gradual technical development).

### 3.3 Analysis of the Collection of 50 Folk Songs Not Only for Beginners

In the Introduction to his collection, the author describes the layout of the tones on the right and the left body of the instrument, and presents the basic position of the right hand and the layout of the basses for the left hand. The author divided the collection into three parts. In the first part, the pupils learn the basic finger placements – they use mainly the *basic finger placement* which they shift along the keyboard. In the second part, the pupils learn the so-called *finger placements of the right hand in minor songs*. In the third part, pupils practise *finger placements in a lower position of the right hand*, and encounter accidentals.

#### Basic Finger Placements

The basic finger placement is placement no. 6, marked mathematically as  $1 + 5 = 6$  (thumb + little finger). The sixth is explained to the pupils theoretically (Example 3). Learning this finger placement is very important for playing the next songs in which the pupils have to shift this finger placement along the keyboard. After strengthening this basic finger placement, three other, easily playable placements are introduced, based on the basic position of the hand. These are the so-called easiest  $\frac{2}{4}$  finger placement of  $E_4 - G_4$ , the so-called borrowed  $\frac{3}{4}$  finger placement of  $F_4 - A_4$  and the last one, the so-called hardest  $\frac{4}{2}$  finger placement of  $G_4 - B_4$ .



Example 3: Košnář, M.: *Akordeón – 50 ľudových piesní nielen pre začiatočníkov* [50 Folk Songs Not Only for Beginners], basic finger placement

With these four finger placements, the pupils are able to play the *Ja mám kone, vrané kone* [I have horses, black horses] song (Example 1). The songs that follow contain even finger placements nos. 7, 8, 9, 10, 11, 12, 13. However, these are only shifts of finger placement no. 6 along the keyboard. While pupils can play the *Ja mám kone, vrané kone* [I have horses, black horses] song without changing the position of the hand, in the next songs they have to practise various skips. In this way, the pupils perfect their orientation on the right body of the

instrument. Finger placement no. 13 reaches the highest possible tone of the 60-bass accordion,  $C_6$ . With these finger placements, pupils can play 21 songs.

#### Finger Placements of the Right Hand in Minor Songs

In this part, pupils learn finger placements which the author calls *finger placements of the right hand in minor songs*. These are finger placements in the range of a third, which can be used in minor as well as in major songs. The lowest tone used in playing the songs was  $E_4$ . In *finger placements of the right hand in minor songs*,  $C_4$  and  $D_4$  are used, too. By the use of these finger placements, pupils can play further 11 songs.

#### Finger Placements in the Lower Position of the Right Hand

When the pupils have learnt all the finger placements, it is time to practise *finger placements in the lower position of the right hand*. These finger placements are a variation of placement no. 6 (i.e. placement in the range of a sixth) with  $B$  as the lowest tone. In songs using *finger placements in the lower position of the right hand*, the pupils come across accidentals as well. The author marks these as follows: a) sharps are indicated in the code with a flake at the respective finger; b) flats are indicated with a star. The rhythmic values of the notes are also depicted visually: the author marks the duration of the notes by a line after the given finger placement, and the amount of lines depends on the required duration. Pauses are indicated by simple dots.

#### Playing with the Left Hand

Pupils can start playing with their left hand already from the second song. The author does not burden the pupils by reading the F-clef but writes the instructions for the left hand simply below the stave. He denotes the root bass with a capital letter, the major triad with a small letter, and adds the number seven to the seventh chord. He denotes the minor bass by a small letter, and adds "m" to it, e.g. he writes the *D minor* triad as "dm". The pupils may play the chordal accompaniment in the left hand but do not have to, it depends on their technical development.

#### 4 The Motivational Aspect of the Code Notation

The code notation integrates three elements simultaneously: fixing the position of the hand on the keyboard, automatic recognition of the notes in G-clef, and developing technical skills. The pupils learn to read the notes in G-clef in an unforced way and, at the same time, perfect their orientation on the right body of the instrument.

The code notation is based on playing double positions. The hand is shifted along the keyboard in thirds and sixths, characteristic for playing Slovak folk songs. Within just a few lessons, the pupils learn to play a simple folk song in an interesting way. The folk songs that Miroslav Košnář included in his coursebook are well-known in Slovakia. If the pupil already knows these songs, playing them becomes much easier. If they do not know them, first they can learn to sing them with their teacher. Singing the songs helps develop the pupil's intonation skills. Another significant motivational element is when the pupil plays the song in an environment that is familiar with it and the audience sings the song along with the performer. This gives the pupils a sense of achievement and pleasure. Support from their environment has a positive influence on the pupils who long to learn the first songs.

Another advantage is that the pupils do not have to concentrate on reading the notation in the beginning but can orientate their right hand with the numeric finger placements and their left hand with letter marks. Since the pupils do not have to control the rightness of the fingering and do not have to focus on reading the notes, they can turn their attention to aural control. This develops their skills to play by ear without being absorbed with the notation.



#### 4.1 Working with Code Notation in Accordion Lessons

Code notation provides several impetuses to the teacher to make the teaching process more interesting. It depends only on the teacher's creativity what activities he chooses.

##### Graphic Activities

The organ of hearing dominates in a child's perception of music, although very often the supportive function of the visual and the motoric analyser also play a role. Graphic depictions with various drawings make musical perception more precise especially for children with less developed musical hearing.<sup>28</sup>

Learning the various finger placements may be supported by graphic illustrations. Since each placement is depicted graphically (Example 3) on a separate page, these pages may be used as graphic worksheets, too. The teacher introduces the finger placement to the pupil and shows him the position on the keyboard of the accordion. Each finger placement has its corresponding illustration of the keyboard, illustration of the right hand, and position of the notes on the stave. In the initial phase, we can indicate by arrows (leading from the illustration of the right hand to the keyboard) which fingers will be used for the given placement. We can also colour the keys that are used with any colour and can also colour the fingers on the illustration of the right hand. Later, we may give only the illustration of the keyboard to the pupil, while his task is to colour the notes of the given finger placement and name them. In this way, pupils can perfect their orientation on the right body of the instrument and, thanks to the visual aid, they can learn faster not only the finger placement itself but also the position of the various tones on the keyboard.

##### Musical Riddles

The teaching process can be made more interesting even with various musical riddles connected to learning the finger placements. The teacher may play the finger placements and the pupil has to guess which placement it is. In the beginning, the pupil can make guesses by looking at the keyboard and, later on, he may try to differentiate between the finger placements by ear. The teacher starts playing an interval which does not figure in the given song at all (second, fourth, octave, or any two tones), and then the interval that corresponds to the finger placement learnt (e.g. sixth or third). The tasks may be swapped, and the pupil may try to test his teacher. Musical riddles can refine the pupils' pitch sense, one of the basic features of musical hearing.<sup>29</sup>

##### Song in the Tunnel

An interesting activity to perfect musical imagination<sup>30</sup> is a game called *Song in the Tunnel*. The teacher plays a song to the pupil while replacing certain finger placements (or sections) by a pause of the same duration. The pupil's task is to say which placement was omitted by the teacher. If the pupil is skilful enough, the roles can be swapped.

##### Echo

The pupils' musical memory<sup>31</sup> can be developed by an echo game where the teacher plays the already learnt finger placements or certain melodic sections of a song in a random order, and the pupils have to repeat them. The tasks may be swapped again, and the pupil may try to test his teacher.

<sup>28</sup> SEDLÁK, František: *Didaktika hudební výchovy I. [Didactics of Music Education I.]* Prague : Státní pedagogické nakladatelství, 1985, pp. 40 – 41.

<sup>29</sup> SEDLÁK, F. p. 62

<sup>30</sup> According to František Sedlák, musical imagination refers to mental qualities, recalled images of tones, tonal relationships, and means of musical expressions of parts or even whole compositions perceived in the past. Musical imagination is a key musical skill and a prerequisite for any musical activity. In: SEDLÁK, F. p. 64.

<sup>31</sup> František Sedlák describes musical memory as the ability of man to remember the perceived music, to recall it and reconstruct it in its original form, or to reproduce it by the voice or on a musical instrument. In: SEDLÁK, F. p. 66

#### 5 Conclusion

Miroslav Košnár was an accordion pedagogue for many years. During his pedagogical practice, he encountered pupils of various ages – he taught young as well as older beginners, and also guided artistically advanced students of conservatories. He faced several problems that complicated the teaching process especially when working with beginners. Playing various technical exercises of the étude character, difficulties with orientation on the keyboard and problems with reading the notation were the most frequent factors causing demotivation in students and their reluctance to go on. Therefore, Miroslav Košnár tried to develop a method which would make it significantly easier for beginners to learn the basics of accordion playing and which would accentuate their pleasure from playing. His quest for new possibilities resulted in creating a so-called code notation which integrates classical notation in G-clef and numeric representations of the finger placements.

Subsequently, Košnár arranged 50 well-known Slovak folk songs into this notation. They are arranged in a way that enables the pupils to learn the placements gradually. By learning finger placements mainly in the range of a third or sixth, the pupils are able to render folk songs relatively quickly and interestingly. The speed of learning the songs has a motivating influence on the pupils because they have a sense of achievement and can see the actual results of their efforts, especially if they render the songs in front of a home audience. The feedback from the audience, and the feeling of support and containment with the rendering of well-known songs, motivates the pupils to learn more songs. Mastering the various finger placements which, depending on the teacher's creativity, may have a playful character, is also motivating. Playfulness and curiosity connected with learning new finger placements and songs make the learning process more interesting and the pupils look forward to their accordion lessons.

Despite all the above advantages, it is not advisable to use only this method for teaching the accordion. Since the learning is based on playing double placements, it does not develop the fingering technique. The code notation is based on accentuating the right hand, while the left hand has an accompanying character. Using only the code notation method for teaching may have a negative impact on the development of the technique of both the hands. Therefore, the code notation should be combined with the classic methodology of playing the accordion so that the pupils develop in all aspects.

The code notation is one of the possibilities to motivate the pupils in the early stage of learning to play the accordion. Its advantage is that it can be applied also to any other keyboard instrument and that it enables the pupils to learn to play songs relatively fast, even without mastering the notation. It has its advantages not only in working with young children but also with adult amateurs who want to learn to play as fast as possible to make music among their close friends and family.

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**Primary Paper Section: A**

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## THE COMPARISON OF CLUSTERING ISSUES BETWEEN SLOVAKIA AND POLAND

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**Abstract:** This paper introduces the selected issues of clustering in various field of industries in Slovak and Polish republics. It provides an overview of basic differences between Slovak and Polish conditions for clustering from the point of view of quantitative aspects. The paper consists of two parts. In the first the focus is oriented on comparison of regional economy measured by indicators on which the operation of clusters has impact through the cluster analysis. The second part is oriented on comparison of selected issues of cluster policy that is prerequisite for clustering of regional stakeholders. The results showed similarities in both cases. The aggregation of regions into the clusters by using cluster analysis depends on using indicators and we can't follow the influence of clusters in region on regional indicators. From the point of view of issues of cluster policy we can conclude that situation in this field is better in Poland than in Slovakia.

**Keywords:** Cluster, region, cluster analysis, quantitative aspect

### 1 Introduction

The actual situation of the European economy as well as the economy of both countries brings intensifications of competition. New platforms for entrepreneurship have become more and more important. Their establishment, acting and supporting is in focus of the European strategies at various level, from local through regional, national until European (Kordos, 2016, Bohátová et al. 2016, Mucha, Peráček, Strážovská, 2016, Mura et al. 2017, Olsovska & Svec, 2017, Tkáčová et al. 2017). Due to the increasing emphasis on the role of gaining competitive advantage of business entities, mutual relations among them and other regional stakeholders (including universities, e. g. Aziz et al., 2016, Slabá & Fiala, 2014, Gavurová et al. 2016, Lietava & Fáziková, 2017) grouped in one area and economic branch are the phenomenon, which is gaining importance. These relations are characterized in the literature as clusters. Clusters have become an inseparable part of economic development and building strategies of the EU member states. (Piatkowsky, 2015 or Tvaronaviciene, 2017). For comparison of countries, regions, cities etc. methods of multi-criteria evaluation of alternatives are usually used but sometimes if groups of similar countries or regions are needed, cluster analysis is suitable. The combination of both principles was used in the analysis of Kuncová & Doucek (2011) where clusters of the EU countries from the ICT point of view were created. Various studies focused on the importance of cluster cooperation point on the main reasons and advantages of doing business in this form. Enterprises grouping in clusters with the characteristics of close geography and correlation find relevant the innovation platform, knowledge spill overs, enhancing the speed of technical innovation and competition, have more competitive advantages and stronger innovative power and performance as non-grouping entities (Youli & Huiwei, 2011, Zaušková & Madleňák, 2012, Hitka et al. 2018 or Žiška et al. 2018). Clusters create synergies, bring many positive externalities, and are seen as an important tool for developing competitive industries, regions and respectively economies. (see also Masárová & Koišová, 2107, Grancay et al. 2015, Gavurová et al. 2017). The results of cluster activities could be seen in new employment opportunities, new products and services, new companies, new R&D activities, new patents and in other issues of economic and competition development. (Kordos, 2015, Štverková & Mynarzová, 2017; Duřová Spišáková et al., 2017). These facts

are closely related to research and development, and its result – innovation is an important determinant of the competitiveness and success of firms, regions and nations (Sipa et al., 2015, Ivanová & Masárová, 2016, Benešová et al. 2018). Cluster plays an important role also in regional development and competitiveness (Bembenek et al., 2016, Nagy, 2016). Innovative regional clusters are a network mechanism for coordinating actions on the formation of an innovative man. (Gerasimova et al., 2014; Mura & Rózsa, 2013, Fuschi & Tvaronaviciene, 2016, Mazurek, 2018). Its main effects consist of various benefits for all stakeholders. The concept of a cluster is a well-known issue but the involvement of regional players in this form of cooperation is limited. The existence of clusters in regions is affected by several conditions. It is possible to examine them from two perspectives: quantitative and qualitative. The quantitative conditions are conditioned by the level of employment in economic branch in which the cluster is conducting its activities, the economic results of regions, the level of national and regional support for clusters, the level and conception of cluster policy, etc (Kordos et al., 2016, Fenyvesi, 2015). From qualitative point of view it is necessary to assess the real connection among the cluster and the regional stakeholders, the level of awareness about the clustering effects among regional stakeholders, but also politicians at both level, national and regional.

However to ensure an effective development, the cluster policy should create necessary conditions for the productive accrual of educational potential, consider the complexity and nuances of joint cooperation between the companies, as well as build a well-functioning infrastructure of cluster management. Cluster policy could be seen from several point of view: national, regional, type of industry, etc.. National cluster policy depends on the basic conditions of clusters comprising various regional characteristics such as the size of industry agglomeration, industrial specialization, firm size distribution, local firms' research potential, the number and quality of research institutes including universities, and the initial level of inter-firm and university-industry research collaboration. National cluster policies can be classified according to the selection process of target clusters (i.e., administrative or competitive) and financial support rules (i.e., full or matched funding). (Okamuro & Nishimura, 2015) The governance of regional cluster policy includes aspects of initiation and funding and is a reflection of regional governance structures combined with horizontal and vertical interactions, i.e. with neighbouring regions and superordinate levels of governance (Kiese, 2012, Hanáčková & Bumbalová, 2016). The regional cluster policy also depends on the characteristics of clusters and on the effectiveness of policy instruments to replicate such characteristics. (Pessoa, 2012, Švec, 2011).

The different contributors all call for a longer-term perspective aimed at coherent goals when designing and implementing cluster policies. (Champenois & Menu, 2012)

An important factor of the development, in this aspect, is state policy (Gerasimova et al., 2014). The increasing popularity of clusters is also connected to the growing number of policies and initiatives supporting them (Haviernikova b et al, 2016, Gorzeń-Mitka, 2016). This is also confirmed by Nishimura and Okamuro (2011) who reported, that cluster policies can be regarded as regional, industrial, or technological policies and implemented as targeted subsidization or networking support under any of these aspects. On the other side Falck et al. (2010) stated that nothing guarantees that political action based on a cluster concept actually has the desired results. So if a policy's justification depends on whether its existence and implementation is an improvement on its absence, there is no direct justification for a cluster policy. However, it does not mean that every political action defined to be a cluster policy is ineffective; it simply means that pursuing a cluster policy is not guaranteed to be a success just because it is a cluster policy. The policy will require a detailed description of its concrete objectives before its effectiveness can be evaluated. This is the

reason why Garanti & Zvirbule-Brezina recommended to evaluate whether the significant differences exist between the policy promoted and natural clusters.

In the context stated above, the paper is focusing on the preliminary assessment stated areas from quantitative point of view.

## 2 Material and Methods

Analysis of regional disparities in various points of view is conditioned by obtaining of relevant data. The choice of method for this analysis depends mainly on the pursued objective, the processes under review, claims for statistically processed input data. (Jaskova, 2015, Cseh Papp et al., 2018) The quantitative aspects of cluster cooperation in both countries were assessed by using cluster analysis that help us to search in empirical data the clusters of similar objects. By this method the regions were grouped on the base of their similarity. For this method the regional indicators closely related with cluster cooperation were used. The following data for each region were then recorded: Regional gross domestic product (EUR), Gross value added (EUR), Number of entrepreneurs in regions, Economically active population aged 15 years and over (thousand person), employment rate (%), number of employees in research and development (persons), Expenditure on research and development (per capita). Each indicator is presented by different measures. Due to this reason, the next step of cluster analysis was data standardization. Given these data the research hypothesis was stated: do these regions form "natural" clusters that can be labeled in a meaningful way? First we performed a joining analysis (hierarchical clustering) on this data. For the cluster analysis we choose: as a distance measure – Euclidean distance, Linkage rule: Ward method. The results of cluster analysis were then compared with the number of clusters in regions. As a next part of qualitative context assessment were compared the basic preconditions of cluster policy in each country. Compared were the existence of holistic cluster policy, documents focusing on cluster development, supporting programs at regional and national level and also the time frame of cluster programs, relationship between cluster policy and related policies and focus on SMEs.

## 3 Empirical experiences

The Slovak republic consists of 8 self-governing regions and Poland of 14. There are clusters in each of these regions. The number of clusters in regions are presented in Table 1 (Slovakia) and Table 2 (Poland). For each region the designation is given for further analysis.

Table 1 Number of clusters in Slovak regions

Region	Sign	Number of clusters
Bratislava	BA	3
Trnava	TT	4
Trenčín	TN	2
Nitra	NR	3
Žilina	ZA	4
Banská Bystrica	BB	2
Prešov	PO	2
Košice	KE	5

Source: own research

We can observe more than 20 clusters in Slovak regions. The highest number of clusters is in Košice region (5), the lowest in Banská Bystrica (2) and Prešov (2) regions. The placement of clusters from a point of view of typology corresponds with economic structure of regions. Slovak cluster typology according SIEA (Slovak Innovation and Energy Agency) is using clustering in two groups of clusters: technological and tourism. This typology is not very suitable, because it is not clearly defined what technological means and also it is not easy to use it in international comparison. The more appropriate is cluster typology that divided the clusters to tourism clusters, industrial

clusters, information and communication technologies clusters, creative and cultural industries clusters.

Table 2 Number of clusters in Polish region

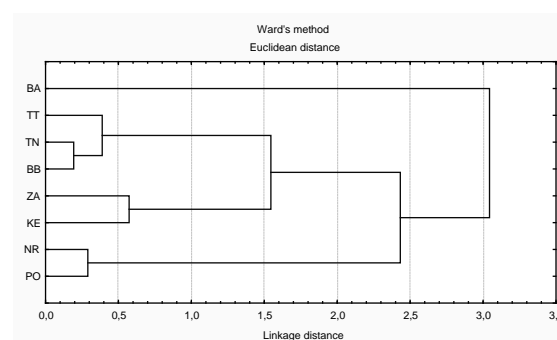
Region	Sign	Number of clusters
Dolnośląskie	DS	11
Kujawsko-pomorskie	KP	4
Łódzkie	LO	3
Lubelskie	LBE	11
Lubuskie	LBU	4
Małopolskie	MP	10
Mazowieckie	MZ	13
Opolskie	OP	1
Podkarpackie	PDK	12
Podlaskie	PDL	8
Pomorskie	POM	5
Śląskie	SL	28
Świętokrzyskie	SW	4
Warmińsko-mazurskie	WM	2
Wielkopolskie	WIE	12
Zachodniopomorskie	ZCHP	6

Source: own research

There are more than 130 clusters in Poland. The highest number of clusters is in region Śląskie (28) the lowest in regions Opolskie (1) and Warmińsko-mazurskie (2). The cluster typology in Poland is extensive, the PARP (Polish Agency for Enterprise Development) recognizes 28 types of clusters: information and communication clusters, various industrial clusters, biotechnology, creative industry, pharmaceuticals and cosmetic, geodesy, etc. It is also suitable to use typology that helps better recognition of similar types of clusters in international comparison.

In the next part of this paper the focus is oriented on realization of cluster analysis. The first similar regions with the result of economic development are Trenčín and Banská Bystrica. In both regions we can observe 2 clusters. The distance between these regions is 0,19. As the last joined region was Bratislava region, which has very different regional indicators due to the specific positioning of this region (the capital of Slovakia; there are a lot of important enterprises, receives foreign direct investment, etc.). If we take into account the distance to the value 1,0, we can see 3 main clusters of regions: (1) Trnava, Trenčín, Banská Bystrica, (2) Nitra, Prešov, (3) Žilina, Košice.

Figure 1 Cluster analysis for Slovak regions



Source: own processing in program Statistica

We are interested in what is the profile of the regions in each cluster. The table 3 shows the mean values and standard deviations of the standardized data of regions belonging to clusters. Based on the results of data presented in table 3 and figure 2 we can conclude, that the highest differences among regions in clusters we can observe only in case of indicators Number of entrepreneurs in regions and Expenditure on research and development (per capita). The average values of rest of the indicators are very similar. These results are specific and depend on used regional indicators.

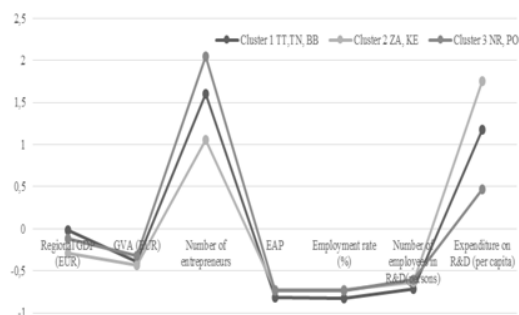
Table 3 Mean values and standard deviations of standardized data in cluster analysis (Slovakia)

Regional indicator	Cluster 1 (TT, TN, BB)		Cluster 2 (ZA, KE)		Cluster 3 (NR, PO)	
	$\mu$	$\sigma$	$\mu$	$\sigma$	$\mu$	$\sigma$
Regional GDP (EUR)	-0,018	0,180	-0,290	0,003	-0,119	0,150
GVA (EUR)	-0,392	0,043	-0,434	0,034	-0,325	0,030
Number of entrepreneurs	1,601	0,016	1,051	0,329	2,049	0,061
EAP	-0,820	0,045	-0,723	0,022	-0,732	0,059
Employment rate (%)	-0,825	0,045	-0,727	0,022	-0,738	0,059
Number of employees in R&D(persons)	-0,720	0,066	-0,634	0,023	-0,603	0,063
Expenditure on R&D (per capita)	1,174	0,068	1,757	0,231	0,468	0,062

Source: own processing in program Statistica based on data from Statistical office of the Slovak Republic and Eurostat. Notice:  $\mu$  - average,  $\sigma$  - standard deviation

Due to the result of mean values of standardized data in cluster analysis, we can measure as the worst regional cluster consists of Žilina and Košice regions (2). There are 9 clusters in various fields of industries. If we compare these results with the number of clusters, we cannot observe connection between the placement of clusters in regions and the economic results of regions.

Figure 2 Mean values of standardized data in cluster analysis (Slovakia)

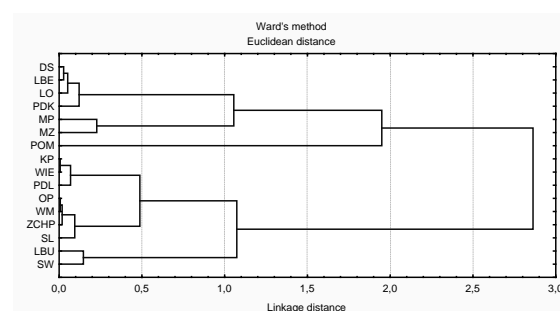


Source: own processing

In case of Polish cluster analysis the first similar regions with the result of economic development are Kujawsko-pomorskie and Wielkopolskie, where the distance between these regions is 0,0066 and regions are different due to the number of clusters. Second cluster with low distance between regions is cluster with

regions Opolskie and Warmińsko-mazurskie with distance 0,0071. We can see low number of clusters in these regions.

Figure 3 Cluster analysis for Polish regions



Source: own processing in program Statistica, based on data from Statistical office of the Slovak Republic and Eurostat

If we take into account the maximum distance of 1,0 we can observe 5 main clusters: (1) Pomorskie, (2) Dolnośląskie, Lubelskie, Łódzkie, Podkarpackie, (3) Lubuskie, Świętokrzyskie (4) Małopolskie, Mazowieckie, (5) Kujawsko-pomorskie, Wielkopolskie, Podlaskie, Opolskie, Warmińsko-mazurskie, Zachodniopomorskie, Śląskie.

For finding the profile of Polish regions the mean values and standard deviations were computed. The results are presented in Table 4 and Figure 4.

Table 4 Mean values and standard deviations of standardized data in cluster analysis (Poland)

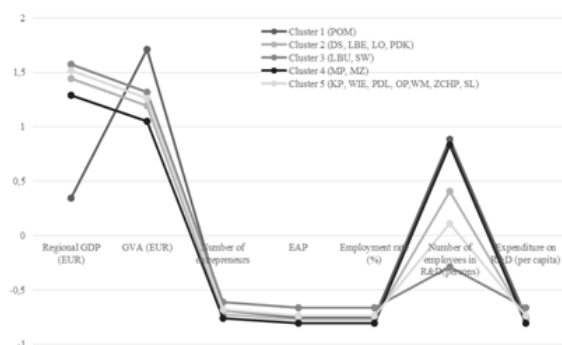
Regional indicator	Cluster 1 (POM)	Cluster 2 (DS, LBE, LO, PDK)		Cluster 3 (LBU, SW)		Cluster 4 (MP, MZ)		Cluster 5 (KP, WIE, PDL, OP, WM, ZCHP, SL)	
	$\mu$	$\mu$	$\sigma$	$\mu$	$\sigma$	$\mu$	$\sigma$	$\mu$	$\sigma$
Regional GDP (EUR)	0,344	1,444	0,014	1,573	0,008	1,289	0,060	1,517	0,018
GVA (EUR)	1,713	1,193	0,013	1,319	0,009	1,052	0,055	1,261	0,017
Number of entrepreneurs	-0,684	-0,724	0,003	-0,613	0,017	-0,761	0,002	-0,682	0,013
EAP	-0,752	-0,774	0,006	-0,663	0,021	-0,805	0,008	-0,735	0,014
Employment rate (%)	-0,753	-0,774	0,006	-0,664	0,021	-0,805	0,008	-0,735	0,014
Number of employees in R&D(persons)	0,883	0,409	0,048	-0,287	0,095	0,834	0,138	0,111	0,088
Expenditure on R&D (per capita)	-0,751	-0,774	0,006	-0,665	0,021	-0,804	0,009	-0,736	0,013

Source: own processing in program Statistica, Notice:  $\mu$  - average,  $\sigma$  - standard deviation

The worst results of regional indicators are observed in case of cluster 4 Małopolskie, Mazowieckie, where are more than 20 clusters. The best results were obtained by regions in cluster 3 Lubuskie, Świętokrzyskie with 8 clusters in total. We cannot confirm the relationship between the economic results of region

measured by selected indicators and the number of clusters in various fields of industries.

Figure 4 Mean values of standardized data in cluster analysis (Poland)



Source: own processing

In the next part of this paper we have focused on the main differences in issues of cluster policy in both countries that are necessary for establishment and future existence of clusters in various fields of industries. The first precondition is the holistic cluster policy, which is to support clusters in different directions (financial, nonfinancial, legislative, educational, etc.) The cluster

policy in Slovakia is only partially incorporated in various documents that are oriented on innovation strategy and innovation policy. The holistic cluster policy is absent. The documents containing selected issues of cluster policy are updated, but issues of cluster policy in widespread context are missing. Openness of cluster policy means that support is providing for cluster organization in vertical as well as horizontal way. It means the support is oriented on cluster organizations regardless to sectoral, value and branch specialization. Cluster policy is governmental body as Ministry of Economy and some of its departments that are responsible for part of cluster policy issues (mainly financial support), but body oriented on cluster policy is missing. In previous period important tasks in this issue were played by SIEA and UKS (Union of Slovak clusters). At this time, the financial support is provided only for industrial cluster organizations from The Scheme of aid de minimis, in previous programming period also from operational programs. The accreditation system that assesses the cluster is still missing. The Slovak clusters were involved in the evaluation system of ESCA (European Secretariat for Cluster Analysis). See also Haviernikova et al. (2016).

Table 5 Comparison of differences between cluster policy issues between Slovakia and Poland

Issues of cluster policy	Slovakia	Poland
Holistic cluster policy	x	x
General aspects of cluster policy presented in other policies	✓	✓
Cluster policy updates	x	x
Openness of cluster policy	x	✓
Institutionalization of cluster policy	x	✓
Financial and nonfinancial support of cluster policy	✓ /x	✓
The national cluster accreditation system	x	✓
The assessment of cluster outputs	X	✓
Regional support for clusters	✓	✓
Cluster typology	Single, not suitable	Widespread
Connection between cluster policy and other sectoral policies	✓	✓

Source: own research

Situation in Poland is similar in several aspects to situation in Slovakia. The holistic cluster policy in Poland is not defined explicitly. It also results from several strategic documents defining and shaping the economic policy in Poland (National development plans, documents in the context of European regional policy, operational programs, etc.). General aspects of cluster policy result from other medium and long-term policies. The validity of documents that have connection with cluster policy is just for relevant programming period, because most of the documents including issues of cluster policy are related to European regional policy. The supporting authority in Poland is mainly the Ministry of Economic Development. In addition, the Polish Agency for Enterprise Development (PARP) is executive agency and the Parliamentary Group on Cluster Policy is a consultative body for the Polish legislator. Financial and nonfinancial support of cluster policy is on higher level than in Slovakia; some programs are specifically devoted to clusters and cluster organizations were supported directly. In 2014 the Polish Agency for Enterprise Development (PARP), in collaboration with the Ministry of Economy and external experts, developed a set of criteria and drafted procedures for appointing the Key National Clusters (KNC). The objective of granting the KNC status is to select clusters which have a significant potential for developing the Polish economy according to and are competitive internationally. At regional level, only some of voivodeships have taken actions related to cluster support, including the choice of key regional clusters. In Poland, in principle, there are no sector limitation for clusters organizations. Therefore there is foreseen the support only for companies within regional or national smart specialization which affects the activity of the clusters (Frankowska, et al., 2016).

#### 4 Conclusions

The result of cluster analysis realized in both countries brings similar results. The division of regions into similar clusters

depends on using indicators. In this paper we selected the indicators on which the existence of clusters from various field of industry should have impact. Based on these indicators, the regions were categorized to regional clusters and the results were compared with number of clusters operating in these regions. We can conclude that the number of clusters has weak impact on the economic results of regions compared in this study. This is why the implication for future studies is to realize a questionnaire survey to find out the real situation in clusters, e.g. economic growth in region, the share of employment person in cluster on regional employment, the share of expenditures on R&D on regional level, etc.

Regarding the cluster policy we can recommend to improve the issues of cluster policy in the Slovak Republic. Recommendations are oriented on elaboration of holistic cluster policy documents, improving the cluster typology, establishment of the authority responsible for cluster policy and elaboration of accreditation system for cluster performance assessment.

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# JOB SATISFACTION PREDICTORS AMONG POLICE OFFICERS: SITUATIONAL VS. DISPOSITIONAL APPROACH

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**Abstract:** The study is focused on the issue of job satisfaction predictors' identification in the specific working environment of police forces. The target group comprises of state police officers in active service (N=255; M=29.89; 20-52 years). We used the Job Satisfaction Scale questionnaire to measure the levels of job satisfaction and the Job Diagnostic Survey to measure the characteristics of the job, while NEO-FFI and Core Self-Evaluation Scale were used to measure the respective personality variables. The regression analysis results suggest that the feedback from agents variable plays a significant role in forming the police officers' job satisfaction, explaining more than 55% of its variance. Our findings indicate a close relationship between the job characteristics and police officers' job satisfaction.

**Keywords:** job satisfaction, predictors, job characteristics, personality, Core Self-Evaluations, police, police officers.

## 1 Introduction

Job satisfaction is one of the most frequently researched phenomena in the work and organizational psychology. However, the research efforts have been merely aimed at supporting the activities in the sphere of business organizations (Judge, Heller, Mount, 2002), rather than on workplaces in the government sector, such as police or armed forces. The reason lies in the quasi-militaristic nature typical for most of the police forces in the past (most of the policemen are trained to do what they are told and not ask questions if they want to survive), as well as in low interest of police executives and superior workers in this issue (Miller, Mire, Kim, 2009). The attention of superiors has been devoted mostly to the tangible outcomes of police officers' work, resulting to considerable overlooking of the intrinsic aspects of police officers' lives and the police work. Only the gradual introduction of psychological approaches into the police forces and law enforcement agencies practice lead to discovering the importance of paying attention to job satisfaction also in the very specific environment of police forces. In case of police officers' profession it is often overlooked that, similarly to any working individuals, also police officers actively form their attitudes towards their professional roles, duties and tasks, evaluate and consider them, and form certain relational positions to them and their context (Kovářík, 2012). Police officer's relationship with his/her job and his/her coping with the existing situation within this job forms an important mental state, referred to as the job satisfaction.

In former academic literature, the police officers' job satisfaction has been investigated either as an independent or as a dependent variable. In the first case, the job satisfaction has been evaluated as a factor determining the organizational level outcomes, such as work-related stress and burnout syndrome (Morash et al., 2008; Martinussen, Richardsen, Burke, 2007; McCarty, Zhao, Garland, 2007), productivity, effectiveness and engagement of workers (Chang, Lee, 2006), or negative forms of behaviour – violent behaviour, alcoholism, absenteeism, fluctuation (Lindsay, Shelley, 2009). In the latter case the former studies have been aimed mainly at identification of predictors from among demographic and organizational variables (Baker, Dolu, 2010; Brough, Frame, 2004) while in fewer cases the attention has been devoted also to personality variables (Miller, Mire, Kim, 2009; Thomas, Buboltz, Winkelspecht, 2004).

Academic literature aimed at studying the job satisfaction predictors offers two main approaches. The situational approach emphasizes that the job satisfaction is conditioned by the nature of the job itself and by the workplace environment (Judge, Locke, Durham, 1997). The situational approach theories place

importance mainly at job design, which can be used to create working conditions more suitable or satisfactory for employees. Through the character of the work the employees gain awareness about importance and usefulness of performing their profession and related activities, as well as the necessary organizational background. Jobs that contain intrinsic motivational characteristics will lead to higher levels of job satisfaction, together with further positive work-related results, such as higher job performance or lower employee fluctuation (Judge, Klinger, 2007). Hackman and Oldham (1974) have created the Job Characteristics Model comprising the characteristics that lead to various mental states. Combination of three characteristics (in particular, skill variety, task identity, task significance) indicate experiencing the job significance. Further, autonomy leads to feelings of responsibility, while feedback on one's work contributes to knowing the results of the performed tasks. Several research studies (Sultan, 2012; Ercikti et al., 2011; Miller, Mire, Kim, 2009) confirmed that the nature of the job itself, as one of the job satisfaction aspects, indicated the strongest relationship with the overall job satisfaction. Therefore, if we want to understand the main job satisfaction drivers, the job characteristics should be the first object of our focus.

Personality variables are fundaments of the so-called theories based on dispositional approach to studying the job satisfaction. These theories suppose that roots of job satisfaction lie in disposition or personality structure of the working individual (Judge, Klinger, 2007; Judge et al., 2001). Unlike in the sphere of business (Rošková, Poláková, 2012; Zhai et al., 2011; Judge, Heller, Mount, 2002), the disciplines focused on work-related issues and activities of police officers currently offer relatively few published studies attempting to identify and explain the share of personality on forming the overall job satisfaction level (Miller, Mire, Kim, 2009). Due to heterogeneity of former studies on dispositional sources of job satisfaction, various research designs, methodological approaches, measurement strategies or types of statistical analyses have been applied. In the recent years, however, more and more studies have been employing the three theoretical approaches: positive / negative affectivity, five-factor personality model and Core Self-Evaluation (Judge, Heller, Klinger, 2008). Our decision to include the last two mentioned approaches to our investigation was motivated, on one hand, by their significance resulting from the theoretical background, and also, on the other hand, by the lack of empirical evidence supporting this relationship in the specific environment of police forces. The findings of a meta-analysis reviewing 163 independent studies (Judge, Heller, Mount, 2002) identified that four out of five characteristics – neuroticism, extraversion, conscientiousness and agreeableness – are related to job satisfaction, while the strongest relationship was indicated in case of neuroticism. In general, the academic literature does not provide unambiguous findings. Despite the significant correlations the identified predictive power does not reach similar levels, compared to e.g. job characteristics, as they explain only around 10% of job satisfaction variance (Ercikti et al., 2011; Miller, Mire, Kim, 2009).

The aim of the presented research study is to identify the share of situational and dispositional variables on explaining the police officers' job satisfaction, and to contribute to explanation of importance of the respective approached for investigating the job satisfaction in the specific working environment of the police forces.

## 2 Materials and methods

### 2.1 Sample

Based on the aim of our examination, two main criteria were set for including the participants in our sample, particularly (1) active service in the police forces and (2) affiliation to the state police.

Total of 255 police officers participated in our study, out of that 213 men and 41 women (1 participant did not indicate gender), with an average age of 29.89 years (the youngest being 20 years old and the oldest being 52 years old) with an average length of service of 7.28 years (minimum 0.5 year, maximum 32 years). As for the marital status, 142 police officers in our sample were single, 98 were married, 8 were divorced, while 7 participants did not provide information about their marital status. As for the position, 228 police officers had executive positions, 24 officers had managing positions, while 3 participants provided no indication.

## 2.2 Methods

The job satisfaction was analysed using the Job Satisfaction Scale (Dantzker, 1993), a foreign questionnaire method that has been adapted for the environment of the Slovak police forces (Karasová, 2013a). This questionnaire was selected due to its specific focus on the police working environment. The adapted version comprises of 25 items. While testing the factorial structure, the author (Karasová, 2013a; Karasová et al., 2013b) identified three factors: social and material security, support from superior officers and job meaningfulness. The questionnaire as a whole as well as its three factors achieved satisfactory levels of Cronbach's alpha coefficient. Entire questionnaire: 0.90, respectively the 1<sup>st</sup> factor: 0.86, the 2<sup>nd</sup> factor: 0.78 and the 3<sup>rd</sup> factor: 0.66.

Job characteristics were examined employing the Job Diagnostic Survey (Hackman, Oldham, 1974) foreign questionnaire method, using the Job Rating Form, which is its separate part. This particular part was selected because of its ability to identify the job provisions in a way that enables elimination of shortcomings perceived by employees and influencing their satisfaction with the performed job. The questionnaire contains 21 items divided into two sections, in which it recognizes seven dimensions: skill variety, task identity, task significance, autonomy, feedback from the job itself, feedback from agents, dealing with others. Participants indicated their level of agreement with different items characterising their job on a 7-point Likert-type scale.

The description of personality traits was based on a Slovak language version of the NEO-FFI (Ruisel, Halama, 2007), which has been constructed on a five-factor personality structure model. The inventory comprises of 60 items organized into five sub-scales: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. The participants indicated their level of agreement with different statements on a 5-point Likert-type scale.

The Core Self-Evaluations concept, as a part of personality disposition, was analysed using the Core Self-Evaluations Scale (Judge et al., 2003), a foreign research instrument. The scale had been adapted for its usage in the environment of Slovak police forces in a series of several studies (Selecká, Holienková, 2016; Selecká, Holienková, 2015; Holienková, Selecká, 2014; Karasová, Očenášová, 2014). The Core Self Evaluations Scale represents a 12-item scale that is understood as one-dimensional variable. The internal consistency analysis of the questionnaire provided satisfactory values of the Cronbach's alpha coefficient (0.80).

## 2.3 Statistical analysis

Considering the sample size and type of the variables used, the Pearsons correlation coefficient was employed to identify the relationships between the investigated variables, and the multiple linear regression to assess the influence of different independent variables on job satisfaction. Also, we used the estimate of internal consistency with Cronbach's alpha coefficient to test the psychometric characteristics of the questionnaires employed. Finally, to identify the factors we used the factor analysis with Varimax rotation method.

## 3 Results

The data obtained through questionnaires were applied into the SPSS 17.0 statistical package where the multiple regression analysis and other statistical tests were executed. Before the testing itself, we carefully explored the data to make sure they follow all important requirements for entering the variables into regression analysis (Rimarčík, 2007).

In the first step of our analysis we focused on identifying which variables are significantly related with job satisfaction. An ENTER method was used to analyse this assumption. The results of regression analysis (Tab. 1) indicate that the independent variables included in our analysis explain 60.2% of job satisfaction variance.

Tab. 1 Regression results using the ENTER method

VARIABLE	B	Beta	Sig.	R <sup>2</sup>	Sig.
skill variety	-0.461	-0.145	0.027	60.2	0.000
task identity	-0.187	-0.055	0.308		
task significance	0.201	0.063	0.979		
autonomy	0.306	0.103	0.075		
feedback from work	0.447	0.131	0.037		
feedback from agents	4.012	0.706	0.000		
dealing with others	-0.162	-0.045	0.442		
neuroticism	-0.151	-0.053	0.459		
extraversion	-0.105	-0.031	0.604		
openness to experience	-0.051	0.019	0.721		
agreeableness	-0.045	-0.012	0.838		
conscientiousness	-0.269	-0.073	0.237		
CSE	0.141	0.070	0.339		

Dependent variable: job satisfaction

The closer look at our results unveils that only three variables that achieved the level of statistical significance (lower than 0.05) are relevant for explaining the job satisfaction: skill variety, feedback from work and feedback from agents. Further look at the beta coefficients indicate that the "feedback from agents" variable shows the strongest influence on the job satisfaction level (0.706) - i.e. the higher is the degree to which a police officer receives information from his/her superiors and colleagues about effectiveness of his/her job performance, the higher is the job satisfaction level. The second relatively strongest effect was identified for the "skill variety" variable (-0.145) - the lower is the extent to which various skills are required from the police officer at the workplace, the higher is his/her job satisfaction. Finally, the third strongest influence was observed for the "feedback from work" variable (0.131) - the greater is the extent of feedback information about effectiveness of police officer's work results, the higher is his/her job satisfaction level.

The regression analysis provided an interesting finding related to personality variables, which have been found to play no significant role in police officers' job satisfaction (their significance is higher than 0.05 and the standardized beta coefficients achieve low values). The results of regression analysis therefore suggest that the overall job satisfaction score is affected mainly by the job characteristics of feedback from agents, skill variety and feedback from work. Personality variables are not significant in explaining the job satisfaction. In the second step of the analysis our goal was to find out which variables are the most significant contributors to the overall level of police officers' job satisfaction, i.e. to identify the best regression model. The "skill variety" variable was eliminated from the analysis, so we included only two variables, namely "feedback from agents" and "feedback from work".

Tab. 2 Regression results using the STEPWISE method

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change Statistics	
				R <sup>2</sup> Change	Sig. F Change
1	0.747	0.559	0.556	0.559	0.000
2	0.758	0.574	0.569	0.015	0.010

a. Predictors: (Constant), feedback from agents

b. Predictors: (Constant), feedback from agents, feedback from work

c. Dependent Variable: job satisfaction

The “feedback from agents” variable was the first to enter the regression as it exhibited the highest value of beta coefficients in the first step of the analysis, and it also explains the highest share of variance of the job satisfaction (55.6%). The “feedback from work” variable was added in the second step of the regression, which resulted to an increase of  $R^2$  by 1.3% to the total of 56.9%, a statistically significant increase ( $p=0.010$ ). Thus, the results suggest that “feedback from agents” and “feedback from work” are two best variables for predicting the job satisfaction. It is especially interesting that a single variable (feedback from agents) explains more than a half of police officers’ job satisfaction.

#### 4 Discussion

Our research paper is focused on identification of job satisfaction predictors in a specific working environment of police forces. Several foreign research studies indicate that formation of police officers’ job satisfaction is significantly affected especially by characteristics of job and working environment (Brady, King, 2018; Abdulla, Djebarni, Mellahi, 2011; Ercikti et al., 2011; Miller, Mire, Kim, 2009; Thomas, Buboltz, Winkelspecht, 2004). Our findings support the importance of the situational approach to job satisfaction investigation.

The results of our regression analysis suggest that the overall level of police officers’ job satisfaction is dependent merely from characteristics of job and working environment than from police officer’s personality. The findings further suggest that feedback from agents (the extent of feedback information on effectiveness and work results received from superiors and colleagues) can be considered as the most important variable, as it explains the highest percentage of variance of police officers’ job satisfaction. Feedback on job performance effectiveness is very important for each worker, which is especially true in the police profession, which is extremely demanding and has an important mission in the society. In case of this profession, feedback from agents seems to be considerably more relevant with this respect (compared to feedback from work). The personality of superior officer, due to greater experience and expertise, seems to be particularly important in the context of police profession. The superior officer can provide his/her subordinates with valuable information and advices for better and quality execution of police profession, especially by providing support in the form of help, encouragement, consultations, feedback, goal setting or problem solving. At the same time, it is important to emphasize that police force is an organization where respecting orders and instructions from superior officers according to the hierarchy is an absolute necessity. Thus, from the job satisfaction perspective, it is important that the police officers’ readiness and willingness to respect orders is based not only on the position of the superior officer in the hierarchical structure, but also on his/her personal qualities, abilities and willingness to solve problems and provide help and advice to his/her subordinates. Furthermore, feedback information from colleagues were also found as equally important for the police officers’ job satisfaction. For a policeman, his/her peer colleagues represent a close group of people in direct and tight contact with execution of his/her work activities, who can therefore directly react to his/her actual needs and provide information important for executing his/her service. Also, in case of unavailability of the superior officer, colleagues might provide substitute and give suggestions, advices or information that can contribute to higher quality of police officer’s service.

The character of the police profession often requires working in teams and cooperation between colleagues, including relying on their abilities and results of their work. Therefore, adequate and quality feedback from colleagues is important not only for sharing information required for executing the work-related activities, but also for developing willingness to cooperate and especially a mutual trust among colleagues.

Finally, our results provide an interesting finding that police officer’s personality as a predictor of forming his/her job

satisfaction is insignificant. Even though some empirical research findings (Khizar, Orcullo, Mustafa, 2016; Ercikti et al., 2011; Zhai et al., 2011; Miller, Mire, Kim, 2009) indicate the impact of personality traits on job satisfaction variance, in the context of Slovak police forces this variable seems not to be significant. Police officers of Slovak police forces represent, with certain aspects, a homogeneous group of individuals who are not considerably different in their personality characteristics. This finding can be explained by the fact that police profession requires particular personality preconditions from among character and temperamental dispositions (Bilský, 2005) that are necessary for adequate execution of the police work. These are examined during the admission psychological testing. If applicants do not meet the criteria related to characteristics required for police profession, they are not accepted to the police force. This fact will be further analysed in our future research.

#### 5 Conclusions

The regression analysis unveiled that police officers’ job satisfaction is significantly influenced especially by the feedback from agents, i.e. an extent of feedback information about effectiveness and work results obtained from superiors and colleagues, which explains more than 55% of job satisfaction variance. Interestingly, personality characteristics were found to be insignificant in predicting police officers’ job satisfaction. Our findings therefore indicate a close relationship between job characteristics and police officers’ job satisfaction. Thus, in order to improve job satisfaction, police management should be focused rather on job design efforts than on further developing the staff selection procedures.

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#### Primary Paper Section: A

#### Secondary Paper Section: AN

## SEXTING AND MOTIVES FOR SEXTING AMONG ADOLESCENTS

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**Abstract:** This article addresses sexting from its theoretical point of view and analyses the classification of its types and forms. Our focus is set to the motives for sexting among adolescents. The quantitative research carried out on the sample of 1,619 students in the Slovak Republic shows that adolescents can be divided into four groups according to their involvement in sexting: by-standers, victims, sexters and bi-directional sexters. It also shows that boys are involved in sexting more than girls. Semi-structured interviews with 37 adolescents aged 16–19 demonstrate that these adolescents encounter many forms of sexting such as partner's request for materials in question, requests from strangers, misused photos, blackmail, etc. The reasons for sexting include trust, relationship intimacy enhancement, distraction, effort to preserve friendship, etc. At-risk sexting stems from unawareness of consequences.

**Keywords:** sexting, peer-sexting, self-sexting, motives and reasons for sexting

### 1 Theoretical definition of sexting and its classification

Increasing accessibility to technological products affects the social life. The advances in science and technology provide us with many benefits in communication, as well as digitisation of machines, apparatus and devices which ultimately makes the work performance, services and other activities more efficient. Information and communication technologies, such as mobile phones, smartphones, laptops, tablets, PCs and various applications, play an important part in our everyday lives and incite the creation of a whole new world – cyberspace. Cyberspace makes it easy to communicate online, share information and ideas, play games, join discussions and social forums, conduct business, create intuitive media and perform other activities. The increase in benefits and availability of cyberspace, products and devices improved by technologization and electronization is directly related to the increase of risks that can affect an individual's life and social life in general.

Cyberspace is a platform for various forms of at-risk behaviour. As the new forms of communication emerged, new addictions, criminality and violence have spread as well. Sexting is currently becoming one of the specific ethical concerns that lies in posting text and audio-visual materials of sexual content in the virtual environment. Social networks such as Facebook, MySpace, Instagram, Viber, Whatsapp, etc., are all platforms that facilitate the online dissemination of sexting. In Slovak Republic, this primarily applies to Facebook and Instagram. However, there is still a lack of researches on sexting, its consequences, interventions and motives for such behaviour that would apply nationally. In Slovakia, the issue of sexting was marginally addressed by M. Gregussová, J. Tomková and M. Balážová. In 2010, they performed the research entitled *Dospievajúci vo virtuálnom priestore (Adolescents in cyberspace)* in cooperation with eSlovensko civic association and EU Safer Internet Plus programme. As for the EU KIDS ONLINE project, sexting was studied by K. Kopecký in cooperation with PRVoK. In 2013, methodological guide for children, *Deti v sieti – ako chrániť seba a naše deti na internete (Children in the Web - How to protect ourselves and our children on the Internet)*, was published. Apart from other subjects, the authors also studied sexting and sexuality on the Internet. Other relevant information materials about sexting are available on the project's website <https://www.zodpovedne.sk/>. This issue is currently being studied by K. Hollá in collaboration with other authors under VEGA project no. 1/0100/18 Self-sexting and peer-sexting and related educational intervention.

The term sexting is a neologism consisting of the words 'sex' and 'texting'. As the availability of devices with the option to access the Internet and send text messages and photos increased, sexting has become more popular among both the adolescents and the adults. Sexting is conventionally described as the 'exchange of sexual messages or images' (Livingstone, 2011).

Hinduja and Patchin (2010) define it also as 'sending or receiving sexually explicit or sexually suggestive images and videos via mobile phone'. After performing the analysis and comparison of foreign publications about sexting, we proclaim that sexting refers to the acts of creating, sending and receiving provocative photos depicting nakedness, sexually explicit images and texts, sexually suggestive naked or partially naked photos, images and videos (Hollá, 2016).

In the last decade, communication via various technologies became an important factor in the formation of romantic relationships. People are increasingly using media to initiate, keep or quit their relationships. Text and audio-visual materials of sexual content most frequently occur between partners who exchange their intimate and sexually explicit photos due to several reasons. Exchanging sexually explicit messages between people in a romantic relationship stimulates their mutual intimacy (Klettke et al., 2014). The problem arises if the couple breaks up and one of the partners uses the intimate photos to get their revenge. Lenhart (2009) states that sexting mostly occurs:

1. between partners;
2. between partners at first and then the content is shared with other people who it is not dedicated to;
3. between two people who want to start a romantic relationship.

Foreign publications, however, offer various classifications of sexting. Van der Hof and Kooops (2011) introduce two types of sexting:

1. *self-sexting* – describes situations when an individual posts their own sexually explicit photos and videos on the Internet;
2. *peer-sexting* – describes situations when peers send their sexually explicit photos and videos one to another.

This division addresses the way the content is posted. It might be a situation when someone posts their photo or video of sexual or sexually explicit content on the Internet or when such photos are sent among peers. Further types of sexting were studied by Scholes-Balog in collaboration with other authors (2016) who divided sexting into six categories, i.e. as sending:

1. sexually suggestive photos and videos;
2. photos and videos exposing people in underwear or lingerie;
3. nude photos and videos;
4. sexually suggestive text messages;
5. and 6. sending or showing other sexts that were intended to be private.

This classification is based on the types of sexting behaviour and the above-mentioned findings clearly show how sexting is performed. Another division is offered by Wolak and Finkelhor (2011). Sexting is described as:

1. *aggressive* – this type is closely related to another negative and often illegal usage of content;
2. *experimental* – refers to the exchange of sexual and sexually explicit photos and videos between two people in a relationship who want to flirt or make contact with each other.

This implies a general division of sexting and its forms. Sexting was analysed in detail by Hudson (2011) who differentiates its four forms:

1. *consensual sexting* – both parties voluntarily participate on sexting;
2. *sexbulling* – sexting is used to harass, force or abuse other people;
3. *illegal sexting* – sexting occurs among minors or between minors and adults;

4. *at-risk sexting* – sexting has various negative consequences such as victimization, humiliation, job loss, divorce, etc.

This classification appears to be the most comprehensive. It includes behaviours within the scope of standards for partners' coexistence (consensual sexting). However, it also covers forms of inappropriate behaviour which fall outside these standards. They are (in real life, as well as in cyberspace) often closely related to the other at-risk behaviours such as cyberbullying, cybergrooming, paedophilia and pornography.

## 2 Motives and reasons for sexting

There are several specific motives that have provoked the outbreak and dissemination of sexting among adolescents and adults in the world. Sexting among adolescents usually occurs in the following contexts:

- as an opportunity for younger people with no experience in sexual activities to become sexually active;
- as an opportunity to draw someone else's attention;
- as a proof of trust and intimacy between sexually active people.

Adolescents post their own intimate photos for different reasons. They often believe that sending illegal photos and videos would help them draw the attention of the opposite sex or start a modelling career. We register the age of those who send sexually explicit materials is decreasing worldwide, including Slovakia. Therefore, it is not rare to see children involved in online sexting. As for children, the main motives for exposing oneself in the cyberspace are primarily related to drawing someone else's attention, as well as getting tangible things in return. Our intention is not to analyse motives and reasons for sexting among children as they are often misled by inappropriate online communication. As a result, they become victims of criminal offences such as paedophilia, pornography and cybergrooming. In this section, the focus is set on the motives and reasons for sexting among adolescents. Kopecký (2015) uses five essential points describing the motivation for sexting, as follows:

1. sexting as a part of romantic relationships: sexual or sexually explicit photos and videos are shared between partners either as a way to get the other person's attention at the beginning of a relationship or to strengthen trust and intimacy during the relationship.
2. sexting as a way of distraction;
3. social pressure of peers;
4. opportunity to express oneself in the society;
5. way to get revenge – especially between ex-partners.

Exchanging sexually explicit messages can be a type of flirting or a way to draw attention of potential partners. Motives for sexting often include distraction, provocation, pressure from partners and peers. Lohmann (2012) – one of the authors who study at-risk phenomenon – states following motives in his publication:

1. infatuation – occurs most often; a person in love would do anything to prove their love to their partner;
2. pressure from peers – to be accepted in a group of peers;
3. curiosity – sexting makes the adolescents curious, leads them to examination and experimentation;
4. insufficient awareness of possible consequences of sexting.

There may be a large number of motives for sexting. It is essential, however, to explain to young people that sexting poses a danger and that nude or half-naked photos should remain private. Published cases of sexting might serve as a good example to do so. Otherwise, an individual's photos and videos could be posted on public portals even without them knowing. Therefore, it is highly important to point out the consequences of their behaviour.

## 2.1 Quantitative-qualitative research of sexting – sexting 'in practise'

So far, only one national research that would focus on sexting among the adolescents has been carried out in the Slovak Republic. This research involved 1,619 students aged 11–18 (the age mean was 14.5).

Table 1 – Research sample structure (Hollá, 2017)

Region	N	Sex		Age Mean (SD)
		Boys	Girls	
Bratislava	205	102	103	14.55 (SD=2.31)
Trnava	202	62	140	14.50 (SD=2.30)
Trenčín	202	91	111	14.48 (SD=2.29)
Nitra	202	92	110	14.49 (SD=2.29)
Žilina	204	97	107	14.44 (SD=2.31)
Banská Bystrica	209	87	122	14.51 (SD=2.31)
Prešov	200	75	125	14.50 (SD=2.29)
Košice	195	93	102	14.60 (SD=2.26)
Total	1,619	699	920	14.51 (SD=2.29)

The aim of this research was to *detect if sexting behaviours occur in the studied population, as well as to study if there are any subcategories of sexting involvement.*

To examine the latter, we used LCA methods and statistical criteria such as Akaike information criterion (AIC), Bayesian information criterion (BIC), the adjusted Bayesian information criterion (aBIC), log-likelihood and relative entropy.

Table 2 Quality level of different LCA sexting models (Hollá, 2017)

Nm. of classes	AIC	BIC	aBIC	Log-likel.	Rel. entr.
2 class.	17,421.2	17,771.6	17,565.1	-8,645.6	0.958
3 class.	16,076.7	16,604.8	16,293.5	-7,940.3	0.971
4 class.	15,282.1	15,988.2	15,572.0	-7,510.1	0.915
5 class.	14,918.7	15,802.6	15,281.6	-7,295.3	0.961

According to the quality assessment of different models, model of four latent classes turns out to be the best option for sexting examination. The entropy for this model refers to 0.915 which is considered relatively high. This implies there are four groups (classes) of people involved in sexting – by-standers, victims, sexters and bi-directional sexters.

The largest group is represented by 69% adolescents standing by who can be also identified as witnesses. They are aware of sexting and its presence (Image 1).

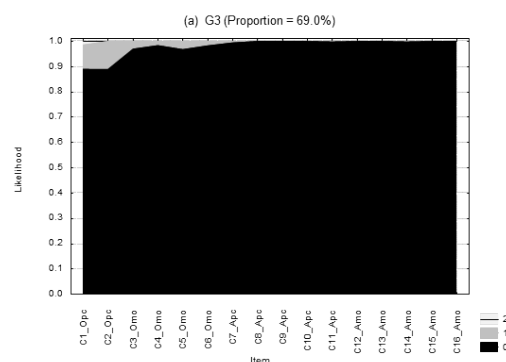


Image 1 – Witnesses of sexting

They could have witnessed sexting either directly or indirectly. Image 1 demonstrates that the score of this group is very likely to be 0 (marked as black) in case of all items, i.e. people in this group are neither victims, nor initiators of any sexting form.

The second most numerous group is represented by 19.1% students. These students are more likely to become victims of sexting. They were threatened once or twice in a month that their own sexually explicit photos would be posted and misused (Image 2).

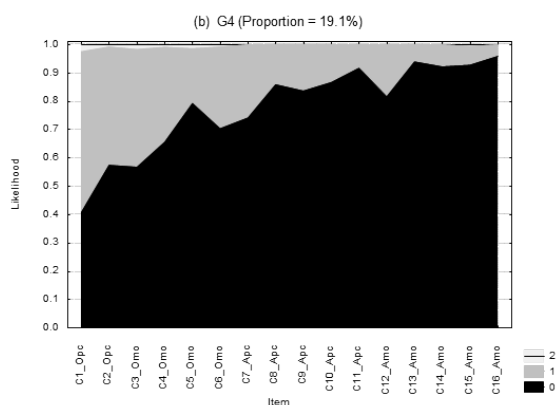


Image 2 – Victims of sexting

The third group includes 10.5% adolescents. These adolescents are highly active in sexting. They are sexters who are, however, less likely to get involved in the active forms of sexting repeatedly (Image 3).

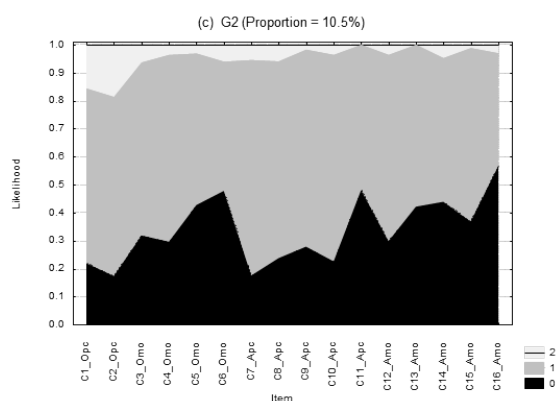


Image 3 – Sexters

The least numerous group (1.4% research sample) is represented by students who actively participate in sexting by sending their own nude photos, as well as photos exposing other people from school and by requesting the others to provide their nude photos.

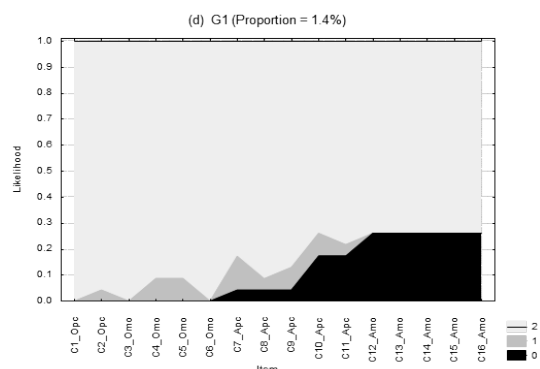


Image 4 – Bi-directional sexters

The gender-based analysis shows that boys' involvement in active sexting increases at the age of 13–18. Boys at the age of 17 and 18 are the most active in sexting. The same applies to girls at the age of 16 and 17. Interestingly, as much as 5% girls would send their own photos to their boyfriends or partners via computer even if they consider such behaviour severe.

We subsequently interviewed 37 young people (29 girls and 8 boys at the age of 16–19) to examine their causes of and motives for sexting. By the means of semi-structured interview we aimed to find out if these participants had encountered sexting before and what motives and reasons had led them to such behaviour.

Have you ever encountered sexting? If so, how?

- Indirectly – I heard about it.
- My boyfriend asked me to send him intimate photos.
- I sent photos exposing naked girls to my friends. I wanted to show them the current lifestyle and the way young girls lived.
- My classmate threatened my other classmate that he would post her photos online.
- My friends received someone's nude photo and showed me. The photo started to spread.
- A stranger once sent me a message on Facebook that included sexually explicit photo.
- My friends sent me photos on Facebook which exposed naked girls I know.
- I know some girls from our town/city who took their naked or half-naked photos and sent them to a 'friend' for a financial reward (app. €5).
- A stranger sent me photos on Facebook exposing them naked and asked me to evaluate their looks and send them my nude photos.
- I received half-naked photos of me and my friend. I was also asked to send them to another friend so I did it.
- I received an email with the photo of my naked classmate. I only sent photos showing my own body and I was not completely naked – I took the photo in the gym.
- I used to send my partially revealing photos when I had a crush on one girl (app. 10 times in that particular month).
- I received the photo of a half-naked girl I merely know.
- A stranger sent me their sexually explicit photo on Facebook.
- My half-naked photos were misused by my classmates in the group chat.
- I know sexting from my friend. He used to send his friends' inappropriate photos. Well, I did not feel comfortable at all.
- I got MMS with the photo of a naked man. I did not know him so I did not reply and forgot about that.
- I could see my classmates, both boys and girls, sending such photos to one another.
- I received someone else's nude photo and forwarded it. When I think about it, I just did the same thing someone had done before me – I just forwarded it. However, it got interesting when someone I knew asked me to send them mine. I am not proud of what I did but back then I did not think about it at all.
- I remember we were receiving photos from a student in our class for a week. We began to resent the person sending those photos and felt sorry for the student on them.
- I used to send my intimate photos to my boyfriend several times a week.
- People requested me to send my private and intimate photos but I never answered them.
- I received a photo of my friend who was naked and drunk and sent it to my classmate. I found it amusing back then but now I regret it. I had no right to send around someone else's photos – not even to people I know.
- When I was still at primary school, I received emails with photos exposing my naked classmates.
- Some boys wrote and asked me to send them my nude photos. I thought it was totally weird and inappropriate. It only happened three times that year but I found it too much and bothering.
- My friend was threatened by her boyfriend. He said he would post the photos she had sent him if they broke up.

As the literature along with the analysis of the above-stated answers show, the adolescents send their photos upon requests from their friends because they trust them and want to enhance the intimacy. Certain young people treat 'sexting in practise' differently. They think that having their partner's nude photo in the phone reflects how sexually active they are. They send these photos and request them from their friends in confidence. Furthermore, it can be stated that adolescents receive photos and requests to send their own photos from people they know and strangers respectively. In this case, they often do it for fun or to make and keep their friendships, not thinking about the consequences.

How did you feel afterwards?

- Sad, humiliated, afraid and worried, disgusted and uncomfortable...
- I wonder what to think about it and what my attitude should be. These days, people often seek their partners on the Internet but I also believe some stuff should not be posted online.
- I guess young couples are trying to communicate in various different ways even by sending photos to one another. However, I condemn any misuse of such photos and videos or threats of posting them.

What motives do adolescents have for sexting?

*They want to draw attention of the others. Either they want to be 'cool' or they are bored and do it for fun. They enjoy viewing this kind of photos but they also want to make fun of the affected person. Another reason might be they want to attract the opposite sex and their surroundings. They want to become more popular among their peers and get as many likes on social networks as possible. They want to become more self-confident. They want to show off their looks, thinking they look more mature on the photos or have a nice body. They do it out of jealousy, prestige or to be attractive and popular in the cyberspace, as well as in the real life. They feel empty inside and do it out of revenge.*

Adolescents who send their intimate and private photos to their partners or post them on social networks are very likely to be at-risk of blackmail, pressure, public humiliation, sexual harassment or sexual assault. This material could circulate online for several years and might be also used much later.

To conclude, it is quite difficult to detect the true prevalence of sexting as researchers use different definitions and methodology to examine this phenomenon. It seems that sexting might be a modern form of flirting. Adolescents could use it to initiate new relationships or keep the existing ones. Sexting is closely related to the individual's age, personality and social situation. During adolescence, young people become more curious and feel invincible. They are much more impulsive than the adults. All these variables also affect the formation and persistence of sexting either as acceptable or at-risk phenomenon. In some cases, sexting can indicate another at-risk behaviour. This allows educational and psychological intervention to take place and generate solutions to prevent any negative impacts on victim, as well as on the actor of sexting known as sexter.

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**Primary Paper Section: A**

**Secondary Paper Section: AM**



# INNOVATIVE DIDACTIC TOOLS AND CLASSICAL MUSIC IN CHILDREN'S MUSICAL PHYSICAL ACTIVITIES AS A PART OF THEIR DANCE TRAINING AT PRIMARY SCHOOLS OF ARTS

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In today's technologically advanced world, interactive education plays a key role in motivating and actively involving students in the education process. Because of the digitalized world in which today's youth lives, and because of their fascination with video games, an increasing number of teachers use of educational and playful teaching methods that help students develop critical thinking skills.<sup>1</sup> This paper presents possible ways to integrate selected didactic tools into dance education. It analyzes the use of audio aids, virtual programs and selected didactic devices (tablet, kinect, dance mat) as tools that help develop a creative educational atmosphere and motivate the children to dance activities to classical music.

Keywords: Didactic tools. Tablet. Kinect. Dance mat. Creative educational atmosphere. Primary school of arts. Dance education. Classical music.

## 1 Music in our lives

Today, our society is influenced by a rapid increase in knowledge. Consequently, the requirements for education and teaching are also changing. Schools as educational institutions that prepare individuals for life in the society have started to partially change their customary teaching methods and forms. One of the tasks in today's school education is to prepare the youth for their future personal and professional life in an increasingly technologically oriented society.<sup>2</sup> Thanks to rapid technological developments and globalization, contemporary listeners, and not only young ones, are surrounded by music everywhere. However, the strong impact of the media and of the social networks tends to promote unilaterally oriented musical styles, such as pop, r&b, or rap; in dance art, it is hip hop and contemporary. Popular music thus becomes a natural part of young people's lives. By selecting classical music, we want to focus young people's interest on other than contemporary popular music to enrich their musical perspectives.

Various pieces of research, specialized articles and opinions of psychologists confirm that music plays a very important role in people's lives and helps develop various aspects of their personality.<sup>3</sup> Contemporary popular music consists of simple tones which are constantly repeated. To a great extent, the lyrics of these songs reveal various sexual topics, contain inappropriate phrases or even reflect other, negative sides of the society, such as the use of drugs and other substances. Therefore, it is more than necessary to lead children to classical music, to the authors who composed it, and to their lives. This way, they learn to differentiate between music that enriches and music that does not actually tell them anything.<sup>4</sup> Because, according to many, classical music supports the emotional side of people, develops their fantasy, motor skills, memory and logical thinking, and enhances their creative features and supports the coordination of various physical activities. Several statements emphasize also its positive influence on the development of brain activity.<sup>5</sup> By listening to classical music, children learn to improve their concentration ability on a single particular thing, and also improve their social skills.<sup>6</sup> Susan Hallam, professor of education and music psychology in London, explains that

preferences of music develop based on the musical styles that the child experiences in its childhood. Therefore, listening to classical music already in the first years of primary school may lead the children to develop a positive attitude to it and, when they get older, they may be able to appreciate a wider range of musical styles.<sup>7</sup> She draws our attention to children aged 9 to 12. There is no doubt that children are naturally inclined to music and are able to evaluate it subjectively. Our own experience reveals that various musical styles have a various influence on us and evoke a wide range of emotions and feelings. Several pieces of research confirm that it is classical music that has the most favourable influence on the harmonious development of a child. It is melodious, emotive, and carries the message of the various moods and mental states of its authors. We are trying to lead children to develop the ability to listen to classical music consciously, to find sources of inspiration in it, and to have a positive experience of it.<sup>8</sup>

The parent and the environment in which the child grows up play a major role on the selection of musical styles and musical preferences. Often, if the parents are inclined to classical music, if they listen to it at home or in the car on journeys, after some time, the child starts to be automatically interested in what kind of pieces these are, who composed them, and what the musical instruments they hear in the pieces are.<sup>9</sup> However, a single musical style should not be forced on a child because the opposite effect might occur and the child might stop caring about that musical style. Children should get the opportunities to discover their own preferences. However, if we teach the child to perceive classical music in an appropriate way, we will not regret this decision later on in life.

## 2 Music in Education

Our teaching experience in primary schools of arts, conservatories, workshops and intensive dance courses reveals that the pupils come across classical music only sporadically. In a more specific form, this fact can be seen in the preference for new trends even in the teaching process and in the musical physical activities at primary schools of arts. Educational standards for the dance specialization at primary schools of arts prescribe musical accompaniment only for the folk dance subject, e.g. "verbunk" recruiting dance (Myjava region) – "Z hory vieter veje" song, transfer of weight with a springing action (Myjava region) – "Pred bučkom, za bučkom", "Do krutu" dance (Liptov region) – "Frajer môj listoček" song, Cindruška dance (Liptov region) – "Ej, Cindruška, cindruška" song etc.<sup>10</sup>

Teaching the techniques of classical dance requires collaboration with an accompanist who chooses pieces from his own musical materials. If the teacher does not have the opportunity for such collaboration, he uses compositions from piano/orchestral recordings that suit the given technical combinations. Musical accompaniment is not prescribed even for jazz or modern dance, and the selection of the songs is up to the teacher. Methodological guides for the creative dance subject contain descriptions of various exercises on different topics for the given year but the musical material is not prescribed, and the teacher can decide on his own what musical genre to select. Work with various musical instruments and musical recordings (improvisations on a theme) is assumed, but teachers often work

<sup>1</sup> Čavojský, I.: *Implementation of Information and Communication Technologies into the Teaching Process*. Zborník príspevkov Juvenilná Paedagogica, 2012, p. 71. 319 p.

<sup>2</sup> Vančíková, K.: *Education and the Society*. Banská Bystrica: Faculty of Education, Matej Bel University in Banská Bystrica, 2011, p. 55-57. 164 p.

<sup>3</sup> Tomanová Marie - *Music Develops: Lead your Children to Music, and They'll Study Better*. [online]. jdemedokoly.cz. May 2015. [Retrieved on 26/07/2018].

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<sup>7</sup> Harris Sarah - *Playing classical music to your child can improve their listening skills later on in life*. [online]. Daylimail.co.uk. January 2014. [Retrieved on 26/07/2018].

<sup>8</sup> Tomanová Marie - *Music Develops: Lead your Children to Music, and They'll Study Better*. [online]. jdemedokoly.cz. May 2015. [Retrieved on 26/07/2018].

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without musical accompaniment and create sounds with their own body, for example the exercise – the Hearts.

The pupils stand in a circle with eyes closed, place their hand on their heart and perceive its beating and rhythm. They stamp this rhythm with their feet. On an audio signal by the teacher, they start walking and, on another signal, they stop, perceive the changed speed of their heartbeat and stamp this changed beat. On a new signal, they again pick up speed (now with eyes open), and the exercise continues. Now, they stamp, clap or “scat” the rhythm (they pronounce nonsense syllables, letters and sounds rhythmically). At the same time, they perceive the changed intensity and speed of their breathing.<sup>11</sup>

To maintain the interest of the pupils in creative activities, dance teachers often use well-known songs from contemporary popular music (r&b, hip hop). An initial survey used in primary schools of arts and conservatories in Slovakia also supports this conviction. The survey was to find the extent of using classical music in the teaching process of physical and dance subjects, in choreographies for various concerts and performances or for other physical activities. The responses reveal that classical music is most often used mainly for exercising techniques of classical dance and for the choreographies of these dance techniques. 369 e-mails were sent out, 30 respondents responded, and there were 18 positive answers, i.e. that they used classical music. Even in spite of the small number of responses and a possible doubt of the validity of the survey, we have decided to take the results of this survey into account because we assume that classical music is indeed used to a very small extent.

Table 1 – Results of the survey, selection of responses

	Question: Do you use classical music (Mozart, Vivaldi, Beethoven, Bach, Tchaikovsky, Zelenka ...) in the teaching process and for creating choreographies for final concerts, competitions and similar performances? If so, which composers and which compositions do you use?	Question: What is the proportion of choreographies with classical music and choreographies with modern music at final concerts?
Private Primary School of Arts, Bratislava	1: They use little classical music, in choreographies mostly for ballets (P. I. Tchaikovsky), in the teaching process, the accompanist more often chooses modern melodies, classical music is most often used in lessons of creative dance (F. Chopin, J. S. Bach, A. Dvořák).	2: They did not answer this question.
Primary School of Arts, Bratislava	1: They use classical music for choreographies for final concerts (C. Orff, P. I. Tchaikovsky, J. Melkovič). In the teaching process: folk music for lower years, film music and contemporary music for upper years.	2: They did not answer this question.
Primary School of Arts, Bratislava	1: They use classical music for choreographies (P. I. Tchaikovsky); in the teaching process, in the form of piano accompaniment (accompanist). Mostly, for choreographies from classical dance, they use modern compositions in slow tempo (film music).	2: about 10% classical music, 20% slow modern music.
Primary School of Arts, Dolný Kubín	1: They do not use classical music.	2: They did not answer this question.
Primary School of Arts, Piešťany	1: They use classical music in the teaching process for techniques of classical dance and for the creative dance subject (P. I. Tchaikovsky, A. Vivaldi, C. Saint-Saëns, F. Lehár, C. Debussy).	2: Each style is represented to the same extent.
Primary School of Arts, Sereď	1: They use classical music in the teaching process in the form of recordings; for choreographies for final performances to a smaller extent (W. A. Mozart: Lullaby, arranged by R. Čanaky and M. Podhradská).	2: They did not answer this question.
Primary School of Arts, Šurany	1: They use classical music in modern arrangements (Z. Keating).	2: Classical music : modern music – 1:2.

### 3 Innovative didactic tools

In this paper, we focus on the development of a creative educational atmosphere by imparting classical music and dance activities by innovative didactic tools and didactic techniques such as tablet, dance mat and kinect used for subjects of the dance specialization at primary schools of arts.

Tablets are modern electronic devices that can be used for various purposes. They are used in the field of multimedia since they can play the majority of the widely used formats. Their common functions include Internet connection (wifi or, in more expensive models, 3G module), playing music, playing videos (even in HD quality in more expensive models), reading electronic books and playing games. They can be operated through a touchscreen which covers most of their surface.<sup>12</sup>

Dance mats, or dance pads, combine games and sports, and are meant for all age categories. After a simple installation (connecting to a PC), a dance program starts and the composition and the difficulty level can be selected. The principle of the game is to step on the fields on the mat in the right moment, according to the flow of the coloured arrows on the computer/television screen. The musical accompaniment is varied, and its advantages include the possibility to work with a composition of your own choice, which will be inserted in an mp3 format into the StepMania program (included in the installation package).<sup>13</sup>

Kinect is a device that can sense figures in front of the television/computer, transfer their movements into the console, and show it in games or applications. This way, it enables you to control a character in the application without a controller, move in the menu, control the playing of the videos etc. It senses the figure(s) (multiplayer) without the necessity of lighting, it can determine their distance from the camera based on the image, subsequently distinguish the limbs, the head, the joints, and use these in the application.<sup>14</sup>

Because of the possibility to select the music freely, we decided, based on the educational standards, to use and work with Camille Saint-Saëns's composition *The Carnival of the Animals*. We took inspiration from the music education curriculum for primary schools (ISCED 1 – primary education). The suite consists of 14 short and humorous compositions about various animals, with onomatopoeic elements. Thanks to their subject-matter, the animals, the pieces can be depicted by physical movements easily. This makes them suitable for children. Some movements of the suite, especially *The Swan*, the *Aquarium*, and the *Finale*, are used in films and advertisements, so they may sound familiar to the children. The composition lasts about 20 minutes, which may appear quite demanding for a child listener. However, the movements themselves are short, which helps keep the children's attention always active.<sup>15</sup>

#### 3.1 First phase of the research

In the first phase of the research, we used a selected didactic tool, a tablet, for preparing a musical dance composition with an experimental group. Thanks to its dimensions and easy manipulation, it is suitable for working in spaces where the pupils do not have to sit at a computer or laptop but can move freely. The first part of the lesson consisted of becoming familiar with the device and determining the workflow with it. We worked with one tablet, with the Paint program installed in it. The pupils learnt to use the basic tools of the program, such as to change the colour of the brush, change the thickness of the brush, use the eraser, select shapes etc.

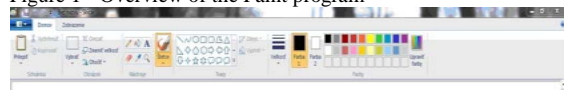
<sup>12</sup> What is a Tablet. [online]. Tabletstore.sk. 2011. [Retrieved on 26/07/2018].

<sup>13</sup> Dance Mats DDR.CZ - What, How, Why. [online]. Tanečnickoberce.sk. [Retrieved on 26/07/2018].

<sup>14</sup> Saver – Presents: XBOX 360 Kinect, You are the Controller!. [online]. November 2010. [Retrieved on 26/07/2018].

<sup>15</sup> Le carnaval des animaux » de Camille Saint-Saëns. [online]. Musicologie.org. June 2016. [Retrieved on 01/10/2017].

<sup>11</sup> Puobišová, D.: *Methodological Guide for Creative Dance for Years 3 and 4 of Level I of the Primary Study of Dance Specialization at Primary Schools of Arts*. Bratislava: Ministry of Education of the Slovak Republic, 2005, p. 8. 62 p.

Figure 1 - Overview of the Paint program<sup>16</sup>

Subsequently, we divided the experimental group into 4 smaller groups, pairs. We chose 4 movements of *The Carnival of the Animals* in advance: Aquarium, the Swan, Introduction, Fossils. Each pair used the device only for one piece. During the first playing of the Aquarium, the first pair drew their ideas into the program together. Subsequently, the movement was played again, and the pairs had the task to transfer the drawn images into physical movement. If they did not manage to do so at first, we played the piece to them again, and the pupils had one more chance to prepare. Then they demonstrated the dance variations created by them to their classmates. The other pairs first looked at the drawn image on the tablet and then, after playing the composition, they watched how the interpreters carried out their task. The demonstration was followed by a short discussion about the achieved results, about the way in which the pair worked, and about the feelings that arose during the preparation of the dance variation. The process was repeated in the same way for the other pairs, too. The other pairs, who were not working with the tablet, had the task to listen to the piece and then to work, therefore this work was more complex in the way they worked during the lesson. From the discussions, we found that the pairs which did not have the tablet when listening to the composition improvised separately. They were not able to describe their ideas to each other. Random movement sequences occurred, created not from the initial listening but directly on the second playing of the musical piece. In some cases, if the pair which worked with the tablet asked for the piece to be played again, these invented physical variations looked differently. The pairs which drew their ideas into the tablet could repeat their physical/dance variations almost precisely several times in a row.

The whole lesson progressed in a positive atmosphere. Initially, the pupils were surprised with the selected didactic tool and their attention was slightly distracted. Later, when the conditions had been explained to them and they learnt to use the Paint program, they were able to focus their attention to the music and to listen to it actively. The pupils' performance during the lesson was not equal, the pairs who used the images drawn in the Paint program made greater effort to transfer the image into movement, while their classmates who worked with imaginary ideas were not able to show the same sequence of movements twice, since they did not have the chance to rely on a real image. This frustrated them, in some cases they even refused to perform in front of their classmates. Another problem was the big interest in working with the selected didactic tool. Some of the pupils were unable to concentrate on themselves and work on the task because they wanted to work with the tablet.

In the control group, we proceeded in a regular way. In the beginning, we listened to the selected movements of the suite. This was followed by improvisation on the heard pieces and the teacher observing their work. After the improvisation, we had a short discussion about how the pupils felt about working with the given movement and what it evoked in them. Another improvisation followed, but now they knew what animal the given piece represented. The movements used by the pupils in the improvisation were depictions of the movements of the animals. Another step was practising the dance variation by demonstrating the physical material by the teacher. This work was unilateral, i.e. the teacher showed the movement sequences and the pupils repeated them. This way, they familiarized themselves even with an abstract movement material which did not represent the movements of the animals depicted in the given musical pieces. At the end of the lesson, the pupils were able to present the movement variations to the teacher. Thanks to the attractiveness of the musical material, we could work with the

pupils well and quickly. Their performance was even, since all of them were learning the same movement variation together. An interesting moment was the demonstration of the abstract movement material to the musical composition on the theme of animals. The pupils were surprised at how they could work with music in a different way, not only descriptively depicting the activity of the animal represented by the composition in movement. However, the final discussion revealed that the pupils would like to work with abstract movement sections to a different music, for example they mentioned Miro Jaroš's songs or their favourite song, *Despacito* (Luis Fonsi).

#### 4 Conclusion

The use of the selected didactic tools in dance education is still in the process of research. The results of the research carried out will be used for the verification of the set goal that, by integrating innovative didactic tools and didactic devices (tablet, dance mat, kinect) into the musical dance activities of the pupils specializing in dance at the primary level of arts education has a positive influence on developing a creative educational climate. Also, the results will serve as an inspiration for the teachers of primary schools of arts who have the ambition to incorporate information and communication technologies into the process of teaching appropriately and efficiently. At this level, it is important to convey the work with compositions through games, initially through improvisation where the children can discover forms of expression and the possibilities of their own bodies by experimenting. The clear dynamic changes, the contrasts of the movements and the non-musical themes of the selected composition (various animals) increase the pupils' interest in depiction by movement. This work contributes to the active involvement of the pupils into the creative process. Their interest in working with classical music is maintained by the attractiveness of the movement material that they choose themselves and that is close to them. Listening to the music in itself does not give them such an experience as when they can feel it in movement and expression. Familiarity with the emotions and feelings arising from the music and expressed in movement develops skills like empathy, understanding and optimism. At the same time, the children learn forms of expression and discover the abilities of their own body, they realize who they are and create who they will be. At a time of globalization and extreme technological development, this approach is indispensable for the children.

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**Primary Paper Section: A**

**Secondary Paper Section: AM**

## BUSINESS STRATEGIES IN SLOVAK START-UPS

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This paper is an output of the research project "Trends of internal control in business entities in the light of new challenges" (VEGA 1/0135/17) funded by the scientific grant agency VEGA.

**Abstract:** The modern phenomenon of "startup" has become a highly debated issue in the business world today. Start-ups are small starting companies with an innovative idea, but often their big problem is their funding and a well-chosen business strategy. However, foreign and domestic literature does not offer extensive knowledge of business strategies for start-ups. In view of this fact, we point out the factors influencing the development and functioning of start-up business strategies, and we emphasize the types of business strategies already known in the literature that could be applicable to start-ups as well. However, these are the types of strategies for small or emerging companies. For this reason, we have opted to choose the factors of the external and internal business environment that are complex and variable. Through rating scales, we identify the level at which the parameter that affects the business strategy is being located. We deduce how the average Slovak start-up looks like. If start-ups can identify their business strategy at the beginning of their business, they will advance in the coming years, and their competitive advantages will be sustainable in the long run. A competitive advantage is at the heart of business strategies, no matter whether in large, medium, small businesses, or in startups.

**Keywords:** Start-up, Business strategy, Competitive advantage, Entrepreneur

### 1 Introduction

Economic globalization has greatly contributed to changing the nature and growth of competition in individual markets. Since Slovakia became part of the single European market, it was possible to observe an even stronger strengthening of this trend in all sectors. In order for today's companies to succeed in the market in a dynamic business environment that is constantly changing and evolving, they must clearly define their uniqueness and competitive advantage. It is the competitive advantage that needs to be constantly developed and working to sustain it. However, it becomes the heart of a business strategy. Several recent studies indicate the sustainability of competitive advantage as a major growth option for organizations. That is the reason, why theorists also encourage leaders to look at sustainability as a driving force for growth and competitiveness.

In the area of competition today, not only the big players play the crucial important role. On the contrary. Currently, we can see the trend when start-ups (small upcoming businesses) can really fast belong between the elite and build a strong competitive edge. Their main benefit is adaptability, especially in periods of dynamic shocks such as breakthrough innovation and technological advances in the industry. It is in these situations that small companies can strike against large corporations thanks to their rapid and relatively simple adaptation to change.

### 2 The modern phenomenon "start-up"

Start-up, though until recently a relatively unknown term, has become a common and popular Anglicism among all ages today. Nowadays almost every young upcoming company is labelled to be a start-up company, which stands at the threshold of its development.

"A start-up is a young company that is just beginning to develop. start-ups are usually small and initially financed and operated by a handful of founders or one individual. These companies offer a product or service that is not currently being offered elsewhere in the market, or that the founders believe is being offered in an inferior manner." (Fontinelle, 2015)

In such a simple way, we could generally define a start-up. However, despite the above, when using the term of this modern phenomenon, countless discussions, inconsistencies and different opinions arise.

### 2.1 Views on start-up by renowned global experts

In defining the exact start-up characteristics, it is really difficult to reach a consensus. Many well-known personalities, moving in today's complex business environments, present their perceptions of start-ups and express their own characteristics based on various parameters such as age, profitability, growth rate or culture.

"In addition to the very complexity of defining a start-up, the second key issue is the determination of the boundary, respectively a notional threshold when the company ceases to be a start-up. (Hoffman, 2013)

"Some theorists note that if most people are convinced that the company will definitely be independent in the next five years, in this case it can no longer be called start-up. This statement is illustrated by a lay example of Twitter. When looking at the above-mentioned company, there is a general consensus that this company will be on the market as independent in the next five years. For this reason, it is no longer appropriate to label Twitter as a start-up. If we apply this definition to companies such as Uber, AirBNB or Dropbox – we can still talk about them as a start-up. If businesses are rapidly moving towards a consensus that they will act as independent companies in five years' time, and by doing so they will no longer be able to mark their start-up." (Hoffman, 2013)

Another American entrepreneur (McClure, 2016) defines start-up as a company that is "confused" about:

- what is its product,
- who are its customers,
- and how to make money.

Even a "temporary organization, a cluster, used to find a repeatable and scalable business model" (Bryan, 2015) is a feature for start-ups. Under the business model, it is understood how the company produces, delivers and captures value. In a simple way, it can be said that it describes how a company earns money.

Author of The Lean start-up as well as the Start-up Lessons Learned blog uses the following definition: "start-up is a people created institution to create a new product or service under extremely precarious conditions." (Ries, 2015)

From the above mentioned, we can conclude that the start-up company can be called fast growing. Not every newly established company is a start-up. The rule is not that the start-up requires or is required to work in the IT sector. In addition, start-up does not need be funded by venture capital.

### 2.1 Views on start-ups by renowned domestic experts

The Slovak start-up scene is experiencing a significant boom in the last six years. It is dynamic, full of young actors and experienced persons, which have been in the business world for years.

In short, the perception of the start-up concept in Slovakia, but also in Silicon Valley, is "a technology-oriented, innovative company with global potential and a high degree of scalability. The company remains a start-up until it finds a scalable, repeatable model of making money." (Štefunko, 2014)

However, if we look at the perception of the start-up from a broader picture, we can say that it is any young, rapidly growing company.

In the Slovak start-up ecosystem, we also meet the definition that "start-up is a project that grows with minimal resources and its founders are motivated directly through the share of the

project's profit." (Maxián, 2014) Many approaches to start-up definitions are today too uncouth.

Interestingly, there is also a statement that "start-up is not just a thought that someone wore in the head and believes it is worth it. They are those who bring this idea into reality and bring to their clients the value they are willing to pay for. Many start-ups make this idea (the business model) sharply changing and tuning in their first years of operation until they find the optimal solution. Start-up is a concept that helps to distinguish modern, ethical, hardworking and entrepreneurial people from the ground up in Slovakia." (Kulich, 2014)

From this knowledge and the facts about the definitions of the start-up, we draw the following conclusions: definitions are still not unified and integrated.

Based on our findings, we cannot clearly judge which definition of start-up is the most accurate. However, each one offers a foundation that is "building stone" or "cell" for start-up.

### 3 Business start-up strategies and their applicability

From the above mentioned, we can conclude, that if a start-up wants to succeed in the complex and turbulent business environment, which is typical of the start-up as well as to other business entities regardless of their size or the legal form of business and the sector in which they operate, this start-up needs to have a good business model and a suitably chosen business strategy.

Currently, however, we do not find a specific typology of business start-up strategies in the literature, yet the known business strategies can be of benefit for start-ups. These are strategies typical for small and starting companies, selected Porter's strategies, and, in part, the Blue Ocean strategy. The term strategy is often mistakenly referred to as a synonym of concepts of plans or tactics. Some authors, however, very simply explain the difference between these terms. They claim that "the key feature of the strategy is to provide surplus value over normal activity. They explain this in a simple example with apple trees. The plan would be to plant hundred apples. The strategy is to collect more apples, faster, more efficient and safer. How to do it in concrete terms should be a tactic." (Zimmermann, 2011, p. 6) The fact, however is, that "business strategies address issues of how a company will compete in its business or in one of its market segments. The intent of the business strategy is to gain a competitive advantage over the opponents." (Slávik, 2013, p. 213)

It is therefore obvious that business strategy is key not only for start-up, but also for any business entity that wants to maintain its market position as well as a competitive advantage. A competitive advantage is the core of a business strategy.

The start-up strategy, therefore, could be metaphorically compared to preparing Napoleon before a major battle, except that the rivals and challenges will be competitors and market pressure. Most start-ups are based on innovative technology-based business models, although it does not always have to be a technological start-up. In any case, an innovative business strategy needs to be adapted to the innovative business model, and these strategies could be used by start-ups. Beneficial for start-up companies could be three modern business strategies: "free of charge" strategy, model of pooling strategy and judo strategy. We can explain the business strategy "free of charge" on information technologies. It was the information technologies that brought a new kind of strategy, the freemium model. We can observe this strategy as a new form of competition where a competitor offers a product or service to the consumer for free. Most often, we can see a freemium model or a free IT product offering where this strategy is applied by companies such as Google with Google Chrome, or Adobe with Acrobat Reader.

The Freemium model can be observed in various areas, not only in the technology sector but also in air transport (Ryanair). We

can conclude that the freemium model is suitable not only for start-ups and starting businesses, but also for those established in the long-term market. For start-ups as well as for established organizations that do not use freemium model, competitors with this strategy can pose a serious threat.

A frequent threat appears to be that some businesses of such competitor do not react or wait too long, even though they have enough tools to avoid the danger. An example of such a slow response was airlines that did not respond quickly to Ryanair's offers. Ryanair began offering free air tickets and tickets with a significant discount. The slow response of airlines has resulted in Ryanair taking slowly over the market share on the European market until its share exceeded Air France. When analyzing the threat posed by the freemium model of our competitor, there are three factors to make it worthwhile – the competitor's ability to quickly cover costs, the growth rate of free-product users, and the speed of leaving out standing customers for free competition.

Four well-established strategies are characteristic for the mentioned freemium model – to offer a widely used free product and to sell premium versions (Acrobat Reader); to sell by-products that are not directly related to the product (Ryanair offers products even during the flight); to sell access to a third-party user database (Google AdWords); or to link a free product to a paid product (HP free printer for computers). Illustrative examples include the use of a modern business strategy freemium model (Bryce, et al., 2011), which can also be applied in start-ups.

The business strategy of the model of pooling is a strategy (Werbach, 2000) that has arisen not only for start-ups, but also for businesses doing business on the Internet. Company/start-up gets the information it sorts and then sells to its clients. Clients process the purchased information and add unique value to them. Companies/start-ups can therefore play a role of originator, partner, distributor or customer.

The first recommendation of this strategy is to change the role in the organizations. Its meaning is to search for vacancies on the market by pooling. An illustrative example is Amazon, which originally was a book distributor, but later changed its role to the role of an e-commerce distributor. This role is still in the company today. The second recommendation is to sell key competencies. The core and business objectives are, for example, delivering and shipment, but these organizations also have high-level support systems and services that can be offered as services. An example of this use is FedEx, which has offered its unique online tracking system to its clients.

Judo strategy (Yoffie, Cusumano, 1999) is applied mostly on the Internet. It is compared to David's fight against Goliath. The difference is that the place where the fight is taking place is the internet. New starting companies, such as start-ups, are characterized by speed and flexibility to take over the dominant position on the market. Their aim is to avoid direct contact. The essence of this is to find a parallel between the style of fighting on the Internet and the judo fighting.

Similar to judo in organizations the strength and weight of the competitor is used. Speed, flexibility and leverage are the three basic elements of this strategy. Moving quickly to the unoccupied market space prevents direct competition. The company's role is to focus on new products, new pricing models, new testing options, and distribution methods. The essence of an entrepreneurial strategy is to avoid fighting itself, for example by using its own flexibility or retreating from the direct attack of a stronger competitor. Is not recommended to compete in a competitive race unless an organization is stronger than an opponent is.

Start-up companies can also use selected Porter Generic Strategies. They are based on competitive advantages based on differentiation and low cost combined with market segmentation. Independence from the industry in which the organization/start-up is present expresses the generic use of strategies in practice.

The essence of the cost leadership strategy is to offer end-customer products or services much cheaper than the competitors. Widespread segmentation of the market is trying to find an average customer that the company can suitably serve its products or services. This strategy is a good start-up strategy, with the exception of those that are at the stage of business development. Probably the best suited for start-ups of large or multinational organizations, since they are able to make excellent use of the economies of scale they control. Offering a distinct product delivering a certain exclusive value to many customers is the essence of a differentiation strategy. The great disadvantage of this strategy is the high cost. It is therefore less suited for start-ups, since they do not have much capital. Protection against competition, which, on the contrary, is an advantage of a differentiation strategy, remains the domain of medium and large companies. Low costs or differentiation are two variants of a specialization strategy.

In the first variant, the company has rich experience with a particular segment and has low costs, which can make the company a leader in some cases. Start-ups can only use this variant if they operate strongly locally. Another possibility is that on the global market the start-ups are focused on a specialized segment.

In the second variant, the organization focuses narrowly on individual customer segments, thanks to advances in research and development and strong marketing. The strategy is also suitable for start-ups, which are using the lean start-up concept. The essence of the lean start-up concept is minimizing loss of resources related to product development and market entry. The minimization of losses stems from the continuous optimization of the basic product, which is functional. The customer gets the product offered primarily at the testing stage, and the product is then upgraded to customer requirements. In the business model, emphasis is placed on feedback. An ideal opportunity to instantly repeat the loop is offered. (Ries, 2011)

"Start-up can profile its strategic focus through multiple testing variants. From a long-term perspective, the use of a lean start-up business strategy may lead to non-compliance with the vision of a business entity." (Nobel, 2011)

We can conclude that adapting new products and services to the end customer based on his feedback and developing the business strategy ultimately should not change the vision of the organization/start-up. This could hurt both employees and current and potential customers. Continuous organization/start-up learning and the presence of business strategy in relation to customers point to a competitive advantage of a start-up, which contributes in a certain way to eliminating strategic uncertainty.

With the business strategy of a lean start-up productivity can also be assessed. However, the core is to persist in effective learning for an organization, which can thus eliminate the resulting losses associated with entrepreneurial activity.

A cooperative-competitive strategy might be another effective start-up strategy. The origins of this strategy are associated with the neologism of cooperative competition. "Mutual cooperation among competitors is important. The new strategic framework is beneficial. The customer's point of view points to a way of creating value." (Brandenburger, Nalebuff, 1996)

"The cooperative-competitive strategy reflects the current situation in business organizations. It is the time during which companies enter into cooperation vertically or horizontally. A positive of this business strategy is that it leads the start-up to maintain a competitive advantage." (Dagnino, Padula, 2002)

To ensure that the strategy is at all feasible, there is a need that all stakeholders have to have mutual goals and goals that are approaching each other. The final effect should be the victory of all the parties involved (the so-called win-win situation).

The cooperative-competitive strategy can be very beneficial for those start-ups, which are aware that they do not have enough resources available for creating and delivering value to the customer.

A competitive advantage is the opportunity to gain know-how from competitors. The cooperative-competitive strategy is characterized by a competition in learning of the organization. Start-ups that choose the path of learning can use a cooperative-competitive strategy to reach a win-win result.

A useful start-up strategy is also the Blue Ocean strategy (Kim, Mauborgne, 2005), which is based on the concept of creating new market spaces and creating new customer segments. Start-ups can thus achieve strong growth through the opportunities offered by the business environment. The effort of the Blue Ocean strategy is not based on a comparison with competitors and a competitive struggle in penetrating marketplaces in mature sectors against some of the strategies used.

For the Blue Ocean strategy, unknown marketplaces that are unaffected by competition are typical. The counter to this strategy is the Red Ocean strategy, where stormy competition rivals for the current demand. The existing market space is crowded with competition and the growth trend is almost impossible. The Blue Ocean strategy is based on an innovation of values that creates added value not only for the organization (start-up) but also for the customer.

A mismatch is visible on Porter's generic strategies. Using the Blue Ocean strategy is to find innovative values that obviously combine low cost and differentiation.

Based on Hill's statement (Hill, 1988), we can assume that the combination of these attributes leads start-ups to create sustainable competitive advantages.

Despite the fact that this research is still in the beginning, we conclude that courageous starting entrepreneurs with innovative growth-enhancing products, who are setting up start-ups, should benefit this way through their rapid and relatively simple adaptations to change.

#### 4 Aim, research sample and methods

The aim of the contribution is to point out the suitable business strategies for start-ups, which can reflect current conditions and future opportunities in a changing business environment. Based on the knowledge of renowned foreign and domestic authors, we can conclude that a well-chosen and functioning business strategy leads start-ups to achieve the competitive advantage, which is the core of a business strategy.

By exploring the start-up business strategy, we detect how strategy helps start-ups to exist, survive, or succeed in a changing business environment. We evaluate the business strategy through internal and external environment parameters using rating scales.

Selected strategic aspects were investigated on a sample of 72 start-ups in 2016 and 53 start-ups in 2017, which are operating in Slovak Republic, by using the questionnaire method. The questionnaire was filled out by the entrepreneur during a personal and multiple visit of the start-up. The age of a typical start-up entrepreneur ranged from 26 to 30 years. Each of them has a 2<sup>nd</sup> university education degree and a 5-year experience. A typical start-up in the surveyed sample considered the idea as world-class, earned its first revenues and used start-up capital.

The research sample of the start-ups obtained by the questionnaire survey was subsequently processed and evaluated in Excel using mathematical methods.

In addition to the questionnaire survey and the interviews with the start-ups of the investigated start-ups, the following survey methods were used:

- mathematical methods,
- comparison method,
- benchmarking method,
- method of analysis and synthesis,
- method of induction and deduction.

## 5 Survey results

As mentioned above, we emphasize the business strategy, which is based on competitive advantages and we give them a prime position. The start-up entrepreneurs gave them a great priority. Its essence was closely linked to the structure of resources of start-ups. Ultimately, it has been their effective use in the business environment.

Finding new competitive advantages in start-ups in a complex and constantly changing business environment is a conclusion and a finding of answers to the question "why business strategies are emerging?" The answer to this question is clear. This is a multiplicity of factors such as creating new surprises in strategic management, or strong unsustainable competition on the domestic market or abroad. The use of multiple tactics of competitors has an impact on their behavior in a complex business environment. What also cannot be obviated is the use of funds or the growth of new requirements set by the customer himself. Customer orientation often leads to high quality products. The aforementioned factors influenced overall decision making in the investigated start-ups.

The surveyed sample of 72 start-ups (in 2016) and 53 start-ups (in 2017) on the Slovak market indicates that the average investigated start-up had a total of 4 members and a mean start-up time of about 1.5 years.

The start-up business strategy was rated using a scale of 1 through 5, where 1 was the minimum value and 5 was the maximum value. Its originality, excellence, diversity, complexity and innovation were assessed against competitors or standard business practice.

Under the conditions in which the start-up analysis was carried out, most of the entrepreneurs had the belief that in order to be successful they only need to have a properly formulated vision. Some of the entrepreneurs abstracted from the vision and considered it irrelevant. However, they did not realize the vision's importance. How and in which way do these start-ups want to secure their long-term prosperity? The vision is one of the images of the future and expresses a sense of how the start-up should know where it wants to get in the future.

Due to the target orientation of the start-up, we also point to its mission, which is closely related to the vision. Visions and mission are general written documents that complement each other and their existence without one another is not possible. The start-up mission defines and tells the members what direction to take, identifies the business philosophy and the sense of starting up. Finally, the vision and mission follow the goals that characterize what the start-up wants to achieve with the use of its activities. Goals set up by start-ups should give meaning to the mission and should represent an assistant in formulating, operating and developing a business strategy. Vision, mission, and start-up goals are a benchmark for business performance and start-up success.

When evaluating goals, visions, and missions in investigated start-ups, through the originality, ambition, size, and difficulty, the results of the survey show that in the surveyed 72 start-ups in 2016, strategic attributes reached an average of 3.90, and 53 start-ups in 2017 reached 3.98. This shows the level of almost European. A scale of 1 to 5 was used, where 1 represented the level of local to regional, 2 national, 3 Central European, 4 European and 5 world level.

After defining the basic vision, which is followed by the mission and concretized in the goals, the next step is to explore the business environment (external and internal). Priority part of business strategy creation in the process of strategic management

of an organization or start-up is to carry out a thorough analysis of threats and opportunities, as well as internal possibilities and existing resources (its strengths or weaknesses). The nature and importance of the analysis is constantly strong, as the business environment to which start-ups are exposed is complex and dynamic. Since the start-ups are marked by turbulence, they can not rely solely on the lessons learned and the information. On the contrary, they need to analyze the external and internal environment at regular and more frequent intervals. In view of the turbulence that is growing in this business environment, the analysis allows start-up to predict threats and discover new opportunities from the outside environment.

Performing external and internal analysis at every start-up is a basic prerequisite for building a successful and functioning business strategy. As with any other business, the start-up analysis provides a picture of the strengths and weaknesses, the threats and opportunities that surround the start-up.

When researching the external environment, we focused on the most promising activities and the most important competitive factors that need to be prepared in the near future. Attention was paid mainly to the factors that influenced the total activity and the existence of the start-ups group. The purpose of this external analysis was to investigate the adaptation of start-ups in the business environment, for which instability, dynamics and complexity are typical.

The investigated sample of the start-ups passed through their developmental phases from development through growth and maturation, subsequently through maturity to their decline or demise. Sometimes there have been times when the start-up prematurely disappeared, and thus it did not reach the next phases of the life cycle at all. This is evidenced by the the number of investigated start-ups 53 in 2017 and 72 in 2016. The number of start-ups in 2016 decreased by 19 compared to 2017.

Based on the results of the survey, we can stated that 72 start-ups in 2016 overall have reached an average value of 2.4 and 53 start-ups in 2017 reached an average value of 2.69, meaning that these start-ups were in the growth phase in both monitored years, and they appeared themselves halfway to maturity. We evaluate this fact positively. The evaluation scale of the individual phases was as follows: we scored the start of start-up with a value of 1, a growth of 2, a maturing phase of 3, a start-up maturity of 4, and a start-up decline or demise of 5.

The dynamics and complexity of the business environment has been researched from low to very high. That is dynamics and complexity that start-ups have to adapt, because the greater external uncertainty makes the conditions in the external business environment more dynamic and complex. The average value ranged from 3.30 in 2016 to an average of 3.16 to start-ups in 2017, indicating that the start-ups at both times were influenced by the higher dynamics and complexity of the external business environment. Changes that happen and effects that impact on this businesses are influenced by the external factors that start-ups must manage to survive.

The task of implementation external analysis is not just a start-up assessment in the actual period, but importance is placed on its future development. However, this must be predicted. The predictability of the future development of the investigated sample 72 (2016) and 53 (2017) start-ups for the 3 to 5 year period was evaluated from very high (1), high (2), higher (3), mild (4) low (5). The average value for the researched file reached 2.80 in 2016 and 2.79 in 2017, indicating that the predictability of the future development was almost higher. Their future development is still largely uncertain from the researching of factors influencing their business activity in the actual period, as many of them may only appear in the future period.

In researching competitive conditions in the industry in the two years under investigation, through the intensity of competition, we concluded that approximately 90% of Slovak start-ups were and are still convinced that they do not have competition in their



business. In the actual period, this intensity of competition is growing. If start-ups are constantly looking for new competitive advantages, their trend will be rising and can expect to gain more profits in the future.

The results showed that the average start-up reached the same value as the predictability of future development of 2.80 in 2016 and 2.79 in 2017, which means that the intensity of competition is rather higher. Some start-ups have reached a much higher value, what follows that the competitive fight between businesses is incredibly hard. The rating scale was graded from a very high (1), higher (2), high (3), medium (4) to low (5).

The action radius, which evaluated the business space through individual levels from local to regional (1), national (2), central European (3), European (4) and global (5) reached an average value of 3.40 in 2016. In 2017, the value of 3.57 was slightly higher. However, we can confirm in both years that a gradual transition from the Central European level to the European level has been recorded. The start-ups were at its half.

The position in the external environment identified through the business space was also in the start-up researched at halfway between Central European and European top. Facts recorded a value of 3.1 in 2016 and a value of 3.09 in 2017. Position was evaluated by level 1 – moving to other positions with better defense, level 2 as weaker position, level 3 as average position, level 4 as a position well defended retaining its actual position and level 5 as an ever-stronger position.

Through market segmentation the market analysis was also researched. The scale was as follows: 1 – no segmentation, 2 – more segments, 3 – several segments, 4 – one segment, 5 – customization. With the segmentation, start-ups have adapted their activities to individual customer groups so that they can be better served. Based on the survey, we can state that the start-ups only chose those market segments that were in line with their used and functioning business strategy. The average score of 2.60 in 2016 and 2.94 in 2017 shows the fact that the start-ups have focused attention to several segments and their position was average. The average value of 3.10 in 2016 and 3.09 in 2017 is the evidence. Position to move to other positions with better defenses or weaker position, or well defended while maintaining the actual position, or getting stronger, was not the start-up for the whole investigated sample in 2016 and 2017 recorded.

We also point to strengths and weaknesses of our investigated start-ups when analyzing the internal environment. The value of 3.90 represented the level of quality, value added, or product value and reached a level almost European, which we evaluate positively. The average value of 3.96 in 2017, which represented the level of quality, added value or product usefulness compared to competitors, was almost European. Even the level of quality, added value, or product value of the territory in 2017 was only slightly lower and reached 3.91. The European level was recorded. (Scale: 1 – Local to Regional, 2 – National, 3 – Central European, 4 – European, 5 – World)

Product prices had to be rated by respondents on scale 1 – low, 2 – moderate, 3 – higher, 4 – high, 5 – very high. The price of the offered products was 2.70 in 2016, which was close to the higher price on the rating scale. Start-ups did not sell their products at very low or very high prices. In 2017, the value (2.85) slightly increased by 0.15 points. The price level was almost the same in both years.

The cost of the product was average, the value of which was 3.20 in 2016. In 2017, the cost was a bit higher, but the level was retained. This is evidenced by the average value of 3.42 being recorded in the mentioned year. The scale was the following: 1 – high, 2 – higher, 3 – medium, 4 – lower, 5 – low).

The services, accompanied, supplemented or which replaced the basic products and were another source of difference, reached an average value in 2016 in the investigated sample of start-ups of 3.20. They were moving at the Central European level. The

average value in 2017 was for those services, whether accompanied or those that replaced the basic products and were another source of difference (competitive) of 3.81 and (territorial) 3.68, which recorded almost the European level. By comparing the two years, we found that 2017 brought a positive transition from the lower (Central European) level to the higher (European) level. (Scale: 1 – local to regional, 2 – national, 3 – Central European, 4 – European, 5 – world)

Key technology in which the rate of originality and innovation was monitored averaged 3.70 in 2016, which was closer to the European level than to the Central European peak. The monitored key technology parameter (competing) reached an average of 3.71 and (territorial) 3.81 in 2017, a difference of 0.10 points. Even though these facts, the level in 2017 remains unchanged (European level) compared to 2016. The same scale as in the previous question was used.

When researching a competitive advantage that was comparable to competitors at the appropriate level, it reached average of 3.80 in 2016 and 3.71 in 2017, which is almost the European level. The same scale as in the previous both questions was used.

The results of the survey for both years show the facts of the competitive advantage that the start-up entrepreneurs perceived and achieved through human resources, where they mentioned their good experience in the business, their special skills and experience. Through material resources, they have described the competitive advantage of being able to achieve their peak technologies and manufacturing facilities that they right now own or have at their disposal.

Some respondents have stated that they consider a first-class position and excellent access to raw materials as a competitive advantage. Access to financial resources has also been a competitive advantage for many of them. Sources of knowledge, such as the first-rate innovation processes, or the promotion of their business have become an external expression of competitive advantage.

Some start-ups did not defend the claim and said that their competitive advantage was also their good reputation, quality management systems, relations with external stakeholders, or excellence in a certain functional area such as information management, manufacturing and marketing. We have concluded from the surveys that the achievement of competitive advantages is the result of a properly chosen and functioning business strategy.

It can not be clearly concluded that the current business strategies of our research sample will continue to work in the future. It is necessary to these small starting businesses with innovative ideas periodically re-evaluate their business strategy and develop it. Developing and constantly improving business strategies will lead them to find and build new competitive advantages. If start-ups follow this recommendation, they have a chance to be successful not only in the actual period but also in the future.

In the evaluation of attitude and action of start-up companies, we used a scale of 1 – shy, 2 – cautious, 3 – defensive, 4 – offensive, and 5 – aggressive. The answers show that the competitive attitude is rather defensive. This means the average value of 3.30 in 2016. In 2017, a higher value of 3.66 was recorded, indicating a slight advancement from a defensive to an offensive attitude.

From the view of their initiative, the start-up companies are rather monitoring activity in the business environment and trying to adapt. The value of 4.00 in 2016 and 4.09 in 2017 is the evidence. Start-ups want to take of the right moment and take the new opportunity from an external business environment. However, most of them maintain contacts with leading business entities. (Scale: 1 – passive, 2 – reactive, 3 – waiting, 4 – tracking/adaptive, 5 – pioneering). The conscious attitude that followed the creation of their business strategy, planned or

spontaneous, keep their value in both years. This indicates an average value of 4.00 in 2016 and 4.09 in 2017. Extremes of chaotic or purposeful targeting were not recorded at almost any start-up. (Scale: 1 – chaotic, 2 – spontaneous, 3 – opportunistic, 4 – intrusive, 5 – purposeful).

In evaluating the dynamics and speed of action we used the scale of low (1), moderate (2), high (3), higher (4), very high (5) and recorded an average value of 3.30 in 2016 and by 0.32 points higher in 2017. This indicates a high level in 2016 and approaching a higher level in 2017.

The average score of 3.60 in 2016 and 3.77 in 2017 shows rather the higher sensitivity and perceptiveness that was recorded for the external stimuli of adaptability. We can also confirm the fact that it is progressively approaching high adaptations. The start-up entrepreneurs did not mention the low or very high sensitivity and perceptiveness to external stimuli. For the evaluation, we used the same scale as in the previous question.

The results of the survey in the two years under investigation point to the differences of action of start-ups from the action of competitors that have seen a bigger difference. The numerical average was 3.30 in 2016 and 3.34 in 2017. (Scale: 1 – match, 2 – small difference, 3 – greater difference, 4 – big difference, 5 – complete difference.)

Based on the results of the survey, we conclude that in the future it is not possible to consider the business environment that will be stable. Start-ups must continue to expect that the business environment to which they will be exposed will continue to be difficult, will evolve and change. Even such small starting business entities have to constantly predict and prepare for all possible situations that are directly affected by the external environment of the business environment.

An integrated view of the survey results from 2016 and 2017 is documented in summary Table 1 through the parameters of the business strategy of the average Slovak start-up by calculating the average values over the reference periods. We evaluate the scale of the individual parameters according to which the parameters were evaluated in the text of the post.

Table 1. Evaluation of Business Strategy in Slovak Start-ups

Parameters for business start-up strategy evaluation	Average value and the parameter level in 2016	Average value and the parameter level in 2017
<b>EXTERNAL ENVIRONMENT</b>		
Goals / vision, mission	3.90 almost European	3.98 European
Life cycle phase of industry	2.40 growth and approach to halfway of maturation	2.69 growth and approach to halfway of maturation
Dynamics and Complexity business environment	3.30 higher	3.16 higher
Predictability of the future development for 3 to 5 years	2.80 almost higher	2.79 almost higher
Intensity of competition respectively. competitive conditions in the industry	2.80 almost higher	2.98 almost higher
<b>POSITION IN THE EXTERNAL ENVIRONMENT</b>		
Action radius and business space respectively	3.40 halfway of Central European to European	3.57 halfway the Central European to the European
Segmentation	2.60 several segments	2.94 several segments

Position	3.10 average	3.09 average
<b>INTERNAL ENVIRONMENT</b>		
Quality / added value / product usefulness	3.90 European	3.96 European
Product price	2.70 almost higher	2.85 almost higher
Product Costs	3.20 average	3.42 average
Services that accompany, supplement or replace basic products and are another source of difference	3.20 Central European	3.81 rather European
Key technology (degree of originality and innovation)	3.70 gradual approach to European	3.71 gradual approach to European
Competitive advantage	3.80 rather European	3.71 rather European
<b>POSITION AND ACTION</b>		
Competitive	3.30 defensive	3.66 offensive
Initiative	4.00 tracking / adaptation	4.09 tracking / adaptation
Conscious	4.00 foisted	4.09 foisted
Dynamics and speed of response	3.30 higher	3.62 halfway of high to high
Sensitivity and responsiveness to external stimuli (adaptation)	3.60 gradual approach from higher to high	3.77 gradual approach from higher to high
Differences in procedure from competitors' actions	3.30 bigger difference	3.34 bigger difference

Source: own work.

## 6 Discussion

The issue of developing and functioning of business strategy in a modern business phenomenon of start-up is gaining importance.

Currently, the researching of the strategic aspects for achieving the competitive advantages that make up the core of business strategy is the actual issue of strategic management. However, the success of a start-up is not accidental, its development and progress mainly depends on the business environment in which the start-ups are located. Such an environment is complex and dynamic.

It is necessary to remark that many times only a suitably chosen business strategy is sufficient, but the key role is also the support of the state as well as the start-up ecosystem as a whole.

As for many established business entities on the market today, as well as start-ups, a changing and complex business environment is characteristic. Continuous changes resulting primarily from the outside environment influence the start-up itself.

Based on the facts of surgery, the business strategy and strategic planning in the long-term perspective are not a good alternative for start-ups, as their existence is relatively short.

From the results of the survey, we state this period of survival between quarters and four years. We deduce that if start-ups had clearly defined goals and a suitably chosen business strategy, it is possible to precondition that their survival time would be prolonged. The fact is that exceptions will be found if selected alternatives to business strategies are used by start-up companies in their business as many other businesses with long-term existence on the existing market. If these start-ups do and proceed in a similar way to businesses operating in the long-term in such an environment, they can also profit in the future and be successful with a view to their longer existence.

There is no doubt that in the start-up it is necessary to find such a business strategy and procedure that will be the most appropriate strategy for that start-up. However, it is questionable to what extent the chosen business strategy can be applied and how to focus on achieving the set goals.

Business strategies that can respond to external circumstances may change. Key values should not change. For the start-up investigations, this would mean that the ways to meet the needs would be diverse, but the content of the start-up defined in the vision should not change. The purpose of start-up missions is to share and define the purpose and way of its development towards both the external and the internal business environment.

The conclusion drawn from the results of the survey also points to well-chosen strategic decisions and the right choice of a start-up business strategy that will lead start-ups to searching and creation new competitive advantages.

Equally important is the analysis of the external environment, which place importance on external factors. These influence largely the performance of the start-up and largely determine their success. The finding from each part of the external analysis state that its role is to provide a source of information for strategic decision-making, thereby reducing strategic uncertainty.

By internal analysis, we have concluded that even with a suitably chosen business strategy it supports its functioning and subsequent development. It provides a systematic evaluation of key internal start-up factors. Systematicity can give them a new insight into the functioning inside the start-up. It helps identify potential shortcomings that compromise the ability to deliver value to customers and reduce their long-term performance. Start-ups should record not only the needs of the customers themselves, but also all stakeholders on their own operation.

When assessing the external environment, startups in the life cycle of the industry cycle should be a step forward either in the maturation or maturing phase in order to be successful. The predictability of their future development should reach a high to a very high level, as it is assumed that the business environment will continue to be affected by the complexity and turbulence.

In evaluating the competitive situation, many of the start-ups should not promote their stance that they are unique to the original that they do not have competition. On the contrary. In the future, they should realize that competition in the sector is growing and can imagine a threat.

In the case, the investigated start-ups are running unique business, as many of them have stated, they should gradually reach the top of Europe and over time to the global action radius with their business activities. Their position should be minimally well defended in the future and gradually stronger and stronger in order to maintain the actual position. This fact was not confirmed by the results of the surveyed years 2016 and 2017.

The competitive advantages of quality, added value and product usefulness should be able to find their place on the European or world level in the future. However, we can not talk about the world level yet. It is possible that successful start-up companies will find their place on the global market in the future.

Many start-ups see a competitive advantage in almost higher prices for products or services, but some consumer groups perceive them as too high. Even this fact was confirmed by the results in both investigated years. When the cost of the product compared to the competitor, the start-up companies said they were average. Their initiative will reduce the costs incurred in the future in business to a lower or low level.

In addition, services that were accompanied, complemented or replaced by basic products and were another source of difference would in the near future be directed to the European level, in the wider future to the world level. To this level also use of key

technologies should move, since they are changing at a fast pace. They are upgrading, modernizing, improving, honing or streamlining the processes.

If start-ups will consider this in the next period, it is possible that the achievement of competitive advantages will not oscillate at European level but will gradually move the borders to a higher level. In attitudes and behaviors of start-ups, it would be preferable to use an offensive or aggressive attitude. They should constantly track and adapt to changes from outside the business environment. They should also realize the fact of the consciousness of making a strategy and think about the applicable business strategy would be spontaneous or planned. In order for start-ups to be viable, the entrepreneurs should take a purposeful attitude towards further development and completion of the business strategy.

Changes and stimuli from the external environment should react at a faster rate than before, and in contrast to competitors, the big differences should see their full difference.

Since the core of the business strategy has been to create competitive advantages, it is necessary to build on the unique characteristics of the start-ups, which are their "cornerstones". Start-ups have many times changed their business strategy as a result of many complexities and turbulences resulting from a changing business environment.

From these facts, we can expect that start-up is a type of business with unique business activity with an original idea, where the basis for achieving competitive advantages is result of the innovation and uniqueness of the products or services provided. These can adapt to the various changes that the business environment is making. If start-ups do so, the results of their business activity and a suitably chosen business strategy will point to finding a match between the start-up mission and its set goals.

If start-ups achieve new competitive benefits, they will know and maintain the prospects of their growing profitability trend in the future.

The strategic aspects we have researched the business strategy in the period under review are important attributes for its determination and selection. If start-up entrepreneurs will work from the beginning of their business activities to compiling and selecting a good business strategy, there is a presumption for their viability in the near or less distant future. Only a properly chosen and functioning business strategy in the start-up will bring success. It is not enough that the strategies only work, they must be gradually developed and completed.

## 7 Conclusion

The actual complex and dynamic business environment places a leading role in innovation and a modern business phenomenon – start-up.

In a turbulent and complex business environment, existing start-ups are continually making efforts to maintain and protect themselves in a changing environment. They are not afraid to risk, even though they are constantly looking for new sources of value for the customer and looking for how it will impact on them and their business.

The great idea or good image are still developing at many levels is just the beginning of their business activity. The developmental start-up trends from the moment of the sparking of a great idea or a good image to a moment when it becomes a full-fledged business are a unique process. Start-ups are the ambition to be flexible businesses that bring new ways and opportunities for business activity, especially with the use of information technology. They are trying to create something completely new – innovative.

Every start-up should set a business strategy or business model at the start of its business. For a better orientation, the business model should combine all the important components in one place.

Only a rightly chosen and functioning business strategy leads start-ups to their vitality. Notwithstanding this, start-up businesses should first determine how they have an idea of the basic components of business (customers, distribution, profit).

Continuing the development and improvement of business strategies is a presumption for finding new competitive advantages in their business.

Ways to continually hone and improve business strategies in their business environment surrounded by turbulence and environmental complexity will result in efficiency and start-up will be successful.

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**Primary Paper Section: A**

**Secondary Paper Section: AE, AH**

# COST ANALYSIS ON THE BASIS OF FINANCIAL AND INTRA-ORGANIZATIONAL ACCOUNTING AND THEIR REDUCTION

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**Abstract:** A company manages properly when business activity is guided by the principle of achieving the maximum benefit with the minimum consumption of the production factors. The application of this principle results in the need for continuous monitoring and cost reduction for the company. Under modern business finance theory, the issue of reducing the cost of a company is linked not only to profits as the most sophisticated absolute value category but also to the value of a company that is currently being promoted as a decisive criterion for evaluating the effects of all business activities.

**Keywords:** costs, financial accounting, intra-organizational accounting, analysis of total costs, cost reduction.

## 1 Introduction

Costs are a category of financial accounting. The significantly higher need for information on the costs used at different levels of the company hierarchy, on both the management of the company process and the decision on its future variants, is the most important feature of an intra-organizational accounting. It is characterized by a large variety of outputs.

In view of this, the cost analysis of a company is a problem that needs to be differentiated depending on the way the cost is presented, the objectives of the analysis, the users whose results will be determined, as well as the required level of information detail. For the purposes of analysis, it is necessary to distinguish mainly the costs of financial accounting and the costs of the intra-organizational or managerial accounting.

## 2 Cost analysis based on financial accounting

The Act on accounting defines the category of costs in financial accounting. Cost is a reduction in the economic benefits of an accounting unit in the accounting period that can be reliably measured. Economic benefits are the possibility to contribute directly or indirectly to the flow of cash and cash equivalents.

By this definition, accounting legislation seeks to bridge the gap between pairs of cost categories - cost - expenditure and revenue - income that are typical of current accounting. A specific solution to their time and material inconsistency is the cost and revenue differentiation technique by which costs and revenues are attributed to the accounting periods in which they were incurred, regardless of the movement of funds.

Costs are a flow variable and in value they express the decrease in the company's assets, alternatively the emergence of liabilities as an increase in foreign resources. Such an impression is a common feature of all financial accounting costs. Costs such as the disposal of assets (- assets) consist of:

- the costs of a company in which is the purposeful link between the reduction of assets and the realized output (e.g. consumption of material, energy, ...)
- the costs associated with the loss of assets value by not complying with the established standards and regulations, the effects of extraordinary effects (shortages, damages, fines, penalties),
- the costs to be paid from trading income (representation costs, remuneration to members of the statutory bodies),
- the costs of implementing the economic policy of the State (taxes, fees).

The state's view of the financial costs is reflected in their classification in relation to the provisions of the Income Tax Act as follows:

- the cost of which was not necessary to achieve the trading income or the cost thereof
- entrepreneurs incurred by non-compliance,
- costs that were necessary to achieve, secure and maintain revenue - tax expenditure.

In financial accounting, the company's costs are classified according to three key aspects that take account of the accounting framework for entrepreneurs:

- species aspect,
- a purpose aspect,
- Cost classification aspect depending on the structure of the trading income.

### 2.1 Species aspect

Cost species criterion is the main criterion that is applied in financial accounting, as well as the basic method of classifying costs for obtaining an overview of their structure. It is a classification of costs into separate groups according to economically homogeneous species, each group containing one cost item:

- Consumer purchases,
- Services,
- Personal costs,
- Taxes and fees,
- Other costs of business activity,
- Write-offs and adjustments for long-term assets,
- Financial costs,
- Income taxes and transfer accounts.

The item classification records costs, mostly of an external nature, in the form and amount at which they originated in the company, regardless of where (in which department) and for what purpose (product) were spent. Primary means that the subject is displayed as soon as they enter the company; external ones are created by the consumption of products, works or services of other entities. In addition to these characteristics, the costs are simple, which means that their decomposition is not possible.

In terms of financial - economic analysis, it is important that the cost species classification provides the information needed to ensure the proportions, stability and the balance between the need for resources in the company and the outside environment that provides them. It answers questions as to who, when, and how a company must secure material, energy, other external outputs, services, and other economic resources for its activity. However, the use of an individual cost species classification is insufficient for lower-cost business management, particularly in assessing the economy, efficiency and effectiveness of business activities. It does not express the cause of the costs incurred, their eternal bearer.

### 2.2 Purposeful aspect

The purposeful classification of costs is applied to the financial accounting to a lesser extent. It respects the purpose for which consumption has taken place, e.g. representation costs. Compared to the purposeful attribute on which the cost accounting in the managerial accounting is based, the purposeful classification of costs in financial accounting is only indicative.

"From the point of view of cost-effectiveness management, the costs of managerial accounting are further classified according to their basic relationship to activity, technological stage or

operation into two basic groups. The first group includes costs directly attributable to the technology or operation of the activity. This also means their naming, called technological costs. This includes, for example, consumption of paper of a certain quality in the main printing industry for a particular title. The second group includes the costs incurred to create, secure and maintain the conditions for the rational course of the activity. They are called the cost of operation and management, and include, for example, the cost of lighting the printer and the salary of the minister" (Král, 2012, p. 72).

### 2.3 Cost classification aspect depending on the structure of the trading income

The classification of costs, depending on the structure of the trading income, makes it possible to specifically monitor and analyze the costs associated with the individual business activities that generate the trading income. This classification distinguishes:

- costs of business activity,
- financial costs.

The intent of such a classification of costs and revenues is to separate the realization of the activities forming the subject of business and activities carried out to support business activity from financial operations. In addition to the above-mentioned contexts, it is necessary to bear in mind, in the case of financial accounting costs, the fact that financial accounting is characterized by considerable freedom between the cost and the object of the business activity. The task is not only to show the economic resources of a company, but also their reproduction and return.

From the point of view of the company's activities, such a reproduction of resources is effective, in which the company's own capital is preserved and a surplus representing the return on equity is generated (profit). Resource reproduction analysis is based on revenue analysis depending on the type of business or particular business transaction. However, the ability to monitor the particular trading income for some type of business transaction is in financial accounting limited, for example sale of long-term assets, material, securities.

On the other hand, it is also possible in financial accounting to distinguish costs identifiable by performance and costs not identifiable by performance. Costs that are identifiable with performance are the costs involved in the performance and are called the cost of performance. Costs that are not identifiable with performance are spent on the general provision of the company's business activity and are generally incurred in regular periods. They are called the cost of the period.

### 3 Cost analysis based on intra-organizational accounting

Intra-organizational accounting understands costs as an efficient and purposeful use of company resources. Purposefulness means spending the costs in bond with the realized performance of the object of activity. Efficiency is understood as a reasonable use of resources, which is to a certain extent quantifiable by cost indicator. Cost accounting in intra-organizational accounting is based on the functions that this accounting subsystem performs in the company information system. Its main task is:

- to record costs, revenues and to determine the trading income of a company and its intra-organizational units,
- provide background material for the use of material responsibility and involvement of intra-organizational units,
- provide the data needed to decide on the distribution of a trading income, to find out how in its creation were the intra-organizational units involved,
- provide documentation for the compilation and control of budgets and calculations, for economy analysis, and so on.

In view of the above, several options are offered for the analytical work of managers on the ground of cost analysis. In

principle, the focus of the cost accounting analysis of the intra-organizational accounting system addresses two issues: the analysis of costs of economic centers and the analysis of product costs.

#### 3.1 Cost analysis of economic centers

The focus of cost analysis of economic centers is to analyze and assess changes in the center's overhead costs. Simple difference methods are used to control and analyze costs - comparing the pre-determined costs taken from the center's preliminary calculations and budgets with the reality of the intra-organizational accounting. An important part is the analysis of capacity and consumption deviation.

Capacity deviation is a result of changes in capacity utilization of a center, a technological workplace, or a workstation. It is found by comparing the planned costs (budget) with the recalculated budget for the actual use of the center capacity. Responsibility for the occurrence of this deviation lies with those workers who influence capacity utilization. The variation in consumption is due to changes in the standard consumption of labor, goods and services in actual capacity utilization. It is found as the difference between actual costs and a recalculated budget for actual capacity utilization. This deviation denotes the center's own cost-effectiveness and the responsibility for its establishment lies with the entire center's staff.

#### 3.2 Product cost analysis

The cost analysis of a product focuses on the analysis of direct (unit) costs, that means to analyze items of the cost model. Analyze changes in the structure of the calculation, the amount of money (in monetary terms) in items, the proportion between the main items of the cost per unit of calculation and their share in total product costs, etc.

Changes in the structure of the calculation cause a disproportionate increase in its items. The share of individual items in the total cost is changed. Changes in the structure of the calculation explain the technical and technological changes in production, the substitution of used inputs, changes in input prices, and so on. Using the differential method and using standards (norms), the deviations between the provisional (plan) and the resulting calculation are detected at direct costs. Two relationships apply. The planned consumption standard (pre-calculation) plus the change in the standard equals to the operative standard (operative calculation) and the operative consumption standard plus the deviation equals to the actual unit cost of output (resulting calculation).

The change in the standard reflects changes in unit cost by factors such as prices of material, energy, material and energy substitution, wage rates, and a different depreciation policy.

Norms and changes to the standard denote the activities of the departments: technical preparation of production, the production center, the supply center, illustrate how the technical, technological and other production conditions change. Deviations from the operational standard denote the economy of production itself; positive deviations mean non-compliance, non-compliance with technical and technological discipline, negative deviations mean savings and better compliance with standards. However, longer-term deviations may also lead to deficiencies in standardization. A detailed analysis of the direct and overhead costs of a company is the subject of short-term intra-organizational analyzes to ensure operational control and cost management.

Special attention is paid to cost and deviations of actual costs from the plan by cost controlling. It focuses primarily on the management of factors affecting the profits of the company and, of course, on costs and revenues.

#### 4 Analysis of total costs

The analysis of the company's total costs over the reference period is based on the information on the profit and loss statement. The structure of the statement corresponds to the structure in which it is necessary to quantify the trading income, j. particularly for economic and financial activity. In line with this requirement, the company's costs are also vertically arranged in the statement. The cost of economic activity consists of the balance of accounts of the accounting groups 50 - 55 and the financial costs comprise the balances of the accounts of the accounting group 56. The basis of the analysis is the horizontal and vertical analysis of the profit and loss statement.

In the vertical analysis, the percentages of each item of cost are determined for the selected cost group (e.g., what proportion of consumed purchases consists of material consumption, what is the interest rate on the company's financial costs, etc.). Horizontal analysis of the statement is a trend analysis (the statement includes data for the current and past accounting periods). Detailed analysis is based on the gradual decomposition of aggregated cost items into partial (simple) costs. It allows seeing to what extent these costs have affected the status and change in the status of the more complex indicator considered.

The level of cost-effectiveness of a company in the context of costs incurred and their revenue compensation is a cost-benefit indicator. It is calculated as the proportion of total costs in monetary terms and total revenues in monetary terms. The cost factor expresses how much cost, in € comes to €1 of revenue. The better the result, the lower the value of indicator, or the more dynamically it is decreasing.

It is important to note that without the consumption, it is impossible to produce outputs as well as sell them. However, there are always ways to reduce costs. An important tool in fulfilling this task is therefore economic analysis of costs. Its scope, content and details depend primarily on the user's output requirements, but also on a large part of the data that forms the information base for the analysis.

#### 5 Sources and means of cost reducing

"One of the conditions for the rationalization of the production process and the entire economic activity of a company is to achieve the smallest unit cost of production at the same or higher level of quality performance. That is why we need to look for the cost-cutting options. They best stand out when we track the costs according to the purpose of their spending and their place of origin. In order to determine the cost reduction potential, it is necessary to know the sources of reserves and the means of reducing them" (Kupkovič, 1999, p. 24).

Sources of cost reduction are found in various unused reserves and hidden sources of the company. Utilizing reserves and uncovering resources reduces the cost of the entire business. Cost savings include:

- use of current assets and acceleration of their turnover,
- use of production capacity,
- determining the optimal assortment,
- improving the quality of raw materials, material and products.

The specific measures that make use of the reserves are called cost reduction resources. They become necessary because the uncovering of reserves is not yet a guarantee that the reserves will actually be used. Cost reduction resources show how to use partial and total reserves and to achieve true cost savings. They represent agents whose use usually affects one or more cost reduction resources. The basic means of reducing costs include:

- introduction of modern technology,
- improving the organization of work and production (activities) management,

- raising the professional level of workers.

#### 6 Conclusion

Costs are one of the most important economic performance indicators. They are such an important category of business activity that it is still paid maximum attention to them not only in practice, but also in the field of economic theory and its special disciplines, despite the penetration of new criteria into the business management concept, the evaluation of its performance and the formulation of an integral goal.

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#### Primary Paper Section: A

#### Secondary Paper Section: AH

# THE IMPACT OF CLUSTER COVERAGE ON THE SPI REGION INDEX IN SLOVAKIA

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This paper was created within the project VEGA 1/0953/16 The evaluation of clusters' impact measurement on regional development of the Slovak Republic.

**Abstract:** In the article is construction a composite index of social progress for the regions of Slovak Republic, the Social Progress Index. The Social Progress Index is an aggregate index number of social and environmental indicators that capture three dimensions of social progress: Basic Human Needs, Foundations of Wellbeing, and Opportunity. Each of this three dimensions including four components of the Social Progress Index. The main aim of the paper is to construction of the by Social Progress Index for condition of the Slovak regions. This indicator is given in relation to the scope of the cluster in the region. Input indicators included in the Social Progress Index are analyzed using more complex statistical methods. Internal data consistency within each component is verified by Principal Component Analysis. The normalized data are aggregated into a composite indicator and compared.

**Keywords:** regional policy, cluster, composite indicator, statistical methods.

## 1 Introduction

The economic development of the Slovak Republic is largely determined by the performance of the regions and the policy of making use of their potential. Effective regional policy requires identification of relevant development factors. An active factor is human resources; passive factors are research, development and innovation, basic infrastructure and services. In addition to the main factors, it is important for the region's development to analyse indicators of economic performance - GDP growth, employment, productivity and assessing their impacts on regional development and growth. Due to the different factors and depending on the starting conditions, the development in the individual regions is different. This is considered an economic and socio-economic problem. This problem impedes development in the economic, social and environmental spheres. The aim of regional policy is to reduce and eliminate these disparities. Reducing disparities is one of the fundamental objectives of the European Union (EU) regional policy.

With the improvement of the socio-economic level of the EU member states related to the development of the various regions also. Achieving this objective is conditional on the level of economic and social development of the member states. This development is, however, between countries at different levels and is determined by the overall situation and the developments in different regions of the member states. The region is seen as a key element in the EU and at the same time an indicator of economic development. At the same time is considered a political, economic, social and cultural unit. (Vojtovič, Krajňáková, 2013)

The uniqueness of the clusters organized on the basis of the regional principle is the uniqueness of the internal environment, the infrastructure, the level of the macro system. This is the region's own, as well as the opportunity to realize its competitive advantages through integration. The cluster acts as a stimulus to economic development. (Krajňáková, 2016)

Activities aimed at improving the prosperity and performance of regions are referred to as regional policy. Regional policy can be defined as a set of objectives, measures and decisions in government activities at the regional level. The priority of regional policy is to ensure the development of the regions and to mitigate major differences in their development. Great emphasis is placed on the efficient use of the region's own resources. The overall economic development of the country is affected by the different socio-economic levels of the regions. Different degrees of regional development stem from inhomogeneous production factories. Regions are also distinguished by the high unemployment rate. (Habánik et al., 2014)

Regional development is defined as a set of economic, cultural and environmental processes and relationships. These relations are taking place in the region and contribute to increasing its competitiveness, economic, social and territorial development. Many authors are currently studying the dynamics of regional development. The first economic models that include the regional development factor are extended versions of neoclassical theories of economic growth. These models assume that free international trade stimulates economic growth and leads to the convergence of economies of mutually trading regions. (Dawkins, 2003)

One of the possibilities of increasing the socio-economic level of the region is to support the development of a predominant sector in the region. Their diversification from one region to another creates a unique environment concentrating businesses of a similar focus. These businesses are trying to exploit the comparative advantages of the region. This creates a network of a range of businesses and organizations linked by specific ties, called cluster. The term cluster is closely related to the theory and practice of regional development. According to Porter (2000), the clusters represent certain geographic concentrations of interconnected enterprises, specialized suppliers, service providers, affiliated companies and institutions (universities, trade unions) in a particular sector (sector) that compete and cooperate with one another. At present, the cluster concept is considered an important regional development element.

Clusters play an important role in the development of individual regions by contributing to increasing their competitiveness. Their importance in regional development lies in particular in increasing the division of labour, increasing migratory flows of workers between enterprises, and the cooperation of enterprises within the department. Clusters are affecting job growth, wage growth, new types of businesses. (Navickas, Vojtovic, Svazas, 2016)

The theme of clusters is still in the interest of experts in several disciplines. In the spotlight is also on components of countries and regions as a tool for increasing the performance and competitiveness of the regions. Regions have different sources of and conditions for the development of a specific industrial sector.

The aim of the article is to identify the social development in the regions of Slovakia by selected social indicators.

On the basis of the aggregate value of the indicator to outline the possible relevance of the existence of clusters in developing the social level of the region.

## 2 Social progress principles

Regional policy is characterized as a set of objectives, measures and decisions in the development activities of stakeholders (Habánik et al., 2014). Regional development is defined as a system of economic, cultural and environmental processes. These processes take place in the region. Regional development contributes to its competitiveness, sustainable economic, social and territorial development. The region is defined as an administrative unit of the national and local levels. (Cooke, Piccaluga, 2006).

In most studies, the starting inter-comparison is analysis of their economic level. The level is expressed by macroeconomic indicators GDP. (Annoni, Kozovska, 2010) Looking for suitable measures of well-being to assess people's quality of life is becoming more important on the agendas of government and central institutes of statistics in several countries. An increasing number of programmers are being implemented in European countries. Since its introduction, GDP has been the most widely used indicator of country's economic performance. However, it is also highly slated as a measure of people's wellbeing. Indeed, GDP is measure of production, but it ignores the undesirable side effects, such as pollution, environment, which often accompany production growth. But GDP does not include in its



calculation a number of factors which significantly affect people's quality of life. Included there are, for example, the quality of education, health, care, environment, social relations, personal safety, decent housing. (Ferrara, Nistico, 2015)

The Social progress Index was launched in April 2013 at the 10<sup>th</sup> annual Skoll World Forum held at the University of Oxford. The European Union Regional Social Progress Index (EU-SPI) was a key project of several European institutions. Index construction was based on Global Social Progress Index developed by the Social Progress Imperative. The Global Social Progress Index has been published in 2014 and 2015 for over 130 countries in the world. The Social Progress Imperative defines concept social progress as the capacity to meet the basic human needs of its citizen. The definition further includes three broad elements of social progress: Basic Human needs Foundations of wellbeing and Opportunity. The *EU-SPI* provides a consistent and comparable measurement of the regions of the EU social and environmental area. The *EU-SPI* is based on a different set of indicators but set of dimensions and components in the same. (Pate, Sweo, 2016)

## 2.1 Methodology of construction SPI

The indicator can be considered as a special subset of statistical results. A general definition of the concept, which would be applicable in all areas of official statistics, does not exist. There are several approaches to this definition. By the first approach the SPI indicator is characterized as a combination of statistical results using a defined algorithm in the form of derived measurements. The second principles use normative interpretation with the possibility of determines categories. The third principle involves mainly social statistics such as health, education and quality of work. In this sense, indicator includes something wider than is actually measured. The fourth approach is engaged in synthetic indicators. They are formed by combining of individual indicators, while using different methods weighting of each group.

The indicator is a statistical tool that monitors the nature and level of phenomena and processes monitor their development, changes and trends. This results in certain properties of the indicator:

- significant, relevant, understandable,
- transparent,
- analytical,
- complete,
- credible,
- internally comparable,
- externally comparable,
- intertemporal. (Michálek, 2013)

The composite indicator is an indicator that is constructed from sub-indicators. The indicators are often presented in the different units which have different levels and have different variability. (Minařík, 2013)

The *EU-SPI* is composite indicator of fifty social and environmental indicators that capture three dimensions of social progress. There are: Basic Human Needs, Foundations of Wellbeing and Opportunity. Each of these three dimensions is further broken down into four underlying components. The list of these sub-indicators is:

1. Basic Human needs: Nutrition and basic medical care; Water and sanitation, Shelter, Personal safety.
2. Foundation of wellbeing: Access to Basic knowledge, Access to Information and Communications, Health and Wellness, Environmental Quality.
3. Opportunity: Personal Rights, Personal Freedom and Choice, Tolerance and inclusion, Access to Advanced Education.

Each component is measured through several indicators. One of the main differences with other Wellbeing indexes is that the

regional *EU-SPI* includes only social and environmental indicators. Index *EU-SPI* excludes regional GDP or income-based indicators. This is because the main aim is in fact to express social progress directly. By excluding economic indicator, the SPI index can systematically analyses the relationship between economic development (measured for example by regional GDP) and social development.

The Index has been constructed to be relevant and comparable for all the regions. Regional index *EU-SPI* allows regions comparing to any degree of economic levels. Index helps regions with a lower *EU-SPI* learn from regions with higher this Index. All components included in *EU-SPI* will identify significant differences, for example, of access to health care, quality of housing, personal safety, higher education, access to ITC, environmental pollution.

Data source are Eurostat, EU-SILC, European Environmental Agency, The Gallup World Poll, The Quality of Government Institute of the University of Gothenburg and Eurobarometer. 272 EU regions were compared. The study concluded alignment of EU regions at NUTS 2 level by *EU-SPI* values. Best rated region was the region Övre Norrland in Sweden in 2015 year. Worst rated was region Yugoiztochen in Bulgaria. Of the 272 regions of the Slovak regions placed as follows: Region of Bratislava (181), West Slovakia (229), Central Slovakia (221) and East Slovakia (243). Construction of *EU-SPI* consisted from the following steps:

- selection of observational units,
- checking for statistical internal consistency within each components,
- standardization,
- aggregation,
- computing regional comparison score,
- testing scores and rankings through an extensive robustness analysis.

The achievement of main aim of this paper is basic research of regional differences in the social field of Slovak Regional Social Progress Index (in the next part we will use the abbreviation *S-SPI*). The first analysis was based on data in 2016 and the second for data in 2017. The process design is identical to the steps describe above.

## 3 Construction of S-SPI

This section describes the construction procedure of composite indicator S-SPI. This process is in accordance with the methodology published in document The EU Regional SPI: a measure of social progress in the EU regions, methodological paper. (Annoni, Dijkstra, 2013) The advantage of the summary indicator is a simple comparison of regions. The disadvantage is the different interpretations using different methods. Custom design composite indicator is described in several subsections and steps.

### 3.1 Selection of observational units

Those requirements must be respected in selection of appropriate indicators. The number of indicators should not be small or too large. Indicators need to be regularly measured and officially published. Index *EU-SPI* was constructed for all regions at the NUTS 2 level. This paper provides a description of the regional *S-SPI* calculated for all NUTS 3 regions in the Slovak Republic (eight self-governing regions). Appropriate division of observational units is fairly debated issue.

### 3.2 Selection of appropriate indicators

In the design of the *S-SPI* have been 20 indicators. The composite indicator was calculated from data for 2015 and 2017. Selection of appropriate indicators was based on the official availability on NUTS 3 level. Data was retrieved from Slovak Statistical Office, Ministry of Interior and Ministry of Education.

Due to the mutual comparability of the data, they were divided by mid-year population in the region in 2015 or 2017.

At level of self-governing regions, we encounter the problem of missing data in official databases. The literature on the analysis of missing data is extensive and rapid development more comprehensive methods can be found in Little, Rubin (2002). Whenever one or more indicators are observed at the country level only, an imputation method is adopted which imputes data by statistical imputation using available data. The formula for the calculation of the  $j$ -th indicator of  $r$ -th region  $y_{j,r}$  at NUTS 3 level, from  $y_{nat}$  at NUTS 1 level is

$$y_{j,r} = \frac{y_{nat}}{\frac{1}{n} \sum_{i=1}^n \frac{x_{i,nat}}{x_{i,r}}}$$

where  $x_{i,nat}$  is the value of indicator  $x_i$  at the county level and  $x_{i,r}$  is value of indicator  $x_i$  for region  $r$ .

We selected for dimension Basic Human Needs these indicators:  $x_1$ - Mortality rate before age 65 (MR),  $x_2$ - Infant mortality (IM),  $x_3$ - Beds in health facilities (HF),  $x_4$ - Water supply from public water supply (WS),  $x_5$ - Sewage treatment (ST),  $x_6$ - Living area (LA),  $x_7$ - Burdensome cost of housing (BCH),  $x_8$ - Number of offenses (NO),  $x_9$ - Number of forfeited (NFF),  $x_{10}$ - Homicide rate (HR),  $x_{11}$ - Number of fires (NF). For dimension of Foundations of wellbeing we selected these indicators:  $x_{12}$ - Secondary enrolment rate (SE),  $x_{13}$ - Number of posts,  $x_{14}$ - Internet at home (IH),  $x_{15}$ - Risk of poverty (RP),  $x_{16}$ - Life expectancy at birth (LEB),  $x_{17}$ - Environmental quality (EQ),  $x_{18}$ - Production of pollutant emissions (PPE). In the dimension of opportunity was selected following indicators:  $x_{19}$ - Gender gap (GG),  $x_{20}$ - Tertiary education attainment (TE). Given the direction, it went into the analysis of eleven positive indicators and nine negative indicators.

### 3.3 Components internal consistency

The issue of aggregating indicators into a single composite indicator is an increasingly discussed topic. The aggregation process always implies the choice of weights or use aggregation method. Both issues play crucial role when assessing regional disparities. Internal consistency is verified by classical multivariate method, principal component Analysis (PCA). PCA method is useful statistical technique for finding patterns in data of high dimension. Using method is based on the properties of the correlation matrix of variables. Initial variables will be replaced by smaller number of new variables, called latent variables – the main components. This process consisted of the following three steps.

#### Step 1: Exploratory analysis

Exploratory data analysis is a critical first step in analysis from an experiment. The purpose of the analysis is to detect the presence of particularities between the data and verify the assumptions for further statistical processing. For this purpose, were calculated descriptive characteristics (mean, variability, asymmetry). By graphical methods we have identified the presence of outliers (Grub's test), data independence (ACF), homogeneity (Box Plot) and normality (K-S test, N-E test and Lilliefors's test). In descriptive statistics was calculated Coefficient of variance too. The value of this coefficient was used in subsequent analyses as a decision criterion for the selection of appropriate indicators. This exploratory analysis shows that the data meet the required minimum prerequisites for further analysis. The next step consists of variable's transformation for some indicators, due to the value of the coefficient of skewness, where the absolute value of this coefficient was higher than value 1.

#### Step 2: Correlation analysis

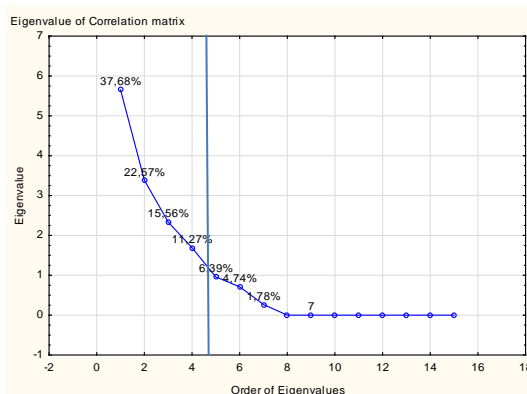
After one-dimensional analysis of variables we performed the correlation analysis. For the strong correlation between the indicators we considered while the correlation coefficient applies  $|r| > 0,9$ . These values have been diagnosed by the inverse

correlation matrix and subsequent VIF factor. The Variance Inflation Factor (VIF) measures the impact of collinearity among the variables in regression model. If value  $|VIF| > 10$ , than multicollinearity is high. For further analysis we considered as a key indicator one who had the greatest variability (Coefficient of variation) and seemed to be more appropriate for the description of interregional disparities. The correlation analysis shows that from structure of composite indicator should be removed five indicators: WS, BCH, NO, SE, TE. The further analysis it went fifteen indicators.

#### Step 3: Principal Components Analysis

Fifteen indicators were analyzed by analysis of PCA. Its aim was identify the key indicators and transform the original data to new latent variables. The suitability of selected indicators was statistically assessed by Kaiser-Meyer-Olkin's criterion (KMO). KMO test is a measure of how suited your data is for PCA analysis. The test measures sampling adequacy for each variable in the model and for the complete model. Since the covariance matrix is square, we can calculate the eigenvectors and eigenvalues for this matrix. These are rather important, as tell us useful information about our data. For further analysis we recommend to retain only those components that have their eigenvalue is greater than 1. Subsequently we selected the first fourth components that are explaining 94,34 % of the total variance. This stems from the Kaiser criteria. In another analysis they are preserved only those components that have modified a number greater than 1. (Meloun et al., 2012). Proper selection of components can be assessed according to the Cattell index cart. From this graph (Figure 1) of eigenvalues, we can identify the main components. The most important components are separated by a vertical line.

Figure 1 Cattell Index graph



Source: own processing in program Statistica

In terms of further reduction of indicators and finding key indicators are included in the next analysis only those indicators that have a value of the correlation coefficient above 0,7. (Hrach, Mihola, 2006) The values of the correlation coefficients between first fourth factor coordinate with indicators are the basis for further reduction of indicators. Omitted indicators are:  $x_2$ ,  $x_{18}$ . Thirteen other indicators will be used later in the step "Weighting and aggregation" to construct weights for the *S-SPI* composite indicator table.

The results of PCA analysis allows to determine of  $q$ -th indicator weight in any time as:

$$w_i = |r_{i,j}|var_j$$

Where  $r_{i,j}$  is value of correlation coefficient of the  $i$ -th indicator ( $i = 1, 2, \dots, 13$ ) of the  $j$ -th component. The values of weights are assigned to each indicator are shown in next table (Table 1).

Table 1 Weight of individual indicators

Indicator	Mark	Weight	Indicator	Mark	Weight
MR	$x_1$	0,30	NP	$x_{13}$	0,27
BHF	$x_3$	0,08	IH	$x_{14}$	0,16

ST	$x_5$	0,30	RP	$x_{15}$	0,28
LA	$x_6$	0,20	LEB	$x_{16}$	0,30
NFF	$x_9$	0,15	EQ	$x_{17}$	0,35
HR	$x_{10}$	0,32	GG	$x_{19}$	0,28
NF	$x_{11}$	0,13			

Source: own research

From the results of the PCA analysis, it is clear that the largest weight is associated with the indicator Environmental quality and lowest weight to indicator Beds in health care. The calculated weight was used for the 2015 indicators also from 2017. Normalization of data is required prior to any data aggregation as the indicators in a data set often have different measurement units. The method Min-Max was used. Using this method, the indicators are normalized to the interval (0,1). If the indicator is positively oriented, we use the following relationship for region  $r$ :

$$I_{i,r} = \frac{x_{i,r} - \min(x_i)}{\max(x_i) - \min(x_i)}$$

and in the case of negative force of  $x_{i,r}$ , the normalization is realized through the formula:

$$I_{i,r} = \frac{\max(x_i) - x_{i,r}}{\max(x_i) - \min(x_i)}$$

For calculation of  $S - SPI_r$  was used Additive aggregation method. The composite indicator  $S - SPI$  for each region  $r$  was finitely calculated by formula:

$$S - SPI_r = \frac{\sum_{i=1}^n I_{i,r} w_i}{\sum_{i=1}^n \sum_{r=1}^m I_{i,r} w_i}$$

where  $w_i$  is weight of  $q$ -th indicator. If  $S - SPI_r = 1$ , the region is assessed as an average. If  $S - SPI_r > 1$  that means the above average appreciation of region,  $S - SPI_r < 1$  means, that region is evaluated as a below average. The resulting values of regional  $S - SPI_r$  for 2015 and with ranking is in next table.

Table 2 SPI values for regions

Region ( $r$ )	$S - SPI_r$	Order
Trenčín (TN)	1,273	1
Bratislava (BA)	1,104	2
Prešov (PO)	1,079	3
Trnava (TT)	1,057	4
Žilina (ZA)	1,036	5
Nitra (NR)	0,894	6
Banská Bystrica (BB)	0,796	7
Košice (KE)	0,760	8

Source: own research

Best rated region was Trenčín, Index  $S - SPI_r$  reached around 0,71 better than Bratislava region. It is interesting because the assessment which take into account economic indicators Bratislava region dominates these two regions as only amounted  $S - SPI_r$  greater than 1. They can therefore be considered as region with above average  $S - SPI_r$ . Indicators of quality of lie in these regions are excellent. The second group may include regions of Prešov, Trnava and Žilina. the index value is close 1. These regions can be considered in terms of  $S - SPI_r$  for average. The last third group consists of region Nitra, Banská Bystrica and Košice. In these cases, the  $S - SPI_r$  is less than 1 and therefore consider them in terms of  $S - SPI_r$  as below average.

#### 4 Comparison of $S - SPI$ indicators between 2015 and 2017

In 2018 year, a similar analysis of the social progress of the regions in Slovakia was carried out. The calculation method of the aggregate index was the same as for two years.

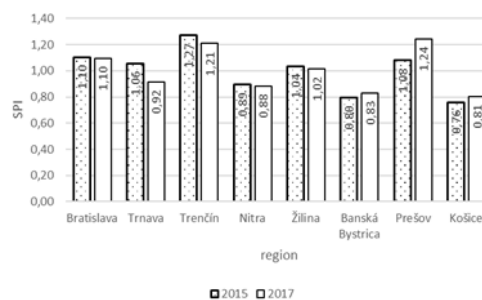
Table 3 The resulting comparison of the regions

Region ( $r$ )	$S - SPI_r$	shift	Order	shift
Prešov (PO)	1,243	▲	1	▲▲
Trenčín (TN)	1,210	▼	2	▼
Bratislava (BA)	1,096	▼	3	▼
Žilina (ZA)	1,017	▼	4	▲
Trnava (TT)	0,917	▼	5	▼
Nitra (NR)	0,883	▼	6	
Banská Bystrica (BB)	0,829	▲	7	
Košice (KE)	0,805	▲	8	

Source: own research

From the table it is evident that the region of Prešov increased during the years, the value of the index  $S - SPI_r$ . From the region's average rating in 2015, the region has been over-rated in terms of the indicators monitored. The Trenčín region is still above average. In 2017 he dropped to second place. The value of the index  $S - SPI_r$  has decreased by 0,063. As compared to the fallen region Bratislava and Trnava. The value of the index  $S - SPI_r$  in this region in 2017, the region indicates that it is below average. The order of Nitra, Banská Bystrica and Košice has not changed. In the regions of Banská Bystrica and Košice, the value of the monitored index has risen, but these regions are still rated as below average. In the following chart (Figure 2), the calculated index values of  $S - SPI_r$  are systematically compared for individual regions in 2015 and 2017.

Figure 2 Comparison of regions in 2015 and 2017



Source: own processing

#### 5 The assessment of social progress for the creation of the cluster

In the introduction, the impact of cluster coverage in the region on its socio-economic development was described. In the year 2018 in the Slovak Republic there were 20 clusters. The highest number of clusters is in Košice region (5), the lowest in Trenčín, Banská Bystrica and Prešov (2). According to Havierníková (2016), the placement of cluster from a point of view of typology corresponds with economic structure of regions. Slovak cluster typology is using clustering in two groups of cluster: technological and tourism. However, it seems more appropriate to proceed on the following division of clusters: tourism cluster, cluster of information and communication technologies, existing industrial clusters, and creative and cultural industries cluster. Particularly creative and cultural clusters represent a certain impetus in the future to increase social progress in the region.

#### 6 Conclusions

The official site of the Institute of Social progress is imperative from the perspective of the order of the countries in the year 2018  $EU - SPI$ . The highest value of  $EU - SPI$  reached Norway, and the highest was rated by the pillar of the Basic Human Needs. Slovakia placed 35 spot with a high score for a Basic Human Needs, but a very low score of Opportunity dimension (0.65). For comparison, in the year 2017 has been the highest-rated country Denmark and Norway was rated as the third best. This year the Slovak republic ended on 30 sites. The aim was to assess the contribution of the regions of Slovakia, between 2015 and 2017 years, from the point of view of social development. The social aspect was just concerned with the

calculation of  $EU - SPI$ . In each of the years analyzed had been drawn up to the order of NUTS level 3 regions of Slovakia. All available indicators recommended by the EU institutions in the  $SPI$  calculation were taken into account. Based on the clusters in these regions, efforts have been made to find the cluster's impact on the social development of the region. To better evaluate the impact, it would be useful if the cluster's scope was differentiated into subgroups. There is also a lack of official information on the functioning of these subgroups.

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#### Primary Paper Section: A

#### Secondary Paper Section: AO, AP

## PERSON-CENTERED APPROACH IN PRIMARY EDUCATION

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**Abstract:** The study deals with a qualitative analysis of the educational process of 8 elementary school teachers. We observed these teachers on the lessons and, using the microanalysis of the teaching units, we came up with findings that point to the predominance of teacher-centered education. This means that we continue to observe, within teacher communication, elements that are not in accordance with the humanist principles of a student-centered approach. A comparison of all 8 researched teachers has shown us that inappropriate pedagogic influence, especially in the level of communication, created passive, almost aggressive reactions by the pupils. On the contrary, we discovered that the teachers who implemented a mostly positive attitude during communication were a lot more successful in getting positive/desirable reactions, respectively, productive behavior of pupils.

**Keywords:** teacher-centered approach, pupil-centered approach, communication interactions, non-directivity, primary education, PCA

### 1 Introduction

#### 1.1 Specifics of research

The paper deals with the research of teacher-student communication interactions and their open (non-directive) and closed (directive) behavior at the lesson. The aim of our study was to identify shortcomings in the communication of the primary education teacher through a qualitative analysis of the openness and closeness of the teacher's behavior in communication interactions. I.E. the research intent presupposes the identification of teacher-centered versus pupil-centered interaction in the classroom. The problematic areas that we have focused on assume that the humanistic approach to primary education is still only at the declarative level, so teachers in practice do not use this approach to the extent that it would be optimal. According to much of our research, the application of the PCA principles has become a common practice in the US where this humanist stream originated and gradually established itself not only in schools but also in various other areas of social life. The main mission of the school and research in pedagogical sciences is the improvement of educational processes. The analyzed problem was studied using a standardized research tool - an observation scheme to identify the nature of communication interactions from a teacher's perspective versus a pupil-centered approach.

#### 1.2 Research Questions

1. Which deficiencies in student interactions can we identify within the primary education teacher during the pedagogical communication process?
2. What communication deficiencies appear the most often for a primary education teacher in the process of communication?
3. Which characteristics of the person-centered approach PCA does a teacher at the primary level of education apply most during communication with pupils?
4. Which characteristics of the person-centered approach PCA does a teacher at the primary level of education apply during communication with pupils the least?
5. What are the typical signs of an open and closed behavior of a teacher and a pupil in pedagogical communication?

#### 1.3 Research Sample

Because the problem and objectives of the research are focused on the extent to which the teacher of the primary education applies the signs of the positive, respectively, humanistic-oriented (non-interactive) communication based on PCA principles in the current school, the selection of the research sample was subjected to the need to monitor the studied phenomena in further depth. Empirical research did not, therefore, require us to monitor several tens or hundreds of teachers on a lesson, as recommended by a quantitative approach. As we have chosen to use the way of mixed research, the selected sample of surveyed observers consists of 8 primary school teachers with varying years of experience from a beginner to an experienced teacher. We chose the participants in the research on a basis of deliberate selection. A more detailed specification of the choice of people has taken place gradually, i.e. how we responded to the current situation, and this choice was influenced by the willingness of the participants to participate in the research (Gavora, 2007, p. 60). As our research required more demanding data collection and analysis, it would be complicated to focus on the large number of subjects surveyed. When observing this sample of teachers, we quantified the phenomena examined, and we describe, analyze, evaluate and interpret them based on qualitative descriptions. Selected teachers and their communication were analyzed using video footage. The teacher and their teaching style are relatively stable, and their behavior is accompanied by steady features. It is therefore not necessary to observe teachers for a long period of time. For this reason, we observed each teacher in 2 lessons for 2 x 45 minutes. As a result, we analyzed 16 teaching units all together. The teaching subjects we observed were not homogeneous.

We assumed that the use of teacher communication always had the same style regardless of the type of teaching lesson, respectively, on the subject and the year in which we observe the communication. Based on this assumption, we observed teachers on various subjects including Slovak language, mathematics and homeland education, respectively, elementary teaching. Together, we watched 9 hours of Slovak language, 4 hours of mathematics, 2 hours of homeland education and 1 hour of elementary teaching, two in 1st year classes, three in 2nd year classes, two in 3rd year classes and one in a 4th year class. Six schools were involved in the research, five of which were from the Bratislava Region and one from the Galanta District. The selected sample of participants is shown in Table 1. The selection of the research sample was conditioned by the fact that one of the most formative periods of human life is entry into elementary school. In this period, from the transition from pre-primary to elementary education, the most important adaptation period is where the student is awaiting many changes. These changes are mainly influenced by the teacher's work and his/her access to the pupil in teaching.

Communication is an important formatting process that creates interpersonal relationships. Interpersonal relationships acquire a certain character depending on whether the teacher applies or does not apply the principles of humanistically oriented communication. The nature of the research suggests that it's been focused on teachers of all primary education classes that we compared with each other. The on-site field research was conducted between November 2016 and January 2017. The recording of the classes was preceded by several hours of hospitalization, which helped the researchers adapt to the studied environment with the participants (pupils and teachers) of research. During these visits, a researcher became familiar with the class, its habits, and established closer contact with the research participants. Then the shooting itself was performed. We always shot two consecutive lessons. This way, we wanted to achieve the consistency of the teacher's educational activities with that class.

Tab.1: Research Sample

Teacher	School	Grade	Subject 1	Subject 2
T1	BA	2	Slovak language	Mathematics
T2	BA	4	Slovak language	Mathematics
T3	GA a	1	Slovak language	Mathematics
T4	GA b	3	Geography	Slovak language
T5	BA a	1	Slovak language	Slovak language
T6	BA b	2	Mathematics	Geography
T7	BA	2	Slovak language	Slovak language
T8	BA	3	Geography	Slovak language

## 2 Method of data evaluation

To record the categories, we chose the so-called natural coding. In this type of coding, the researcher will record each time the observed category occurs (Gavora, 1999, p. 88). Replicas of teachers and pupils contain specific items that we code according to how many times this phenomenon occurred in the observed unit for the teacher. Their occurrence (frequency) was recorded on the record sheet. The record sheet is preceded by a protocol from microanalysis of interaction units. The protocol served us to analyze the interaction units (phrases, responses, replicas, teacher and pupil questions) and to subsequently identify the items under review. This means that we made a transcript from a 16-hour video record of the teacher's replica data with pupil/pupils. We then searched for the following signs - categories. Each category has a positive, negative, or neutral value. Thus, each replica was given a positive, negative or neutral value, depending on whether it falls into the open sphere of teacher interactions - TOD or the closed sphere of teacher interactions - REOD, respectively, neutral sphere, and whether the replica of a pupil falls into the sphere of productive or reproductive responses. Supporting teacher traits and their interactions in teaching are also called Transaction-Oriented Decisions or decisions resulting from non-disciplinary. In this case, the teacher is an open, facilitating element that encourages pupils' productive responses. Conversely, a teacher who reacts rigidly, closed and directive is part of the sphere Role-expectancy Oriented Decisions. This means that the essence of looking at the role of teacher in the classroom as an authority is since he will behave and react from the position of the holder of formal power, superiority, that is, the conductor of the teaching process, where pupil replicas will have a more reproductive character. In the Role-expectancy Oriented Decisions sphere, the teacher's ability to respond openly - productively is limited and limits the variability of pupils' responses in communication.

Protocol 1: Excerpt from T6 teacher analysis

Teacher 6				Openness			
Directing 195				Total	675	161	
Replicas 945				Openness	16%	30%	
				Teacher		Pupil	
t 773 82%				+	-	+	-
p 172 18%				105	570	49	112
Rep.no	Role	Text	Note	Category	O/C	Category	O/C
109	p		Pupil is reading task.	Telling	-		
110	t	Shh! Could you stop, please?		Reproving	-		
111	t	Exactly, I will show you in a while.		Affirming	-		
112	t	There are ladybird's Christmas excersisers.		Focusing	-		
113	t	You are supposed to fill in zeros into the snowflakes in order to build dozens.		Directing	-		
114	t	Keep in mind these snowflakes are all over the sheet.		Clarifying	+		
115	t	How to build ten from one?		Probing-Priming	-		
116	t	Who knows the answer? Raise your hand!		Monitoring	0		
117	p	We add a zero to create ten.		Reasoning based on giv	-		
118	t	Well done!		Accepting	+		
119	t	Next exercise, how do I get ten from this number one?		Probing-Priming	-		
120	p	Should we write it down?		Exploring	+		
121	t	No, wait.		Rejecting	-		
122	t	Vanessa?		Monitoring	0		
123	p	Zero.		Reasoning based on giv	-		
124	t	Zero, and what we get?		Probing-Priming	-		
125	p	20.		Reasoning based on giv	-		
126	t	20, well done.		Accepting	+		

On the contrary, a teacher whose communication falls within the scope of the Transaction-Oriented Decisions is open to understanding the broader frame of reference of the pupils' personality and thus encouraging them to respond to the variability of reactions to teaching. We have defined the replica as any statement of the teacher or pupil that has been evaluated

based on the categorical system of the analytical scheme. However, the replica did not necessarily have to be just one whole sentence separated by a dot. The replica must have significant consistency, i.e. that we marked something as a replica many times as either a part of a sentence or several consecutive phrases that have been meaningfully linked to each other. If the sentence had more characteristics, we split it into the required number of replicas and assigned the appropriate category to them. If several phrases were meaningfully related to the same communication situation, and during the teacher or pupil's communication the significance of these sentences did not change, then we identified them as one whole replica and assigned the appropriate category to it. In the extract from Protocol 6 we demonstrate the evaluation.

As we can see from the log on the left-hand side, we can see the total number of replicas by both the teacher and the pupil together - i.e. 945 replicas, as well as the total number of replicas by the teacher - 773 and the total pupil replicas - 172, and the ratio of the pupil/teacher's reactions during teaching (82% to 18%). In addition, we see the most commonly applied replica of a teacher included in the Directing category - used in 195 cases. Next, we see the replica sequence number 109-126, also the interaction partner of T - teacher, P - pupil, and the comment column used to specify the situation from the video. On the right of the protocol, we see a column for categorizing teacher replicas and categorizing pupil replica and the assigned +, - or 0 value depending on whether we identified an open, closed, or neutral category in the replica. We see that the teacher has been allocated 105 plus codes and 570 minus codes, which together make up 675 replicas. We did not consider neutral replicas to the full extent of „openness “the degree of open communication, since this replica was assigned a zero value. The full extent of openness in T6 was 16%. The pupil received 49 plus and 112 minus codes, which together make up 161 replicas, and the overall productivity (openness) is 30%. We realize that there are a lot of factors influencing the teaching process and we will never be able to isolate and then observe the ideal conditions that would promise generally valid conclusions. However, we note that pedagogical communication is such a complex and ambiguous process that it can be grasped especially with individual cases. If we wanted to prove the generality of these laws, we would have to expand the research. Nevertheless, the interaction diagrams of communication are so steadily characterized that we can assume the high degree of relevance of the research findings to a narrow sample of the research participants.



### 3 Research results and interpretation

In this chapter we describe 8 teachers and their typical features in communication based on the indicators of openness (non-directivity) and closeness (directivity) of a humanistic-oriented teacher and their approach in pedagogical communication with pupils at the primary level of education. We interpret each teacher through established research questions. Individual analyzes contain the short characteristics of the teacher and the description of the lessons we have followed. Although our observations have assumed that the age, the number of years of practice, the achieved education, the subject or the type of lesson are not related to the teacher's communication schemes (this conclusion follows from L. Alberty, 2002), we provide further details for the completeness of the information, which relate to the observed educational process. Research findings are based on 16 micro educational analyzes. In empirical research we operate the basic concept of "openness" or "open communication rate". This term tells us how much the teacher has used positive replicas in his pedagogical communication, and thus has worked on student productivity. As we mentioned, 16 units were analyzed by observation. The chosen method of structured observation was used to analyze educational processes from the point of view of teachers, respectively, the pupil-centered approach in communication through micro-analysis of individual lessons. According to Zelina (2006, p. 71) in the microanalysis "... it is an analysis of small units, activities, communication acts but also movements, gestures, behaviors that occur at the lesson, ... it looks at the details, specifically micro-facts, from which a deduction is done, the quality of the teacher's work is determined, as well as the behavior of the pupils." The origin of the method described is the creative-humanistic theory of education. THV Theory "... seeks to resolve the dispute between quantitative and qualitative analysis of educational phenomena." (Zelinová, 2004, p. 81). Microanalysis can detect and describe different psychological manifestations and personality, behavior, directivity or non-directness of the teacher, etc. For eight teachers and their pupils, we analyzed approximately 850 statements - replicas of two 45-minute lessons. This together consisted of approximately 6,500 replicas.

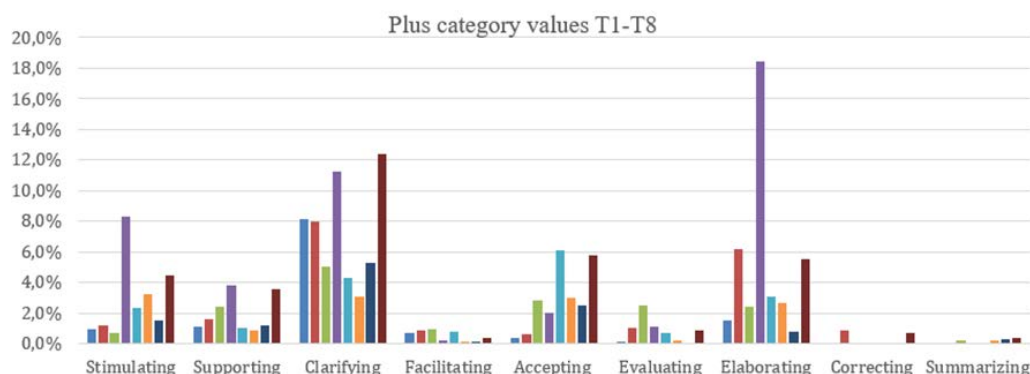
#### 3.1 Research findings

In this subchapter, we summarize the research findings of all 8 teachers together because these analyzes are too extensive and unrealistic to re-publish them as a full version. For teachers T1 to T8, we identified their strongest and weakest aspects in pedagogical communication in the T-P interaction. We identified positive - open, respectively, non-directional communication and conversely, the negative - closed, respectively directive communication and their occurrence among individual teachers. These features have been linked to humanistically-oriented

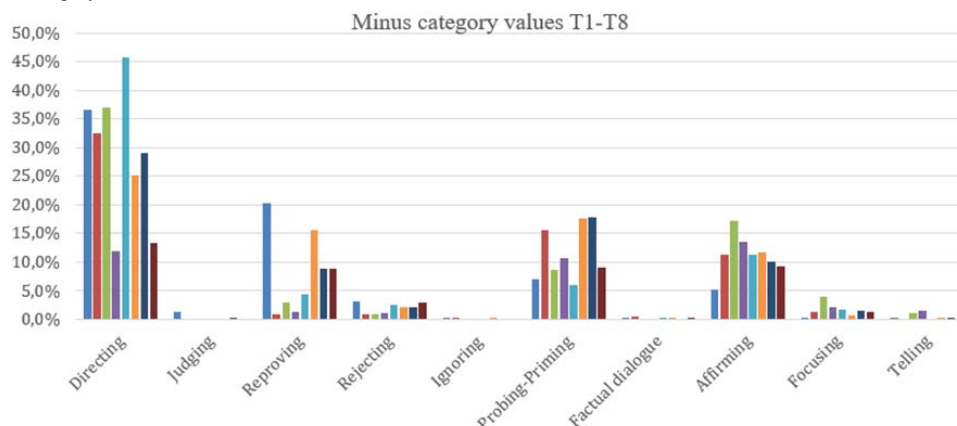
communication a communication that expresses a person-centered approach (PCA) based on the theory of C. Rogers. We used an observation system to analyze the collected research data - individual replicas of teachers and pupils - to find out the classification of teacher's verbal behavior in teaching (in the original Classification of Verbal Behavior in the Classroom, B. Macdonald and E. Zaret, 1964). We have described each case of T1 to T8 separately. With the use of quantitative measurement, we got the absolute values of the open and closed replicas of the teacher and the productive and reproductive replicas of pupils. By qualitative descriptions, we have interpreted these results based on identified research questions. We then selected teachers who fall into the category of Transaction-Oriented Decisions (decisions that are formed from non-directivity) or the Role-expectancy Oriented Decisions (a teacher who reacts rigidly, closed, defectively). The research revealed that two teachers from eight were classed as dominant TOD and four other teachers as the dominant REOD. In this subchapter we present the teachers' summary results and conclusions.

From Graph 1 we see all eight teachers and their results in the plus categories. Teacher T1 dominated mainly in the Clarifying category. In other categories, he did not show significant results. Teacher T2 also dominates in the Clarifying, or Elaborating category, which binds itself to the first category. Teacher T3 does not show a significant frequency of plus values in communication. All we can mention is the Clarifying category, where we see the highest measured value for the T3 teacher. Teacher T4 is distinctive compared to other teachers in the categories Stimulating, also Supporting, quite dominant in the Clarifying category and the most dominant in the Elaborating category. Teacher T5 has the most significant results among plus categories in the Accepting category. Teacher T6 does not dominate any of the plus categories. Teacher T7, like the previous teacher, does not dominate any of the plus categories. Finally, the T8 teacher's plus replicas predominate in the categories Stimulating, Supporting, Clarifying, Accepting, and Elaborating. The above-mentioned categories, which fall within the sphere of open teacher communication, should be applied in the field as often as possible. Interactions in which teachers rarely apply the signs of open communication can be identified as problematic. The T4 and T8 teachers who demonstrated best in our research had the ability to stimulate pupils. Pupils had the opportunity to discuss, express their opinion, get the most space to express themselves. Conversely, teachers who have proven to be inadequate in communication mostly demanded simple answer to reproduce facts from their pupils. The learning activities were also oriented in this direction - to practice and remember. In the next graph 2, we describe the mistakes and shortcomings of T1 to T8 teachers used most often in their communication.

Graph 1: Plus category values T1-T8



Graph 2: Minus category values T1-T8 1



Graph 2 tells us that teacher T1 has the greatest shortcomings in the categories of Directing and Reproving. Compared to other teachers, they mainly dominate in scolding pupils. Teaching of T1 was this way throughout the time of observation. Their verbal expression was characteristic by constantly patronizing, reproaching and criticizing pupils. Most of the time, pupils did not respect teacher T1, they were incredibly bored at the class, which was probably the cause of their bad discipline. Some individuals often ignored the teacher, did not engage in activities, and when they got involved, they were usually reproached by the teacher because they did not cooperate. Of course, each teacher works with a certain unrepeatable and unique class, but the teacher's job is to set the rules and conditions that would eliminate as much as possible of such a similar negative behavior. Changing the teacher's approach could be remedied, but this is a prerequisite for another, rather longitudinal, type of research. The teacher's personality, as pointed out by some of the researches mentioned in the theoretical part of the thesis, is the determinant of the teaching process. A teacher who gains experience from their university studies all the way to years of professional practice must draw attention to the essential aspects of their communication with pupils, thus acting not only on their own development, but rather on the cultivation of the pupils' personalities. Self-reflection of one's own abilities leads to the development of pedagogical competencies.

Communication is one of the most important areas of cultivation of human behavior. The teacher must not forget about it. As far as teacher T2 is concerned, we see their shortcomings in frequent guidance and management of teaching by putting in place convergent and closed questions. We also observed good organization skills for teaching. Pupils engaged in the teaching process and did not have a problem with discipline. According to the teacher T2, the pupils were studying difficult material, and this could have also influenced the character of the T-P interactions. Nevertheless, we note that they had used typical features of traditionally designed teaching. Teacher T3 also has high values in teaching and learning management. We note that the personality of the teacher was predominantly dominant, and this gave character to the whole course of teaching. Teaching activities on the lesson often changed, and in a short period of time, it was possible to take over or practice a greater amount of curriculum. What, however, can be said from the observation is that the teacher T3 has often instructed the pupils? The frequency of her replica was high, and therefore very fast. Step by step she told the pupils what to do and how they should do it. While teacher T3 has years of pedagogical experience, her teaching has been traditionally focused. At T4 we observed a

phenomenon that was unusual in comparison with other teachers. The pupil-lesson teacher led the discussion, which led students from the analysis of concrete phenomena to generally valid conclusions. Such a form of discussion is a stimulating element in teaching. The activation methods are mainly applied in modern conceived education, and therefore, from the point of view of our research, we can label teacher T4 as a pedagogue with predominantly humanistic features of pedagogical communication. As we have already evaluated in the previous chapter, T4 teacher has been able to increase productive responses to 66% in pupils. The most problematic area for the T5 teacher in pedagogical communication was the inadequate application of instructions and management of the teaching process. The character of their communication was particularly marked by frequent instructions and guidance. For example, how pupils should sit, how to write, how they should not sit and how they should not write, what to do, and what not to do and vice versa. A similar behavior was observed with T3. The sixth interpreted teacher, T6, in her communication most often used examination and the study of learned and memorized facts. Her communication was characterized by convergent and closed questions. In the case of T7, a similar teaching style was evident. Teachers mostly focused on learning. These characters are indicative of traditional teaching. Finally, the T8 teacher and her communication have led to mostly productive communication among pupils. Their shortcomings were in scolding and reproaching. In the summary table 2 of all replicas of teachers, we see the sum of the most frequently used replicas used by teacher. We identified the following categories: Directing, Probing-Priming, and Affirming as the biggest deficiencies and mistakes in teacher interactions. The first mentioned category helps to increase the teacher's directive behavior. As we have mentioned in the interpretations of the research results, redundant directing of the teaching process is not in accordance with humanistic principles, and teachers should avoid this behavior as much as possible in communication.

In addition, as the greatest shortcoming of teachers, we have found frequent focus on asking closed and convergent questions. Research has shown that teachers examine a significant part of pupils' teaching, find out learned facts and memorized data. The Affirming category - pupil's confirmation to the teacher, we recommend turning it into teacher's full responses for valuation, feedback, or verbal evaluation that would have a greater impact on productive pupil behavior. Stimulating categories that primary teachers used in our research most often were Clarifying, Elaborating and Accepting. We have to say that the ratio of the plus categories to the minus category did not represent

Tab. 2: The most numerous plus and minus replicas in the T1-T8 categories

		T1	T2	T3	T4	T5	T6	T7	T8	Summary
Stimulating	+	5	8	6	37	20	25	10	25	136
Supporting	+	6	11	20	17	9	7	8	20	98



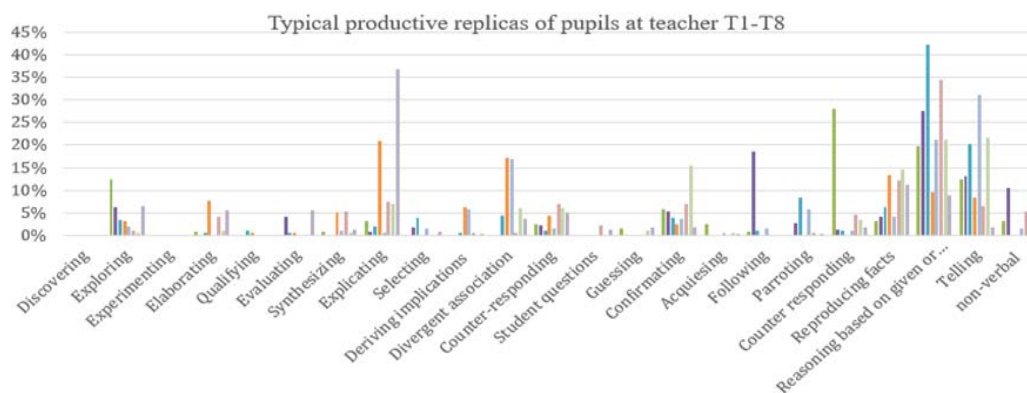
Clarifying	+	43	53	42	50	36	24	34	69	351
Facilitating	+	4	6	8	1	7	1	1	2	30
Accepting	+	2	4	24	9	51	23	16	32	161
Evaluating	+	1	7	21	5	6	2	0	5	47
Elaborating	+	8	41	20	82	26	21	5	31	234
Summarizing	+	0	0	2	0	0	2	2	2	8
Correcting	+	0	6	0	0	0	0	0	4	10
Directing	-	193	216	308	53	382	195	185	74	1606
Judging	-	7	0	0	0	0	0	1	0	8
Reproving	-	107	6	24	6	37	121	57	49	407
Rejecting	-	17	6	7	5	22	16	14	16	103
Ignoring	-	2	1	0	0	0	1	0	0	4
Probing-Priming	-	37	103	72	48	50	137	114	50	611
Factual dialogue	-	1	4	0	0	1	2	0	1	9
Affirming	-	28	75	144	60	94	91	64	52	608
Focusing	-	1	9	34	10	14	6	10	7	91
Telling	-	1	0	9	7	0	1	1	0	19

even one third of replicas of the overall verbal expression of teachers in the classroom together. For pupils, this ratio was considerably higher, approaching a one-to-one ratio. Thus, pupils overall showed replica productivity in all examined classes of about 50%. The most successful plus category for pupils was Explicating. On the other hand, the weakest negative category for pupils was the category Reasoning based on given or remembered data.

In addition to the summary graphs of all teachers, we also provide summary charts for their pupils. As can be seen in graph 3, T1 has typical features, except in the Exploring category, where pupils were asking quite a lot of questions, compared to other teachers and their pupils, but otherwise showed no other significant values in the other productive categories of pupil replicas. For teacher T2, the Exploring category was also a bit more explored, but to a lesser extent. The Evaluating category is slightly more pronounced for T2 than for the others. The measured value indicates that the teacher provided a certain amount of teaching space for the pupils to evaluate each other. For T3, we didn't notice significantly higher scores in productive pupils' replicas either. The Selecting category can be mentioned where T3 gave the opportunity for a pupil to choose a volunteer by transferring some of their responsibility - in this case the teacher placed a pupil in the role of the teacher. In the case of teacher T4, we see significantly higher measured values in productive pupil categories, especially in the Explicating category. This value tells us that T4 pupils have been given a

disproportionately greater amount of space to talk about their studies than other pupils, except for T8, where we see an even further increase than other classes. We also tested this fact using the hypothesis H3. T4 teacher pupils also have higher values in the Elaborating category, which is related to the Explicating category, where learners have expanded their answers to new information when explaining them. In addition, we can mention the Divergent Association and Divergent Implications categories, when the pupils approached different tasks with creativity and answered in majority with productive - divergent replicas. For T5, we see higher values for the Divergent Association category. It means that the teacher gave the pupil questions and tasks that were related to the presentation of examples. We have explained this fact, which we have mentioned as divergent associations in the specific case of T5 analysis. The Deriving Implications category is similar to the previous one, but with the difference that the pupils had some more complicated thought processes. The T6 teacher in their productive category was only able to generate more activity in the Counter-Response category, where pupils could freely express current ideas or demands. In other categories, compared to the other teachers, they did not score any significant values. Teacher T7, like the T6 teacher, did not achieve significantly productive pupil replicas. Finally, at T8 we see that they were able to raise interest in pupils in the Explicating categories, i.e. explanation, which was their strongest side and very prominent in comparison to the other teachers. This is also evidenced by a considerably longer pupil's contribution to studying - an average of 10 words per pupil's conversation.

Graph 3: Typical productive replicas of pupils at teacher T1-T8



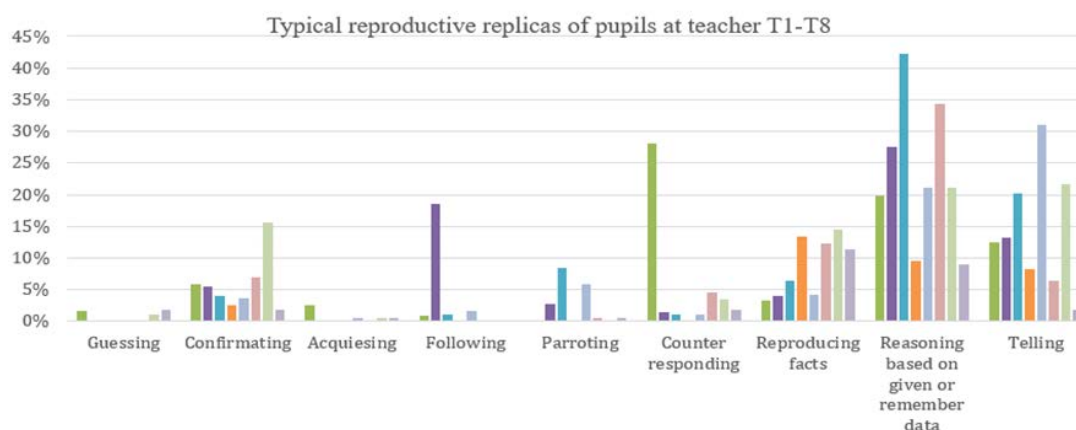
Conversely, Graph 4 shows teachers' weaknesses in their communication with the pupils. As we can see, in these categories, teachers strongly dominate the previous productive categories. On the chart we can also see replicas that the teacher awakened the most in their pupils. These are reproductive, closed replicas. The rate of open communication through high

values in this area is significantly decreasing in pupils. The first teacher T1 dominates the pupils' replicas, which characterize the inappropriate, inadequate response. This is due to excessive scolding and reproaching. We also see excess values in the category Response based on the provided, respectively, memorized data, which relates to the low application of tasks of

higher cognitive processes. The second teacher T2 dominates in the category Following - teacher management and imitation, and in the same category as the previous T1 teacher, in over-assigning convergent tasks. In this area, the most dominant teacher is T3. Even though we see high values for the T4 teacher in the reproduction of facts, the other values are relatively low compared to the teachers who previously had closed communication. That's also true for the T8 teacher, which we will get to later. Teacher T4 shows much lower values in the categories where other teachers dominate, especially in the latter two categories - response based on the provided/memorized data and speaking - directive speech or reading. Teacher T5 has higher measured values in the last three categories, showing above average use of closed questions, research tasks, verification of memorized facts or reading, where the desired

creative thinking process in pupils does not occur. Teacher T6 has a dominant position in the categories of reproduction of facts and pupil's response based on the provided/memorized data where both categories have a certain connection. Thus, pupils mostly respond to closed and convergent types of tasks or questions. The T7 teacher fares similarly, except for the category of speaking - direct speech, reading, where the teacher also dominates via tasks to read texts and tasks from textbooks. The final T8 teacher and their communication is typical, because while she also dominates in the category of reproduction of facts, in the other reproductive categories we recorded only low values in their pupils, indicating a trend in the overall positive - open communication of the teacher and their pupils.

Graph 4: Typical reproductive replicas of pupils at teacher T1-T8



#### 4 Conclusion

The role of the study was to systematically summarize the overall data of T1 to T8 teachers and their pupils and to identify the positive and negative aspects that arise from the approach used in the pedagogical communication of all surveyed participants of this research. Six of the eight teachers and their approach were identified as a teacher-centered and vice versa, we identified the principles of a pupil centered approach in only two observed teachers. The intention of the study was also to highlight the importance of the humanistic approach in education. Because the Slovak Republic refers to the humanistic tradition in its key documents on the definition of the initial goals for education and training, we consider it very important to pay attention to the study of this area, especially in the work of the teacher of primary education. Primary education is a period in a person's life, which is largely shaped by their personality both in the cognitive and affective spheres. Our attention has been drawn to the central element of educational relations - the primary education teacher and their approach to pedagogical communication. Positive interpersonal relationships are developed in the process of positive communication. The process of growth of a unique personality requires the creation of optimal educational conditions. The Person-Centered Approach (PCA) considers it necessary to create an environment of trust, positive reception, empathy, congruent behavior and valuation, in which human beings interact to discover their inner potentials. In such a relationship, understanding is an important factor through which the inner world of person comes to the surface and acts on the positive change of one's own personality. Through his lifetime work, Rogers has enriched his psychological, social and pedagogical and has helped to improve interpersonal relationships in different areas of human life. The research carried out was designed to examine teacher-pupil communication, to find the essence of these relationships based on theoretical analysis of humanistic theories of education and training, and finally to provide knowledge that would lead to the improvement of obsolete teaching techniques and the persistent directive approach of teachers at school. Educational strategies that focus on developing communication skills are also strategies

for developing all human-cognitive and non-cognitive characteristics of the personality. Communication is a means of cultivating the development of human personality. Only a happy and inwardly balanced personality can positively influence their surroundings, thereby enabling the formation of "new" better people for this world. Humanism is not just a pedagogical direction, it is the essence of a person and their life. It is a path that should be the goal as well. Communicating means to humanize.

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**Primary Paper Section: A**

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## THE APPLICATION OF CRITICAL THINKING IN PEDAGOGICAL STUDENTS' ESSAYS ON SOCIOCULTURAL PROBLEMS

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**Abstract:** Critical sociological thinking is one of the most important abilities of a future teacher. Its role is to teach pupils to assess information logically in different socio-cultural contexts and to arrive at a decision showing sensitivity to a social problem. Does school prepare future teachers in these dimensions? The aim of the study was to analyse the level of composition of professional essays with a focus on critical sociological thinking, using the Jane Schaffer model. The subject of content analysis was 207 expert essays of students of teaching at three faculties of Prešov University in Prešov, within the compulsory socio-scientific subject *Socio-cultural Aspects of Education*. Analysis of research results showed that about 1/3 of the works did not contain elements of critical sociological thinking. The greatest shortcomings were found in the inability of students to demonstrate sensitivity in specifying a thesis arising from a social problem, which we consider to be key in relation to the character of the output. This deficiency is the result of non-critical acceptance of a quantity of information, the absence of systematic support for critical thinking in education, etc. The authors propose a change in the learning environment using selected strategies that can support the critical sociological thinking of future teachers.

**Keywords:** Critical sociological thinking, Jane Schaffer model, diagnostics of the level of critical thinking of future teachers.

### 1 Introduction

This study focuses on the issue of critical sociological thinking, which is a current issue due to the needs of today's democratic society. In the beginning, we will rely on the idea of Sekerak (2017, p. 179): *In order for democracy as such to exist at all, it is essential that a community of thoughtful adults and competent citizens is available ... The mass that decides may not behave with consideration and can, with the formal preservation of democratic procedures, take decisions that are toxic or even destructive for democracy, particularly liberal democracy.* The undergraduate training of future teachers should be aimed at enabling graduates to promote the competence of their pupils to take their own critical and responsible approach to all the challenges, demands and problems that life brings to society. The phenomena of contemporary society, such as the information explosion, multiculturalism, extremism, lifestyle, etc., have given the school a difficult task, namely how to educate a wise, educated, just, responsible, learning person who, with the integrity and maturity of his personality, can successfully manage the demands and fears of today's complicated and dynamically evolving world.

It is evident that it is not possible to respond to growing societal problems with the encyclopaedic model of education, which is still persistent in Slovak schools. In addition, the rapid flow of a large amount of information easily accessible through the media causes it to be uncritically accepted by the individual, dulls sensitivity to solving social problems, leads to apathy, inability to predict the consequences of our decisions, and so on.

Foreign literature offers some inspirational stimuli to awaken the student's perception of social problems while developing critical thinking. We consider one of them to be the method of writing essays according to Schaffer (1995). This product is not normally implemented in the undergraduate preparation of Slovak teacher study programs. For this reason, we applied the Schaffer model of preparing and writing professional essays into the programme *Socio-Cultural Aspects of Education* (a compulsory subject of the socio-scientific basis of the teaching programs of Prešov University in Prešov in the first year of the Master's study).

The aim of the study is to present the overall level of ability of future teachers to express themselves on selected societal problem through essays focusing on critical sociological

thinking. In the study, we rely on a number of world experts in the field and on the theory of Geertsen (2003), who considers sociological knowledge and sociological imagination as the basis of critical sociological thinking.

### 2 Theoretical definition

Although at present, philosophical, cognitive-psychological and pedagogical works provide a wide range of definitions of critical thinking, we have an inspirational definition from Ruisel (2008), according to which it is a synonym for quality or rational thinking involving the following components: motivation for the challenge that critical thinking brings; knowledge about critical thinking skills; training structures to facilitate transfer between connections and meta-knowledge monitoring. Paul and Elder (2006) consider critical thinking as an art to analyse and evaluate thinking with the intention of improvement. According to the authors a well-cultivated critical thinker:

- raises fundamental questions and problems, formulates them clearly and precisely;
- collects and evaluates effectively relevant information using abstract ideas to interpret them;
- comes to well-founded conclusions and solutions, testing them against relevant criteria and standards;
- thinks openly within alternative thinking systems, can distinguish between them and, where necessary, evaluate their assumptions, consequences and practicality;
- Effectively communicates with others when dealing with complex issues.

Critical thinking is, according to the authors, self-controlled, self-disciplined, self-monitored and self-correcting thinking (Paul, Elder, 2006; Ruisel, 2008; Balogová, Šoltésová, Kvašňáková, 2013; Zelina, 2017). It requires strict standards of excellence and thorough control of their use. It means effective communication, problem solving ability, and commitment to overcome egocentrism and sociocentrism. It follows from the above-mentioned considerations that critical thinking is not based on one isolated ability but rather on a set of personality, attitudinal and cognitive abilities that can be applied to the logical consideration of all the reasons for and against (Ruisel, 2005). One of the possible solutions to support critical thinking in the undergraduate training of future teachers is writing an essay based on the Schaffer model (1995). We consider this method to be one of the effective means to awaken the student's susceptibility to social problems. The origins of choosing a method to strengthen critical thinking were the findings of several foreign authors. e.g. Roybal (2012) argues that the essay writing method is considered to be both the most effective tool for developing critical thinking and it additionally enables the learner to penetrate the depth of the problem; it is not about superficial writing.

The strategy for writing professional essays based on the Schaffer model (1995) consists of the following steps:

1. Challenge.
2. How to write an effective paragraph – it is necessary to prepare colours:
  - a. blue to highlight the topic and the final judgement;
  - b. red for specific details;
  - c. green for comments.
3. Topical searching - This is the first sentence in the paragraph that shows the main idea. This is usually a slightly controversial statement; something to be proven. This thesis may also be short (e.g. 3 words).
4. Factual details - here you need to consider facts, quotes, examples. This is the evidence that supports our position.
5. Commentary on facts - requires analysis, interpretation, explanation, or overview.
6. Final judgment - this is an argument, an opinion.

From the practical point of view, Jane Schaffer offers a schema that has the exact order: *topic sentence* (TS), *concrete details* (CD), supporting evidence, comments and *commentary* (CM), and further comments and commentary (CM). If students can manage a basic paragraph (e.g., 4 sentences), they should add additional specific details and always use the ratio of *two comments per detail*. Later, students add a concluding sentence (CS). This structured writing helps the student to better organize their own thinking and build clearer lines of argument.

### 3 Method of research

The basic method of research was the content analysis of specialist essays focused on critical thinking within the module *socio-cultural aspects of education*. The criterion for the deliberate choice of this module was that it offered a lot of opportunities to discuss current issues in society and also offered stimuli to awake the student's perception of social problems (cultural differences, multicultural communication, educational and cultural aspects of family, schools, mass media etc.). The study module was taught in the winter semester of the academic year 2016/2017 in the first year of master's study. It was attended by 207 students of the Faculty of Humanities and Natural Sciences of Prešov University in Prešov in preparation for the teaching profession. Students were divided into 11 seminar groups led by one teacher. Each student had the same conditions in the course. The essay was part of one of the compulsory output with N = 207.

For the method of content analysis, we relied on the work of Kerlinger (1972), Seebauer (2003). The stages of content analysis of the essay:

- Deliberate choice of study module;
- The initial content analysis of 5 specialist essays for the purpose of selecting analytical categories – exact definition of categories, rules of coding (Seebauer, 2003);
- Content analysis of the essay; current content analysis checked by an independent researcher;
- Random selection of 5 analysed specialist essays with the correctness of analysis checked by an independent specialist.

The basic unit of analysis was the supra-sentence entity. Overall 17 analytical categories were analysed, which had a defined quantificational process:

- Adequacy of evaluation of analytical categories was based on the scale: yes – 2 points, partially – 1 point, no – 0 points;
- overall level – summary of partial points / overall number of points;
- subsequently, the percentage level of processing the professional essays was calculated as well as the overall level at which an arbitrary approach was used<sup>1</sup> (Stračar, 1977).

In interpretations, we offer partial results of research in accordance with the aims of the study. The content analysis took place from November 2016 to January 2017. We tested relations between the selected analytical categories using Spearman's Correlation Coefficient.

### 4 Results

Preparation for writing the specialist essay was not simple. The students were coming into contact with this type of output for the first time during their studies. During the whole semester

they applied, to teaching, different methods supporting critical reading, critical writing and critical argumentation. The results of the content analysis of the specialist essays in table one present the overall level of essay composition achieved.

Table 1: Overall level of composition of essays following the Jane Schaffer model

Level	Specialist Essays	
	Absolute number (n)	Relative number (%)
A	22	10.63
B	32	15.46
C	35	16.90
D	24	11.59
E	27	13.05
Fx	67	32.37
Total	207	100.00

The overall level of specialist essay composition is the result of the evaluation of 17 analytical categories, divided into the following parts: research on the topic, conceptual analysis, thesis, factual details, commentary on facts with evaluative opinion, final judgment, formal elements, stylization and grammar, ethics and citation technique. The average level of specialist essay composition is expressed as M = 2.65, which represents classification grade D (satisfactory). Table 1 shows that approximately 1/3 of the sample of students (n = 67; 32.37%) did not demonstrate the ability to think critically when addressing the particular socio-cultural problem. The biggest deficit in these essays was the lack of a thesis (see Table 2 - 28.99 %). Presenting a thesis, that is, the position on the chosen problem, was one of the most important conditions of the expert essay. We assert that if a student is unable to select a relevant claim from the quantity of information, we can assume that they will not be able to evaluate and select the facts and other information needed to confirm or refute the thesis. We understand the thesis as a statement that should include subject matter and belief; it should be arguable or questionable. According to Nemčok et al. (2014) and Režný (2015), its main feature is controversy. Table 1 also presents the following findings: classification grade E – 27 essays (13.05 %); D – 24 essays (11.59 %); C – 35 essays (16.90 %); B – 32 essays (15.46 %); A – 22 essays (10.63 %).

The ability to write a good essay is influenced by the knowledge of the subject and the ability to express sensitivity in specifying the thesis. The result of the adequacy of the formulation of the thesis is shown in Table 2.

Table 2: Adequacy of formulation of the thesis with the subject and

Adequacy of thesis formulation	Absolute number (n)	Relative number (%)
yes	46	22.22
partly	101	48.79
no	60	28.99
Total	207	100.00

In evaluating the analytical category of adequacy of thesis specification, we achieved the following results: adequately formulated theses – n = 46 (22.22 %), partially relevant theses – n = 101 (48.79 %) and inadequately formulated theses – n = 60 (28.99 %). This is largely related to the next analytical category. The choice of relevant information and facts to support the thesis is influenced by the student's knowledge of the problem and his ability to work with professional texts. Table 3 shows the result of the adequacy of processing the discussion of the given thesis.

Table 3: Adequacy of processing discussion on the thesis

Adequacy of thesis formulation	Absolute number (n)	Relative number (%)
yes	42	20.28

<sup>1</sup> The transformation key for converting the scores in the analysed categories was defined in advance and we used the classification scale (A – 90 % to 100 %; B – 89.99 % to 80 %; C – 79.99 % to 70 %; D – 69.99 % to 60 %, E – 59.99 % to 50 %; FX – 49.99 % and lower).

partly	105	50.72
no	59	29.00
Total	207	100.00

The ability to support the thesis using relevant information, facts and expert comment following the Jane Schaffer model was identified in 42 expert essays (20.28 %). In those, the students showed their ability to logically deduce and thoroughly understand the selected socio-cultural problem, re-evaluate the information obtained from several parties, select important facts and support their own views, according to the Jane Schaffer schema. A partly processed discussion was identified in 105 works (50.72 %). The biggest drawbacks: the absence of compatibility between the thesis and the fact, or information and evidence (mostly incorporating more general expert statements), absence of commentary and failure to comply with the schema provided. Inadequately processed discussion was identified in 59 works (29.00 %). This fact was contributed to by the fact that 56 essays (28.99 %) contained an inadequate processing of the thesis, which significantly influenced the processing of other essential components of the essay. In the remaining essays, there were no criteria for the processing of factual details (see point 4 - Strategy for Writing Specialist Essays Presented on a Theoretical Basis).

The overall result for the level of specialist essay composition and level of processing analytical categories is the result of the ability to select resources relevant to the topic. The evaluation of this analytical category is shown in Table 4.

Table 4: Relevance of selection of specialist literature to the discussion

Adequacy of thesis formulation	Absolute number (n)	Relative number (%)
yes	97	46.86
partly	75	36.23
no	35	16.91
Total	207	100.00

Evaluating the selection of literature relevant to the defined problem is an important component of critical thinking. The positive thing is that 97 students (46.86%) used relevant sources in the discussion. Partially relevant sources were used in 75 papers (36.23 %) as evaluated (e.g. using secondary sources). In some essays there were outdated sources or the list of literature used included resources that were not part of the content of the essay. Sources irrelevant to the problem identified were data in 35 expert essays (16.91 %).

We wanted to find out how closely the analytical categories of *adequate discussion* and *relevant sources* are correlated. To determine these connections, we used Spearman's correlation coefficient. The results of the tests are presented in table 5.

Table 5: Values of Spearman's correlation coefficient for adequacy of discussion and relevance of sources

Variable	Adequacy of discussion	Relevance of sources
Adequacy of discussion	1	0.711**

The highlighted values represent a significant relationship (\*\* $p < 0.01$ )

On the basis of Spearman's correlation coefficient  $r = 0.711$  ( $p < 0.01$ ) we found a highly positive correlation (Chráska, 2007, p. 105)<sup>2</sup> between selected analytical categories, specifically: the

<sup>2</sup>Approximate interpretation of the values of the coefficient of correlation according to Chráska (2007, p. 115) –  $r = 1$  (functional dependence);  $1.00 > r \geq 0.90$  (very high correlation);  $0.90 > r \geq 0.70$  (high correlation);  $0.70 > r \geq 0.40$  (medium correlation);  $0.40 > r \geq 0.20$  (weak correlation);  $0.20 > r \geq 0.00$  (very weak correlation);  $r = 0$  (no correlation).

adequacy of discussion and the relevance of sources. The calculated coefficient therefore shows that the more relevant the sources are, the more adequate the discussion is in terms of the outputs that were evaluated positively and conversely, inadequate sources were reflected negatively in the quality of the discussion.

From the point of view of critical thinking, the most important thing is to reach a decision and to support it with relevant evidence. The result of the evaluation of the compatibility of the thesis and the concluding judgment is presented in Table 6.

Table 6: Values of Spearman's correlation coefficient for the relationship sensitivity of the thesis and concluding judgement

Variable	Sensitivity of thesis	Concluding judgement
Sensitivity of thesis	1	0.667**

The highlighted values represent a significant relationship (\*\* $p < 0.01$ )

Using Spearman's correlation coefficient  $r = 0.667$  ( $p < 0.01$ ) we found moderately positive correlation (Chráska, 2007, p. 105), which indicates a moderately close relationship between the thesis and the concluding judgement. The calculated value suggests that there is a significant relationship between these analytical categories, which means that if a student is able to correctly state the thesis, they are most likely to be able to justify it and properly support it with an appropriate argument. Conversely, if they are unable to distinguish the thesis from other statements (e.g. opinion), it influences the ability to establish a relevant argument and to arrive at a relevant judgment.

#### 4 Discussion

The overall level of Jane Schaffer's Critical Thinking Expert Essays was expressed as Grade D - satisfactory ( $M = 2.65$ ). We consider this result to be satisfactory as a whole, given the fact that such type of teaching is not common at Prešov University in Prešov in the context of master's level training for the teaching profession. The worrying result is that approximately 1/3 of essays ( $n = 67$ ; 32.37 %) did not contain critical elements of critical thinking, which reflected their overall level of processing - classification grade FX. We assume that these may be caused by multiple effects on the individual:

- insensitivity to social problems caused by unethical presentation by the media;
- superficial solution of life situations - someone else will solve it for me;
- the laziness of the mind caused by the advances in technology – I can find everything on the Internet;
- non-critical acceptance of any examples, information, etc.;
- absence of communication face to face;
- absence of altruism;
- absence of responsibility
- unsystematic development of critical thinking in education and the absence of the foundations of modern logic and many others.

The fact is, that the development of critical thinking was not included in the Slovak Republic's National Education Program until 2008. The results of several research papers suggest that this issue is still present in Slovak education at all levels of schools in the periphery (Petrasová 2008; Smetanová et al 2015, Čavojová, 2017, Čavojová and Jurkovič, 2017 a.). This makes it more difficult to apply its development to the more specific social disciplines of the obligatory socio-scientific basis of teaching. The partial results of content analysis showed that students have problems working with information, selecting relevant facts and evidence, building relevant arguments, and so on. In this context, the Jane Schaffer method is considered to be very interesting because, on the one hand, it allows the learner to organize their own thinking according to predetermined steps and on the other hand, it brings a variety of cognitive skills. A

well-composed essay requires the ability to ask questions. The literature provides several options for reviewing and improving the process of one's own thinking. We recommend the following sources to readers: Paul (1992); Paul and Elder (2003); Crenshaw, Hale and Harper (2011); Schaffer (2017).

## 5 Conclusion

Supporting the critical thinking of learners is a challenging and responsible role of the teacher. Learning to critically review the information received is an important part of cognitive processes. It requires a teacher who has good socio-scientific insights and can think critically (e.g., to build relevant arguments, to identify logical errors, etc.). Our analyses point to relatively large deficiencies in the orientation of the learning outcomes of the courses offered in the field of teacher education to this area of the future teacher's competences, as well as to the level of critical sociological thinking of future teachers.

The application of Jane Schaffer's essay writing technique to teaching in addressing sociological problems caused several problems for students - future teachers. The students were not used to the type of teaching that required critical judgment. We encountered several issues during the seminars:

- reading enough relevant book and magazine literature,
- having sensitivity for selecting a socio-cultural problem,
- performing detailed analysis (theoretical and empirical anchoring),
- specification of the thesis,
- elaborating individual paragraphs of the essay in accordance with the Jane Schaffer schema - introductory paragraph, core of work, final paragraph with final judgment.

Despite the fact that enough space was spent on steps to meet the requirements of the given subject, about one third of the essays were poorly composed. We believe that this fact may be related to the teaching of the learners in previous years, which was not aimed at in-depth study or higher-level thinking. Students - future teachers - should be able to teach their pupils to actively work with different types of information, cultivate social sensitivity and lead to social responsibility. These qualities will be reflected in the future functioning of society. From the societal point of view, we consider it important to support education for critical thinking in the Slovak school system so that learners of all levels of school are aware of social and cultural contexts. Teaching Critical Thinking through the Jane Schaffer model (not only on social topics) is considered to be one of the important ways to prepare a person with the future competencies defined by the World Economic Forum (WEF, 2018) in Davos – the ability to solve complex problems, critical and creative problem solving, managing people, coordination with others, and emotional intelligence.

The presented lessons can be inspirational for all social disciplines, since the ability to think critically is considered to be the dominant competence of contemporary and future society.

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## Primary Paper Section: A

## Secondary Paper Section: AM



## CRISES OF CATHOLIC SEMINARIANS

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This paper originated as part of the VEGA no. 1/0134/17 scientific project The Significance of Value Orientation – Expectations and Perspectives of the Younger Generation in Terms of Success in the Job Market.

**Abstract:** Preparation for priestly vocation in the Catholic Church in Slovak seminaries is unusual in that it is in direct contrast to today's trend of liberalization. It is very strict and based on traditional values, which have survived for two thousand years. This training causes many problems and issues that manifest themselves in crises of seminarians. The research problem – how Greek Catholic and Latin Catholic theologians managed to solve crises during university studies and their stay in the seminary – has been studied using qualitative research methods, in-depth interviews, which is the main research method of phenomenological analysis. The research offers findings on what personal crises theologians identified during university, how they solved them and how they evaluate these crises. The research includes indirect a slowly-emerging facts that brought depth examination of the research problem – different atmosphere and a different relationship between the Greek Catholic and Latin Catholic theologians. At the end of article the author provides a comparison of research results from both examined groups.

**Keywords:** Catholic seminarians. Crisis of priestly vocation. Crisis of celibacy.

### 1 Introduction

Despite the considerable openness of today's society, the life of seminarians is veiled in mystery and not only for the general public. In the Slovak literature it is as if this group does not exist. This is partly due to the still continuing class antagonism, which we have unfortunately inherited from the socialist era. However, it appears that the substantial reason for their being no examination of the life of seminarians is the considerable seclusion of the environment in which seminarians prepare for the priestly vocation. So for researchers from the outside (secular) environment, it is difficult to get to this small and specific group of university students.

The result of this state is that the Slovak professional literature addresses the issues of seminarians only marginally (and we could say the same about the neighbouring Czech Republic). It particularly stands out that this subject is only of marginal concern even at theological faculties. One exception is Škurla's monograph (2013), *The Human Formation of Future Priests*. In addition, titles appear sporadically focusing on the psychology of religion and the influence of religiosity on an individual's personality (Sriženec, 2011).

Conversely, this is a richly represented subject in foreign literature. The formation of seminarians is the topic of the American *Seminary Journal*. Professional publications focused on the subject of seminary education can be divided into several groups: 1. Priestly formation – preparation for the role of a spiritual leader (Guindon, 1993; Sperry, 2003; Coleman, 2006; Fischer, 2010; Marsh, 2010; Cencini, 2011). 2. Intellectual formation – how priestly seminaries prepare seminarians for their roles as teachers in parish Catholic schools (Boyle and Dosen, 2017), how the seminarians themselves perceive their role in Catholic schools (Simonds et al., 2017). 3. Updating the preparation of future priests for changed social conditions – the challenges of priestly formation in relation to the present life of Catholics in the United States have been defined by McCarthy (2013), and Scholtus (2013) has studied the same subject in the context of European conditions. 4. Various aspects affecting the quality of preparation of seminarians – the relationship between the determination to persevere in the vocation and the wellbeing of Catholic seminarians has been studied by Sunardi (2014), the influence of racism and prejudices on the formation of seminarians has been assessed by Ortiz (2012), the development of intercultural competences has been studied by Deck (2012).

Foreign literature does not avoid even the most difficult topics by associated with the preparation of priests. Weber (2012) and Reinert (2012) investigated how addiction to pornography is reflected in formation at seminaries, Gregoire and Jungers (2004) defined effective methods of preventing sexual abuse by the spiritual faculty members during their formation in the seminary.

In the article we compare two groups of seminarians – Latin Catholic<sup>1</sup> and Greek Catholic theologians trained for priestly vocation in various seminaries that have different organizations of ritual and tradition within these legal differences. The most perceived difference of the two rites is voluntary celibacy in the Greek Catholic rite, while the Latin Catholic rite retains compulsory celibacy.

### 2 Crisis

Although seminarians are preparing for the priesthood, which is perceived by people as a profession that helps other people to overcome the crises, they themselves do not avoid crises, quite the opposite. They are part of the preparation for the priestly vocation and they do not avoid them even when they become priests.

Crisis is a notorious and repeating concept in social sciences (Eastham, Coates and Allodi, 2010). It is important for the purposes of this work that we explain what crises we are considering, because the term crisis is used with varying meanings. It is the lack of something or a fall (Šaling, Šalingová and Maníková, 2008). In the medical sciences, this term refers to a sudden reversal in the course of a disease; in political life it refers to the fall of a government and is caused by an extraordinary situation; in economics it refers to a disruption of the balance between supply and demand, and in literary texts, a crisis signifies the culmination of the plot of a drama or a novel. In addition, we can talk about the personal crisis and a crisis in an organization or society (Sisco, 2010).

In the personal life of an individual, a crisis is a period of uncertainty and confusion, in which the meaning of a person's identity becomes uncertain. It is usually caused by changes in a person's expectations or new tasks brought by society (Řičan, 2005). A crisis is an emotional and physical reaction to events which disturb our normal everyday functioning. Everyone experiences crises and addressing them is how we grow and develop. According to current concepts of psychological crisis is a temporary state of internal imbalance caused by critical events or life events that require a fundamental change and a solution.

Knowledge of crises can be summarized as in these points:

1. The individual, during his life, is exposed to periods which are characterized by increasing internal and external tensions, which disturb his state of equilibrium with the surrounding environment.
2. This state disturbs the emotional balance of personality and at the same time starts an adaptation formula for the automatic solution to the problem. If the problem is not resolved, the tension causes anxiety and discomfort and may reach a culmination point.
3. At this point, adaptation mechanisms cease functioning and the individual finds himself in a state of acute crisis, which is manifested in disorganization and the development of psychiatric symptoms. This is followed by a period of gradual reorganization until a state of equilibrium is achieved.
4. Stress events associated with crisis can be seen by the individual as a threat to their basic needs, their own sovereignty or well-being.

<sup>1</sup> Translators note: the main Roman Catholic rite in the West and worldwide.



5. Experiencing of these conditions causes the characteristic emotional reactions – worry, sadness, grief.
6. A crisis is not a disease or a pathological phenomenon. It reflects the attempt of the individual to cope with a difficult situation.
7. The duration of the crisis – from the initial complaint to the resolution of the crisis – may vary a lot in different individuals. It depends on the severity of the threatening events and reactions of the individual, his social situation.
8. Each specific example of the crisis may have predictable stages which are expressed with a certain emotional experience and specific behaviour. (Špatenková, 2002).

For the needs of the article an important term is Erikson's identity crisis relating to an active process of self-determination. Erikson, by this term, meant doubts about oneself, which are an integral part of healthy psychosocial development (Atkinson and Atkinson, 1995). Ideally an identity crisis should be solved in a person's early or mid twenties. And this is precisely the period studied in our participants. Their crisis concerns specifically the priestly vocation and that which is inextricably linked to it – firstly the issue of celibacy. When the process of solving the identity crisis has been successfully resolved, we say that the person has gained their own identity. This means that they have chosen or accepted, in our case, their professional focus. This involves a consistent feeling about oneself and a set of internal criteria for evaluating self-worth.

In the article we have focussed on the crises of seminarians relating to their priestly vocation and celibacy.

### 3 Research Methodology

This study presents the results of empirical research, in which we are using a qualitative approach to examine the beginning, progress, solution and assessment of crises in Latin Catholic and Greek Catholic seminarians. The basic research question was: How did Greek Catholic and Latin Catholic seminarians cope with crises during their studies at university and the seminary? Our basic research question is reflected in the specific research questions:

1. What crises did participants experience in the environment of university and the seminary?
2. How did these crises progress?
3. How did the participants solve these crises?
4. How did participants assess these crises?

We chose a qualitative approach because it offers research strategies respecting the fact that man is a being acting and following certain intentions, that man is a being forming an understanding of meaning (Plichtova, 2002).

The aim of research – describing and interpreting crises, which occurred during university in our participants, thus documenting the world from their perspective (Silverman, 2005), is part of the philosophical position of interpretivism used in qualitative methodology. Among all the branches offering qualitative design we decided for phenomenological analysis. Its essence lies in the fact that the researcher is trying to enter the inner world of the individual to understand the importance that he attaches to the examined phenomenon (Hendl, 2005). It seeks to reveal the experience – feelings, thoughts, and self-awareness (Gavora, 2009) of the world of a selected group of people. In this world we choose a phenomenon that affects all participants – the perception of crisis.

The research sample consists of two groups of participants – 7 Latin Catholic seminarians in their fifth year and 7 Greek Catholic seminarians in their sixth year. Our aim was to investigate participants in their final years of study. These students could most comprehensively assess how, under the influence of university and the seminary, they had coped with crises.

To collect research material we used in-depth semi-structured interview, which is the main research method in phenomenological analysis (Kerlinger, 1972). Interviews with students took place at the premises of the faculties in which participants studied.

### Data processing

In total we recorded and transcribed 14 interviews. Another step in processing the recorded material was coding. We used open coding, which was developed in the framework of analytical tools of grounded theory. Due to its simplicity and efficiency it is useful in a wide range of qualitative projects. It's a simple, yet quite laborious technique, but the initial effort of the researcher leads to detailed and in-depth work with the text and will later be rewarded by uncovering meanings that may not be obvious superficially (Švaříček and Šed'ová, 2007). This is an inductive technique. Concepts and categories are created based on the collected material. What emerge as new during open coding are ideas, categories and concepts, which are then grouped by similarity. This creates the basis for their future "networking", defining the relationships and dependencies between them.

First, we deconstructed the transcribed interview – divided it into units, not formally, based on paragraphs or lines, but according to meanings. The units in our case were the words, parts of sentences, whole sentences, compound sentences or paragraphs. In this way there emerged data extracts, which in the second part, the coding stage (conceptualization) (Strauss and Corbinova, 1999), we assigned some code. We gave them a name (a word or short phrase), that was an indication that somehow evokes a certain type and distinguishes it from the others. For each data item, we asked ourselves what is it? What does it represent? Gradually, we compared the individual data items so that similar phenomena were assigned the same name. Otherwise, after analyzing, we would have many names, which would confuse us.

The third step was to organize the codes into categories according to how they were related or unrelated they were to each other. This categorization could be described as a process of grouping together concepts that belong to the same phenomenon. The phenomenon represented a certain category is designated by the term, but the concept includes more abstract concepts such as identifying codes that belong to the category.

After coding interviews, we compared the data fragments from all interviews falling into one code to find out whether there were any that belonged under another code, or if we had not used different codes for the same data content. In the second stage of coding (recoding) some different codes were merged into one, because under the different labels, we had discovered the same content.

### Analysis of data

For data processing, which we got to using open coding, we used the technique of "showing cards" (Švaříček and Šed'ová, 2007). This adequately meets our intention to describe and then compare the experience of crisis in Latin Catholic and Greek Catholic seminarians.

Quotations from interviews in this work are distinguished using italics. The quoted text has not undergone grammar/language correction and also shown with drafting errors and non-literary terms, as it was transcribed from an audio recording. For each citation in brackets, there is an identification code that we have created for the purposes of this work. We decided not to even use fictitious names, so that there is no association between the quotes and the names of our research participants. Quotations of Greek Catholic seminarians are identified by the abbreviation GK with LK for Latin Catholic seminarians. Moreover, every code includes two numbers. The first number means the page of the interview from which the excerpt is quoted; the second is the serial number of the interview.

#### 4 Crisis of Creek Catholic Seminarians

Data items relating to the crisis of vocation were divided into three codes: the presence of the crisis, the solution of the crisis and the assessment of the crisis. Participants spoke very openly and in detail, which meant that the category of *Crisis* was richly filled.

##### 4.1 Presence of crisis

The occurrence of a crisis was most commonly associated with the pastoral year. It came just before the start, during or after its completion. There is an explanation for this. The pastoral year is timed in the middle of studies, after the third year. It ends part of the study, which is dominated by non-theological subjects – philosophy, languages, and church history. During the pastoral year, the seminarian spends the whole year in another environment, in a parish, pastoral or educational facility. Apart from trying life in a different environment and learning how his practical and spiritual abilities apply in practice, it is a time for reflection on whether he wants to continue along the path to priesthood. After the pastoral year, there dominates theological study in subjects that herald the coming priesthood. But a time of crisis is not only associated with the pastoral year. It may appear with different degrees of intensity throughout studies. *But as for the priesthood, there have been crises with me since the first year. (3GK3) Things do not always go according to plan as they should, so... I think that even now I am at a crossroads. I'm at such a point that how and what to grasp for and I have experience that it depends to the extent to which I will be honest to myself, to God. (6GK4) Or crisis engages the entire being of the seminarian just before the end of the study. Just this past year and winter semester – last 5 – 6 months has been such that I wondered if it really worthwhile being a priest. (4GK6) For some people at the end of studies a crisis may still be being solved. I have just gone through quite a serious crisis, let's say that it hasn't been brought to an end. I had quite an attitude against it, not against the priesthood, but that the priesthood is not for me. (3GK3)*

Crises concern two main issues. The first is to be or not to be a priest. If so, will I be a good priest? Second, what is the meaning of the priesthood? Not all participants talked about these issues in relation to crisis; some expressed themselves as having strong doubts about these issues. Nevertheless, the word crisis has its firm place in the dictionary of seminarians. *In my life I've had two kinds of crises. The first was whether I am able to be a priest, and if I will be a good priest and so forth. ( ) In the seminary I more experienced why bother, why be a priest, when in my life I could be a lawyer, IT worker, politician, it does not matter what and it would be better for me and I would have more money, I would not have worries. (3GK7)*

These issues suggest that the aforementioned crises relate to the establishment of priestly identity. The strongest state of identity, according to Marcia (Atkinson and Atkinson, 1995) is achieved identity<sup>2</sup>. It is typical that a person is aware of a problem in some areas and uses a crisis to resolve it. It is therefore something of his own, not taken from parents, relatives or from the surroundings. This is the value of obtained identity.

##### 4.2 Solving crisis

All participants in the group of Greek theologians admitted that the above-mentioned issues are a problem for them. We were interested to learn, therefore, not only whether the problem had been solved, but also how they had arrived at solution.

Confiding in someone that one is experiencing a crisis requires a lot of confidence. This is an internal matter that is beyond the limit of spiritual intimacy. It is not surprising that participants stated that part of their solution was a more intense spiritual life. In this sense, the answer: *The chapel, (2GK5) to the question*

where you seek help in a crisis is very authentic. It is an expression of faith that God can help one get out of a crisis. *I go into repentance and listen to his voice. I believe that He has the ability to take care of me, to break me away from each crisis. (6GK4) He who realizes that he is called by God, wants to solve the problem of the profession with God.*

It is possible to understand in the same way the desire to work towards solving the crisis with the help of a confessor or spiritual leader, who are bound to secrecy. *It is going well with my spiritual father. I had quite an attitude against it, not against the priesthood, but that the priesthood is not for me, but my spiritual father does not see it that way. I'm trying to explore, he recommended I deepen my personal prayer, which I am also trying to do now, and it gave me calm in my life. (3GK3) Mainly I prayed what to do next. (4GK2)*

It is surprising that a significant role in solving crises was played by classmates from the same year. *My brothers in the year group helped me, visited me, encouraged me, we are here with you. (7GK1) Cohesion in the year is apparent from the statements of all participants in the group of Greek seminarians. It is expressed in mutual trust and willingness to help.*

An important way to solve the crisis appears to be reminding oneself of the original decision to join the priesthood. As if one of the causes of the crisis was gradually forgetting the primary motive for being a priest. (During the crisis) *I very intensively reminded myself of why I wanted to go into the priesthood, that it was God's invitation, to whom I said yes, and that in retrospect I see that God fulfils, but the circumstances are sometimes such that that we hesitate. ( ) But when it was really difficult, then I went back to my decision when I gave God a definitive yes. (3GK7)*

In solving progress of a crisis, the mentioned aspects interact. Out of four (classmates in grade, spiritual leader/confessor, prayer, reminding oneself of the initial decision for the priesthood), usually three factors can occur in one seminarian and in various combinations. This is most aptly described by these data items. *It was mainly through prayer, it was the word of God through the contemplation, which often fell in such a way that I was left in awe. But it was also through the words of people. And it was also through certain situations. Also, through the priests. (5GK2) Mainly I prayed what to do. The lord helped me in this... and I shared with some brothers, and one priest. (4GK2) Here there interact prayer, help of classmates and priests.*

Passing through a crisis of vocation still has a significant effect. In the case of two seminarians who consider themselves introverts, there was a change of attitude in solving problems. *I'm more of an introvert, so I solve many things myself – I and the Lord God and I don't much let other people into it. Not that just me, but me and God and we sort it out, but then there came a change of attitude that God can speak through people into my situation and I recognized it was like that. (4GK2) Help from classmates helps overcome the crisis, but it also creates a strong trust in which the seminarian feels safe that he opens up to solving the problem in the community. My brothers in the year group helped me, visited me, encouraged me, we are here with you. They helped from such emphatic, sometimes individual thinking and approach to the problem, to a thought-out a common solution to the problem. ( ) That was the turning point. When I was a first-year, a second-year, I was a bit of a loner. I didn't pull away from the community, it's not that if someone came to me that I would send him away, but rather I tried to solve any problems myself. And then the third-year on, I was more open to the community. Even when they told me that I was like this or like that, I took it in the sense that they want what's good from me. (7GK1) This case shows the positive side of socialization. Willingness to help classmates from the year-group creates a relationship of trust, which dissolves the unwillingness to open up to others. It is a typical example of where community acceptance of individuals helps the individual to solve their crisis.*

<sup>2</sup>Apart from achieved identity, Marcia lists foreclosure, moratorium and identity diffusion (Atkinson and Atkinson, 1995).

From interviews with participants in the group of Greek seminarians, it emerges that the crisis starts with some problem in the life of seminarians. This is connected with major inner turmoil and personal suffering. Contrastingly, the conclusion – resolution of the crisis is accompanied by establishing inner peace, inner balance and the end of suffering. *I search in that decision for such peace, probably about the fact that I decide to do something and in it there is peace. I feel that peace is in it, even though there may still be some things to come, some problems, but I'm going after that journey, I have decided and I go after it.* (6GK3)

From the expressions of the seminarians at what stage their own solutions to the crisis are, we find two types of identity – achieved identity<sup>3</sup> (seminarian is aware of the problem and has solved it) and moratorium identity<sup>4</sup> (seminarian in the midst of crisis is actively working to resolve the issue, but it has still not been resolved).

In solving crisis among the participants in the group of Greek seminarians, a significant role was played by:

- classmates in the year,
- spiritual leader/confessor,
- prayer,
- reminding oneself of the initial decision for the priesthood.

### 4.3 Assessing the crisis

As occurrence of a crisis is a rare unifying element of all participants of this group, they all assessed the impact of the crisis on their lives positively. *The crisis for me is not a catastrophe, but a state when I have to decide. Whether I want to or not.* (5GK2)

The transition from year to year gradually changes the view of seminarians of the priesthood and of his own person and abilities. The result of this awareness is the question of whether the seminarian is well prepared for their profession and whether they even want the priesthood, with which they have gradually become acquainted. *I think every crisis is good in that it is an offer to stop and revise the current status or way of thinking and choose how I want to continue. If I am doing well, to affirm it, and when I am doing something wrong, to return quickly.* (6GK4) *There were moments when I fell into doubt and I thought about it, but I think it was a good process where God gave me the opportunity to re-make decisions, whether I still want or do not want.* (4GK6)

The significance of crisis lies in the fact that the seminarian recognizes the value of his profession more strongly. If you invest a lot of energy in something, we value it more. Of course, this also applies in reverse. *I think it is a necessity, because when a person does not need to fight for something, then he cannot appreciate it.* (4GK6). With the effort that must be made to cope with crises is associated an awareness of one's own share of vocation. The Catholic tradition stresses that one is called into priestly ministry by God. In this understanding, a person can feel like a passive recipient. Conversely, an effortful overcoming of a crisis creates an awareness of co-participation in the priestly vocation. *I know that my vocation that I receive from God, is not just something that God has given me, but it's also something which I am able to put my hand in, which I could fight for a bit.* (4GK6) Here is shown a strong element of Christian faith in

joining their own activity and capabilities with that which God gives. This symbiosis is a sign of a mature Christian attitude, a sign of a mature Christian faith. At the same time this approach to vocation builds personal dignity. A seminarian is not just a passive recipient of vocation; he is an active co-creator of his life. On this basis, one can build a healthy human and Christian confidence.

According to participants, a crisis is a difficult but necessary condition of spiritual and personal growth, which over some time resolves basic issues, but at the moment there appear more, it comes again, so that it takes away that which is unnecessary and helps to accept the necessary. *It's necessary, but no one enters it with love and joy. I take it as a natural necessity for development, which is still to come. I know that one needs to fight, that it will help me.* (10GK1)

At the same time, crisis is perceived by seminarians as an indicator of a problem. *Many times, a crisis stops a man in his life and directs him to a problem.* (6GK2). Although active progression through a crisis – the search for solutions and help from others, solves the current problem, seminarians' experiences are that the current situation is not definitive and more crises that will arise to be addressed. *I am prepared for there being more crises; there have already been smaller ones. I do not take it as a definitive state, which will be one hundred blissful years, because I would stay in one place and get nowhere and not move on.* (5GK2)

According to participants are the main benefits brought by passing through a crisis are:

- the opportunity to revise the current way of life and decide again;
- appreciating what a person has received;
- having a share in the priestly vocation;
- building personal dignity.

## 5 Crisis of Latin Catholic Seminarians

Achieved identity is marked by two basic signs. A person with this kind of identity has undergone an identity crisis and has resolved it. In the case of participants in the group Latin Catholic seminarians we were interested in the crisis in the context of their priestly vocation. We were interested to know whether the participants in this group ever admitted doubting questions about their priestly vocation,<sup>5</sup> either from other people or themselves. Based on their responses to the crisis of priestly vocation we will try to answer the question of what kind of priestly identity these seminarians have at the end of priestly formation.

### 5.1 Presence of crisis

The priestly vocation is specific in that it is accepted as a lifetime commitment. If the priest does not fulfil that commitment and leaves the priestly ministry, this is to be understood as a failure. A specificity of the priestly vocation in the Latin Catholic Church is emphasized as mandatory celibacy. A milestone in the life of seminarians who are preparing for the priesthood is entrance into the clerical state, which happens on accepting diaconal ordination at the end of the fifth year of theological studies. In a short period of time after the diaconal ordination, usually after the sixth year, there follows priestly ordination.

In the group of Latin Catholic seminarians we identified the presence of dual crises:

- crisis of priestly vocation,
- crisis of celibacy.

<sup>3</sup> People with achieved identity have undergone an identity crisis and actively asked questions for self-determination. They hold ideological positions, which they themselves have worked out. They reconsider the religious and political positions of their families and rejected those that can not be reconciled with their identity. Achieved identity is something like intellectual property, which a person has worked for through their own efforts. This contains great value and at the same time is a source of relative permanence (Atkinson and Atkinson, 1995).

<sup>4</sup> Moratorium identity status is typical for young people in the middle of an identity crisis. They tend to actively seek answers to their questions, but have still not resolved the conflict between the expectations of parents and their own plans. They ardently express political and religious beliefs to leave them at the next moment. A short duration of a moratorium may be acceptable and even constructive for the future, because it allows young people to explore the possibilities which come into their consideration (Vagnerova, 2010).

<sup>5</sup> Under the term *priestly vocation* we do not mean merely "employment as a priest" but vocation in this sense of being in some way called into priestly service. This is a specific kind of religious identity, which is very closely connected to the knowledge that the decision to be a priest is not merely the decision of a private individual for a particular type of activity and lifestyle, but it is the answer of a person to God's calling.

These two types of crises are part of the four-level model of the crisis (Table 1), which we have compiled on the basis of the testimonies of participants of this studied group.

The first stage of crisis of priestly vocation is found in the first year. It is due to idealistic notions of seminarians – future priests, which beginning seminarians have brought into the seminary. *In the first year I had two (crises). First, what am I doing here in the seminary? This was a disappointment that this beautiful romantic monastery was a residence full of all kinds of people and not saints, but people with their faults.* (9RK6)

Table 1 Four stage model of crisis of Latin Catholic seminarians

	Type of crisis	Question	Period of beginning	Cause of crisis
1. stage	crisis of priestly vocation	Should the seminarian be a priest?	beginning of first year	disappointment from faults of older seminarians
2. stage	crisis of priestly vocation	Should the seminarian be a priest?	first – second year	realisation of own faults
3. stage	crisis of priestly vocation	Should the seminarian be a priest?	first half of studies	more realistic knowledge of priestly service
4. stage	crisis of celibacy	Should the seminarian accept celibacy?	pastoral year or second half of studies	personal realisation of the burden of life-long celibacy

The crisis caused by optimistic expectations has its continuation in the awareness of seminarians that even they do not meet the criteria they put on the others. Knowing their own fault in a period of idealistic notions of priesthood is a source of strong doubt as to whether a person is worthy of the priestly vocation. *The second was disappointment in myself that I'm going to the priesthood and whether I am worthy.* (9RK6) The third stage of the crisis has its origins in a more realistic knowledge of the nature of priestly ministry. Coming to the seminary is consulting “behind the scenes” of the priesthood. And there one can also see the difficult and unpleasant part of priestly life. Abandonment of idealistic notions of the priesthood is painful. *I do not know whether it was in the first or second year, but I realized that my desires and imaginations do not match with how a priest is. It is often about something completely different than any romance or beauty.* (9RK6) The fourth stage of the crisis begins with awakening to a state in which a seminarian more strongly and more personally realizes the burden of mandatory celibacy. *So there remained whether to be a diocesan priest, or to raise a family and go in a completely different direction. And one time this came to the surface and another time the other.* (11RK1) The beginning of this stage of the crisis is usually linked to the pastoral year, where I was confronted with girls. *I was in a centre for young people and the vast majority of visitors there were girls, with whom I spoke, and we discussed all these things with regard to the church. It was a different view of a woman and relationship with her. And here too we are still confronted, as we study with the laity and the girls, we went out for a beer, a coffee, sit, talk. And so I began to realize that you probably can't rationally defend that celibacy is a good thing.* (4RK2)

## 5.2 Solving the crisis

Latin Catholic seminarians did not resolve their crises with fellow students. Neither with classmates from their year-group nor with students from other years. *So I went to priests, I did not address spiritual life issues much with the seminarians. But either it was a confessor or the spiritual director here.* (2RK7) It was not in all cases a refusal of classmates to help, on the contrary, the seminarian expected interest from classmates, but it did not come. *Probably because (not solving it with classmates), I kept waiting for one to speak up that they were interested in a person and it didn't happen. I struggled with the fact such people come here... so I did not try to play some form that I was*

*overly sad or whatever, but I think it was evident that I was fighting something and no such question came. Not that I blame them, but I was expecting support or willingness that someone asks what's wrong. I myself did not dare talk about it.* (12RK1)

In no interview in this group did we record that a seminarian asked other seminarians for help in resolving a crisis. Only in one case did a seminarian admit that he would be willing to talk about his problems with other seminarians. We found a similarly reserved and distrustful attitude in relation to the board of the seminary. *The first (crisis) I did not really talk about, especially not with the board, because toward the spiritual director I did not have complete confidence that I could poured out my heart.* (8RK2) Among those who would have access to resolving the crises of Latin Catholic seminarians, there did not appear their parents. The most apt justification is this quote: *They would probably be very worried; I think they would be very much burdened. I have an open relationship with their parents, but about some things it would be difficult for me to talk about what I am experiencing spiritually.* (12RK1)

In addition, an important role in solving a crisis is played by personal prayer and effort to solve the problem through personal contact with God. *I spoke with the spiritual leader, the confessor; I tried to pray, rather, to retain prayer.* (12RK1) In the case of smaller crises, seminarian tried to tackle them on his own.

## 5.3 Assessment of crisis

Latin Catholic seminarians assess crises clearly. They speak of them as difficult, but indispensable for personal growth and maturation.

A crisis overcome brings self-identification with the road embarked upon and certainty. *Yes, when a person overcomes a crisis then he knows why he is doing a thing. During the crisis he stands as if at a crossroads and when he overcomes the crisis, when there is some certainty, not from the outside, which springs out of the man, the man continues in the same direction and no longer stagnates, he progresses and does things out of conviction.* (12RK1) This condition induces psychological relief as well as a powerful incentive on the way to the objective. *Then I self-identified with the fact that I wanted to be a priest and I gained such confidence.* (12RK1) Awareness of the difficulties of crisis is indisputable, but the fruits are worth it. *They are necessary because even in Scripture it is written that gold is purified in fire, and when we let ourselves be scorched through a crisis, sometimes it burns us well, but we move forward.* (7RK1) In the terms of Latin Catholic seminarians, it is clear that without overcoming a crisis their priestly vocation would be more superficial. (9RK4) It also contributes to getting rid of unrealistic ideas and doubtful thoughts regarding the priestly vocation. Participant (P): (Crisis) *is not an obstacle on the road of formation for the priesthood. It (the crisis) rather drew my attention to it being a condition, a river, across which one must pass in order to wash and cleanse oneself of all that, whether doubtful thoughts, or too idealistic ideas.* Researcher (R): *That means you don't see a crisis as something difficult? P: No, more as something creative.* (7RK5)

Greater identification with the priestly vocation and internalisation of beliefs is associated with the spiritual growth of seminarians. *I see crisis as a climb up a mountain. I'm going up Kriváň (a high mountain in Slovakia) if I want to get higher, I have to take a step up the hill, and that step is hard work. If I stayed in one place, I would never get up the hill. Thus I perceive a crisis like a difficult match, which if I win, I get from the quarter-finals to...* (9RK6)

A crisis overcome provides recognition of limits. It is important that the recognized limits be recognized and respected. Sometimes a strong factor in the beginning of the crisis is disregard for known limits. At the moment when these limits are exceeded, a person finds firsthand what they bring into his life. At that moment, awareness or knowledge changes into own

experience, which is a higher degree in the hierarchy of psychological “ownership” than knowledge and understanding. *For example, also a relationship with a girl. My opinion, before I liked a girl, was that for the pure everything is pure. That I can interact with the girls on all levels and now I see that it is not the case, that there is a certain limit, over which I must not go. I can joke, I can wish them a nice day, I can just be polite, but it is enough. There are things that not only may I not do, but that would be another burn for me.* (9RK2)

All the above-mentioned positive effects of a crisis overcome significantly contribute to clarifying the meaning of the priestly vocation and the overall meaning of their own lives. *The crisis is a necessary, indispensable part of spiritual growth and purification, the total internalised belief that it makes sense to do it. It is a search for meaning in who I am, why I am here, where I am headed.* (12RK1)

We consider the most significant contribution of crisis to be the rebirth of traditional belief as lived (experienced) – the internalisation of faith. This involves changes of the foreclosed religious identity into achieved religious identity. Our participants were led to believe by their parents from childhood, but conscious, lived and living faith needs a personal decision that is arises or ends during a time of personal crisis. In this sense we could sense the change in participants in the group of Latin Catholic seminarians of a shift from a position of “I believe because I was brought up like that” to a position of “I believe because I have decided like that.” Precisely the confirmation of the decision to be a priest after overcoming a crisis changes the foreclosed religious identity to an achieved one.

From observations of participants in the group of Latin Catholic seminarians, there follows that overcoming a crisis brings the following positive effects into their lives:

- stronger identification with vocation;
- internalisation of beliefs;
- spiritual growth;
- knowledge of the limits which must be respected in order for the seminarian to preserve the identity of his vocation;
- help in finding meaning of vocation.

## 6 Conclusion

The content of crises in Latin Catholic and Greek Catholic seminarians were partly identical. In both groups, crises concerned the question of whether a seminarian should become a priest. In addition, part of the crisis of the Greek seminarians was the search for the meaning of the priesthood, as if they needed a strong motive to become priests. Latin Catholic seminarians, especially in the second half of their studies, had difficult struggles with personal justification for the acceptance of lifelong celibacy.

For solving crises in both groups we identified three consistent elements that help cope with crisis – a spiritual leader, confessor and intense spiritual life. The most important difference in this part was the fact that the Greek Catholic seminarians also solved crises intensively with their classmates in the year. This was facilitated by the cohesive relationships between classmates. Even seminarians who in the first half of studies avoided the community gradually built a strong relationship of trust towards their classmates and were able to speak without fear about serious crises. In contrast, the Latin Catholic seminarians resolved their crises more intimately and discreetly than the Greek Catholics. They confided their problems either in the seminary spiritual director, spiritual leader, or another priest whom they trusted. All these persons have an obligation under their office to maintain secrecy in regard to third parties about these things. The Latin Catholic seminarians did not solve their crisis with anyone who is not bound by confidentiality obligations arising from their office. We did not see even a hint of efforts to address their crises with classmates.

Both groups of participants clearly positively assessed the meaning of a crisis overcome, but did not completely agree on the positives. Greek Catholic seminarians more appreciated the opportunity to participate in the priestly vocation and again remind oneself of the initial decision for the priesthood, while Latin Catholics perceived value in the crisis, especially in the possibility of internalising their decision for the priesthood and to identify with it more.

Table 2 Comparison of progress of crises of Greek and Latin Catholic seminarians

	Greek Catholic Seminarians	Latin Catholic Seminarians
<b>What does the crisis relate to?</b>	Should the seminarian become a priest? What is the meaning of the priestly vocation?	Should the seminarian become a priest?  Should the seminarian accept celibacy?
<b>Solving the crisis</b>	With spiritual leader. With confessor. Through more intensive prayer. With classmates in year-group. Reminding oneself of the original decision for the priesthood.	With spiritual leader. With confessor. Through more intensive prayer.
<b>Assessing the crisis</b>	Clearly positive	Clearly positive
<b>What seminarians value about the crisis</b>	Possibility of revising style of life thus far and newly deciding. Appreciating what a person has received. Having a share in the priestly vocation. Building personal dignity.	Stronger identification with vocation. Internalising beliefs. Spiritual growth. Recognition of limits which must be respected for the seminarian to maintain the identity of his vocation. Help in finding the meaning of vocation.

From comparing the interviews in the groups of Greek Catholic and Latin Catholic seminarians, there emerge that the differences in the content, solutions and evaluation of crises in these groups are caused by different atmosphere among seminarians. Among the Greek Catholics the year-group has greater cohesion, trust and solidarity. This causes openness to classmates and willingness to accept help. Relationships with elders do not exhibit excessive superiority or rejection. There is an accepting, supportive atmosphere. Among Latin Catholic seminarians there is less cohesion in the year-group and relationships with peers were strongly influenced by patronization of older to younger members. A role was also played by the great distrust of seminarians towards the board of the seminary. A non-negligible role is also played by the different traditions of the Greek Catholic and Latin Catholic church, which translate into a different organization of life in the seminary and emphasis on different priorities.

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**Primary Paper Section: A**

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## FORMS OF EMPLOYMENT IN SME SECTOR – EXAMPLE FROM SLOVAKIA BASED ON PRIMARY RESEARCH

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**Abstract:** The rapidly changing market conditions of the 21st century also need to be adapted by companies, which include, among other things, the consideration and study of forms of employment, and possibly the introduction of new forms of employment, as we only think about how fast it is spreading. These forms of employment can be characterized by a distinct mark in terms of typical 8-hour employment, which is typical of the past, and can be mentioned as atypical. The basic aim of the research is to map the employment forms realized by small and medium-sized enterprises, especially the so-called atypical forms of employment. For the primary data collection we used an online questionnaire survey, we analyzed 320 completed questionnaires. Based on the analysis we have come up with conclusions and suggestions.

**Keywords:** Employment Forms, Atypical Employment, Small and Medium Enterprises, Primary Research.

### 1 Introduction

The economic role of small and medium-sized enterprises is remarkable since they provide a significant ratio of the GDP beside export and import activity. Based on the data of the Slovak Business Agency, more than 70% of the employees are employed by a company representing the small and medium-sized business sector (Malé a stredné podnikanie v číslach v roku 2015, 2016).

The rapidly changing market conditions of the 21<sup>st</sup> century forced the companies to consider and study the current employment trends and introduce new forms of employment e.g. home office, part-time job. These forms of employment show completely different characteristics from traditional nine-to-five jobs, and can be called atypical. Many authors point to the fact that between European countries there are many differences in the field of employment. According to Lapinová (2013) these differences have not only economic reasons but also there are several factors of sociological and cultural nature which cause these differences.

### 2 Problem formulation

The issue of different forms of employment has been studied by several domestic and foreign researchers. Kazuya (2005) emphasises, that it is not so easy to clearly define what do we mean under typical and atypical patterns of employment, since what we accept today typical was considered to be atypical a few decades ago. Technological and infrastructural developments over the last decades required appropriate solutions, which can be characterized by flexibility (Makó, Cs. & Simonyi, Á., 2003). Hanzelová (2005) emphasizes the fact, that the scientific literature does not provide clear definition for typical and atypical patterns of employment. Following the labour market changes of the past period we can assume, that employment with a contract of indefinite duration and not a nine-to-five job can be considered atypical.

The atypical employment patterns provide new possibilities for small and medium-sized enterprises; introduce the possibility to decrease the social contribution costs. Unlike to socially-protected employment status, these new patterns of employment provide numerous advantages and solutions of managing human resources. These new types of employment can cut costs and increase competitiveness and efficiency. (Korcsmáros, E. & Majdúchová, H., 2016; Šubertová, E. & Tóth, M. & Tóthová, A., 2017)

Hárs (2012) listed the types of atypical employment patterns as the following:

a) part-time employees;

- b) temporary workers (employees with fixed term contract, seasonal workers, casual workers);
- c) renting workforce;
- d) work at home, teleworking;
- e) flexible working hours;
- f) self-employment.

Part-time employment is defined as people in employment (whether employees or self-employed) who usually work less than 30 hours per week in their main job. Employed people are those aged 15 and over who report that they have worked in gainful employment for at least one hour in the previous week or who had a job but were absent from work during the reference week while having a formal job attachment. This indicator, presented as a total and per gender, shows the proportion of persons employed part-time among all employed persons and is also called incidence of part-time employment. (OECD, 2017)

The increase of atypical employment patterns is driven by changing customer needs and efforts to provide cheaper and more flexible forms of employment. The adaptation to different life cycles and better work-life balance also encourage the increase of atypical patterns of employment. As Mura and Vlacseková (2017) described, motivation is very individual and managers have a hard task by motivating their employees but the part-time employment could be motivation factor as well.

Part-time employment is one of the most known forms of atypical employment patterns. In case of part-time jobs the working time is reduced to 4-6 hours a day. According to Frey (2007), the popularity of part-time employment pattern lies in faster increase of employment rate compared to full time employment pattern. The target group of part-timers can be diverse e.g. parents applying for childcare allowance, maternity leave, those who care about family members, older workers before old age pension. The employer and employee may enter a contract declaring shortened work time, or extension of shortened working hours to full time. Employees working on shorter work time receive a wage, in accordance with their working hours included in the employment contract. (Štěpánková, M. & Bendová, Š. & Koralov, M., 2015)

A mutual trust is required both from the employee and the employer to apply the atypical pattern of employment successfully in the organization. This level of trust, as a part of company culture, as Finna (2007) emphasises, is one of the pillars of long-term cooperation. The absence of cooperation as a key factor can weaken the performance of company in terms of efficiency, competitiveness and profitability (Takácsné György, K. & Benedek, A., 2016). Neubäumer and Tretter (2008) point out that, on the one hand, atypical forms of employment reduce labor costs and redundancy costs which could be positive for companies, but on the other hand, they increase transaction costs and the cost of training and skills. (Examining this fact is not the goal of our contribution)

Being familiar with the long-term economic benefits, that is to say, the shift from old tendencies happens, because it can maintain the competitiveness of the company or help to become competitive (Laczkó, Zs., 2007). The labor market trends show, that employees and employers are ready for mobility and flexibility. Flexibility is considered to be long-term, which requires employees with special characteristics.

The research conducted by Frey (2000) emphasizes the disappearance of regular and rigid forms of employment patterns, which are gradually replaced by atypical, irregular and flexible patterns of employment. It is important to mention, that this transformation is not a result of external constraints, but the managers of companies apply atypical forms of employment to maintain competitiveness of their businesses. They have recognized and accepted the importance of this change, which

can provide help in hiring employees, decreasing unemployment or managing the fluctuation in customer demand.

Based on foreign literature the development of flexible employment arrangement could be defined into three reasons as follows:

- the changed requirements of firms operating in broader, more uncertain and more unstable economic context with constantly intensifying pressure to increase competitiveness and to cut costs;
- the changed behaviour of labour supply, with a marked increase in labour-market participation especially by women;
- changes in the labour policies by governments and the European Union as to unemployment. (Regalia, I., 2006)

For the better understanding of the current situation of part-time employment we had to compare the situation in Slovakia with situation in other countries.

With the exception of Ukraine all the neighbouring states of Slovakia were examined (the Eurostat database does not contain data about the situation of part-time employment on Ukraine). Based on the datas of Eurostat it can be said that the use of non-traditional forms of employment in Slovakia is very low. The number of part-time employees in Slovakia was in year 2016 only 11,8% (same as in Czech Republic) which is the second lowest rate within the examined countries. In Austria the proportion of part-time employment was 24,4%, in Poland 22,9% and in Hungary 8,3%. (Persons employed part-time, 2016)

### 3 Problem Solution

#### 3.1 Research Objectives and Methodology

The main objective of the research is to map the employment patterns applied in small and medium-sized enterprises, with a special emphasis to introduce, in what measure businesses apply typical and atypical patterns of employment in a rapidly changing economic environment of the 21<sup>st</sup> century.

In order to achieve our research objective we decided to collect primary data with the help of questionnaire survey. We have created a database of small and medium-sized businesses operating. The questionnaire was sent via mail to companies. 320 completed questionnaires were returned and used to examine the issue. The primary data collection was implemented in the first half of 2017.

The questionnaire contained 21 questions, which can be categorized as the following:

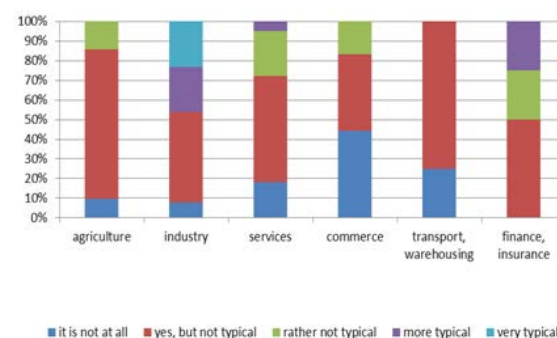
- a) questions that focus on fundamental characteristics of research sample;
- b) the presence of different employment patterns in companies and the information about them;
- c) flexible employment and related beliefs;
- d) future plans for employment.

To analyse our research data we used basic descriptive statistical methods, cross-tabulation analysis and distribution.

#### 3.2 Research Results

All the companies, providing data for this survey apply the pattern of nine-to-five job. Nearly half of the respondents marked the flexible work pattern as an atypical form of employment. Part-time employment is characteristic for 30% of the companies, while teleworking sound popular by 2%.

Graph 1 Breakdown of atypical employment in economical sectors



Source: own editing based on primary data collection

The absolute majority (50,41%) of businesses involved in our survey provide their business activities in the service sector. Significant rate can be observed in the agricultural sector (17,36%), and trade (14,88%). Although atypical employment pattern can be recognized in all the sectors studied, it is not a widespread phenomena yet.

While 23,08% of the companies in industry sector declared, that atypical pattern of employment is characteristic, other sectors involved in our research show little presence of atypical forms of employment. (see Graph 1.)

By examining the complete sampe it can be declared, that atypical patterns of employment can be found in 55,83% of companies, but it is not characteristic at all. The answers provided by respondents were evaluated on a 5-point Likert scale (1-not typical at all, 5- very typical). The median of responses is 2 and the IQR =0,5, which allows us to accept the median as an average response by small and medium-sized enterprises.

**Assumption 1** Atypical patterns of employment are linked to seasonality; therefore, it is a favorite form of employment by companies in agriculture or service sector. Each of the indicators (Phi, Cramer V, contingency coefficient) show significant value at 5% significance level. A significant correlation can be shown between the sector the business operates in and how much the atypical pattern of employment is characterisic for the company.

Table 1 Phi, Cramer V and contingency coefficient of the econimic sector and the use of atyical forms of employment

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Phi	,683			,000
	Cramer's V	,342			,000
	Contingency Coefficient	,564			,000
Interval by Interval	Pearson's R	-,130	,041	-2,332	,020 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-,153	,051	-2,760	,006 <sup>c</sup>
N of Valid Cases		320			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Source: own editing based on primary data collection

Applying cross tabulation we examined, which are those economic sectors, where atypical patterns of employment are applied, and which were the most characteristic forms of employment. 50,94% of the businesses involved in our research represent the service sector. The majority of companies in this group (28,44% of the total) declared presence of atypical employment patterns in the company, but it is not absolutely characteristic, because traditional patterns of employment are still popular to conduct some temporary tasks.



Table 2 Cross table for the appearance of the economic sector and atypical forms of employment within the companies surveyed

	It is not at all	Yes, but not typical	Rather not typical	Rather typical	Very typical	Total
Agriculture	1,88%	14,38%	2,19%	0,00%	0,00%	18,44%
Industry	0,63%	3,75%	0,00%	1,88%	2,50%	8,75%
Services	9,06%	28,44%	11,56%	1,88%	0,00%	50,94%
Commerce	6,25%	6,56%	2,81%	0,00%	0,00%	15,63%
Transport, warehousing	0,94%	2,81%	0,00%	0,00%	0,00%	3,75%
Finance, insurance	0,00%	1,88%	0,63%	0,00%	0,00%	2,50%
						100,00%

Source: own editing based on primary data collection

18,44% of the researched companies represent the agricultural sector and fisheries. The overwhelming majority of companies in the sector (77,97%, which is 14,38% of the total sample) have a presence of atypical employment patterns, but those are not clearly characteristic. In this sector, the increase of atypical forms of employment is strongly determined by the seasonality, mainly because of cultivation, crop production, harvesting and foraging. Based on the answer of the respondents, atypical forms of employment are also present, but not clearly characteristic.

On the basis of statistical analysis conducted we can conclude, that Assumption 1 is not completely valid, since atypical employment forms are applied not only in companies of agricultural sector, but other sectors of the economy as well. This is a positive factor, as it helps to make atypical employment patterns widespread, and can help the active population to make their work-life balance better.

Based on the analysis of data obtained, we managed to set up a chronological order of those atypical patterns of employment companies prefer.

Table 3 Preferred atypical forms of employment

Sequence	Atypical forms of employment
1	Flexitime
2	Part-time employment
3	Seasonal / casual work
4	Employment with the fix-term employment contract
5	Work on telework / variable locations, hire of staff
6	Home work (incorporation)

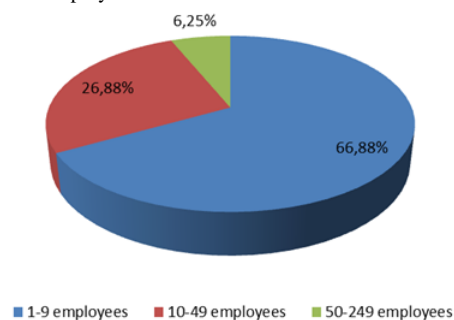
Source: own editing based on primary data collection

Flexitime was the most popular atypical form of employment, which treats the required number of working hours in a month or week flexibly. Part-time employment was marked as the second, which means reduced hours of employment compared to full-time contractors. If the workload does not require a full-time employee, this pattern of atypical employment can be an ideal choice for cost-efficiency. Seasonal / casual work was third in a rank. As the research sample was mainly represented by companies of agricultural and service sector, it is not surprising, that seasonal work is mainly characteristic in the mentioned sectors and has gained a prestigious position.

**Assumption 2** Cost-efficiency is the reason why micro businesses chose atypical patterns of employment instead of traditional nine-to-five jobs.

To verify the assumption, Hypothesis 0 was formulated and Hypothesis 1 as the opposition to Hypothesis 0. To justify our assumption, the research sample was grouped according to the employee number of small and medium-sized enterprises.

Graph 2 Distribution of the companies surveyed based on the number of employees



Source: own editing based on primary data collection

66,88% of the companies in our research sample can be classified as micro businesses based on the employee number; 26,88% are small businesses, and 6,25% are medium-sized enterprises. To verify our assumption, our primary objective was to prove, whether a significant relation can be detected between the number of employees in the companies and the employment patterns applied by the company.

If we choose lambda, Goodman and Kruskal tau values to survey the number of employees in the companies and what kind of employment patterns are characteristic, we can see that the number of employees has more influence on the other variable (the company practices atypical employment forms), because the value of this dependent variable is 0,075 in case of lambda, and 1,128 with Goodman and Kruskal tau.

Table 4 Lambda, Goodman and Kruskal tau

			Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Lambda	Symmetric	,050	,018	2,714	,007
		Number of employees Dependent	,075	,026	2,864	,004
		How characteristic is the atypical employment of the company Dependent	,030	,025	1,157	,247
	Goodman and Kruskal tau	Number of employees Dependent	,128	,023		,000 <sup>c</sup>
		How characteristic is the atypical employment of the company Dependent	,067	,019		,000 <sup>c</sup>

Source: own editing based on primary data collection

The symmetric indicators (Phi, Cramer V, contingency coefficient) are all significant, and in case of 5% significance level there is significant relation of medium strength.

Table 5 Phi, Cramer V and contingency coefficient

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Phi	,691			,000
	Cramer's V	,489			,000
	Contingency Coefficient	,569			,000
Interval by Interval	Pearson's R	,209	,083	3,803	,000 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	,098	,067	1,755	,080 <sup>c</sup>
N of Valid Cases		320			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Source: own editing based on primary data collection

The detailed analysis of the researched sample shows, that lower is the number of company employees, more frequently companies apply one of the atypical patterns of employment.

#### 4 Conclusion

In the rapidly changing socio-economic environment of the 21<sup>st</sup> century, due to constantly changing market and consumer demands we should emphasize the expansion of atypical patterns of employment as a different phenomenon from the standard nine-to-five employment form.

The number of companies providing services is widespread in Slovakia, and this is reflected in the examined measure. Atypical forms of employment are more present in the service sector, compared to other emerging economic sectors. We also have to define that atypical forms of employment are more or less characteristic for other sectors of economy as well. We hope that this positive fact can help the active population to make their work-life balance better. Because of the most preferred atypical form of employment is flexitime, we recommend that companies that use this kind of employment should receive different minor discounts, for example in the way the contributions are being discharged after these employees. According of the result of our research the lower is the number of company employees, more frequently companies apply one of the atypical patterns of employment. It is probably based on cost-efficiency. But also several articles point out the fact, that on the one hand, atypical forms of employment reduce labor costs and redundancy costs which could be positive for companies, but on the other hand, they increase transaction costs and the cost of training and skills. (Examining this fact is not the goal of our contribution)

We define that companies have already recognise the benefits of atypical forms of employment, but only a small percentage of SMEs have enough information about them, so it is needed to inform entrepreneurs about the atypical patterns of employment and the benefits of these new forms of employment. We think that it would be the best if all this was done with the active assistance of the Labour Office and other regional economic organizations by organizing events, conferences, forums, meetings. The Labour Office has already provided various forms of support to companies. The programmes, primarily designed to start businesses are proposed to be supplemented by programmes to inform entrepreneurs about the atypical patterns of employment and the benefits of these new forms of employment. The business events, conferences, forums organised by regional economic organizations should serve a task to provide information and emphasize the advantages of atypical forms of employment on the labour market.

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# INTERNATIONALIZATION OF SELECTED EUROPEAN LABOUR MARKETS AND ITS IMPACTS

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**Abstract:** This paper provides an analysis of the impacts of immigration from countries outside the European Union on domestic unemployment rates of Austria, Czech Republic, Germany and Poland based on gender and age of immigrants. Using Eurostat data from 1998 to 2014, data analysis and regression functions with constant coefficients for every analysed country were performed. The results of P-values and the T test indicate that the gender of immigrants is not a determination factor for the development of domestic employment in any examined country, contrary to their. With the increase of age of immigrants, the employment rate in Poland and the Czech Republic increases as well. Generally, the labor markets react to inflow of immigrants differently in Poland and the Czech Republic compared to Germany.

**Keywords:** Internationalization, migration, labour market, immigration, employment

## 1 Introduction

Migration has become a common phenomenon and one of the most important topics in Europe. The demographic, economic, social and fiscal consequences of immigrants' redistribution are of great concern to governments of both sending as well as of receiving countries. As Williams and Baláz (2008) point out, human capital is a key determinant of innovation which is nowadays recognized as a driver of national modern economies and competitiveness. The international migration might be seen as challenge for the policy makers but it may also generate economic opportunities in both home and host markets. Moreover, for economists, it represents the ability to increase the total world income and productivity (Clemens et al, 2009). For its implications, composition of immigration is an important policy question.

As United Nations reports, the majority of international migrants are of working age. In 2015, 177 million of them (72 %) were between ages 20-64 compared to 58 % of the total population (United Nations, 2015). As statistics show, migration from employment reasons is a current trend that results in various impacts on the host labour market and environment in which occur. Factors influencing the migrant flows usually are (Lee, 1966; Drbohlav and Uherek, 2007):

- an economic recession in the country of origin;
- employment opportunities;
- differences between wages for equivalent jobs;
- differences in any kind of discrimination between the home and host country;
- an access to the benefit systems of host countries and to the state education, housing and health care of higher quality
- a small chance for personal as well professional development in the country of origin;
- catastrophes;
- a desire to travel, learn a new language, build new skills and qualifications and develop networks.

In many countries that are receiving the migrants, the arrival of large numbers of immigrants is naturally raising concerns and questions about their impact on the integration into society as well as economy and, in particular, the labour market in a host country. The academic research regarding to topic of migration is usually concentrated on the main four following issues: the effect of immigrant on natives; migration policy; the determinants of migration; and assimilation of migrants. This study focuses on the first of these topics.

When investigating the impacts of migration on host labour markets, usually the studies focus on wages and unemployment. Although the estimates of the effects of immigration on wages and employment in host markets are quantitatively small, they

vary widely. Majority of the research has been conducted with data of USA, especially to effects of migration on wages of inhabitants compared to more rigid European market with studies investigated the topic related to unemployment rate. On the other hand, changes in wages and (un)employment are not the only reactions of an economy to immigration. As Dustmann et al (2008) suggest, immigration flows may change the composition of goods and services produced in the host economy and therefore the occupational and industrial structure of the labour market as well. Secondly, immigration may change the technology used for producing particular products or services. This is the case of skilled migrants that may bring know-how and encourage innovation.

In terms of European Union market, the most of studies are single country-oriented. The main reason of limited number of studies focusing on European labour market as whole is a high differentiation of international data and a lack or poor availability of quality data.

The aim of this paper is to analyse the impacts of immigration of third country nations on selected European labour markets, namely Austrian, Czech, German and Polish market as immigrant's host countries. In the first part of the paper we describe existing studies and findings concluding the impacts of migration on selected labour markets, in relation to the impacts on wages, (un)employment and productivity of the host markets. In accordance with the stated aim, studies on European Union market and territories of four Central European countries are presented. Moreover, findings of reports on OECD labour markets are included as well. In the next part of the paper, the impacts on unemployment rate of domestic labour force are statistically demonstrated based on country-level statistics of EU-ELFS covering the period 1998-2014. The results and conclusion of the findings on immigration effects on the analyzed countries and their labour markets are presented.

## 2 Literature Review

One of the earliest works focusing on European labour market comes from Gang et al (1999) by testing data from 1988 when 12 existing member states of European Union were included. Hypothesis testing showed very low degree of correlation between presence of immigrant on the labour market and unemployment of local labour force. However, more significant correlative relation was found out in case of less qualified domestic labour force. Another study of European Union market was carried out by Angrist and Kugler (2003). They collected the data from 1983 till 1999 and examined the impact of immigration on unemployment based on gender with regard to institutions that regulate labour market.

Findings of Angrist and Kugler (2003) demonstrated difficult absorption of immigrants due to limited flexibility of the labour markets. Moreover, immigration into European Union causes decrease of men's wages, contrary to women's wages where no significant impact was proved. Boeri and Brucker (2005) researched migration from Eastern Enlargement of European Union into Western Europe and focused on reasons why Western European countries protest their labour markets against new member states. The findings state that with migration of 3 % of inhabitants from Eastern Europe into Western countries, Gross Domestic Product (GDP) of European Union would totally increase by 0,5 %. Similarly, according to Huber et al (2010) and their study of 1995-2004, the immigration affects the European productivity of labour force in a positive way.

More recently, analysis of European Union market in terms of its fraction into NUTS-2 regions for the period 2000-2007 was conducted (Huber and Tondl, 2012). According to the findings, immigration growth of 1 % causes an increase of GDP per capita in immigration areas by 0,02 % and of productivity by 0,03 %.

Contrary, emigration decreases GDP per capita by 0,03 % and productivity by 0,02 % in emigration areas.

The study of brings another valuable results describing the impact of migration on Organisation for Economic Co-operation and Development (OECD) countries as another integration unit. To note, currently, the OECD has 35 members, including 22 of the 28 European Union member states. Docquier et al (2014) simulated the net immigration and emigration effects on labour markets for the years 1990 - 2000. According to their conclusions, immigration has a positive effect on the wages of local inhabitants of lower educational attainment. Moreover, it has also proved a positive or no effect on domestic employment rate. On the other hand, the effect on the wages of less educated domestic workers is negative. The same conclusions hold true even after consideration of immigration flows of 2000-2007. Jean and Jimenez (2007), also investigating the effects on OECD countries, reported that migration has only temporarily effects on unemployment. Significant growth of immigrant generates increase of unemployment within a period of 5 till 10 years (Jean and Jimenez, 2007).

European policy makers are particularly interested in research of immigrants related to the employment rate of natives. As it has been highlighted, the statistics of European labour market as whole are not sufficient which causes limitations to the researchers. This paper focuses on analysis of territory of four European countries and in this regard, previous studies oriented on these markets are presented.

In 2015, the United Nations (2015) conducted a study focusing on phenomena of migration. Since the report does not take the recent so-called European migrant crisis into account, the official Eurostat data on the number of successful asylum applicants for 2015 and 2016 were included too. According to these figures, most common country of origin of foreign-born population in analyzed countries is: Ukraine for Czech Republic and Poland, Poland for Germany and Germany for Austria.

Both Germany and Austria can be considered as two the most prosperous European Union countries. As D'Amuri et al (2010) calculated, Germany host the largest number of foreign work force within European Union. Since the late 1990's, immigrant labour force have represented more than 10% of the total German labor force. Due to domestic generous unemployment benefits and wage rigidities, the potential for negative employment consequences of immigration arises (Borjas, 2003).

In terms of German market, Bonin's analysis (2005) covering the period 1975-1997 indicated that 10 % increase of share of immigrants in domestic labour force decreases wages by less than 1 %. Especially after 1990 when immigrants' inflows grew, the local labour market adapted mainly via employment. Increase of immigration by 10 % caused decrease of employment rate of local inhabitants by 1,5 p.p.. Low-skilled labour was together with labour force of older age affected the most. D'Amuri et al (2010) conducted similar research focusing again on the changes after 1990 but for the time period of 1987-2001. The conclusion states that rigidity of German labour market limits possibility of labour market to absorb immigration inflows without significant consequences that were found out in relation to previous migrants.

Recent study of Horvath (2012) looked at the Austrian market during 1994-2005. Austria together with Germany The impact of immigration on wages was proved negative but negligible for unskilled workforce with low wage and secondly positive for unskilled workers with high wage. In terms of qualified labour force, the effects are usually positive no matter the level of their wages.

Turning to Czech Republic and Poland, the international migration has undergone an historic evolution since 1989. Although these post-communist countries have been known for sending migrants to the West, they have become attractive destination for foreign population flows, including third country

nations trying to get into European market. Specifically to Poland, it has been known for massive emigration flows for the last century however as Wallace and Stola (2001) state, the present status stands for both, receiving and sending country. Nevertheless, research related to Poland still mainly focuses on emigration. Compared to Poland, the Czech Republic has more quickly become an immigration and transit country. According to Drbohlav (2003), findings of foreign labour force analysis report very similar migratory characteristics in the Czech Republic to features of Western developed democracies. As for Poland and Czech Republic, the studies on impacts of immigration represent significant gap.

Based on the findings of previously mentioned studies, several conclusions may be formulated. Firstly, the overall impacts of immigration from the third countries on local labour force are not significant. More detail look suggests that if immigration has measurable negative implications, it usually affects less qualified labour force and immigrants that have come to the analysed area earlier. Another conclusion appeared in the studies claims that probability of unemployment growth as a consequence of immigration is low in a short term and negligible, almost zero in a long term period.

### 3 Methodology

Regression analysis is an econometric method, which can be used both at the micro level (when analysing companies, employees, etc.) and at the macro level (in terms of evaluation of the labour market, macroeconomic indicators, regional development etc.) (Novák, 2007). It is often used in research different areas of economic policy – for example unemployment, inflation, poverty and the environment.

Advantages of regression analysis consist of for example low-collinearity between the observed data. Time series analysis is often a high multi-collinearity (interdependence explanatory variables) (Hisiao, 2003). On the other hand, a major disadvantage of this method is its time-consumation and it requires a complex data collection.

Based on the empirical model, this paper investigates the impacts of immigration from third countries on unemployment rate of local labour force in Austria, Czech Republic, Germany and Poland. The empirical model that is tested in this paper is based on regression analysis of data and proceeds from approach used by Borjas (2003) and Bonin (2005).

In order to investigate the impact of immigration, the labour force is divided into groups differentiated by gender and age as a determinant of length of work experiences. Let suppose the group of local workers that has in given year and given country certain work experiences. The share of immigrants with the same characteristics is possible to express by total immigration rate that is calculated as follows in the formula (1):

$$m = \frac{M}{(M+D)} \quad (1)$$

where:

$M$  – a number of immigrants of certain age and gender;  
 $D$  – a number of local workers of certain age and gender.

Let is to be supposed that  $y$  is mean value of unemployment rate of local workers in certain year and country. The unemployment rate of local workers is computed according to the formula (2):

$$y = \frac{N}{(Z+N)} \quad (2)$$

where:

$Z$  – a number of employed local workers of certain age and gender;  
 $N$  – a number of unemployed local workers of certain age and gender.

Analysis of the data set was performed by using the computer program MS Excel and the program Gretl for econometric calculations. Each of the countries has been studied in a total of six units of variables of cross-sectional equidistant time series of length of 17 (tracing the development between years 1998-2014).

Consequently, the total number of data collected for each country had value 102. Totally, 408 data was collected number for all analysed countries and the data base was complete. For every analysed country, regression function with constant coefficients was an object of investigation. The regression model, inspired by Borjas (2003) had a following structure:

$$U = \alpha + \beta m + \pi + s + \varepsilon \quad (3)$$

where:

$U$  – is an employment rate of examined country

$\alpha$  – an absolute coefficient of a regression function

$\beta$  – a coefficient of migration rate variable

$\pi$  – is a vector of fixed effects indicating working experiences (age) of a group;

$s$  – a vector that determines a gender of a group

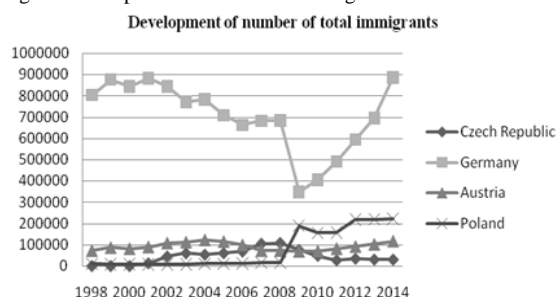
$\varepsilon$  – a vector of fixed effects that determines.

Regression analysis will be looking for a relationship between the unemployment rate of local inhabitants and total immigration rate. The calculations will be separated for various age groups as indicator of working experiences and also in terms of a gender of immigrants.

Calculations and analysis is based on data set of county-level variables from EU-ELFS (European Labour Force Survey) Eurostat database (2017) for the period 1998-2014. For the purposes of the paper, we segment data into three age group categories (15-24 / 25-54 / 55-64) that include economically active population; and two gender categories (males / females). Totally, the examined workforce is divided into  $3 \times 2 = 6$  analyzed groups. For each group, unemployment rate of local workers and total migration rate are quantified according to formula (1) and (2). This applies to every analysed country (4 countries are included in the present research), for the examined period of 17 years.

Graphs that follow below aim to describe the immigration situation in examined countries and also to display the statistics that were used for other calculations as well as regression analysis in this paper. As it is clearly evident in the figure below (Fig. nr. 1) during single examined years, the inflow of immigrants shows a huge difference, multiple of hundreds, for immigration to Germany compared to other countries. This data again proves the position of the country as very popular immigration destination in Europe. We can also observe that the latest data from 2014 show similar values of maximal numbers of immigrants in Germany as in 1999-2001. For the purpose of comparison, it is necessary to point out that statistics of migration are for the Czech Republic available from the year 2001.

Fig. 1: Development of number of immigrants

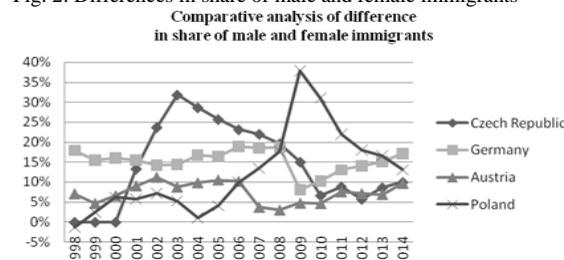


Source: own processing the basis of the Eurostat data (2017)

Referring to German statistics, the gap between years 2008 and 2009 might be explained by the new immigration policy that came into practice and economic recession in the world. To compare Poland and the Czech Republic, the number immigrants into the Czech market was higher in period 2002-2008. However the year 2009 again proves the socio-economic changes in the world affecting not only the German market but demonstrating the opposite impact of flows of immigrant from third countries into Poland. Austria does not show any larger changes but rather stable trend.

Another interesting look is offered by the next graph (graph nr. 2) illustrating the situation of immigrants in terms of gender. Gender can be considered as an important variable in terms of migrations because it affects not only labour opportunities at destination but also reasons for migrating into another country, the social networks that migrants create and use, and integration process. Following figure displays the differences in shares of male and female immigrants in analysed period.

Fig. 2: Differences in share of male and female immigrants



Source: own processing the basis of the Eurostat data (2017)

Gender can be considered as an important variable in terms of migrations because it affects not only labour opportunities at destination but also reasons for migrating into another country, the social networks that migrants create and use, and integration process. As the figure nr. 2 illustrates, the distribution of immigrations in terms of gender is very variable over years and except of the superiority of male migrants, no particular trend can be observed in any analyzed country. We can note that only for the first examined year 1998, the value of differences in shares of male and female immigrants is negative (-1,3 %) and so the number of female immigrants exceeded male immigrants. In all other cases, male migrants count larger numbers (up to difference in share of 37,85 % in Poland in 2009).

More detailed examination of this situation and its background and causes could be a valuable topic for future research. Special attention should be paid to the research of labour market experiences of female migrants in the host countries.

#### 4 Results and discussions

The analysis examining a relationship between the unemployment rate of local inhabitants and total immigration rate described above found regression functions for individual countries in the following form:

Czech Republic:

$$U = 0,774 + 0,335 m + 0,061 + 0,015 + \varepsilon$$

Poland:

$$U = 0,582 + 2,958 m + 0,117 + 0,011 + \varepsilon$$

Germany:

$$U = 0,963 - 0,961 m - 0,017 - 0,005 + \varepsilon$$

Austria:

$$U = 0,902 + 0,022 - 0,003 + \varepsilon$$

The above-mentioned functions assuming unchanging coefficients in time are then the interpolation on what employment rate in the country can be expected with known rate of immigration into the examined country provided certain groups of immigrant distribution by age and gender.

Function found for Austria is a constant function due to constant immigration rates in the reporting period (the rate of immigration has been reported with a value of zero throughout the whole period) and thus, it is actually the interpolate (projection) of Austrian employment rate over time.

From the total values of the coefficient of determination we can state that founded functions describe the behavior of the labor market in the Czech Republic - the rate of coefficient of determination is more than 73.5 %, and then in terms of Poland – the rate of coefficient of determination has value of more than 70 %. The function is not a suitable model for Germany in which case the rate of determination at nearly 9 % indicates only a small explanatory power to describe data variability. Next, Austria is due to the above described state of the migration irrelevant to evaluate. The overview of coefficients of determination for each feature is summarized (table nr. 1).

Table 1: Coefficients of determination of founded regression functions

Country	Coefficients of determination
Czech Republic	0.735477621349911
Poland	0.707753672508288
Germany	0.0866311530126691
Austria	0.543594126656185

Source: own processing on the basis of the calculations from Eurostat data (2017)

From the shape of the functions it can be also observed that the absolute coefficient ( $\alpha$ ) is decisive for the level of employment in all surveyed countries. Moreover, the significance of this factor for all functions has been clearly confirmed by founded P-value which was moving into the limit of zero in every performed measurement. This signifies completely anticipated argument that domestic factors (eg. GDP, wage developments, development of payroll taxes, legislative changes etc.) have a major impact on employment in the surveyed countries.

Examined factors, including the level of immigration, pay a marginal role compared to other domestic factors in all countries. Furthermore, the examined factors, although marginally, have larger impact on the labour market (employability) in Poland and in the Czech Republic than in two analyzed developed countries - Germany and Austria.

The level of significance and influence of single factors on employment rate was investigated by the significance test of parameters on the P-value. Results organized by a variable of country are transparently demonstrated below (table nr. 2).

Table 2: The importance of individual factors

Country	Factors		
	Coefficient of the immigration rate	Coefficient of the age	Coefficient of the gender
<b>Czech Republic</b>			
Value of coefficient	0.3352785685838	0.06067758203047	0.01517894213537
T test	1.300044581076	15.52512900653	2.570125882859
P-value	0.1966350688816	0.000000	0.011671507088
<b>Poland</b>			
Value of coefficient	2.958493228954	0.1173124506371	0.01105078453425
T test	3.55180340250	15.35642027222	0.9155702179479
P-value	0.000590041063696	0.000000	0.3621397773828
<b>Germany</b>			
Value of coefficient	-0.9605403716130	0.0173799749896	0.0050190102070784
T test	-2.906879088518	2.510834727517	-0.889513128468
P-value	0.004514434207449	0.01368073499666	0.3759057061520
<b>Austria</b>			
Value of coefficient	-	0.022283897324	-0.00317014947300
T test	-	10.81776552947	-0.9424141297565
P-value	-	0.000000	0.3482747372377

Source: own processing on the basis of the calculations from Eurostat data (2017)

The table of P-values and the values of the test criteria (T test) of tested coefficients indicate that the gender of immigrants cannot be considered as a factor of determination for the development of domestic employment in any country. (An exception applies to the Czech Republic where this factor could be considered as significant while increased level of significance of about 2 %).

In contrast, the age of immigrants, or to what age group immigrants lie, is a determinant of domestic employment. It means that the age of coming migrants into the country is appropriate to monitor in terms of domestic employment of the country. The actual immigration rate is the only determining factor on the significance level of 0.005. In the Czech Republic, the factor of immigration is even completely insignificant.

If there is abstracted away from significance level and thus the real impact of single analyzed factors on domestic employment in research countries, based on the findings of performed data analysis – and especially according to the value and direction of dependency of single factors, we can claim following:

- In both Poland and the Czech Republic, the labor market reacts to inflows of migrants differently than in the case of Germany that represents a Western economics. Increased proportion of migrants increases employment in the Czech Republic and Poland. In Germany, the situation is the opposite. In the Czech Republic, this factor is not statistically significant, however, in Poland and Germany, significant (significance level of 0.5%).
- As it has been mentioned, the age of immigrants is according to the values of P-value an significant factor (in terms of Germany only on significance level till 2 %). However it is possible to observe the opposite trends in selected post-communist countries and in EU-15 member states. Specifically, we can state that with increase of age (higher age-group) of immigrants, the employment rate in Poland and the Czech Republic increases as well. This can be considered as positive in the context of migrants' integration into the society. We can suppose that immigrant of higher age-group are always utilized for particular job positions that is compatible with the host labour market.

For more detailed conclusions, deeper analysis of educational attainment of this group of immigrants would be needed. Contrary situation occurs in Germany where with higher age of immigrants, the employment in the country decreases.

Due to the unavailability of data sources in terms of educational structure of migrants, it is really very difficult to make this step. Procházková Illinitchi's research (2014) deals with an educational structure of migrants and their impact on the labor market in selected countries of the EU. However, due to the lack of comprehensive data on the educational structure, the author decided to use estimates, respectively percentage shares of groups based on qualifications of total migrants applied to different age groups of employed migrants. This view represents a very simplistic assumption entering subsequent analyzes. We claim that it is not possible to assume that with increasing educational attainment of migrant population remains the track of employed/unemployed migrants in the qualifying group fixed.

It is logical to assume that with increased education increases employment in the group of migrants, and vice versa. For this reason, the present work in this paper dropped from watching the criteria of qualification and migration was observed only in terms of age and gender.

- Even if the gender of migrants does not play in any country an important role in the impact on the labor market in the host country (according to the result P-value), the positive impact on domestic immigration employability was recorded by the value of gender coefficient for immigration of men at Poland and the Czech Republic. In Germany, the findings are again different. In the reporting period, the labor market seemed rather positive due to immigration of women into the country.

Observation of migration trends and especially their impacts on source as well as host markets offer interesting findings since the differences between the economics are significant. The impact of immigration on employment is more significant in less developed countries – such as Czech Republic and Poland, contrary to German-speaking countries.

#### 4 Conclusion

Cross-border migration of people from one country to another has increasingly become an important feature of the globalising world and it represents an important driver of economic growth across international boundaries. The exchange of capital, processes and people between countries happens under certain conditions and within a particular economic, social, demographic and political context. The phenomenon of immigration itself with its growing tendency is considered as a controversial and complicated issue, especially nowadays and within the European context.

European societies have changed under the influences of immigration and migrant settlement. There are permanent debates on the effect of immigration on the labour markets since the immigrant inflows increase the labour supply and as Card et al (2012) point out, there is often a widespread belief that immigrants take jobs away from domestic inhabitants and bring down their wages.

The relationship between immigrants and the labour markets in the host countries is often linked to factors such as gender, age and educational attainment. As the report from the European Migration Network (2006) claims, the significance of these factors changes over time due to the economic situations in the countries of origin and settlement.

The aim of the paper was to analyze impacts of immigration from the third country nations on employment rate in selected labour markets in Europe. This paper provides an overview on existing findings focused on selected European labour markets and contributes to the existing knowledge with own analysis of comparison of four European countries; Austria, Czech Republic, Germany and Poland.

The markets of analyzed countries are various and we can especially compare Austria and Germany contrary to Czech Republic and Poland. In both Poland and the Czech Republic, the labor market reacts to inflow of migration differently than in the case of Germany. Moreover, we can claim that more developed countries are better prepared for increase of labour supply from outside and they can easier and faster absorb the immigration inflows.

The results of computations found the age of immigrants as a significant factor in terms of the impacts on employment. The opposite trends on labour markets occur in selected post-communist countries and in EU-15 member states. Specifically, we can state that with increase of age (higher age-group) of immigrants, the employment rate in Poland and the Czech Republic increases as well. The investigated results of P-values and the values of the T test of coefficients indicate that the gender of immigrants should not be considered as a factor of determination for the development of domestic employment in any examined country. However, the positive impact on domestic immigration employability was recorded by the value of gender coefficient for immigration of men at Poland and the Czech Republic. The findings also suggest that it is not necessary to observe the structure of immigrant groups.

Although growing number of studies focuses on the economic integration of immigrants into the host economy, the immigrants' integration process differentiated by skills, gender and cultural-ethnic networks and its effects on the host labour market and society still remains under-researched and offers possibilities of further research. Unfortunately, availability of data of a good quality and its comparability across single

countries remain an issue for the research work with need of migrant statistics.

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## THE ECONOMIC FACTORS INFLUENCE ON REAL ESTATE MARKET DEVELOPMENT

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**Abstract:** The real estate market has a significant impact on the development of any country's economy. However, there is also a reverse effect - economic growth leads to inevitable changes in the real estate market. The author's analysis of scientific literature shows that the real estate market is influenced by the same macro and microeconomic factors that affect the entire economy and social environment. These are general indicators reflecting the state of the economy or its sector, which may be affected by demand, consumer expectations, declines in government grants for a particular region, or other negative factors. These negative factors lead to a fall in the profitability of regional branches of economy, which also affects the overall economic situation. This article examines the impact of the income gap of a specific region on the real estate market and regional development.

**Keywords:** economic growth, development, real estate, real estate market.

### Introduction

Real estate is an important part of the country economic potential constituting a big part of national wealth the role of which in economy influences many spheres of activity related with the development of country economics. Changes of the market value of real estate are important for all the sectors of economic activity related with real estate: construction – for forecasting the construction costs and profitability of the projects, banking – for establishment of the proportions of loans, possible risks and bond, production – for evaluation of the production costs, future demand for articles intended for construction and the possessed long term property, state – for evaluation of the property administered by the state and establishing of the real estate taxes. The market of real estate is dynamic and constantly changing. Striving for correct and reasoned forecasts its constant observation and analysis are necessary. Till present much research and many studies of the real estate market had been conducted, however, they insufficiently reveal the present and forecasted changes in the real estate market in Lithuania. So taking into consideration the significance of this sector of economy for the country economics it is necessary to identify all the possible factors which influence both the present changes and the development prospects of this market supposing the changes of these factors and their influence on the real estate market.

The results of the forecasts of real estate market based on research can be relevant to investors, sectors of finance, construction and all the residents. These results of research must offer opportunities for weighing the possible risks and plans of future activity. The performed analysis and drawn conclusions will be useful for the participants of real estate market in evaluating the probable changes of real estate market, their forecasting in the future and passing decisions related with the acquisitions of real estate.

With a knowledge of the present economic situation of Lithuania and forecasting its future it is useful to analyse one of the most important sectors of economy – real estate market and to evaluate its changes and the factors determining these changes. For the evaluation of the real estate market of Lithuania there is lack of reliable statistical information and its analysis. The present sources of information often present only the statistical data of real estate market without taking into consideration their ties with the changes of the factors acting in this market. It should be noted that the influence of economic factors on the

prices of real estate of different sorts is not necessarily the same. The dynamism of real estate market and constant changes in it ought to be emphasized. Due to this reason striving for correct today's conclusions and forecasts of the nearest future it is necessary to observe this market constantly and conduct new research employing the newest macro and micro economic indicators of real estate market and today's economics.

### 1 Factors Influencing the Real Estate Market

Factors of economic growth influencing the rates of growth of economy are closely interrelated. Six major factors which determine the changes of the growth of economics are singled out. Four of these factors had been grouped as supply factors: natural resources, means of production, human resources and technologies. The remaining two are productivity and demand. All these mentioned factors have direct effect on the value of goods and rendered services (Boldeanu, Constantinescu, 2015). According to authors L. Kauškale, I. Geipele (2014) the development of real estate market is inseparable and interrelated with the development of the whole economy. According to the authors the real estate market is distinguished for certain lags of reacting to the changes in economy. Therefore, the forecast of the changes of real estate market is a very important factor for the evolution of economy.

Real estate is an important sector of industry. Real estate can be employed for trade, production, rendering of services as investment or business. Attention ought to be drawn that real estate market is very important for every country due to both ensuring construction and infrastructure necessary for life and work and its strong multiple influence on the evolution of the economy of the whole country. The tendencies of real estate market are a strong indicator of the tendencies of all the economics (Golob, et al., 2012). The industry of housing real estate can be named as a special market which is directed towards people and the satisfaction of their social needs.

Macroeconomic country development influences real estate market in various aspects. Due to the increase of the local and foreign demand the number of the registered buildings is growing. The development of real estate market and macroeconomic environment also determines the earning power ratio of rent and the profit of real estate businessmen (Kauškale, Geipele, 2014). Although the formation of the prices of real estate is a complicated process, during the analysis of literature the following factors influencing housing prices can be singled out (Ting Xu, 2017; Belas, et al., 2016):

- Growth of GDP;
- Income;
- Employment;
- Interest rates;
- Government policy.

The factors influencing the real estate market had also been investigated by Psunder (2009). He has established that impact factors were accompanying the growth of real estate market. The following impact factors influencing the growth or reduction of real estate market can be named (Golob, et al., 2012; Srovnalnikova, Karbach, 2016):

- Household income;
- Demographic and social indicators;
- Offered and financed expenses;
- State impact.

The development of real estate market and acquisitions in real estate market are essentially related with the purchasing capacity of the residents, revenue sharing and, in the course of time, with the formation of social strata and other factors which are very

important in forming economic prerequisites (thoughts) (Kauškale, Geipele, 2016; Ciarniene, et al., 2017).

The variety of factors influencing the dwelling market is very wide. As Cohen and Karpavičiūtė (2016) state dwelling is one of



Fig. 1. Interconnection between government policies, national economy development and real estate market (Source: L. Kauškale; I. Geipele (2016))

the most important goods in the economic relations of the country. Real estate market is related with many other markets (construction, furniture, interior, landscape gardening and others). „Dwelling market is the major part of all the real estate market as well, so it is a rather reliable indicator of both real estate market and all the economy of the country. The principal factors such as interest rate, real estate supply and demand, construction costs, demographic situation, economic state of the country are named as the fundamental factors. Real estate market and herewith the factors influencing it are different even in the countries which are equally developed. In the countries of transitional economies to which Lithuania can be attributed as well additional (derived) factors appear, „these are the rise of ownership right, regulation of land market, expectations of the consumers (both rational and irrational), increasing volume of loans and others“ (Skackauskiene, et al, 2015; Cohen and Karpavičiūtė, 2016). The tendencies of impact and structures investigated in separate countries are not always applicable in another country. In Lithuania the investigations of fundamental and derived dwelling price factors are scarce, depending on the investigation period their results are contradictory.

It is vital to note that significant damage to construction sector and construction market can be inflicted by bigger inflation (bigger financing expenditure), due to which the demand for the real estate decreases and effect on the prices is produced (Golob, et al., 2012; Srovnalnikova, 2015). The reduction of the investment attractiveness of property (due to the reduction of possible monetary flows, growth of risks, reduction of liquidity) is the principal factor which is described by various macro and microenvironment factors (Simanavičienė, et al., 2012; Raslanas, et al., 2005; Zubrecovas, 2010; Virglerova, et al., 2016; Reilly, 2013 and others). The analysis of a great variety of macro and micro economic factors enables to establish the influence of the changes of these factors on the prices of real estate.

Authors L. Tupėnaitė and L. Kanapeckienė, (2009) in their article have investigated that following the GDP indicator it can be affirmed that in the Baltic countries the changes of the dwelling prices have essentially coincided with the economic growth of the countries. As the countries' economics, income and purchasing capacity of the residents was growing, more and more residents were able to acquire a dwelling and after the beginning of economic depression the prices stopped rising or even dropped. However, mention may be made that in 2004-2006 the growth of dwelling prices was 4-5 (and sometimes also 6) times bigger than the growth of GDP. Consequently, the prices of dwelling market were booming much more than the countries' economics. That indicates that dwelling during this period was overvalued. Authors K. Golob; M. Bastić; I. Psunder (2012) have established that positive correlation between the reducing interest rates, bigger prices and increasing real estate transactions exists.

Seeking to forecast the changes of real estate prices in Lithuania the ratio of GDP, income and dwelling prices and other indicators are also analyzed.

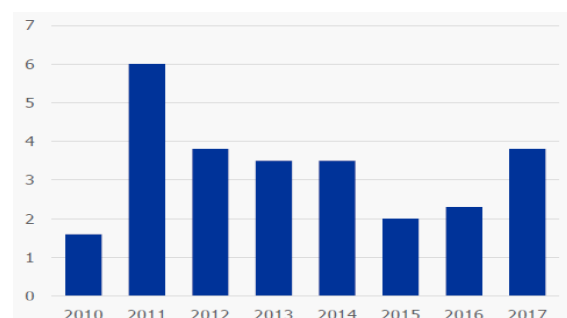


Fig. 2. Annual GDP growth in Lithuania, % (Source: A. Antanavičius (2018)).

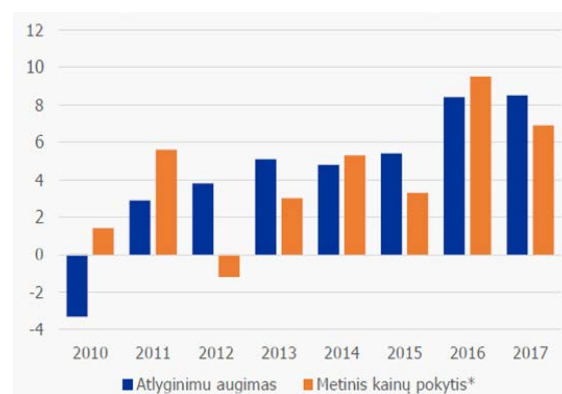


Fig. 3. Change in salaries and housing prices in Lithuania, % (Source: A. Antanavičius (2018))

Since the introduction of the euro the savings of natural persons and legal entities in the banks increased by 2.48 billion EUR, however, the portfolio of the loans granted to them grew by 3.33 billion EUR. The people have become not in the least richer, they have become more debt-laden, but bigger amount of money in circulation creates the illusion of richness. At a high rate the market is approaching maximal debt consolidation. The author also presents a clear dependence of loan fund on the change of dwelling prices, so he forecasts that in our market the dwelling prices will be determined not by the expectations of the residents, even not by the balance of demand-supply, but by the amount of money in the market.

The growth of economics or real estate market can be evaluated following such principal indicators as GDP, inflation, wages, unemployment rate. After reviewing the conducted investigations and the presented statistical information on the state of economics and real estate market, in the further chapter the authors by their investigation will aim to analyse and identify the economic factors influencing the changes of the housing real estate prices through a broader lens.

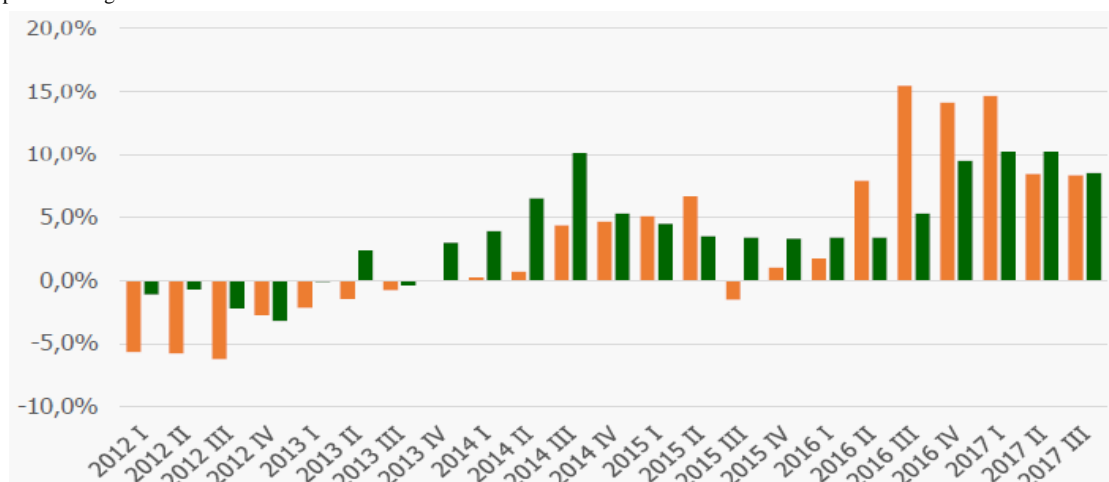


Fig. 4 Changes in Household Loan Fund and Housing Prices in Lithuania, % (Source: A. Antanavičius (2018))

The regional macroeconomics mostly analyses the comparative economical characteristics of different regions in the country's economy. The regional macroeconomics tackles the problems related with comparable growth of economics, differences of employment rate of the region and movement of production factors between the regions. While on the subject of regional macroeconomics, certain econometric models which essentially are similar to the models of national economy have been prepared. Instead of interrelations of different countries they pay attention to the interrelations of the regions (Kačar, et al., 2016).

The factors influencing the economic level of the regions have been investigated by K. Durkova; L. Čabyova; E. Vicenova (2012), the authors have singled out the following factors acting on the economic level:

- The localization of enterprises in the region, their incidence, structure of the affiliates, economic stability, intensity of regional economic relations, types of organizational forms;
- The quantitative and qualitative characteristics of the residents and their movement;
- The technical and social infrastructure taking into consideration the complexity, quality and quantity;
- The available natural resources and the level of their exploiting;
- The direct and indirect impact of the state economic policy.

## 2 The impact of macroeconomic factors on the residential housing market

For statistical analysis, MS Excel, Python 3.6 and Tensorflow-GPU 1.10.0 were used. During the analysis data on the transactions of apartments in 2008 – 2018 years (total 85.531 transactions) from the State Register was collected, which were assigned 24 variables, of which 8 categories variables such as gas or heating type, sewerage, etc.

At the next stage, regional macro indicators from the Lithuanian Department of Statistics were taken:

1. Turnover of the economy by place of business (non-financial enterprises) by economic activity
2. Number of completed apartments
3. Number of newly built non-residential buildings completed, pcs

4. Housing price indices (2015 = 100), H1 Housing purchase
5. Wages and salaries (monthly), EUR
6. Number of employees
7. Emigrants
8. Births
9. Education of the population | thousand, total by education
10. Population density at the beginning of the year per km<sup>2</sup>
11. Immigrants
12. Dead
13. Deadly babies
14. Unemployment rate
15. Permanent population as of July 1, City and Village
16. Regional GDP per capita at current prices, thsd. EUR
17. Regional GDP at current prices, mln. EUR
18. Expenditure on municipal budgets thsd EUR, Total
19. Revenues from municipal budgets thsd EUR, Total revenue
20. Territory (land area) at the beginning of the year km<sup>2</sup>
21. Foreign direct investment at the end of the period million EUR
22. Number of registered fires
23. Fees paid by enterprises and residents thsd EUR, Total fees
24. Interest rate on housing purchase
25. Consumer price developments calculated on the basis of the
26. Consumer Price Index percent,

Some indicators have been provided quarterly, part provided monthly, but most of the data is provided at annual intervals. Therefore, macro indicators were interpolated by quarter and predicted by 2018.

In the next step, macro indicators were assigned to each transaction in accordance with the zone classification of the registry center and the date of the transaction.

As the main predictive variable, the unit price, which is obtained by dividing the area of an apartment from the amount, was chosen. However, the distribution of data reflected exponential distribution. Some data was rejected, which showed very low prices or very high, i.e. it was chosen to take quartiles from 5% to 95% (76.212 transactions left). It was also chosen to transform the data according to the log (1 + x) transformation (see Figure 5).

In addition, a shapiro wilk test with a P value of 0.929 was performed. These adjustments completely converted the distribution of the main predictive variable to the normal one.

The next step was to convert all the categorical variables to dummy variables, i.e. to make columns that indicate whether the transaction meets the criteria or not (Yes = 1, No = 0). In this case, the zones were removed and left only the districts: Alytus, Šiauliai, Utena, Kaunas, Panevėžys, Vilnius, Tauragė, Marijampolė, Klaipėda, Telšiai.

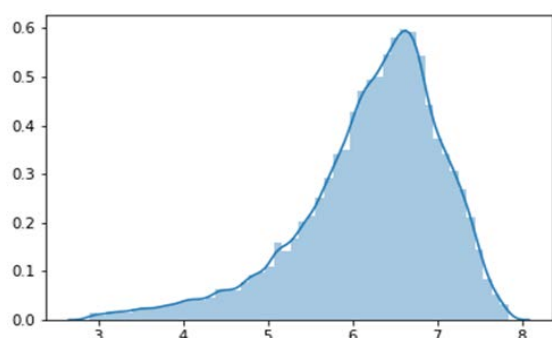


Fig. 5 Forecast variable histogram, unite price

Missing values were restored using MICE package (Azur, et al., 2011). The LightGM algorithm, which is the solution tree integration with the gradient search, was used to predict (Ke, et al., 2017). In the next step, the main criteria were selected (32 variables in total), applying them were optimized hyper parameters. The correlation between the predicted variable and the independent variables was then checked, all independent variables were transformed or left to original values based on the maximum correlation between the unit cost and the analysed independent variable.

With the compiled model, a unit price forecast was made, the accuracy of which is based on the “Mean absolute error”, R2 and the correlation between the predicted unit price and the true (see Table 1).

Parameter	Meaning
Mean absolute error	163.75%
R2	0.48%
Pearson Correlation	0.70

Table 1. Assessment of model accuracy

From the table 1, we see that the overall average error is 163%, due to the fact that the properties of the same characteristics are

sold at very different prices, but part of the valuation of prices falls into the lines. This problem is also seen in the evaluation of R2, which shows how much data is presented in terms of mean

change, the data obtained in this case explains 48% of the change, which requires the development of a methodology and the collection of more information or more detailed information. Despite the potential expansion, the correlation coefficient between the forecasted price and the real price shows a 70% dependency, which defines price prediction objectively, but in order to expand the module, in order to assess more exemptions, it is necessary to expand the methodology and the amount of information to be collected.

The model obtained in the last stage is interpreted using the SHAP package and identifies the main variables affecting the cost of the property (see Figure 3).

On the basis of the graph 6, we can see that the main variables affecting prices are the number of inhabitants per square kilometre, which directly coincides with places like large cities. The employment of the population, i.e., the number of employees in the region, has a great influence, as residents without economic activity cannot afford to buy housing. The following criteria relate to housing characteristics such as purchased area, housing area, high number. It is also important to emphasize the fact that the birth of new born families is also influenced by the purchase of housing. Based on this fact, estimates could be made for assessing births, i.e. determining the period during which the population tends to create new families. Also important are the interest rate and housing price indices that relate to preferential loans. This study showed the possibility of expanding the development of real estate valuation methodology, which would allow more objective introduction of data-based assessment in practice, and not just a comparative method.

This information can be used to evaluate the price of real estate or to improve the mass real estate valuation methodology. This access would allow you to estimate the price of an immovable property in an area in which previously the object of this type would not be sold. At present, the cost of such objects is evaluated on a comparable basis, but in the absence of historical transactions, the price is difficult to estimate. Based on this methodology, it is possible to leave the housing variables and change the macro indicators according to the zone in which the new object is sold. Validation of this access requires further research.

### 3 Conclusions

The analysis of scientific literature indicates that the prices of real estate market are influenced by many and various factors which according to their effect are singled out to macroeconomic and microeconomic and according to their nature – to objective and subjective factors. The analysis has revealed that the real



Fig. 6 Visualization of the influence of the main variables on prices

estate markets are very dynamic and the changes of the situation in a real estate market are most often represented in the segment of the market of housing real estate (dwelling). The number of the property items transactions of this sort is the greatest and that offers the opportunities for the analysis of the development tendencies of all the real estate market.

The investigation has indicated that the influence of not all the factors can be assessed with the help of quantitative methods. Taking into consideration this factor correlation – regression analysis which has enabled to assess the influence of the changes of analysed factors exerted on the changes of the prices of real estate market in quantitative values and mathematical formulas was chosen.

Calculations have indicated that the most significant factors which in 2008 - 2018 influenced the prices of Lithuanian real estate market were as follows: changes of GDP, changes of the residents' income.

The results of the conducted investigations have indicated that the dependences of factors indicators and changes of dwelling prices expressed in mathematical formulas in practice can be used for the forecasting of the changes of the prices of real estate in the near future.

It should be noted that the principal problem related with the analysis of the factors influencing real estate market is insufficient data base of the comparative transactions, the country's real estate market having short history. Another problem is the lack of methods substantiated by expert investigations appropriate for small developing markets in the literature of both Lithuanian and foreign scientists. Aiming to work out an appropriate methodology of analytical evaluation it is necessary to analyse the approaches employed abroad, to repeat an analogical investigation in Lithuania and to work out the methodology of evaluation of analytical approach on the basis of the results of the investigation.

The study revealed that population density, employment, and so on have a significant impact on the market, i.e. the number of employees in the region, as people without economic activity cannot afford to buy housing. The following criteria relate to housing characteristics such as purchased area, housing area, high number. It is also important to emphasize the fact that the purchase of housing is influenced by the birth, i.e. the creation of new families. Based on this fact, estimates could be made for assessing births, i.e. determining the period during which the population tends to create new families. Also important are the interest rate and housing price indices that relate to preferential loans. Information from this survey can be used for real estate valuation, forecasting price changes and improving the methodology of mass real estate valuation. This access would allow us to assess the price of an immovable property in a region in which such an object was not previously sold. Based on this methodology, it is possible to leave the housing variables and to change the macro indicators according to the eligible zone in which the assets are sold. Validation of this access requires further research.

#### Literature:

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**Primary Paper Section: A**

**Secondary Paper Section: AH**



# ORGANIZED PHYSICAL ACTIVITY AS A MEANS OF THE QUALITY OF LIFE IMPROVEMENT IN OLDER ADULT WOMEN IN SLOVAKIA FROM THE PERSPECTIVE OF ADULT EDUCATION THEORY

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This paper is the outcome of the project solving VEGA nr. 1/0706/17 The relationship between physical activity and obesity in older adult women financed by the resources of Ministry of Education, Science, Research and Sport of the Slovak Republic.

**Abstract:** The presented study is a result of the qualitative research with the aim to reveal the impact of organized physical activities with a recreational character on the quality of life improvement in older adult women in Slovakia. Participants of the research, were students at the University of the Third Age. Using the semi-structured interviews, we identified subjective meanings that the older adult women, engaged in the education process, ascribed to organized physical activities in relation to the quality of their own lives, from the perspective of adult education. Besides the analysis of problems associated with the education process itself, conclusion also contains proposals pertaining to direction of an education process of organized physical activities of older adults in Slovakia and hence improve the quality of their lives.

**Keywords:** organized physical activity, quality of life, older adult, adult education theory.

## 1 Introduction

Quality of life<sup>1</sup> of older adults in Slovakia is very low. Slovakia ranks 25<sup>th</sup> out of 28 European countries in Active Ageing Index<sup>2</sup>. One of the possibilities of changing the current situation are organized physical activities<sup>3</sup>.

Numerous researches of both domestic and foreign provenance show that older adults purposefully influence conditions of their own ageing and the quality of their lives by choosing an organized physical activity (Chrisler & Palatino 2016; Talbott & Roberson Jr. 2011; Dionigi, Horton, & Bellamy 2011; Klusmann, Evers, Schwartz, & Heuser 2012; Taylor et al. 2004; Hsu, Lu, & Lin 2014; Boulton-Lewis & Buys 2015; Bond, Corner 2004; Stilec 2004; Nemcek 2011; Pelcova, Gaba, Tlucaková, & Pospiech 2012; Pelcova et al. 2009; Gaba, Pridalova, Pelcova, Riegerova, & Tlucakova 2010). The paradox is, that despite these findings, organized physical activities for older adults in Slovakia are still lacking. Among other things, it is closely related to problems associated with designing exercise programs (Fialova & Fiala 2004).

Mentioned researches mostly draw on knowledge from the field of sport educology. However, there is a lack of research into the impact of physical activities on quality of life of older adults from the perspective of adult education theory. Our research opens a possibility to contribute to the development of sport geragogics.

An object of our interest is a person in education process, an older adult who educates himself and exercises, and hence influences the quality of his life. It is a person who is active, curious and autonomous and as such regarded as a co-author of his own development. The research was based on personalistic

approach to education. In the centre of our research, intersecting the field of andragogy and sport educology, are education constructs presenting concrete principles, general requirements of an education process, determining its effectivity.

Among the common principles are the general didactic principles such as the principle of intuition, the principle of conscious and active participation, the principle of accessibility, etc). Group of older adults as a target group of education is homogenous in the interests, goals, health condition and other specifics; and that requires refined and proficient educator. Didactic principles of dialogue education, as presented by Vella (2002) are perceived as requirements that education of older adults needs to meet. In that kind of education an older adult enters into his or her own development as a co-author. These principles are as follows: Needs Assessment, Safety, Sound Relationships, Sequence/Reinforcement, Praxis, Respect for Learners, Ideas/Feeling/Action, Immediacy, Clear Roles & Role Development, Teamwork & Small groups, Engagement, Accountability. (p. 4)

The research investigation analysed in the presented study was aimed at identification and analysis of variables which reveal subjective perception of organized physical activities of older adult women, involved in education process, in context of education constructs, and that all in relation to the quality of life. Given the scope of the research, the study presents analysis of only the most significant findings.

## 2 Methodology

Main research goals were: At first to identify and analyse subjective meanings that the older adult women, engaged in the education process, ascribed to organized physical activities in relation to the quality of their own lives, from the perspective of adult education. Secondly to reveal and describe problems in education process of organized physical activities of older adult women in context of education constructs.

Main research questions were:

RQ1: How do older adult women interpret the principles of dialogue education?

RQ2: How these interpretations are reflected in particular dimensions of quality of life of older adult women?

To select participants we applied extreme case sampling since the presented example is an atypical example of an educational organized physical activity in the Slovak Republic. Older adult women studying at the University of the Third Age in Presov participated in the research. They have had an opportunity to attend a program aimed at organized physical activities under the professional supervision of erudite sport educators. The basic criteria used to select participants were: age over 60, involvement in the study program Physical Education and Sport conducted by the Faculty of Sport of Presov University in Presov, and the willingness to cooperate. The study program Physical Education and Sport takes four semesters. In each semester there are 8 theoretical and 9 practical classes. Physical performance is diagnosed at the beginning of the semester and then again at the end of the semester, together with the final assessment. Since 9 practical classes in one semester are not sufficient for development of functional physical fitness of an individual, a special program called ProSenior was designed. Students of the University of the Third Age, as well as other older adults could attend it twice a week. The sample comprised 5 older adult women who participated in this program for three or more years and attended the University of the Third Age in the study program of Physical Education and Sport. It was an exhaustive sample comprising all available persons. Namely, our participants were Mrs Klara – aged 74, widowed at the age of 40, she has two children, education: complete secondary

<sup>1</sup> The quality of life means, in accordance with the definition presented by the World Health Organization, individual's perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.

<sup>2</sup> Active Ageing Index is a tool to measure the untapped potential of older people for active and healthy ageing across countries. It measures the level to which older people live independent lives, participate in paid employment and social activities as well as their capacity to actively age.

<sup>3</sup> Organized physical activities are purposeful physical activities practised regularly and described by the units of time, distance, intensity, frequency, commonly having own rules. Performing organized physical activities requires a suitable place, equipment and clothing (Ettinger, Wright, & Blair 2007).

education, participation in ProSenior program: 5 years; Mrs Magda – aged 64, married with 2 children, education: Secondary School of Economics, participation in ProSenior program: 3 years; Mrs Tamara – aged 65, married with 2 children, education: complete secondary education, participation in ProSenior program: 2.5 years; Mrs Maria – aged 60, widow, 2 children, education: certified economist, participation in ProSenior program: 3 years; Mrs Helena – aged 64, married with 3 children, education: complete secondary education, participation in ProSenior program: 3 years.

Semi-structured interviews carried out in participant's homes and in public spaces were used to collect data. Both options helped the participants to be more open and willing to answer the asked questions. In most cases, the meetings took place after the exercises, personally attended by the researchers, which allowed more personal relationship between the participants and the researchers. At the same time, the researchers got involved in a direct participant observation. Interviews were recorded on a digital audio recorder. Overall, five interviews were conducted.

Analysis of empirical data was carried out in three-stage coding process (Strauss & Corbin 1998) based on principles of a grounded theory. Initially, we used the technique of open coding resulting in the set of indicators to which the more general meaning – the code was assigned. Established codes were then categorized. Parallel to open coding, axial coding took place, followed by selective coding. During the analysis of data, numerous set categories from the theory of adult education were used, but new categories were also established. During the phase of selective coding our attention was focused on identification of a central category, around which the basic analytical story was organized.

Drawing on Svaricek et al. (2007), Silverman (2005), and Plichtova (2002) we used direct quotations to increase credibility, validity and authenticity. We mapped the course of the whole research so that the research audit could be performed. To maintain the ethical standards we obtained an informed consent in which the participants were informed about the nature of the research and about possible consequences of their involvement in it. The participants were assured of confidentiality and anonymity and confirmed the understanding by their signatures. Prior to the depth interviews, an informed consent was also obtained from a guarantor of the study program.

### 3 Results

We bear in mind, in line with Vella (2002), that there are no two people who would perceive the world in the same way. Therefore, it is necessary to take into account that people joining the same program come with different experience and expectations.

The overall situation of participants shape the decision-making about what to teach and how to teach it. Statements presented by the older adult women indicate a need of individual approach from the side of an instructor. Based on complex diagnostics of the exercisers, instructor can design an individual plan of exercises to be performed at home, together with recommended dietary regimen and specify short and long-term goals. Subsequently an instructor can perform measurement of success rate.

In general, sense of care and concern has beneficial effects on older adult's psychological wellbeing. An individual approach includes consultations which strengthen mutual relationships and security even more and, at the same time, motivates an individual more to perform physical activities. Broadly speaking, it is possible to assume that the approach to exercise and stability of a group, with regard to a number of participants, depends on how successful is the motivation of an individual.

Apart from the exogenous factors, an approach of older adult women to exercise is also determined by their inner motivation,

closely related to their value orientation and the overall perception of their quality of life. To know the interrelatedness of indicators applied to describe the quality of life of individuals can help an instructor to design a curriculum and adopt an individual approach. We established following key categories: strict daily routine, freedom to redistribute leisure time, need of social interactions, being able to establish priorities and living in the present. We are selecting for this article as follow:

#### Strict daily routine

Mrs Klara (74 years old) interprets the quality of her life through strict daily routine. She needs to have her free time filled with organized activities. In her own words, she does everything not to shut herself in her home. We can say that for her any kind of activity, it does not have to be a physical one, is like a drug. Her motto is: to move is to live. It appears that she lives her life well when she manages all the activities she had planned before. Strict daily routine creates some kind of stereotype that leads to feeling of security and hence satisfaction. Her involvement in ProSenior program is primarily motivated by her need to have a strict daily routine and organized free time. She explains: "just not to have any time to spare, not to shut herself in her house". The major benefit of her exercising is in the psychological wellbeing, described as good mood, enthusiasm and positive thinking. Maintaining good health state and losing weight comes second. It is because Mrs Klara enjoys good health, she does not take any medication, which is down to good genes, as she puts it.

#### Freedom to redistribute leisure time

The main category in the analytical story of Mrs Tamara (65 years old) is freedom to redistribute her leisure time. It implies that Mrs Tamara does not have to lead a hasty life and she can set aside time for herself. Mrs Tamara's perception of quality of life is determined by her own upbringing (family of a priest); life experience, both positive and negative, and her former occupation (a nurse). Health, both physical and mental, always comes first. Health affects free redistribution of leisure time, but we can assume that it works vice versa too, since the respondent chooses activities supporting health. Mrs Tamara's free time is filled with all different activities and her family. The activities she mentions are reading, gardening, doing crosswords, taking care of her grandchildren, hiking, the University, exercise in her village, walking her dog, exercise at home and in ProSenior program, PC, and relax. She sees physical activity as the best remedy. It is for a respondent a source of energy and a determinant of sound mind. Family is where she finds the meaning of life. Quality of life is associated with the warmth of home, mutual communication and trust among the family members. For Mrs Tamara home means place where she feels safe. Her family strongly determines the freedom to redistribute her leisure time by certain obligation to help each other within the family. This obligation results from healthy family ties and a certain upbringing style.

#### Need of social interactions

Mrs Magda (64 years old) is happy with her life when her friends are near. Her leitmotif could be "live life to the fullest and take it as it comes". When she says "live life to the fullest" she means experience joy; think positively; perform organized physical activities; walk in the nature; attend cultural events and meet her friends. Mrs Magda looks forward to every meeting with her friends and claims that „sometimes friends are more than a family“.

*"I must always be in touch with people and simply have fun with them, joke around, and not I, I cannot do this or that. I'm looking forward the meeting, to be in touch with these people, we'll tell jokes again, we'll talk about our experiences, I can't live without it. I don't know that, I, for instance, haven't been working for ages, I'm retired but I go to my old work sometimes and I speak to the people there about their news and I tell them my news. I couldn't shut these people out, yeah and we're already talking about where to go next, yeah, whether we'll continue out studies, yeah, but we will meet each other again, simply I can't be like this: the school has finished we won't be meeting again, so.. And this pleases me a lot, that you meet*



these people. I can't imagine myself living in isolation, but only like this" (Magda, 64 years old).

Fear of isolation and a need for social interactions brought her to the following activities: hiking, swimming, meetings with colleagues, physical activity in ProSenior program, the University. Her statement "to take life as it comes" relates to the satisfaction with the course of her life. Mrs Magda enjoys every meeting, she tries to help everyone. Comfort associated with the course of life comes from her phlegmatic nature, as she herself puts it. She tries not to bother anyone and takes everything with humour. Organized physical activities have been a part of her life since the early childhood. She considers herself a "go-getter" and she cannot do without exercising. In case of Mrs Tamara, we specified a physical activity as a remedy, whereas for Mrs Magda it is exercising for the sake of exercising. Although we realize that psychological comfort is closely related to it, in this case it is especially about physical comfort.

#### Being able to establish priorities

An ability to prioritize depends on recognition of one's value orientation system. For Mrs Helena (64 years old) family comes first, followed by the circle of friends, orientation to active lifestyle and material security. Her value orientation regulates her actions. Sound family relationships based on mutual understanding, trust and tolerance create a family environment. That, and also health of all family members lead to satisfaction or dissatisfaction with one's own life. A circle of friends brings Mrs Helena opportunities of conversations with added value. She finds pleasure in meeting people and finds interest in news from their lives and new topics. In this way she compensates for a conversation with the partner. Meeting all kinds of people with their own problems broadens one's horizons and enables us to look at our own troubles from a different perspective. Her experience has taught her that the person with an ability to empathize shows more composure and is more likely to respect and tolerate others. Meeting other people also contributes to an active lifestyle, together with the University study, exercise and hiking. Organized activities allow older adults to lead eventful life and encourage the feeling of being needed. Exercising fills Mrs Helena's life with joy and keeps her health at the satisfying level. As soon as she unexpectedly stops participating in organized physical activities, for one reason or another, it reflects on her physical and psychological wellbeing. Mrs Helena interprets physical activity as serious illness prevention. Knowing benefits that organized physical activities offer, should motivate individuals to get involved even more, while they still can.

#### Living in the present

A prominent figure in our group of five older adult women is Mrs Maria (60 years old). She plays a role of an informal leader of the group. In the ProSenior program she takes initiative and organizes various activities that fall under both non-formal and informal education. The key category defining her perception of quality of life was described as living in the present. Mrs Maria likes organizing and leading her life as she wishes. In everyday life, the freedom of decision-making is very essential for her. She perceives the absolute certainty of her existence through feelings. She follows her feelings; they show her which activities to choose. She does not set long-term goals and claims that: "people should only do what they are capable of and what they want". With regard to the quality of life, very important seems an ability to adapt to living conditions and all sorts of situations. To that she adds that is done for one's own benefit. For Mrs Maria, similarly to Mrs Klara, physical activity is like a drug and it is perceived as a compensation for a loss of her husband. She keeps herself occupied by various activities and her time goes by faster. Her needs of self-realization and recognition are fulfilled when she gets involved in a wide range of activities. She offers a few reasons why she participates in the ProSenior program, for instance, feeling well, feeling good in the company of the fellow older adults who are fun to be around. In that context we can refer to a physical activity as to a source of joy.

#### 4 Outcomes

Summarising the above stated facts, we can assert that organized physical activities play an important role in enhancing the older adults' quality of life. It becomes apparent that many of our findings correspond with the findings of Stathi, Fox, and McKenna (2002). Analysis pertaining to the quality of life of older adult women presented in this study enables us to distinguish five different categories of quality of life on one hand, and five different meanings given to physical activity, on the other hand. Individualized differentiation of the concept of physical activity results from the life stories of older adult women, from their current health state and value orientation systems. Knowing the relational frame of categories defining the quality of life and perception of physical activity, allows us to specify primary motivation for participation in these activities (see Table 1).

Table 1 Individualized differentiation of the concept of physical activity and relational frames with the quality of life and motivation for participation in physical activity

Quality of life	Meaning of physical activity	Motivation for participation in physical activity
Strict daily routine	Physical activity as life	Need to have a strict daily routine
Freedom to redistribute leisure time	Physical activity as a remedy	Maintaining and improving health condition
Need of social interactions	Physical activity for the sake of physical activity	Fellow participants, team
Being able to establish priorities	Physical activity as prevention	Maintaining good health state
Live in the present	Physical activity as a source of joy	Good feeling, team

Source: own elaboration

Recognising these associations might help instructors to increase the efficiency of education process, since these findings can be applied mainly in principles of security, healthy relationships, praxis, ideas – feelings – activities.

When formulating conclusions we need to take into consideration a scope of researched topic and the surplus of information. That is the reason why we present only the most significant findings or main hypothesis.

Education is optimized through an analysis of needs. Important is to know what older adult women want or need to know, and which direction is the education process going in order to bring some progress. We found out that their satisfaction with education process will increase when these elements are included: elements of yoga; Five Tibetan exercises; team building exercises; swimming; timed exercises more often; going on trips together; organizing activities with an involvement of their partners; lectures on how diet influences physical activity and also they would like to remove aerobics from the curriculum. The more of the given indicators of content are applied in practice, the higher efficiency of exercise, with respect to social, physical and psychological quality of life dimensions, can be achieved.

Individual approach of an instructor affects the motivation of an individual. The success rate of individual's motivation to physical activity conditions his or her approach to exercise, as well as to the group stability, when numbers of exercisers are concerned. In this context we can turn to the instructor to give more individual consultations.

In education, we regard very important a link between the principles of security, healthy relationships and clear demarcation of roles and that is because the subjects of education process are their common indicators. The other principles of dialogue education are differentiated with regard to mentioned relations.

We merged the principles of security and healthy relationships into one, since their common indicator is, firstly, a group of participating exercisers and secondly because healthy relationships affect the principle of security and vice versa.

We are convinced that there is a relation between the principle of security and the principle of healthy relationships. We can say that the principle of security is differentiated with respect to stereotypes, trust and the group of exercisers. We assume that there is a relation between the relationships towards the instructor and also relationships of the instructor towards the exercisers. Furthermore, the group of exercisers is specified by the friendly team, same age (group of women of the same age) and the role of a confidant. We can reason that the more the stereotype is fed by indicators (gym settings, the way an exercise unit is run, periodicity, and instructor), the more the principle of security will be met.

We assume that there is a relation between conducting a dialogue and education environment. Further to the assumption, we speculate that an increasing interest in dialogue on the side of educators results in growing efficiency of education and also a growing interest of older adults to participate in education process.

When creation and selection of didactic methods and forms of education process, are concerned, we can state that exercise is differentiated with regard to the shape of the participants.

Older adult women remember new things easier when the educator is emphatic, uses a suitable language code, examples from praxis, and when they see applicability of newly acquired knowledge in everyday life. They master exercises easier when they repeat them regularly, when exercises are accompanied by music or when exercises in question are presented in an experiential way.

Linking theory to practice can be seen in the contribution of exercise. Older adult women see the benefits of exercise in better functional fitness, good feeling, self-confidence, relax, team, strengthening of psyche and rejuvenating effect.

## 5 Discussion and Conclusions

Analysing interpretations of older adult women pertaining to quality of their lives, we came to the conclusion that the relational frames cannot be synthesised since the participant's former lives directly influence the quality of their lives in the senium. Therefore, we deal with the quality of life separately using the key categories: strict daily routine, freedom to redistribute leisure time, need of social interactions, being able to establish priorities and living in the present. Identifying indicators of quality of life of the exercisers reinforces all principles of dialogue education which results in making the education process more effective.

Given the concrete education reality, it is possible to formulate several recommendations with respect to education theory:

- in agreement with Medekova (2011), a necessary prerequisite for doing physical activity in older age is corresponding level of understanding of its impact, contribution and benefits. Therefore, we recommend more frequent individual consultations for an exerciser in order to reveal the purpose of their exercise;
- the analysis showed stronger motivation to achieve goals on the side of an instructor, compared the one of the participants. On that account we suggest introducing so called team meetings which could bring the team together. Team meetings provide a space for dialogue but also a great opportunity to praise or plan further activities;
- older adult women demonstrate a strong need to bring the team together and that is why we recommend to organize more team building events, such as competitions, trips, veteraniady (sporting events for older adults), discussions or even conferences. The participants radiate energy, vitality, optimism and it would be a pity not to use their power to promote organized physical activities to those who do not exercise yet;

- when creating a content of exercise units we recommend to take into account above mentioned indicators arising from the analysis of needs;
- when study material is concerned, we support a notion of Nemcek et al. (2011) and we recommend to create various publications providing a strict methodology of selected exercises that older adult women can perform every day. We add that a great supplement could be practical advice referring to the influence of food on exercise. Authors should not omit medical exercises, workouts, stretching and relaxation exercises. Such material would be of use for an instructor too since it could be utilized during consultations to compile an individual exercise program for a particular individual;
- older adult women could raise to the challenge and contribute to textbooks creation because only they know what is significant and age appropriate, in other words, they can identify their education needs and that is the reason why we recommend their involvement;
- older adult women like to educate themselves, they are functionally literate and they oftentimes search for various information on the Internet. That is why we recommend the instructor to refer the participants to various magazines, articles, publications dealing with benefits of physical activities to the quality of their lives. In addition, the instructor could inform them about the trends in other countries – e.g. how older adults exercise there (as a comparison) and so on. Instructor could also provide them with various products (DVD, monographs). This kind of activity can strengthen healthy relationships and arouse even more interest in physical activity.

Implementing of these recommendations could contribute to an increase of: quality of education process, professional and social competence of an instructor, number of those interested in exercise, awareness of organized physical activities, number of course materials.

Proposals of recommendations can be also beneficial in the area of preparation of future instructor of older adults. Here we find important to state that the implementation of the given recommendations depends on exogenic and endogenic determinants of education. Since our proposals pertain only to organization of various events and creation of study materials, we find economic, social and political factors important.

From the presented result we can draw a conclusion that organized physical activities considerably influence physical, social and developmental wellbeing of older adults, especially when the principles of security, healthy relationships and clearly defined roles are applied. Sustainable development of the quality of life in the senium can be achieved by organized physical activities and autodidacticism while taking into account their needs reflecting the reality of their lives.

Information obtained in the research can be further used to make work with older adults more effectively with regard to design of various programmes organized, for instance, at the universities of the third age, in day centres and other institutions of non-formal education.

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#### Secondary Paper Section: AM

## LONELINESS AND ITS CHARACTERISTICS IN ADOLESCENCE

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The paper was created in the framework of the grant project Vega 1/0285/18 entitled "Risk behaviours of adolescents as clients of social work due to their loneliness".

**Abstract:** The paper is focused on the solving of loneliness issue in middle and late adolescence. The aim of the authors, in the theoretical part, was to clarify the concept of loneliness in the context of adolescence. The aim of the empirical part was to introduce conducted research. The conclusion contained a description of research already conducted in this area and also suggestions for solving loneliness issue in adolescence.

**Keywords:** Loneliness, UCLA, middle adolescence, late adolescence, social networks.

### 1 Introduction

It is clear that everyone in this world wants to live his life happily, he wants to be part of something and does not want to feel emptiness or loneliness. Someone lives in this way, others do not. In today's world full of competition, advertising and digital life, people face many challenges. One of the biggest problems that threatens mankind is loneliness. Due to the fast lifestyle, people often do not realize the risks of this phenomenon and consequences associated with it. Loneliness is not related only to certain group of people, such as the older generation.

Regardless of any demographic or other characteristics, loneliness may affect all of us. More than an individual problem, it is increasingly becoming one of the major social problems. The period of adolescence brings with it many changes, and young persons' opinions and attitudes are changing, the world looks differently than when he/she was a child. The causes of loneliness in adolescence may be different. It could be the transition from high school to college, independence, leaving to dormitory, and so on. All of these changes can lead to feelings of loneliness. In connection with loneliness, a number of researches have already been conducted, some of which have been specifically aimed at identifying the causes of loneliness. Nationwide surveys indicate that up to 80% of adolescents showed severe loneliness (e.g. Brennan, 1982, Parlee, 1979, Rubenstein & Shaver, 1982).

### 2 Loneliness

The state of loneliness is associated with dramatic and significant changes in man's life, which is time-bound and related to the need to create new social networks. An example may be students who have left their homes and went to a dormitory or took a new job. (Muller De Morais 2015). In this context, (Muller De Morais 2015) Výrost and Slaměnik (2001) add that such a condition is related to the necessity of forming new social networks.

According to Krchnák (2001, in: Šlosiar and Duško 2014), it is necessary to distinguish between the terms solitude/to be alone and loneliness. According to him, solitude/to be alone is the condition when a person is alone or when he/she remains alone. This is the real state of our personality in a certain situation. On the other hand, loneliness is a tune that can be expressed verbally. The author also questions whether the feelings of loneliness may also appear without a state of solitude/to be alone. He points out that solitude/to be alone does not have to cause negative feelings right away, just as feelings of loneliness can appear without a state of solitude/to be alone. These thoughts are followed by Nákonečný (1993, in: Žiaková 2008), according to which people can feel lonely even though they are

surrounded by other people with whom they interact, which can be caused by the fact that these relationships lack the element of intimate sharing.

„Loneliness does not mean the same thing as solitude. Solitude is an objective state, easily visible from the outside. Loneliness is related to our perception of social interactions and their characteristics“ (Výrost and Slaměnik 2001, p. 76). Solitude turns to loneliness at the moment when one does not have anyone to share experiences with, no person from whom to receive praise, and he/she feels a strong need for such feedback. Loneliness also occurs when one is surrounded by other people, but these people do not understand him/her, or they are even pushing him/her away. These two terms also differ in many world languages, for example, in English, there is a term "to be alone" and the term "to be lonely". First of all, it should be emphasized that a lonely person is especially unhappy. (The Beastess 2016)

Loneliness is usually associated with these three characteristics (Muller De Morais 2015):

- loneliness is a subjective experience that depends on our own interpretation of the given events and cannot be revealed by the ordinary observation of another person, and on the basis of this observation it can be deduced that this person feels lonely only for being alone at the first sight,
- loneliness, from global point of view, is a result of the perception of a certain deficiency,
- loneliness is a condition that is considered uncomfortable.

### 2 Loneliness in adolescence

Adolescence is generally considered to be a period characterized by rapid changes, protests, and moodiness. Variability of emotions in adolescents is due to the intensification of feelings, which means that adolescents tend to experience things more intensively than an adult. (Carr, Gregg 2012) To understand this developmental period, it is necessary to understand the physical, psychological, emotional and social changes that Ráczová (2008, in: Žiaková 2008) points out. These changes bring a certain amount of uncertainty during the adolescence period and create a need for orientation in the new situation. This need may represent a certain degree of burden for adolescent, which will cause defensive reactions. If the adolescent is able to handle this burden, he/she is able to develop, but if this burden is too large, there is a precondition for maladjustment. (Ruiselová and Prokopčáková 2013)

Nielsen Sobotková et al. (2014) state that insufficient space and a low opportunity for meaningful integration into society can lead to an undesirable, even risky process of creating one's own identity. If the feeling of personal identity remains unfulfilled, it can lead to internal confusion, which can then emotionally disorient the adolescent and lead him/her to feel inferior. These feelings can manifest by increased aggression, neuroses, or drug abuse. (Labáth 2001)

Ruthellen Josselson described the four stages of identity development in adolescence:

- stage of differentiation (12-13 years) - the adolescent begins to notice that his / her views are different from those of his/her parents or peers.
- stage of new experience (14-15 years) - the adolescent focuses on immediate satisfaction of his/her needs, does not respect authority, tries to achieve autonomy and tries to figure out what is best for him/her.
- stage of convergence with friends (16-17 years) - the adolescents behaviour starts to be more responsible, relationships with parents are improving, and he/she puts greater importance on friendly and erotic relationships.

- stage of consolidation of self-esteem (18 years to the end of adolescence) - opinions on one's own person, surroundings or the future are more stable, while forming a sense of autonomy and uniqueness. (Thorová 2015)

Young people today are often exposed to great pressure from the society, which results into feelings of insignificance or even isolation. (Ráczová 2008 in Žiaková 2008). Yalom (1980, in: Muller De Moraes 2015) believes that most psychologists encounter three types of isolation in their practice.

- Interpersonal isolation – it is characterized by loneliness and it represents an isolation of a person from other people, while this isolation can be caused by various factors. These factors include lack of adequate social skills, very conflicting feelings in relations to intimacy but also the personal style of the person. In addition to the factors mentioned above, there are also cultural factors, such as the decline of social institutions whose role is to ensure intimacy and closeness.
- Intrapersonal isolation - it occurs in an attempt to suppress their own feelings and desires, while there is no confidence in their own judgment. A person who is in an intrapersonal isolation does not use his or her own potential and tends to accept foreign orders as his/her own wishes.
- Existential isolation – it is considered an insurmountable gulf between man and any other person as well as a separation of a man from the world. When experiencing this type of isolation, one tends to think that if he/she would get close with someone, there will always be a gap that will separate them in some way.

## 2.1 Loneliness and leisure time

Leisure time, selection of appropriate group of peers and positive acceptance in this group has a high impact on social adaptation of adolescents. The main aspect of a successful and healthy development of the adolescent is quality use of leisure time, including regular movement. (Kabiček 2014)

Kratochvílová (2010) points out the leisure time functions that come from its very meaning and are important for both an individual and for the society. Leisure time fulfills health-hygienic function, self-realization, formative-educational, socialization and, last but not least, preventive function.

The primary role of the family and environment of adolescent should be to promote healthy lifestyle and to help him/her in acceptance of right and meaningful values. It is also extremely important to emphasize the importance of communication in the family and the increased interest of parents in the spending of leisure time of an adolescent. They should be interested in where the adolescent spends his/her leisure time and with whom. (Dvorská, in: Kolibová 2013)

In the past century, many American psychologists, psychiatrists and social workers considered it disquieting that most children spend two to three hours a day of their leisure time watching television. Today, most of the children and adolescents spend their time playing computer games or browsing the Internet. It is often stressed that these figures can be compared with the time that adolescents spend at school. (Jedlička et al. 2015)

## 2.2 Types of loneliness

Loneliness can be viewed from different perspectives. One is the psychological point of view, which divides loneliness into three types. It distinguishes cognitive, behavioural and emotional loneliness. Cognitive loneliness lies in the absence of people with whom a person could share his/her experiences and they would understand each other in a professional or philosophical area. Behavioural loneliness occurs when one does not have someone with whom he/she could spend his/her leisure time and who would share the joy of spending it with him/her. The last, and the most serious type, is emotional loneliness. It is a lack of satisfaction in the emotional area and a lack of love.

Consequences of this loneliness are often the most serious. (Žiaková 2008)

Palenčár and Duško (2015) found out that loneliness is, in most cases, divided into psychological and existential loneliness. These two types are further specified.

*Psychological loneliness* - This is a state where a person is missing a particular object. This loneliness can be divided into interpersonal and intrapersonal. In the context of interpersonal loneliness, the authors distinguish emotional and social loneliness.

*Emotional loneliness* is caused by the absence of a specific person, while social loneliness is caused by the lack of social contacts with whom the person wants to share their activities and interests (Výrost a Slaměník 2001).

*Intrapersonal loneliness* occurs when a person alienate from himself/herself.

*Existential loneliness* - it is a situation where a person lacks nobody and nothing in particular, but nevertheless feels loneliness.

Adolescence is a period of time when society puts more and more social demands on the adolescent, requires him/her to behave responsibly and to become independent. These demands may cause stress in adolescent, which manifests itself by either rejecting adulthood itself or by anxiety. Peers are of great importance in adolescence. They have a great influence on the formation of personality of adolescent. (Thorová 2015)

## 2.3 Consequences of loneliness

People who feel lonely fall in a vicious circle of problems, which explains why these feelings are so stable. Lonely people are not able to form friendships, as they shape new interpersonal relationships with negative expectations and with poorly developed social skills. The result is the fact that interacting with other people themselves is not the source of pleasure and enjoyable experiences, but causes various inconveniences. The ultimate result is the problem of creating optimal social relationships and remaining lonely. (Výrost and Slaměník 2001)

Such consequences may be, for example, anxiety disorders, depression or behavioural disorders. In the worst case scenario, this feeling of unfulfilled social interactions may lead towards suicidal tendencies. In adolescence, it is necessary to be able to distinguish whether it is a pathological depression, as there is a great risk of suicidal behaviour. (Krejčířová 1997, in: Muller De Moraes 2015)

In addition to mentioned consequences, loneliness can cause blood pressure disorders, cardiovascular diseases, including heart attack and stroke. It was found out that in some lonely people there was a higher incidence of certain types of cancer than in people who were not lonely. It is assumed that a lonely person has a greater tendency to get sick than a person who is not lonely, because his immunity is weakened by loneliness. (The Beastess 2016)

## 3 Research project

The primary objective of this research was to empirically prove the severity of experiencing loneliness in adolescents and to find the factors that reinforce this state. A secondary objective was to demonstrate the risk rate of such behaviour.

The research is divided into 3 parts. In the first part we present the frequency data of loneliness, in the second part we deal with the relations between loneliness and the time spent on social networks, in the third part we are addressing gender differences in loneliness.

### 3.1 Methodology

To conduct the research, we decided to use the questionnaire methodology. The questionnaire consisted of three parts.

The first part of the questionnaire focused on the examination of the degree of loneliness. To determine the degree of loneliness, we chose a standardized UCLA (Russel 1996) questionnaire, which consisted of 20 statements measuring subjective feeling of loneliness and social isolation. From one half, statements are drawn up to reflect satisfaction with social relationships, and from the second half they mirror dissatisfaction with social relations. Respondents filled out the questionnaire on the scale from 1 - Never to 4 - Always. The original UCLA questionnaire measured the Cronbach's alpha coefficient in the range from 0.89 to 0.94. The Cronbach's alpha coefficient, measured by us, reached 0.87.

The second part of the questionnaire included demographic and other data that we needed for our research. We focused on determining the age of respondents, their gender, and we also asked about the type of family they came from. The questionnaire also contained questions that were focused on detection of problematic and risky use of the Internet. Respondents were asked how much time they spend daily on social networks and we also identified how they usually spend their leisure time.

Research was evaluated in the SPSS Statistics 25 statistical software. We determined the findings through Spearman's correlation coefficient, which examined the relationship between these phenomena, and also by using the Mann-Whitney U test, through which we identified the differences between given variables. We also used the frequency analysis method to find average responses of respondents to individual questions from the UCLA questionnaire.

### 3.2 Research sample characteristics

The research sample consisted of 100 respondents. The gender ratio was balanced, since 47 adolescent girls and 53 adolescent boys participated in the research. Respondents were chosen using a deliberate, nonrandom selection.

Research sample was further divided by age. We focused on a group of adolescents aged 15-19 years, that is, a group of adolescents belonging to the middle to late adolescence. The frequency of occurrence of individual age is shown in Table 1. The average age of our research sample was 17.04.

Tab. 1 Frequency of occurrence of individual age of respondents

Age	f
15	12
16	18
17	33
18	28
19	9

## 4 Research results

The highest score that respondents could achieve in the UCLA questionnaire was 80 and the lowest score they could achieve was 20. Based on the used statistical method, we found out that the average value of responses in the questionnaire focused on the subjective feeling of loneliness was 2.50. The most frequent answer, on a scale from 1 never to 4 always, was 3, that means sometimes.

### 4.1 Frequency data from loneliness

By evaluating individual items in the UCLA questionnaire, aimed at examining experiencing loneliness, we found that answers of respondents on a scale of 1 Never to 4 Always on average ranged between 2 Rarely and 3 Sometimes. Therefore, we can assert that the majority of adolescents tended to

experience loneliness with positive responses to individual items, even though we did not notice any significant differences between answers in the individual items.

### Frequency analysis of experiencing loneliness based on the age of respondents

Depending on different authors, the division of adolescence differs. In each division, however, we can find very similar views on this developmental stage. Authors usually divide adolescence into several stages. Every stage is somehow specific, as well as the experiencing of each adolescent is individual. The research sample, we have identified in our research, belongs to middle and late adolescence. We were interested whether there are differences in experiencing loneliness based on the age of adolescents. We compared the response averages of adolescents at the age of fifteen, sixteen, seventeen, eighteen and nineteen, focusing in particular on the comparison of the lower limit (15 years) and the upper limit (19 years), of medium to late adolescence. For these purposes, we selected three questions from a standardized questionnaire UCLA. Frequency analysis results are shown in Table 2.

Tab. 2 Frequency analysis age

	15		16		17		18		19	
	X	SD	X	SD	X	SD	X	SD	X	SD
U13	2,75	1,138	2,28	1,074	2,24	0,867	2,50	1,000	4,56	6,598
U16	3,00	1,206	2,11	1,022	2,63	1,025	2,57	1,103	2,66	1,118
U20	2,91	0,996	2,16	1,150	2,42	0,936	2,67	0,904	2,55	1,013

### U13: How often do you feel that no one knows you well?

There is a significant difference between the 15 years olds ( $X = 2,75$ ) and 19 years olds ( $X = 4,56$ ) answers. Here one could argue about why 19 years olds have a stronger feeling that no one knows them well. This may be caused, for example, by the fact that nineteen years olds are in the process of transition from high school to university, so changing the environment, meeting new people, a new system, all these are factors that can make these feelings stronger.

### U16: How often do you feel that there is no one who really understands you?

The average of the fifteen years olds ( $X = 3,00$ ) is worth noting, as it differs by average from all others. Fifteen years old adolescents tended to answer this question in a way that they often feel that there is no one who really understands them. When considering this difference, it is necessary to take into account the fact that fifteen years old adolescents are at the stage of accepting their own physical structure and role related to the adolescent's gender. Often they feel that no one understands them, because they too open up to only few with the changes they experience. Their own block prevents them from actually realizing that there are people who really understand them and who have gone through something very similar.

### U20: How often do you feel there are no people to whom you can turn to?

As in the previous question, the average of answers in the fifteen years old adolescents was higher than in all others. Item number 20 from the UCLA questionnaire is very closely related to item number 16. Even here, we can think about whether the distance of adolescents and their inner experience of the impact of change are not the cause of the feeling that there are no people to whom they can turn to. Of course, this can also be closely related to the school when the transition from elementary school to high school is a time when adolescent relationships with its peer change. By changing school, the adolescent loses intense contact with his closest friends, with whom he/she spent a lot of time before. This is the reason why the adolescent feels that there are no people he/she can turn to. His/her closest friends, classmates

are no longer at his/her side when he/she needs help or advice. Frustration that results from this absence can be the cause of this feeling.

Although the age limit from 15 to 19 years is considered to be early to middle adolescence, and at this stage there are many common elements typical for all adolescents between 15 to 19 years of age, we must not forget that each person is a valuable individuality and each individual should be paid adequate attention. To each individual age and its specifics, it is necessary to pay appropriate attention.

#### *Frequency analysis of experiencing loneliness in relation to the type of family*

The term single-parent family is often perceived in the negative sense and there are several reasons. Single-parent family is a family where one of the parents is missing and the absence of a female or male pattern can negatively affect the adolescent and his/her social development. Another reason for the negative perception of this term may be the financial situation of one of the parents, as the family is missing financial income of the other parent. Let us not, however, abstain from this claim as the only option, because it may not be exactly defined as a rule. In our research, using frequency analysis, we identified the differences between respondents' answers to experiencing loneliness in relation to the type of the family. We compared the responses averages of adolescents from complete and single-parent families. To compare averages, we selected 3 questions from a standardized UCLA questionnaire. In Table 3, we demonstrate responses averages of our research sample.

Tab. 3 Frequency analysis single-parent family

	Complete family		Single-parent family	
	X	SD	X	SD
U2	2,50	0,970	2,19	0,780
U5	2,70	0,993	2,28	1,023
U11	2,40	1,010	2,28	0,813

The results of frequency analysis make us once again reconsider the statement about the negative understanding of single-parent family. It turned out that only in three items, we were able to confirm the experiencing of loneliness in adolescents from single-parent families based on responses averages.

#### *U2: How often do you feel a lack of company?*

As we can see, adolescents coming from a complete family ( $X = 2.50$ ) feel a lack of company to a greater extent than adolescents coming from a single-parent family (2, 19). The answer to this difference could be the idea that members of a complete family may feel that the adolescent misses nothing and that they pay enough attention to him/her and to his/her needs as well. However, the opposite is true. Parents often think that they spend enough time with the adolescent, and thus it may come to playing down his/her needs, requests for help and so on. On the contrary, the average of adolescents coming from single-parent families can be justified by the absence of one parent, forcing one that remained to put twice as much energy into parenting. One parent's attempt to fill in the missing parent's place eliminates the feeling of lack of company in adolescent.

#### *U5: How often do you feel excluded from the group of friends?*

The difference in the average of this question is more significant than in the previous question. It is possible that adolescents coming from single-parent families ( $x = 2.28$ ) attempted to compensate the absence of a parent by creating meaningful and valuable relationships with their friends? If so, then it is logical that they will feel as part of a group of friends more often than adolescents coming from complete families ( $x = 2.70$ ), whose relationships may acquire the nature of shallowness or meaninglessness.

#### *U11: How often do you feel pushed away?*

Both averages do not differ in this respect that much, but there is a difference nonetheless. This difference can certainly be

justified in exactly the same way as in the first question, also by the fact that the adolescent coming from a single-parent family feels pushed away just because of enough attention from one parent.

#### *Frequency analysis of experiencing loneliness in relation to spending the leisure time*

We were interested in how adolescents, in our research sample, mostly spend their leisure time. The result showed that up to 60 adolescents from our research sample spend their leisure time at home and 50 adolescents spend their leisure time mostly outdoors among friends. This prompted us to further investigate and to compare the answers of respondents to the UCLA questionnaire, and as well as in the two previous cases, we tried to find out whether there are any differences. Frequency analysis results are shown in Table 4.

Tab. 4 Frequency analysis leisure time

	LT outdoors		LT at home	
	X	SD	X	SD
U6	2,28	0,968	2,72	1,136
U7	2,32	0,915	2,60	1,056
U9	2,39	0,987	2,72	1,015
U10	2,52	1,048	2,80	0,992
U13	2,21	0,885	3,02	3,011

U6: How often do you feel that you do not have a lot in common with the people around you?

U7: How often do you feel that you are no longer close to anyone?

U9: How often do you not feel sociable and friendly?

U10: How often do you feel that you are not close to people?

U13: How often do you feel that no one knows you well?

The results of this frequency analysis will be summarized in an individual unit. The results clearly indicate that respondents who spend their leisure time mostly at home (U6-  $X=2.72$ ; U7-  $X=2.60$ ; U9-  $X=2.72$ ; U10-  $X=2.80$ ; U13-  $X=3.02$ ), reported experiencing loneliness to a greater extent than respondents who spend their leisure time outdoors (U6-  $X=2.28$ ; U7-  $X=2.32$ ; U9-  $X=2.39$ ; U10-  $X=2.52$ ; U13-  $X=2.21$ ). U6 could be considered as the cause but also as a consequence. The fact that respondents spend their leisure time mostly at home is caused by the feeling that they do not have much to in common with people around them. That is why it can be considered as a reason why they spend their time mostly at home. As a consequence, we could perceive this if we said that just because the adolescent spends his/her leisure time at home, he/she has little in common with the people around him. This statement, however, is subject to further examination. Similarly, we might consider the remaining questions.

#### **4.2 Relationship between loneliness and time spent on social networks in adolescents**

In relation to the way of spending leisure time in adolescents, we were interested whether there is a correlation between loneliness and the time that adolescents spend on social networks.

Tab. 5 Loneliness and time spend on social networks

	n	r	p(α)
Loneliness	100	0,325***	<0,001
Time spend on social networks			

\*\*\*p<0,001

We can say that between these two variables, we see a correlation based on Spearman's correlation coefficient, which shows the result of 0.325, which means a moderate correlation. This result is shown in Table 5. The value p (α) 0.001 in this case points to a statistically significant relationship between given variables. Average daily time spent on social networks in hours in our research sample was almost shocking. Adolescent

girls and boys in our research sample stated that they spend an average of 4.58 hours per day on social networks. Some respondents even stated that they even spend 7 or 8 hours per day on social networks.

### 4.3 Gender differences in loneliness

Our aim was to find out, among other things, whether there are gender differences in experiencing loneliness in adolescents. Using the Mann-Whitney U test ( $Z = -0,010$ ) we found out that there are no statistically significant differences between experiencing loneliness and gender in our research sample ( $p(\alpha) = 0,992$ ). The result of Mann-Whitney U test is shown in Table 6.

Tab. 6 Gender differences

	Gender	n	X	Z	p ( $\alpha$ )
Experiencing loneliness in adolescents	Woman	47	50,53	-0,010	0,992
	Man	53	50,47		

We state that in our research sample, gender differences in experiencing loneliness have not been proven. Average indicates that there is a small difference, however, this difference is not statistically significant. The result tells us that adolescent girls and boys do not differ significantly in their intensity of experiencing loneliness.

## 5 Discussion and conclusion

To determine the extent of loneliness, we used the standardized UCLA questionnaire, much like the authors Weinan, Zeng et al., who in 2016 in their study examined the relationship between loneliness, explicit self-esteem and risky use of the Internet. Their research sample consisted of 624 Chinese adolescents. To examine the relationships between these variables, Pearson's correlation coefficient was used. Their results suggest that loneliness fully mediated the connection between explicit self-esteem and pathological use of the Internet among adolescents, which means that lower self-esteem correlated with greater loneliness, which was then associated with greater pathological use of the Internet. Therefore, according to authors of that research, increasing adolescent confidence and reducing their feeling of loneliness may act as a preventive measure for helping adolescents to alleviate the extent of pathological or risky use of the Internet. Here we can argue whether these findings in Chinese adolescents could be applied to our research sample, and thus whether their gradual increase in their self-esteem would lead to a decrease in the feelings of loneliness and hence to less intense risky/impulsive use of the Internet. We could also apply this application to the problematic spending of leisure time among adolescents in general.

Some scientists indicate the relationship between loneliness and the different aspects of using the Internet (Loytsker & Aiello 1997; Moody 2001; Morahan-Martin & Schumacher 2000). Specifically, Kraut et al. (1998), and their well-known study included 93 families during their first 1-2 years spent on the Internet. The results suggest that a higher level of Internet use is associated with an increase in loneliness. Although this study was criticized for its small sample size, failure in random selection of participants and the absence of a control group, Morahan-Martin and Schumacher (2000) also reported the connection between the different aspects of Internet use and loneliness. In their study of 277 university Internet users, pathological users were significantly lonelier. (Dittmann 2003)

Finally, we present possibilities of solving the loneliness from the view of various authors, to which we lean too.

Výrost and Slaměník (2001) claim that many empirical studies show a lack of social skills, as a possible factor causing loneliness. On the one hand there is a group of people who, without any problems, establish contacts and new acquaintances. These people hardly understand those who have a problem with it. Some people lack basic social skills, which are best developed

through practical conversation with other people. Author adds that lonely people have too few opportunities to do so. Here, it is important to reflect on whether this little opportunity to develop their social skills in practice is not one of the causes of loneliness in adolescence, and one of the causes of excessive use of social networks. From a certain point of view, it can be concluded that if adolescents, who feel lonely, learn social skills, they would minimize their feelings of loneliness.

Muller De Moraes (2015) provides a perspective on the issue from a parental perspective. He points out that in the process of adolescence, some parents often tend to look at their children as young adults and thus cease to perceive their need for love, safety, protection or interest. It is essential that they do not forget about these needs and that they constantly express that they care about children and that they can turn to them at any time. The basic aspect is therefore a relationship that has to be constantly strengthened.

Quality and strong relationships as one of the aspects of overcoming and solving loneliness are extremely important not only within the family but also in the friendships area. Forming of meaningful and full-valued friendships is one of the most effective ways to overcome loneliness in adolescence. One of the options to overcome loneliness is also a strategy for coping with social anxiety. (Výrost a Slaměník 2001)

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**Primary Paper Section: A**

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## SOCIAL LONELINESS AND SOCIAL SUPPORT IN THE ELDERLY

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This paper is an outcome of the VEGA scientific project No. 1/0134/17 Importance of value orientation – expectations and prospects of the young generation with regard to their employability

**Abstract:** The aim of the paper is to present an empirical verification of the connections between experiencing social loneliness and the degree of social support in the elderly. Social loneliness is a phenomenon that is typical for senium as a developmental period. From the perspective of social work, the possibility of activating social support in the elderly appears to be an appropriate tool for eliminating social loneliness. This assumption was also confirmed in the conducted research, where authors confirmed the positive correlation between social loneliness and social support in the elderly living in an institutional environment.

**Keywords:** Social loneliness, social support, the elderly, institutional care.

### 1 Social loneliness and social support in the elderly

Coping with loneliness is very difficult for many people. Loneliness in elderly people can be caused by the feeling that no one is counting on them anymore. This leads then to emotional suffering and pain. Oftentimes an elderly person resolves it by using alcohol or using various drugs such as antidepressants and so on. Older people placed in an institutional facility can abuse workers to their own benefit and at the same time they can become emotionally entangled to them. It is important to realize that it is the mental suffering of elderly people not a whim (Pichaud 1998). The problem of loneliness in the elderly is very current, working with older people requires an individual approach. It is important to understand the needs of clients that can significantly contribute to improving of their lives.

Significant researchers who deal with or have dealt with the problem of loneliness from various perspectives and research scope from the world scale - include, for example: Witzleben (1953); Fromm-Reichmann (1959); Yalom (1980); then writing duos Peplau and Perlman (1982); Rubenstein and Shaver (1982); Cacioppo and Patrick (2008) and others. In Slovakia, similar research focused on loneliness from different perspectives was conducted by, e.g. Žiaková (2008); Ráčová (2005); Balogová (2005); Žitniaková Gurová (2013) and many others.

### 2 Senium

A person begins to age with its birth. An important role is played by the genetics and the external environment of man. Ageing is an irreversible biological process and concerns the whole of nature. Life expectancy is specific to each individual species, and old age is the final stage of the Ageing process. (Poledníková 2006). Ageing as process and old age as the last period of human life, which always ends with death. Ageing can have several properties. It is considered to be progressive, i.e. unstoppable, irreversible - bringing irreversible changes of Ageing, inner - Ageing affects e.g. smoking or various diseases, unequal - different Ageing of organs.

### 3 Loneliness in senium

By retirement, a person loses, essentially involuntary, work contacts, so he/she can feel lonely. The effort of man is to share his/her experiences, joys, sorrows with someone else, regardless of age. (Tošnerová 2009)

One of the results of some empirical studies is the fact that the factor that can create loneliness, especially in the elderly, is the lack of social skills. An elderly person needs another person not only because of dependence on the help of others, but also because of the need for a human relationship that mediates the

contact with the environment, feeling of satisfaction and his/her social value. Another cause of loneliness in the elderly is the reduction of social contacts, as a result of reduced mobility, personality changes in terms of egocentrism, egoism and suspicion. All this can lead to social isolation, abandonment and awareness of the loneliness. (Balogová 2009)

Social loneliness, together with emotional loneliness, is described in the professional literature under a single common name, namely - interpersonal loneliness. This name reflects that these types of loneliness take into account the absence of man's relationship to another person or to group of people. (Palenčár, Duško 2015) The aforementioned division of interpersonal loneliness was eventually supplemented by two other types, namely:

- *intrapersonal loneliness*, became a subject of research not only for the Austrian psychologist Freud and its origins date back to the psychoanalytically oriented psychology, or to humanists, such as Rogers and others. Recognized American psychiatrist Yalom describes it as a process: "through which one separates parts of oneself" and "it occurs always when ... he/she suppress his/her own feelings and desires, accepts what is and what is required for his/her own wishes, does not trust his/her own judgment or suppress own abilities". Subsequently, "fragmentation of one's own self, loss of one's identity, integrity and self-identity" occurs. So much, so that it can lead to the emergence of mental personality disorder. (Yalom 1980, in: Palenčár, Duško 2015, p. 23)
- *existential loneliness*, known with different names, each author gives it another name. It is known as primary loneliness (Witzleben 1958) or metaphysical loneliness (Mijuskovic 1979, in: Palenčár, Duško 2015). Authors Yalom (2006) and Žitniaková Gurgová (2013) define the existential loneliness as the gap between man and any other person, as the gap between man and the world surrounding him/her. It is a kind of loneliness that is present, on one hand, despite satisfactory and ideal relationship with other people, and on the other hand, despite good self-knowledge. This type of loneliness finds its place in situations where a person is confronted, for example, with death, in new, previously unrecognized and unknown situations in which the adopted scenarios do not apply and are insufficient.

Generational loneliness is described by Androvičová, Rácz and Krchnák (2015, in: Šlosiar, Palenčár, Duško 2015) as one of the forms of loneliness. An essential role here is played by an old man who is beginning to feel lonely, because most of his peers die and he/she will not be able to share a common world of the past, opinions, views or ideas for the future with someone. Despite a functional and loving family whose members are often two to three generations younger, elderly person does not have to find the right understanding and finds himself/herself in a vicious circle called loneliness.

### 4 Social support

Social support is understood as an aid in stressful situations, in order to facilitate coping with the difficult situation (Krivoslavský 2002). Social support is similarly described by Caplan and Caplan (1993), who defined the social support as an interpersonal connection and positive relationships between people in the group who provide the assistance in stressful situations to each other. Cohen, Underwood and Gottlieb al. (2000) are coming from the theory that social support affects our health and well-being, while social support is understood as social relationships.

The effect of social support is the psychological well-being of an individual, regardless of the actual stress level of an individual (Paulík 2010). Therefore, a satisfactory social support can be attributed to the protective nature in the course of a life that has a positive impact on the mental health of the individual

(Křivohlavý 2012). Social support can also have the so-called buffering effect, which can result into the acceptance of a more favorable alternative of cognitive assessment of the situation or the reduction of maladaptive defense mechanisms. In this case, social support is evaluated as an important intervention variable between the stressor and the result of its effect on the individual. (Paulík 2010)

Křivohlavý (2001) talks about four types of social support. Instrumental social support represents a specific type of assistance. This assistance is initiated by one's own will in order to help another person in need, for example by borrowing money, assisting with shopping, or helping with administrative formalities. Providing information to a person who is in an unfavorable situation and needs help in a form of e.g. advice, is called informational support. This social support is also defined as an active listening to an individual who is in need and later on also the saturation of needs of an individual. Listening can be included here.

Emotional support is characterized by empathy, love, caress, affection, shown by a person to another person who feels inadequate social support, so-called emotional closeness. Expressing respect, esteem, encouragement, self-assessment is characterized by the form of evaluation support. It is an activity towards a recipient of social support.

Social support can be a means of reducing the level of experiencing social loneliness among the elderly, which is a phenomenon that can be handled by social work practice. With an appropriate social work with the elderly, it is possible not only to activate but even to create their social support system.

## 5 Research

The main objective of the research was to verify gender differences in experiencing social loneliness and in perceiving of social support in the elderly men and women in the institutional environment.

### 5.1 Method

The research was conducted through a small questionnaire battery, which consisted of two questionnaires and basic socio-demographic questions. The 1997 SELSA-S social and emotional loneliness questionnaire is a shortened version of SELSA (Social-Emotional Loneliness Scale for Adults) constructed in 1993. Its authors are DiTommaso and Spinner. The original version of the questionnaire includes 37 items. The shortened version of the SELSA questionnaire contains 15 questions, and these can be divided into 3 subscales, namely family subscale (questions 1, 4, 8, 11, 12), romantic subscale (questions 3, 6, 10, 14, 15) and friendly subscale (questions 2, 5, 7, 9, 13). The evaluation of family and romantic subscale is related to emotional loneliness, the evaluation of friendly subscale is related to social loneliness. Individual items in the questionnaire are evaluated on a 7 degree Likert scale, from of full agreement to an absolute disagreement (1 - strongly agree, 7 - strongly disagree). The second questionnaire was dedicated to investigation of perception of social support, using the Multidimensional Scale of Perceived Social Support by Zimet, Dahlen, Zimet and Farley (1988). This is a 12 item methodology in which respondents evaluated statements about perceived social support on the 7-point scale from "strongly disagree" to "strongly agree". The scale is evaluated using a single factor average score.

The results of the questionnaires were processed by SPSS software version 16.0. Statistical operations were selected based on the results of the normality of response distribution.

The research sample was represented by 100 the elderly living in the institutional care environment, 51% women, 49% men, aged 60-94 years.

## 5.2 Results

### Loneliness

Gender differences in experiencing loneliness in the elderly were tested by Student's t test. The average value of responses among men in this questionnaire on the scale from 1 to 7 was 4,492, and among women 3,742. Significance was below 0.05. The result showed that men feel higher social loneliness than women.

Tab 1: Gender differences in loneliness

Student t-test				
gender	n	x	t	Sig. (2-tailed)
Men	49	4,496	3,758	0,000***
Women	51	3,739		

The highest loneliness was confirmed by statistical calculations in the partner dimension, where men achieved an average score of 5,133 and women achieved an average of 4,131.

### Social support

The average value of responses, in the range of 1-7, was in men 4,081 and in women 3,337. The value of significance was again lower than 0.05, which means that women statistically perceive more social support than men in the institutional environment.

Tab 2: Gender differences in social support

Student t-test				
gender	n	x	t	Sig. (2-tailed)
Men	49	4,092	2,736	0,008**
Women	51	3,407		

Women have a higher degree of social support, which has been confirmed in particular in the dimensions of "family" and "other person".

## 6 Discussion and conclusion

Results supported previous findings on the existence of gender differences in the age group of the elderly in both researched phenomena. It was found out that women feel a lower level of loneliness, and at the same time, perceive a higher degree of social support, especially from the family and "other person".

Molčanová, Baumgartner, Kaňuková (2007) conducted a study to find out whether there is a difference in experiencing loneliness between men and women. The research sample consisted of 275 students. Loneliness was researched using SELSA and UCLA questionnaires. All three established hypotheses were confirmed in the research, and thus it was found out that men experienced loneliness more intense than women. Results are reasoned by the opinion that women form more friendships than men, are more open in them and share their personal information in them.

Drennan (2008), in his research that was participated by 683 respondents aged 65 and over, came to the finding that the elderly felt the highest degree of loneliness in the romantic (partner) area, and also that the elderly who lost their partners felt significantly higher loneliness in the family and partner area. Within the family loneliness, it has been shown that widowhood is the strongest among other factors, which is involved in high romantic loneliness. However, widowhood is not a strong predictor of social loneliness; social loneliness (friendly loneliness) is caused and mitigated by the higher quality of persons' social network, by maintaining contact with friends rather than by the actual number of children and by contacts with neighbors.

Several studies confirm the occurrence of gender differences in experiencing loneliness in the elderly. In terms of working with the client, we consider it necessary to verify the existence of gender differences and to apply the results in practice.

Changing the environment from home to institutional, can affect the older person in negative way, can cause deterioration in health, and mental problems, mood swings, depression, anxiety, fear, etc. may occur. The elderly as a target group of social work are at the risk of a certain social deprivation. Therefore, it is important for social workers to choose appropriately selected methods, approaches, theories, therapies while working with this target group based on the history of clients. Just working with the social support system in the elderly, with its use or activation, can be a suitable tool for eliminating the loneliness in the elderly.

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#### Primary Paper Section: A

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# STRESS, SECONDARY TRAUMA AND BURNOUT - RISK CHARACTERISTICS IN HELPING PROFESSIONS

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**Abstract:** Helping workers are at increased risk of the impact of stress, burnout and other negative consequences arising from helping. The aim of the paper is to present the percentage of addressed population of helping workers (N = 738, random selection of the research) that has symptoms of increased stress, emotional exhaustion, burnout and the risk of secondary trauma. Authors present psychosocial characteristics such as profession, length of practice, hours of real work with the client, or age of identified risk groups. Results show that up to 86% of helping workers perceive increased stress from helping. 23% show symptoms of emotional exhaustion such as a first level of burnout, which has not yet developed into depersonalization or cynicism. Moreover, 15% are at risk of secondary trauma from helping others.

**Keywords:** Helping workers, perceived stress, secondary trauma, burnout, risk factors.

## 1 Introduction

Non-optimal environmental (and also working) conditions are requirements that may exceed capabilities of the coping of individual. Such an imbalance between environmental requirements and the responsiveness of the organism is referred to as stress (McGrath, 1970). Social work, like other helping professions, represents in the implementation the burden itself, and requires implementers to cope with different stressors. The relation between stress and other negative phenomena at work is confirmed there, as well as the negative correlation between stress and social support (Skiles, Hinson, 1989).

The social worker's job is often described and perceived as an ideal state of necessary help provided to a client in a difficult life situation. The demandingness of the helping profession of social work results from its particular position in relation to the client, where part of the professional performance of the work is participation in solving client's problems (Raková, Bednarek, 2015). In this context, Barnett and Cooper (2009) report that workers in helping professions are very often threatened by excessive stress and burnout. They provide help to others, although their internal and external resources may be overloaded. The field of social work belongs, in terms of the origin and development of burnout, to the most of risky ones (Ráczová, Köverová, 2017).

Workers in helping professions are threatened by an increased risk of the negative impact of selected psychosocial variables resulting from helping (Um, Harrison, 1998). Helping others is accompanied by an increased risk of emotional stress and exhaustion as a result of responsibility and engagement in helping others (Figley, 2002). Workers in the field of social practice represent a very heterogeneous group in terms of the diversity of job positions and the level of education. This is due to a wide portfolio of services and client problems. It brings a higher degree of threat by various negative phenomena, and at the same time, the diversity in the degree of threat posed by the phenomena. This is the reason why we are dealing in this paper with the extent of experienced level of stress, secondary trauma and burnout in the social field, in terms of certain work-related characteristics.

## 2 Stress

The issue of stress and the level of its experience has been a topic for researchers for a long time. Various helping target groups were examined, like students (Cohen, Kamarck, Mermelstein, 1983; Lesage, Berjot, Deschamps, 2015; Palekar, Mokashi, 2014; Rajkumar, Nehra, Arya, 2014; Jacob et al., 2012) and workers in helping professions (Lesage,

Berjot, Deschamps, 2015; Stauner, Konkoly, 2006; Eskildsen et al., 2015; Ting, Jacobson, Sanders, 2011; Waszkowska, Andysz, Merecz, 2014).

If we look at the individual in the context of an ecological perspective, the stress definition should focus on the external environment that may endanger the individual. In this context, stress can be characterized as a specific case of the burden, which exceeds the rate of adaptive capabilities and possibilities of the individual. (Paulík, 2010)

In the professional literature, it is possible to find different definitions of stress as such. The stress response is generally defined as phylogenetically encoded metabolic-functional preparation of the organism for fight or flight. It is, therefore, a significant deviation from normal, in which the integrity of the organism is disturbed, during which defensive or compensatory mechanisms are mobilized. (Bartůňková, 2010)

Historically, the stress was first investigated from a biological point of view. For the authors of the first theories of stress are considered Cannon and Selye (Evans et al., 2012).

Cannon (Evans et al., 2012) is the author of physiological theory based on the Sympathetic-Adrenal Medullary (SAM) system. It perceives stress as a certain alarm response of the organism in terms of fight-flight.

Selye (1978) started from the pathological triad of the General Adaptation Syndrome (GAS). He defined stress as body's general response to the requirements the organism is exposed to. He considers it a condition that is manifested by a specific syndrome based on all, in the organism non-specifically induced, changes (Selye, 1978). His first theories raised a great deal of interest in the scientific world and, of course, contradictory opinions.

Psychological stress models developed independently of biological models and focused on the impact of psychological factors on the response to stress. The most famous of these models is the transactional model developed by Lazarus and his colleagues (Lazarus, Folkman, 1987). According to this model, stress results from the interaction between man and the environment. While stress does not arise only because of the occurrence of some events, it associated with cognitive evaluation of the event and coping strategy that is used to deal with the event, and that also affects the level of experienced stress (Evans et al., 2012).

One of the latest theories is the theory of allostatic load (McEwen, 1998), which offers a dynamic view of stress as a continuous effort of the body to achieve allostasis, resp. stability through change. According to this theory, there is no ideal state of physical functioning. When a person is confronted with a stressor, physiological stress systems are activated in order to find a new balance.

## 3 Stress and its sources as the negative consequences of practising helping professions

Excessive stress, burnout, and experiencing secondary trauma, affect an individual's health, an increase in emotional exhaustion and feelings of anxiety occur (Redeke, Mahoney, 2000). The overall quality of life can be affected and, at the same time, also the job satisfaction and effectiveness of the work of social workers.

According to Baranovská (2014), there is no single definition of stress that would 100% name what stress actually is. One feels stress subjectively, so he/she perceives and evaluates certain circumstances as stressful subjectively. We understand stress as a form of specific escalation of burden that is by an individual

considered to be extreme and threatening his/her subjective feeling of well-being, what leads him/her to tension.

The concept of stress is also associated with the term stressor. Stressor is most widely defined as a situation that is affecting health (Eswi et al., 2013). As a real physical, mental or social event/stimulus that affects an organism and forces it to respond in a certain way (Donatelle, 2013). Bratská (2004) classifies here problematic, frustrating, conflicting or depriving situations that the individual encounters. These are circumstances, in which high demands and requirements are put on man. Stress is then the consequence and manifestation of perceived load and response to the stressor (Móricová, 2011). In this concept, we assume that the negative consequences of helping professions such as burnout, secondary trauma, or compassion fatigue are forms of stress, resp. result from experiencing stress.

Human performance in stress depends on a number of factors related to the individual and on the specific characteristics of the situation in which these actions are performed (Bourne, Yarpush, 2003). Effects of stress on human performance in general can be very difficult to predict on an individual level. The intensity of a particular stressor can be increased without measurable effect on the performance of the individual, while the same increase may be associated with a dramatic deterioration in the performance of another individual. Whether it is a disposition or experience, some individuals are simply more able or fit than others to cope with stress (Staal, 2004).

Excessive stress, burnout and experiencing secondary trauma affect the health of an individual, an increase in emotional exhaustion and anxiety occurs (Redeke, Mahoney, 2000). The overall quality of life can be affected and, at the same time, also the job satisfaction and effectiveness of the work of social workers.

According to Mann (2004), as a result of intensive work with the client's emotions, helping workers can suffer from compassion fatigue in the form of secondary trauma. Secondary trauma represents a vicarious stressful experience that results from the act of telling the trauma story by someone who experienced it directly (Cunningham, 2003). Also on the basis of direct assistance in a stressful event, for example in the form of crisis intervention after a mass car accident. Although a social worker is not directly in the role of a victim of a major event, the client's event may be a source of stress and can have the same impact on him/her. As a result, he/she may experience symptoms of secondary trauma in the form of terrifying dreams, feelings of helplessness, or frequent thoughts about the client's situation.

Burnout occurs after long-term exposure to stress. Employment and the working environment are the main source of stressful situations. Workload and stress can be a consequence of the overall atmosphere and relationships in the workplace, structure, and environment. Each person reacts to stress and stressful situations in a different way. Each person can handle a certain level of burden and its limits are very individual. An internal factor, contributing to the resilience of a person to the adverse effects of stress, is its personality. External factors include social support and social network (Kupka, 2008). The area of social work, in terms of origin and development of burnout, belongs to the most of risky (Ráčzová, Köverová, 2018).

Social workers are often exposed to traumatic life experiences of their clients and behaviours associated with them (Skiles, Hinson 1989). Working conditions for practising social work in Slovakia are characterized by low salaries, a large number of clients, lack of time, lack of total funds for the job (workspace and equipment) and the negative perception of the society (supported by media) (Lovašová, 2014). These conditions, along with the complexity of the profession of social worker, together form such a summary of stressors that it can be assumed that the stress perception of these workers will be high, which is confirmed by various studies (Skiles, Hinson, 1989; Lesage, Berjot, Deschamps, 2015; Stauner, Konkoly, 2006; Eskildsen et

al., 2015; Ting, Jacobson, Sanders, 2011; Waszkowska, Andysz, Merez, 2014).

#### 4 Research

The aim of the research, for the interests of this paper, was to analyze the percentage of helping workers, who perceive increased stress, workers with symptoms of burnout and compassion fatigue. The intention was to highlight the selected work characteristics that lead to these negative impacts of helping, and to present the characteristics of risky workers.

##### *Research sample*

The research sample consisted of 739 workers of helping professions in the field of social services (educators, nurses, social workers, psychologists, social therapists). Individual facilities were selected from the list of social service providers available on the website of the Ministry of Labor, Social Affairs and Family (<https://www.employment.gov.sk/sk>). Selection was made by means of a random number generator so that social facilities from all eight regions of Slovakia were proportionally represented. This way, 14 workplaces were selected, which were subsequently contacted by phone and data collection was carried out after obtaining their consent with the participation (with the condition of anonymity met). Questionnaire batteries were sent to individual workplaces by mail. The average age of respondents was 44.04 (SD = 10.33), the youngest respondent was 20 years old and the oldest one was 65 years old. 81 men and 658 women participated in the research, reflecting a real disproportionate gender representation in the examined professions. The average number of years of practice was 13.11 (SD = 10.49).

##### *Measurement tools*

Perceived stress scale (PSS-10, Perceived Stress Scale, Cohen, Kamarack, Mermelstein, 1983; Slovak version by Hricová, Ráčzová, Lovašová, 2018). PSS represents a self-assessment questionnaire focused on assessing the level of perceived stress among individuals during the last month on a 5-point Likert-type scale with verbal anchors from 0 - never up to 4 - very often. The scale consisted of ten items, while six (p1, p2, p3, p6, p9, p10) are negatively formulated in terms of feelings of helplessness and anger (e.g. "How often did you feel nervous or stressed in the last month?"). Together they form the sub-scale 1. The remaining four items (p4, p5, p7, p8) express individual's perceived self-efficacy and ability to handle problems (e.g. "How often did you feel that the things went the way you wanted, in the last month?"), and before calculating the overall score, it is necessary to overpole them. These items represent the sub-scale 2 (Cohen, Williamson, 1988). When evaluating the overall score, it is valid that the higher the score an individual achieves, the higher the level of stress he/she perceives. The final score is calculated by counting all ten items. Items are formulated in general (the wording of the Slovak version of the questionnaire is presented in the end of the paper). Internal consistency was 0.87.

Professional Quality of Life (ProQOL, Professional Quality of Life Scale, Stamm, 2010, Slovak version by Köverová, 2017). The questionnaire focuses on the subjective assessment of the quality of life in relation to the practising of helping profession. The Slovak version of the questionnaire consists of two factors, namely ProQOL-CS (Compassion satisfaction), e.g. "The ability to help people satisfies me", and ProQOL-STS (Secondary Traumatic Stress) "I feel like I'm experiencing the trauma of someone I'm helping." The original version contains ProQOL-B factor (Burnout), which was not included in this analyzes. The role of the respondent is to evaluate the items on the 5 points scale (0 = never, 5 = very often), in terms of how often he/she experienced the mentioned, during the last month. The internal consistency of items in the factor of compassion satisfaction reached 0.80 and the consistency of the secondary traumatic stress was 0.85.

Maslach's burnout questionnaire (MBI-HSS, Maslach Burnout Inventory, Maslach, Jackson, Leiter, 1996). The questionnaire

focuses on subjective evaluation of the extent of burnout in helping professions. It consists of 22 items divided into three factors: emotional exhaustion MBI-EE (state of physical and mental exhaustion, for example "At the end of the day I feel exhausted."), depersonalization MBI-DP (insensitivity to recipients, for example "I feel that I handle some recipients as they were impersonal things.") and factor personal accomplishment MBI-PA (indirect indicator of burnout in a form of a level of personal satisfaction with work competences and work performance, for example "I am able to solve problems of my clients very effectively."). The role of the respondent is to choose option that best describes him/her on the 6-point scale (0 = never, 6 = every day). To calculate the score, the higher the score, the higher the level of the measured variable in the individual factors.

MBI-HSS measures the level of the variable on each scale in three degrees - high, moderate, low. Grading is carried out by means of intervals of points. For emotional exhaustion factor: low degree 0-16 points, moderate 17-26 and high 27 or more points; for depersonalization factor: low degree 0-6, moderate 7-12 and high 13 or more points; for personal accomplishment factor: low degree above 39 points, moderate 32-38 and high below 31 points. Internal consistency for emotional exhaustion factor was 0.86, for depersonalization factor 0.73 and for personal accomplishment factor 0.72.

### Results

In the presented paper, we are dealing with the level of experienced stress, level of risk of secondary stress and burnout among respondents. In conclusion, we verify the relationships between the phenomena examined.

The level of experiencing stress and secondary trauma was verified in the first step. We examined the percentage of helping workers who are at risk from increased impact of negative consequences resulting from helping. Specifically, we've been investigating how many people in our sample are experiencing increased stress, exhibits symptoms of secondary trauma and burnout.

Based on the answers on a 1-5 scale, we distinguished between helping workers who have a lower risk of stress and secondary trauma (answer 1 and 2 on scale), and those who show symptoms of secondary trauma and stress (answer 3, 4, 5). As we can see in Table 1, helping workers are particularly threatened by the impact of increased stress. Concretely, up to 86% (646) of respondents perceive increased level of stress during the last month. While analyzing items, statements such as: "I felt stressed out in the last month." or "Last month I found out that I am not able to handle all the things I need to do.", dominated. Workers with increased stress are mainly nurses (N = 218) who provide regular physical care for clients of social institutions and social workers (N = 169). They have more than 10 years of experience in the field (N = 348), and they work with clients for more than 28 hours a week in average (N = 526). These factors can be considered as risky.

Table 1: Level of the risk of stress and secondary traumatic stress among workers in social field

	Lower level	Higher level
<i>Perceived stress</i>	13% (93)	87% (646)
<i>Secondary traumatic stress</i>	90% (666)	10% (73)
<i>Compassion satisfaction</i>	6% (45)	94% (694)

For comparison, only 10% (76) of respondents show symptoms of secondary traumatic stress. In particular, those who have a work experience of up to 10 years (N = 28) and work in the position of a nurse (N = 34) or a tutor (N = 18). On average, they spend more than 28 hours a week (N = 39) with a client. This result shows in what entities respondents work - secondary trauma is experienced by those respondents who work with

clients searching for help or requiring care due to traumatizing life events. However, this does not apply to all respondents.

On the other hand, up to 94% (694) of addressed helping workers reported an increased rate of compassion satisfaction in the form of: "The competence to help others fills me with satisfaction."

In case of burnout, respondents were divided into three groups, as described in the Measurement tools section. As we can see in Table 2, helping workers are mostly threatened by emotional exhaustion from helping, 27% (198) of respondents. Most dominant were items such as: "I feel like fulfill my tasks so conscientiously that it's getting tired of it." or "At the end of the day I feel exhausted."

Table 2: Level of risk of burnout among workers in social field

	Low	Moderate	High
<i>Emotional exhaustion</i>	46% (341)	28% (206)	27% (198)
<i>Depersonalization</i>	74% (550)	19% (138)	8% (56)
<i>Personal accomplishment</i>	39% (289)	31% (232)	30% (224)

In terms of risk factors, those were especially nurses and healthcare staff (N = 100), with over 10 years of experience (N = 124) and average hours spent with clients over 28 (N = 123) per week. Manifestations of depersonalization occurred in only 7% of respondents. Those were mainly tutors (N = 17) and social workers (N = 20), with over 10 years of experience (N = 30) and in contact with clients over 28 hours a week (N = 32). Their age average was lower M = 40.96 (SD = 10.11) compared to the age average of the entire population.

In the last step, we have verified the relationships between the variables examined. Interdependencies between variables were verified based on the normality response distribution, by correlation (Pearson). Mutual positive correlations between stress, secondary trauma, emotional exhaustion and depersonalization were confirmed. Negative correlations have been confirmed between stress, compassion satisfaction and job satisfaction that represented positive dimensions.

Table 3: Correlations between the level of experienced stress, secondary trauma and burnout

	stress	
	Pearson corr	p(α)
<i>compassion satisfaction</i>	-0,489**	<0,001
<i>secondary trauma</i>	0,476**	<0,001
<i>emotional exhaustion</i>	0,499**	<0,001
<i>depersonalization</i>	0,314**	<0,001
<i>job satisfaction</i>	-0,366**	<0,001

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### 5 Discussion and conclusion

In the research conducted, we attempted to determine risk factors in relation to the level of perceived stress, burnout and secondary trauma in its three factors. We determine two risk factors that have been confirmed, regardless of the working position of respondents: work experience over 10 years; an average of more than 28 hours per week of real work with the client. In terms of

job position, nurses, healthcare staff and social workers prove to be most at risk.

Figley (2002) in his study examined the compassion fatigue syndrome in psychotherapists who work with chronic disease. He found out that they tend to overlook their own needs in the field of self-care, because they focus on the needs of clients. The author describes compassion fatigue through a multifactorial model that puts emphasis on the value of care, empathy and emotional investment into the help with suffering. This model suggests that the ability to reduce stress from compassion and addressing traumatic memories, together with effective coping with case load, are effective ways to avoid compassion fatigue. This model also suggests that in order to reduce stress from compassion, psychotherapists with chronic manifestations need to develop ways to increase their satisfaction and to learn emotionally and physically break away from work, thus increasing their self-care competencies, to achieve regeneration. Research in a large sample of police officers (N = 1390) was conducted by Battle (2011) in the United States. The aim of the research was to determine the relation of compassion fatigue with job satisfaction and burnout syndrome, in terms of length of practice and previous experience. Police officers have achieved above-average score on Compassion fatigue scale. The length of practice correlated with compassion fatigue. (Battle, 2011)

Another similar research was conducted in Europe in Slovenia. The aim of the research was to verify the relationships between occupational stress, burnout, job satisfaction, and compassion fatigue. The research sample consisted of specialist medical center staff N = 118, of which n = 101 were women and n = 17 were men. The age of respondents ranged from 26 to 45 years. Socio-demographic factors were age, gender, length of practice. The correlation between the length of practice and compassion fatigue, or the gender differences in compassion fatigue, were not confirmed. (Tabaj et al., 2015)

Smith (2015) focused his research on finding the relationship between self-care and the ability to avoid the so-called compassion fatigue. The research sample consisted of 150 students of social work. In addition to finding a relationship between self-care and the ability to avoid compassion fatigue, the partial objective of the research was to find out whether there are differences in self-care and self-care trends among students. The processing of the obtained data revealed the student's primary focus on the spiritual area of self-care, which consists of activities such as: find some time for spiritual reflection, spend time in a church or synagogue, meditation or prayer, and reading inspirational literature, or listening to inspiring music. Author reasons this result by the fact that students are preparing for the practising in the field of social work, and in this way, they cope with stress. After spiritual self-care, students focus on physical self-care, and then on the emotional area of self-care.

Professionals in helping professions enter into practice with the inner conviction that their work can contribute to a positive change in their clients' lives. They expect that their work will fill them up, and this is often the where the problem begins. Job requirements and the often slow progress with clients at work may instead lead to compassion fatigue. Compassion fatigue was first discovered in connection with the burnout in nurses. It represents a cumulative process caused by constant and intense contact with the client. It starts with some discomfort in the field of compassion, it continues with fatigue from stress, and ends with complete exhaustion. At this point, the ability to cope with excessive burden and the return to the original state is already impaired. (Berry et al., 2012)

Self-care can function as a factor eliminating the negative impacts of consequences of helping professions or negative phenomena at work as such. Several studies confirm the real connections between self-care activities and negative phenomena at work.

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**Secondary Paper Section: AN, AM**

## CONSEQUENCES OF PARENTING IMPACT IN CONTEXT WITH MOTIVATION FOR DIFFERENTIATION OF ACADEMIC PERFORMANCE AT ADOLESCENTS

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**Abstract:** The presented study is focused on parenting impact and motivation for performance as factors of study progress at adolescents. The principal point of the research is based on an analytic-synthetic model of nine fields of family education and motivation for performance which reflects performance motivation and anxiety (breaking and supporting performance). The research sample consisted of 627 respondents. We think the most important is that we pointed out the differences in study success that resulted from the interaction of the parenting impact and the motivation for performance. Some recommendations for pedagogical theory, methodology and practice are a part of our study.

**Keywords:** parenting impact, motivation for performance, academic performance, adolescent

### 1 Introduction

Parenting impact (parenting style, family education, relationship between parents and children, educational style.....) is a significant factor in the formation of a child's personality. It is a phenomenon that determines socialization, personalization, professionalism, the conception of the own identity, self-perception and the value orientation of adolescents. According to Čáp & Mareš (2001, p. 303), the style of the family education is: 'One of the key moments of the education that is focused on emotional relationships between adults and children, their communication, the intensity of the requirements, the way they are specified and checked. The style is presented by the choice of educational resources and the way a child reacts to them.'

Lewin was one of the pioneers who started to deal with the parenting impact, the educational style specifically, on the basis of his own experience. He differentiated autocratic, liberal and social-integral educational style. His typological model was understandable and helping but later it seemed too simple and not everyone can be classified according to those three types. The Anglo-Saxon tradition offered the approaches to a better arrangement and complexity for more parents' approaches. They were brought under to the factors' analyse and reduced to two approach dimensions – dimension of emotional relationship to child and dimension of control that we also consider too simple and the independence of both dimensions is questionable. The mentioned imperfection is improved by the analytic-synthetic dimensional component model of nine fields by Čáp & Boschek (1994) that reflects the reciprocal impact of the emotional relationship and the educational control – those complex characteristics represent four educational components (positive, negative, requirements and freedom) and their combinations. Čáp & Mareš (2001, p. 312) reported that, 'The model of medium control associated with the positive emotional relationship is optimal. It agrees with Lewin's typology of the educational styles. It is defined as the social-integral educational style.' With respect to its positive features and its establishment in Central European context, the named model represents the basis of our research of family impact. In spite of the fact, that this model has not been discussed in foreign publications and so a comparison is impossible, we believe the model concept of nine educational fields is unique and it offers possibilities for a further research as well.

The strongest educational impact by parents on their child is associated with the start and development of the motive for performance as a relatively continual disposition of an individual that is conditioned by developmental history and life experience. The motivation for study performance is in that situation a

condition that is awoken and influenced by a complex of some internal and external factors. It is presented as a necessity for a good performance and for success at school. The motive part of man's performance is conditional on many factors. The school success is inflicted by the motive for performance as well as by avoiding failure (Pardel, Maršalová & Hrabovská, 1992). Applied Questionnaire of the motivation for performance is a modification of Hermas' performance motivation test. It is a complex questionnaire with some suitable psychometric qualities that beside the motive for performance, the scale of breaking performance and the scale of supporting performance includes. The differences between high and low motivated individuals can be associated to their different cognitive evaluation of the situation. The difference between them is in breaking performance anxiety as well. Some studies point out that the motivation is decisive in school success that depends more on motivation than on ability (Džuka, 2003). Study success, we understand as students' school performance or their corresponding behaviour with the school requirements, the school curriculum, the contents and the performance standards and their roles defined for a particular school-year and subject. Study failure is if the performance or the behavior does not agree with the requirements above or with student's possibilities and abilities. That may be the consequence of a non-existing motivation, overloading, inadaptability and so on. The failure can have a varied level, extent and duration of time (Schnitzerová, 2002).

We decided to set our research in the period of the adolescence<sup>1</sup> as a specific life period when individuals have managed the strategy of their behavior conditioned by family education, but they are still in the process of formation and education, and the results are understood as school success.

More authors have already partially studied the subject of education, motivation and school progress. In our country, the newer studies are by Čáp & Boschek (1994; 1998), Horňák (2001) with the specification on the pupils from the socially disadvantaged environment. Family education at adolescence was studied by Šramová, Lajčáková & Fichnová (2002), Šatánek (2005), in relation to the introspection and the formation of child's personality by Ďuricová (2005a; 2005b), in relation to ethnic attitudes by Oravcová (2005), in relation to assertive behaviour by Vašáková (2005). Verešová & Hušvétyová (2005) mentioned family education in relation to problems with dangerous behaviour by Gecková (1998a; 1998b; 1999), Širůček (2001), Verešová (2003), Nevolová (1991), Šimová (1994), Koestern, Millerová & Hummertová (2001), Criss et al. (2003) and the others. Kollárik, Marušincová & Okružlicová (1992); Vágnerová (1997) and Průcha (1997) dealt with school failure.

In the foreign research studies, the problems of the parenting impact according to warmth, psychological control and behavioral control with respect to school involvement and children's achievement were solved by Stright & Yeo (2014). Fulton & Turner (2008) dealt with the impact of warmth, autonomy granting and supervision of students' academic motivation. They arrived at the conclusion that parenting probably influences the development of motivational beliefs during childhood and adolescence. Finding of Gottfried, Nylund-Gibson, Gottfried, Morovati & Gonzalez (2017) indicated that students' early motivation relates to need for cognition and educational attainment during adulthood. The contribution of parental involvement to school students' motivation was studied by Gonzales (2010). Thomas, Keogh & Hay (2014) discussed good parenting attributing to school success. Hickman, Bartholomae & McKenry (2000) also dealt

<sup>1</sup> Hartl, Hartlová (2015, p. 18) characterized adolescence as a developmental period which is between childhood and early adulthood, characteristic of adolescence is the onset of secondary sexual characteristics, reaching sexual maturity, maturing intellectual abilities and the completion of personal integrity.'

with influence of parenting styles on the adjustment and academic achievements. According to Tulk, Montreuil, Pierce & Pépin (2016), parental working conditions have an indirect effect on the psychological well-being and educational success of adolescents, through family environment, parenting and the quality of the parent-adolescent relationship. The problems of the motivation with regard to the motive to achieve success and the motive to avoid failure were studied by Gjesme (2006a) and Nygård (2006), considering the performance Gjesme (2006b), with regard to academic standing and social position Life (2013) specifically, whether they will sacrifice social position for academic standings or vice versa. Goulart & Bedi (2017) found out that children with high levels of interest are 6–10 percentage points less likely to fail as compared with children with low and medium levels of interest in school. Result of Penner (2016) indicated that educational engagement consistently predicts achievement growth. It is positively associated with achievement for students with lower socioeconomic status. According to Yu & Singh (2018), teacher support influenced student mathematics achievement indirectly through students' mathematics self-efficacy, and also influenced students' interest in mathematics courses. Students with higher prior achievement were also more likely to perceive higher levels of teacher support. Abdollahi & Noltemeyer (2016) provided evidence that commitment, control, challenge, and sense of belonging to school were positively associated with academic achievement. Hill, Witherspoon & Bartz (2018) dealt with understanding of parental involvement in education. Boon's (2007) statements are closest to our study when she studied parenting (warmth and strictness/supervision), motivation (mastery goal orientation, self-efficacy and self-handicapping) and academic achievement, she arrived at the conclusion that low achievement was significantly linked to neglectful parenting perceptions, higher self-handicapping and lower mastery goals and self-efficacy. An authoritative parenting style was found to predict higher achievement via enhanced mastery goals and self-efficacy while protecting against self-handicapping.

Nevertheless, we suppose we are missing a more complex view of the interaction of the mentioned phenomena and the consequences of the formation of individuals and their study progress.

The goal of the research is to analyse the problems of family education from the point of view what kind of the parenting impact is applied like. It has a key role at developing and intensifying positive or negative aspects of the motivation for performance. We consider the parenting impact and the motivation as factors influencing the study success of an adolescent. Based on the gathered results, we want to interpret the reciprocal relation among three studied phenomena – parenting impact, motivation for performance and study success of an adolescent.

We presume there are some differences in study success in regard to the parenting impact in context with the motivation. We want to study the existence of a relation among the parenting impact, the level of the motive for performance and the study success of an adolescent in the educational environment. We presumed specifically that the more positive emotional relation and the more adequate educational control parents have, the higher is the level of the motivation for performance which then positively effects the study achievement of adolescents. We came to that conclusion in our previous pilot study as well (Mayer 2013; 2015) where we studied 386 students at Grammar Schools (2013) and 511 students at Grammar Schools and specialized academies (2015). The study showed that the reduction of the model of nine educational fields to three educational styles by Lewin and putting the rest of students into one heterogeneous group is not an optimal solution because Lewin's educational styles do not cover the scales of educational approaches in contemporary families and a big number of the respondents did not suit into the traditional model of three parenting styles.

## 2 Method

### 2.1 The research sample

The research sample consisted of 627 adolescents of the second and third school-year at three grammar schools with a varied study focus (Grammar School on Konštantínova Str. 2, Grammar School of St. Nicolas and Grammar School with a focus on physical training) and three academies (Hotel Academy, Business Academy and Pedagogical and Social Academy) in the district of Prešov. The number of enrolled girls and boys was about the same in the sample (316 boys, 309 girls). The research sample included the students in the second school-year 52.4% and in the third school-year 47.6%. The age of the respondents was from 15 to 18.

### 2.2 Methodology

#### *a) Questionnaire for the Survey of Approaches in Family Education*

The questionnaire for the survey of approaches in family education by Čáp & Boschek (1994) is a standardized one based on an analytic – synthetic, dimensional component model of nine fields that reflects the reciprocal functioning of the emotional relationship and educational control. It includes 40 issues relating to the father's educational approach and the same 40 issues for the mother, 10 issues for each of four components of the education – the positive and negative component, then the component of requirements and freedom. The questionnaire detects educational approaches of parents based on respondents' answers by monitoring two complex educational characteristics: first, the quality of the emotional relationship that is formed by the positive and negative component and then the whole educational characteristics of the power of the educational control that is presented by requirements and freedom.

With regard to the fact that the mentioned approach is not discussed in reputable magazines, we think it is necessary to give the basic characteristics of the fields. The educational impact in field 1 is characterized by strict instructions and restrictions that have to be fulfilled. Otherwise, strict and humiliating punishments follow. Parents assess children's ability negatively, they make fun of them or they are ironic, they discourage the child from study, job and partnership. A good performance is taken for granted (without any praise). It follows frustration. In field 2 restrictions and instructions are not dominant, detailed control and frequent punishments are missing. Lack of interest in children is predominant, indifference to them, absence of positive emotions and empathy. Parents do not require and expect a good performance because they do not believe in child's ability. The child sometimes tries to achieve a good performance and goals in spite of family indifference. Field 3 represents disagreement of parents in educational control or of one parent. One parent is too strict, he or she punishes the child, the other parent protects the child he or she pardons the child and covers child's problem, resp. a parent can act like in field 1 or on the other hand, he or she is liberal (no interest in child and freedom). The mentioned educational type results in confusing, chaotic and frustrating situation. A common sign for field 4 to field 8 is a good climate in family – good time and humour, good relationship, support and encouragement, common activities. Field 4 is characterized by parents who are a consistent authority for child but a kind, understanding and close person as well. Positive emotional relationship makes acceptance of instructions and restrictions easier. It is characteristic for field 5 that adolescents assess this educational impact very positively because the relationship in family is friendly and a partnership is predominant. In the family, understanding, respect to each other and common activities are predominant. There are not any unsuitable requirements and strict punishments. A positive emotional relationship with a weak control in field 6 results in friendly relationship between parents and children and lack of requirements and criticism. Parents try to satisfy children, pardon them and they try to speak for them. When children fail at school or do not keep requirements, they speak to them and expect that the children will fulfil promises without any control. Emotional relationship in field 7 creates good emotional climate,

however, the field does not offer defined and homogeneous picture of a family. It depends on whether the child is influenced by parents with stronger or weaker control. A decisive component of field 8 is extremely positive emotional relationship and children consider weak control by parents as medium educational control. They feel there are not any requirements and their control. Parents are authority and children trust them completely. Field 9 is characterized with a negatively-positive emotional relationship, adolescents perceive one parent as negative and the other one as extremely positive. The authors do not specify subgroups according to educational control because in their opinion, the field is numerous. According to traditional Lewin's model field 1 agrees with autocratic educational style, liberal educational style can be found in fields 2 and 6, fields 5 and 8 cover social-integral educational style and fields 3, 4, 7 and 9 get over three models of educational style.

#### *b) Questionnaire for Motivation for Performance*

The questionnaire for the motivation for performance by Pardel, Mařalová & Hrabovská (1992) is also a standardized one consisting of 52 issues (the first one is instructive, not evaluated) that forms 3 scales: the scale of performance motivation, the scale of breaking performance anxiety and the scale of supporting performance anxiety.

*The scale of the motivation for performance* covers 24 issues including the following aspects: the aspect of behaviour (8 issues), the aspect of aspiring level (5 issues), the aspect of perseverance at work (5 issues) and the aspect of time indication for the future (6 issues). The expression "work" used in the issues is schoolwork, i.e. learning or studying. The scale of the motivation for performance represents a more homogeneous scale that corresponds with a more constitutive understanding of the structure of the performance motivation as we can see in the characteristics above.

*The scale of breaking performance anxiety* consists of 17 issues and the authors describe them as self-admitting of a worse performance, loss of promptness and activity under the stressful conditions that occur in a critical, stressful or new situation.

*The scale of supporting performance anxiety* consists of 10 issues and affects the link between a slight tension and a mobilisation of activities as advantageous conditions for a good performance. The scales of breaking performance and of supporting performance anxiety are more homogeneous.

#### *c) Demographic Questionnaire*

The demographic questionnaire was made to get anonymous data about the respondents. It presents the characteristics (age, school, school-year). A part of the demographic questionnaire is a review of the final results (marks) in particular subjects – Slovak language, two foreign languages (English, German and French or Russian language) Mathematics, IT, Civics and Physical Training.

### **2.3 The plan of the research**

The research activity was focused on the plan of the research type ex post facto with an attributive independent variable. Our starting point was the independent variable (parenting impact) that was represented by the model of nine fields. We used the Questionnaire of nine fields to find out ways of family education and a respondent could be placed in one of nine fields in that questionnaire. We understood the starting independent variable as a presumed potential reason of expected changes in the dependent variables – motivation for performance and study success. The variable of motivation has three scales – motivation for performance, breaking performance anxiety and supporting performance anxiety. The quota of gained gross score in particular scales and the number of issues in particular scale showed the average in each scale and could be in the range from 1 to 6. The indicator of study success was the average of marks in particular subjects at the certificate of the adolescent. A standard qualification in Slovakia was used (1 – excellent, 2 – very good, 3 – good, 4 – satisfactory, 5 – unsatisfactory). The

motivation for performance has a special place in the research because we understood it as the dependent variable in relation to the educational impact in family. However, we studied it in the interaction with the parenting impact as a presumed reason of changes in school success, i.e. in the position of the attributive independent variable. In order to study the parenting impact and the motivation for performance as independent variables and their reciprocal interaction expecting some changes in the dependent variable of study success, we used factorial plan of type  $9 \times 3$ , i.e. the research plan included two independent variables, the first included 9 types of parenting impact and the other (independent variable of the motivation for performance) always represented three grades (weak, medium and strong) at each motivation scale (motive for performance, breaking performance anxiety, supporting performance anxiety).

The research was done in the school-year 2017/2018. The data from the respondents were gained continuously during 45 minute class meetings, with the agreement of the school managements for the particular classes and schools, and the cooperation of the students was voluntary and anonymous. The statistical data were processed with the statistic programme SPSS Statistic 24.0 for Windows.

### **3 Interpretation and discussion**

The research fulfilled our expectations. We state that our results are in agreement with the pilot study and standards by the authors of the questionnaires. Many of our premises were proved, while some of them did not achieve the significant level of importance because of some conditions and other factors, but they showed the set trend.

We came to the conclusion together with Mayer (2013; 2015), Ďuricová (2005a; 2005b), Oravcová (2005) that we meet a negative emotional relationship (61.45%) and contradicting educational control (37.77%) in most families which results from the present status of families. We come across some phenomena, e.g. lack of time [Čáp (1999) indicates a connection between lack of time and negative emotional relationship]. In our study, we base on the statements of developmental psychology represented by Vágnerová (2000), Langmeier & Krejčířová (1998), Macek (2003), lack of time does not allow express all feelings. We also think that negative feelings can have their origin in adolescents' egoism, their opinion can be influenced by emotions easily. The stress caused by working duties can result in ambivalence of relationship to adolescents – once benevolence and then commands. Disharmonious educational approach to the problems and its consequences in case of divorce is presented by Pavlůvčíková & Warošek (2004). The most numerous field was field 3 (196), the least numerous field 9 (17). If we looked at our statement through the optic of the traditional educational styles, then the most numerous educational style was the liberal one that is at 25.44% adolescents predominant, the next one is autocratic educational style (18.39%) which is in agreement with the results by named authors. Our results are in agreement with the statements by Turček (2003) and Zelina (2004) that the most applied educational style is the liberal one.

Based on the resources by Džuka (2003), Macek & Lacinová (2006) and Vágnerová (2000) and on the results gathered in the Questionnaire for Performance Motivation by Pardel, Mařalová & Hrabovská (1992) and conclusions by Mayer (2013; 2015) we expected that the predominant level of the motivation is at the medium level ( $M=3.79$ ). This level awakes the body for a performance, but at the same time it does not limit the performance which we fully confirmed. A subjective tension cannot only lead to breaking performance ( $M=3.36$ ) but to its supporting performance ( $M=2.75$ ) as well because we need a certain activating level to a performance. Our activity rises with mild anxiety and fear. If there is not any anxiety, there is no reason to try. With regard to that we believe in a certain level of anxiety as a positive and useful feature to achieve an optimal performance at adolescents. We think we arrived at those results because of the types of schools where the motivation is

necessary to achieve excellent performance and to be able to study at colleges in future.

In our sample, the students with excellent school achievements were in the first place, in the second place the students with the grade of very good. Study success was confirmed with the average of 1.76. According to Macek & Lacinová (2006), a successful performance is an important value in the time of maturing and the study performance is its indicator. We consider it as a consequence of the interest in studying, which results in further education at colleges and in getting a good social position in a group, or as a pressure from parents to achieve good performance. The results agree with the conclusions by Mayer (2013; 2015), Penner (2016). The mentioned data is supported by the fact that almost half of the students achieves excellent results according to the internal statistics of District School Department in Prešov.

At the end of this part, we would like to summarize. In our sample, the negative emotional relationship of parents to their children, the contradicting educational control, the medium level of motivation for school performance and the high study success are predominant.

The significant difference in study success with respect to the parenting impact ( $F=2.47$ ;  $p=0.013$ ) were confirmed. The best study results were achieved by the adolescents who are in educational field 8 ( $M=1.46$ ), field 5 ( $M=1.51$ ) and field 4 ( $M=1.52$ ) in the model of 9 fields, on the other hand, the students, who are educated according to field 3 ( $M=1.84$ ), field 2 and field 6 ( $M=1.67$  the same results), have the worst study performance. We proved that hypotheses on the base of statements by Hickman, Bartholomae & McKenry (2000), Džuka (2003), Thomas, Keogh & Hay (2014), Tulk, Montreuil, Pierce & Pépin (2016). In their opinion, study success is conditioned by a complex of internal, subjective, biological, biopsychological and external factors including education where parents are a model and where their pressure on a good study performance can be counterproductive. Real study abilities of students and following results are related to the parenting impact in addition to the other factors. If we want to develop these abilities, we have to influence the parenting impact as well marks [see also Gjesme (2006b)].

At a significant level of importance, we also confirmed the differences in study success based on the motive for performance ( $F=12.36$ ;  $p=0.000$ ) and breaking performance anxiety ( $F=3.36$ ;  $p=0.036$ ); in case of supporting performance anxiety the results were now statistically important ( $F=0.93$ ;  $p=0.396$ ). We presumed that the students with a strong motive for performance are oriented to success and they also achieve it. They determine realistic goals. They consider the product of their acting as the result of their own effort. They think that their success is the result of their own abilities and their failure is only consequence of time related variable factors as e.g. lack of effort. In self-evaluation of such a person, pride, satisfaction after success and sometimes disappointment after failure are predominant. Performance situations are a challenge and these adolescents confront their abilities with realistic requirements that lead to the next success and self-confidence.

The performance and a successful performance especially is an aid to achieve and to keep social status which adolescents depend on [Džuka (2003), Macek & Lacinová (2006), Life (2013)]. The strong motive for performance was confirmed with grades  $M=1.36$ . According to the above mentioned, emotions and fear or doubts play an important role at the performance and they have an impact on the complex evaluation of adolescent (Macek & Lacinová, 2006; Džuka, 2003). It is interesting that breaking performance anxiety differentiates study grades but not in the way we expected. The best study results ( $M=1.62$ ) were at adolescents with the highest level of breaking performance anxiety. It is a surprising discovery – we would assume the opposite tendency at the character of searched differences. We think in that case, we meet with a very strong motive to be successful and with a strong social motive. The motive for

performance and the effort to get an excellent evaluation can lead an adolescent to a better effort in spite of big anxiety. He wants to be excellent to gain social prestige and a good position in a group. An important role plays here systematic preparation that is necessary at those types of schools. The motivation became the factor of study success. The results related to the differences in study success with regard to supporting performance anxiety agree with Yerkes – Dobson's rule although not at significant level. In our sample, there were not big differences presented in the medium grade of supporting performance anxiety and the weak grade of supporting performance anxiety. We think it could reflect in the fact we did not confirm that hypothesis, i.e. not big differentiation of supporting performance anxiety differentiated results at adolescents significantly. The best results were achieved by adolescents with the medium grade of supporting performance anxiety ( $M=1.65$ ). Macek & Lacinová (2006) state that students often show anxiety and doubts. The subjective tension can influence the performance in a negative way but it can also support the performance because a certain activating level for the performance is needed.

The main research hypothesis about the link between the parenting impact, the motivation for study performance and study results was confirmed only partially and it is necessary to continue and to study the indicated links. Čáp & Boschek (1994) say that the data about educational approach are necessary in practice when we want to solve the problems of education and performance, the information about parent – child relationship is important when we want to explain problems of performance and of impaired motivation of a student resulting in a bad study performance. We tried to prove their statement in our study and to confirm a relation among the parenting impact, the motivation for performance and study results.

We can state that the link the parenting impact, as it is presented in the model of 9 fields by Čáp & Boschek (1994), the motivation for performance and study results was confirmed. At a significant level of importance, we confirmed the interaction between the parenting impact and the motivation for performance in context with study success. The mentioned data functioned separately ( $F=3.15$ ;  $p=0.039$  and  $F=12.29$ ;  $p=0.000$ ) as well as together ( $F=2.76$ ;  $p=0.041$ ). We came to the conclusion that a positive even extremely positive emotional relationship of parents and a strong, medium, resp. weak educational control in family without any extremes in the sense of contradicting educational control (field 4, field 5 and field 8) together with the strong motivation for performance influence the study results positively ( $M=1.18$ ;  $M=1.00$ ;  $M=1.11$ ). On the contrary, the highest average score and so the weakest study success were at the respondents who had a negative emotional relationship and peripheral forms of educational control (field 3 and field 1) and medium respectively weak level of the motive for performance ( $M=2.50$ ;  $M=2.00$ ). In seven from nine fields (1, 2, 4, 5, 6, 8 and 9) it was clear that increasing intensity of the motive for performance results in better marks [see also Čáp & Boschek (1994), Boon (2007), Mayer (2013; 2015), et al.].

The breaking performance anxiety ( $F=3.203$ ;  $p=0.039$ ) was demonstrated as a statistically significant factor. The interaction with the parenting impact is not significant ( $F=0.841$ ;  $p=0.639$ ) as much as at the motive for performance. We explain it as consequences of self-doubts that result in intensive preparation, an effort to manifest parents something, to gain social prestige, resp. in case of field 1 parents' pressure on their performance. They feel afraid of them and have to fulfil their instructions. The average gained score shows that the marks of the adolescents get better when breaking performance anxiety rises. We noticed this tendency in five fields. That means that the character of the field is not decisive in this case because all mentioned fields include various combinations of emotional relationship and educational control. Two relatively best study results, one absolutely best ( $M=1.00$ ), were achieved by the adolescents from field 9. The weak breaking performance anxiety in the interaction with fields 5, 6 and 7 produces the weakest study assessment ( $M=2.01$ ;  $M=2.03$ ;  $M=2.04$ ). The adolescents from field 3 (negative

emotional relationship and contradictory educational control) at weak breaking performance anxiety ( $M=2.33$ ) achieved the worst result.

If breaking performance anxiety is low and parents' approach is kind, adolescents do not feel that they have to achieve a good performance. We did not get statistically significant differences ( $F=0.643$ ;  $p=0.848$ ) at the interaction of the parenting impact and supporting performance anxiety. However, the results show a trend like at the interaction of the parenting impact and the motive for performance. It seems with regard to the education, the decisive factor is the positive even extremely positive emotional relationship and the medium grade of supporting performance anxiety (an adequate activating level) at all three types of the educational control except contradictory one. The adolescents also achieve good study results ( $M=1.18$ ) in case of the negative emotional relationship and the strong resp. weak educational control (field 1 and field 2) and supporting performance anxiety. It is obviously the same principle as it is at breaking performance anxiety. The best results at all levels of supporting performance anxiety are at the adolescents from field 9. The adolescents, who come from the families with a positive even extremely positive emotional relationship and strong, medium, resp. weak educational control (field 4, field 5 and field 8) with medium level of supporting performance anxiety ( $M=1.30$ ;  $M=1.55$ ;  $M=1.48$ ), were also successful. On the contrary, the worst study results achieved the respondents from field 3 (negative emotional relationship and contradicting educational control) at all grades of the motivation for performance ( $M=1.81$ ;  $M=1.83$ ;  $M=2.54$ ). The adolescents from field 4 together with strong supporting performance anxiety ( $M=2.05$ ) achieved the second weakest study result. We think that the right emotional relationship parents – children is the key to success at school.

The styles of family education probably depend on social-historical conditions (economic, political, cultural...) on characters and experience of parents and on characteristics and behaviour of educated children and their attitude to parents (Čáp & Boschek, 1994; Čáp, 1999). Džuka (2003) writes that the beginning and the development of the motive power start at childhood and some factors are presented as, e.g., the real performance of a child, the training of independence, parents' behaviour and the grade of self-confidence that is supported and given by adults. The need for a good performance is individually different and it depends especially on two factors, i.e. motive indication of parents and the own experience with success [see also Fulton & Turner, 2008]. In the Questionnaire for Survey of Approaches in Family Education (Čáp & Boschek, 1994) it is said that the pupils with a positive or extremely positive emotional relationship with parents and with control, without any extreme forms of requirements, as well as freedom, have good school results more often.

#### 4 Recommendations

The presented research is a resource of some recommendations for theory, methodology and practice in education.

##### *Recommendations for theory:*

The transformation of the research results in a theoretical level and the presentation of gathered information:

- to avoid a negative impact of a negative emotional relationship in the family and a contradicting educational control in the family, which can lead to a reduction of the motive power and an increase of breaking performance anxiety resulting in bad study success;
- to pay attention and to support the importance of a positive emotional relationship in the family and the medium educational control in context with an adequate motivation for school performance and consequently the better progress of adolescents;
- to concentrate on the presentation of complex educational characteristics and following the model of nine fields of the family education, and to leave the permanent dealing with

the classic educational models (autocratic, liberal and social-integral educational styles).

##### *Recommendations for methodology:*

Based on the research results we came to these recommendations:

- to find the other indicators of variables – educational impact in family, motivation for performance and study progress (e.g. to use other questionnaire methods - ADOR, FAST, interview with a teacher,...);
- to focus on breaking performance anxiety because it was proved as a significant factor of study success;
- to find and to eliminate the other factors that can interact and deform the interpretation.

##### *Recommendations for practice:*

In context with our results we introduce the following applications for practice:

- to appeal to parents and educational institutions to pay attention to the importance of an adequate educational approach to children, in our case to adolescents which should be joined with a positive emotional attitude and a medium educational control. They affect with some other factors very positively on the motivation for performance and study success;
- to focus on the elimination of the fear of failure in the motivation for performance through motive programmes with the goal to explain how to set a realistic goal, how to describe results so that it has a positive impact and how to consider the consequences so that the person can have positive emotions. After these partial processes are improved, we expect students to find the way to success;
- at school assessment of student to use an individually related norm instead of a permanent comparison of students with the class average. It means adolescents can make a self-assessment, and so they can see more clearly whether they have improved or stagnated in regard to their effort. That enables them to feel the power of their own activity and prevents any feeling of inability.

#### 5 Conclusion

We can state that our sample represents the negative emotional relationship and the contradicting educational control (field 3) mostly, the adolescents achieved mostly the medium grade of the motivation for performance and excellent study results. The differences in study progress resulting from the interaction of the parenting impact and the motive for performance were demonstrated at a significant level of importance; in our opinion, field 4, field 5 and field 8 are the most optimal together with the strong motive for performance. Breaking performance anxiety also facilitates to achieve good study results as a separate factor, the interaction between that anxiety and the parenting impact is not decisive. The parents' emotional relationship seems to be the key that has positive consequences on study success and exceeds to other spheres of life at adolescents and has a strong motive for performance.

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#### Primary Paper Section: A

#### Secondary Paper Section: AM, AN

## THE RELATIONSHIP BETWEEN FAMILY FACTORS AND SOMATIC PROBLEMS IN ADOLESCENCE

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**Abstract:** The paper examined the presence of somatic symptomatology in relation to the perception of parental education, emotions and sense of security in the family environment. Those surveyed consisted of 4,847 adolescents. The defined family factors consisted of inconsistency of education, parental interest, supervision, affection and a sense of security within the family environment and these were examined in relation to selected somatic issues through the SAHA methodology. The results of the correlation analysis indicated that the quality of these family factors is related to the symptoms of somatic problems of adolescents. A positive correlation between somatic symptoms and inconsistency of education and a negative correlation between somatic symptoms and a sense of security at home were observed.

**Key words:** adolescence, psychosomatics, somatization, symptoms, family factors

### 1 Introduction

The multifactorial effect of family factors significantly contributes to the mental and physical health of the individual (Langmeier, Krejčířová 2006; Siqueland, L., Rynn, M., Diamond, 2004; Kučířek 2006; Husovská, 2013; et al.). Factors such as a sense of security, parental love, education, and interest are a significant source of emotional bonds and have a determining influence on the development of the individual. A malfunction of the individual factors can be manifested as somatic problems, as evidenced by many studies, e.g.: (Danzer, 2001). The transition period, for example adolescence, is considered as a high-risk period for the development of psychological and somatic problems (Démuthová 2006; Paulík, 2017). The problem represents in a specific way, and it is also an expression of individual experience, perception, the process of managing challenging tasks, personality traits, and other factors. The question remains, how do the family factors during adolescence appear in each age group, by whose age definitions we consider the process of adolescence? Many studies (Blatný, et al., 2004; Blatný et al., 2005; Blatný et al., 2006) prove a relationship between psychosomatic problems and family factors. The relationship between negative emotions and health was examined in the past, e.g.: (Rachmann, 1977), the multifactorial aspect of problems appear in works by many authors (Gullone, 2000; Danzer, 2001; Siqueland, L., Rynn, M., Diamond, 2004; Jessor et al., 2006; Husovská, 2013; Doktorová, Ručková, 2015).

### 2 Characteristics of the Problems

The nature and forms of mental health care have undergone certain transformations. At present, the impact of individual factors is emphasized in the context of an individual's personal life story. Baštecký, Šavlík and Šimek (1993) state that no factor can be considered as the sole and specific cause of any somatic disorder, because psychosocial factors are applied through a complex interaction with many other factors. There is no unambiguous answer to the question of how physiological mechanisms are disturbed and thus the psychosocial pathology develops. The somatic, psychological, social context and situational context have an impact on the development of the specific severity of problems. This circular causality is emphasized by Raudenská, Javůrková (2011). The emergence of somatic problems may be observed from several points of view. In a bio-psychosocial perspective, problems may be seen in the context of relationships with family, sibling and contemporaries, the psychoanalytic concept perceives somatic issues particularly

in relation to intra-psycho conflicts. Somatic problems can also be considered in the context of social relations (Kučířek, 2006; Novotný, 2009; Poněšický, 2012). At a psychological level, specific experiences are assessed and can be expressed as emotional responses. Emotions can fundamentally affect the function of individual organs and may cause somatic symptomatology. The short-term psychological adjustment and venting of feelings may not pose a great risk of developing somatic problems, but the long-term accumulation of negative emotions, such as anger, rage, sadness, sensitivity and anxiety, can act as a trigger for somatic problems (Rhudy, 2000; Matějček, 1996, 1997; Krivohlavý, 2001, 2002; Trapková, Chvála, 2007; Baranovská, 2016). The authors agree that life experiences and the quality of family relationships are important factors in the prevention of somatic problems. The basis for our research were findings that examined the family and feelings of security, e.g.: (Šulová, 1998; Gecková et al., 2000; Moran Du Bois, 2002; Směkal, 2003; Parker, Benson, 2004). These authors consider a feeling of security as a regulator and supportive element of homeostasis. In the research study, the quality of the family environment is monitored in the context of these family factors: consistency in education, interest, and emotional relationships, function of the family control systems. The first factor examined in relation to somatic problems is inconsistency of education, which emphasizes parental consistency in education in terms of setting of limits, the adequacy of requirements. The importance of education consistency is found in Matoušek and Kroftová (1998). Further, the paper examines the connection between somatic problems and parental supervision and interest. The importance of these factors is found in Matoušek, Kroftová (1998). The authors stress the need for an appropriate level of monitoring, and parental requirements. Requirements that go beyond the abilities of the individual or severely limit his or her needs may be one of the causes of homeostatic disorders and thus constitute one of the risk factors for the development of somatic problems. Another factor studied in relation to somatic disorders is emotional affection. The importance of the emotional relationship and the quality of parental support in the prevention of the development of somatic problems is found in Matějček (1996, 1997, 2001). According to the author, a positive emotional relationship is a source of a sense of security, care, understanding, social interaction, and a negative emotional relationship can represent frustration. According to Paulík (2017), frustration can significantly affect the psychosomatic condition of an individual. Next, we examined parental interest. Support for the study of this factor is found in (Macek, 2003; Verešová, Hušvetyová, 2005; Širůčka, Širůčková, Macek, 2007). According to these authors, parental disinterest may lead, for example, to emotional aversion but the contrary, interest and personal involvement may lead to harmony in the relationship between parents and children. In the context of the quality of the family environment, parental love cannot be omitted. In our research, it is the factor termed parental affection. This factor is supported by Matějček (1994, 2001), Blatný et al. (2005). Emotional support, according to the authors, fulfills a key and integrative function in the social context of health and disease. The period of adolescence which is the focus of the paper is transitory, characterized by significant developmental changes. Many changes are biologically conditioned, but many are also determined by psychological and social factors (Langmeier, Krejčířová, 2006; Macek, 2003; Směkal, 2003; Vágnerová, 2005; Blatný et al., 2006). According to Baumeister Twenge (2003), an important aspect of this developmental period is the creation of one's own identity and autonomy. The process of acquiring identity and autonomy is accompanied by manifestations of negativity and the examination of borders and the resulting parental responses (Bonino, Cattellino and Ciairano, 2005; in Blatný et al., 2006). The subjective experience of the family climate, the current and accumulated problems can be a source of feelings of helplessness, confusion or anxiety which can also be manifested by somatic problems (Paulík, 2017). In this paper, we examine



somatic problems in the psychological plane. The quality of the personal relationship between adolescents and parents as presented in the study by selected family factors may be manifested by somatic problems. Our research focused on the psychological aspect of somatic problems that have a somatoform character. The level of the individual family factors and the presence of somatic problems were detected in the perception of adolescents in three developmental cohorts. The question of somatic problems in those cohorts is not sufficiently well mapped and the results could help to analyse the specific somatic symptoms of each age cohort.

The aim of the paper was to discover the links between family factors and somatic problems, to find the frequency and comorbidity of individual somatic symptoms in three adolescent age cohorts of (12-13 years, 14-15 years, 16-19 years). With regard to these objectives, the research questions (RQ1-RQ6) and the hypotheses (H1, H2) were formulated.

#### Research Questions

- RQ1: Are there significant differences in somatic symptoms among the age groups?  
 RQ2: Which somatic symptoms are associated with a higher level of somatization?  
 RQ3: Are there differences in the specific symptoms within the age groups?  
 RQ4: Which age cohort has the highest incidence of somatic symptoms?  
 RQ5: Is there a relationship between specific somatic symptoms and family factors?  
 RQ6: Are there differences in somatic symptomatology among individual age cohorts?

#### Hypotheses

- H1 There is a statistically significant relationship between family factors (parental affection, interest, consistency in education, parental supervision) and somatic issues  
 H2 Experiencing a sense of security in the family environment is associated with a lower incidence of somatic problems

#### Research Methodology

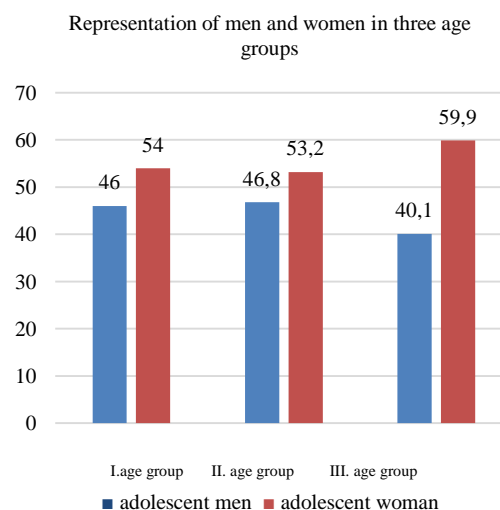
To determine the relationships between family factors and somatic problems, we used the SAHA questionnaire method (Blatný, 2004). This method was part of the International Social and Health Assessment study and identified the individual types of high risk behaviours. It was created for an adolescent population and its sub-scales allow the analysis of the conditional and predisposing factors of high risk behaviours. The individual sub-scales contain personality factors, family, school factors related to the wider social environment and health. The SAHA project is part of a larger program by the Yale Child Study Center, which focuses on the intercultural aspects of mental health and the developmental psychopathology of children and adolescents (Blatný; in Koukal, 2005). The exceptional nature of the SAHA project lies in the monitoring of high risk behaviours in relation to psychosocial factors in the development of children and adolescents. A broad thematic focus and multiculturalism contribute to the exceptional nature of the SAHA method, which makes it possible to better address general trends and patterns in the healthy and pathological development of adolescents (Blatný, Hrdlička, Květon, Vobořil, Jelínek, 2004). Psychosocial factors are contained in individual ranges such as, for example, the impact of the family environment, the school and community environment, environmental quality, bullying, exposure to violence, psychiatric disorders, etc. From the SAHA questionnaire, we used a range of family factors and somatization. Family factors include the sub-ranges: inconsistency of education, parental interest, parental supervision, and parental affection. To these factors, we have assigned a question about a sense of security in the family environment. We examine the issues of somatic problems as an interaction between family factors in relation to

the experience and perception of emotional relationships, education, control, and organization of the family system.

#### Research Sample

The study participants were 4,847 pupils in 3 age cohorts 12-13 year olds, 14-15 year olds, and 16-19 year olds (12-13-year-olds N = 1,436, 14-15-year-olds N = 1,520, 16-19-year-olds N = 1,891). Overall there were 2,716 male participants and 2,131 female participants in the survey. The research sample is shown in Figure 1.

Figure 1 Research sample



Legend: I.age group = (12-14 years), II.age group = (14-16 years), III. age group = (16-19 years)

#### 3 Results

Somatic symptoms were measured by 11 items within the SAHA methodology. The column for N = 4,799 items in the sample show good intra-item reliability Alfa > 0.8. The description of each variable is shown in Table 1. The theoretical range of each variable ranged from 0 to 22 points. The average value was 4.96 points (SD = 3.90), the median was 4 points and the most frequent value 2 points. The inter-quartile margins were between 2 and 7 points. As expected, the variables do not have a normal distribution as it is not a variable that represents a normal phenomenon. For values in the band above  $AM \pm 2SD$ , we can consider those that are in the interval 13-22 (N = 241). Family factors within the SAHA methodology are measured by 5 variables: inconsistency of education, parental interest, parental supervision, parental affection and sense of security. The descriptions of the characteristics of family variables are shown in Table 1. Inconsistency of education was measured using 5 items (Alpha > 0.65), the range of values in the set has a range of 5-20 points (the same as the theoretical range), an average of 11.54 (SD = 3.27), the median and modus are 11 and the inter-quartile variance is in a range of 9-14 points. Parental interest was classified using 6 items (Alpha > 0.65), in a range from 6-24 points and the inter-quartile range was 14-19 points. The average of our set is 16.66 points (SD = 3.42), the median and modus are equal at 17 points. Parental supervision scored between 8-32 points, which is also the theoretical range derived from the minimum and maximum of possible values of 8 items. The inter-quartile interval is between 19 and 26 points, the arithmetic mean is 22.02 (SD = 4.80), we can say that the median, modus, and average reach approximately the same values. Parental affection was calculated as the sum of the score of 5 items; we can see in Table 1 that the range of 5-20 points is the same as the theoretical range. The average is 16.06 (SD = 3.11), median is 17 points and the most frequent value is slightly higher, namely 19 points. The modus is also the upper limit of the inter-quartile range, the lower limit is at 14 points. A sense of security was

measured using one item where the respondents responded with a value between 1 and 4, with an average of 3.73 points (SD = 0.53). As we can see in Table 1, the median, modus, the 1<sup>st</sup> and the 3<sup>rd</sup> quartiles scored 4, which indicates a significant prevalence of feeling safe in the home environment (76.5%). According to the Kolmogorov-Smirnov test (Sig. <0 .05), the family factor variables do not have a normal distribution.

Table 1 Descriptive characteristics of family factors and somatic symptoms

	a	b	c	d	e	f
N	4745	4748	4701	4734	4795	4799
Average	11,54	16,66	22,02	16,06	3,73	4,96
Median	11	17	22	17	4	4
Modus	11	17	22	19	4	2
Standard deviation	3,27	3,42	4,80	3,11	0,53	3,90
Minimum	5	6	8	5	1	0
Maximum	20	24	32	20	4	22
1st quartile	9	14	19	14	4	2
3rd quartile	14	19	26	19	4	7

Legend: a = inconsistency of education, b = parental interest, c = parental supervision, d = parental affection, e = sense of security, f = somatic symptoms

H1, H2: To determine the correlation between somatic symptoms and family factors, we used a correlation coefficient, and given the non-normal distribution of the variables, we chose a nonparametric Spearman variant of the coefficient. Table 2 contains the test results. There is a significant but weak positive correlation between somatic symptoms and inconsistency of education, a weak negative relationship between somatic symptoms and a sense of security. We extrapolated that the more intense the inconsistency of education and the less secure teens feel in the home environment, the higher the incidence of somatic symptoms. Table 2 contains other statistically significant results at a level of significance of Sig. < 0.001, however, these are very weak correlations that we interpret as trivial relationships. Based on the above, we accept hypotheses H1 and H2.

Table 2 Spearman's coefficient of rank correlation between somatic symptoms and family factors

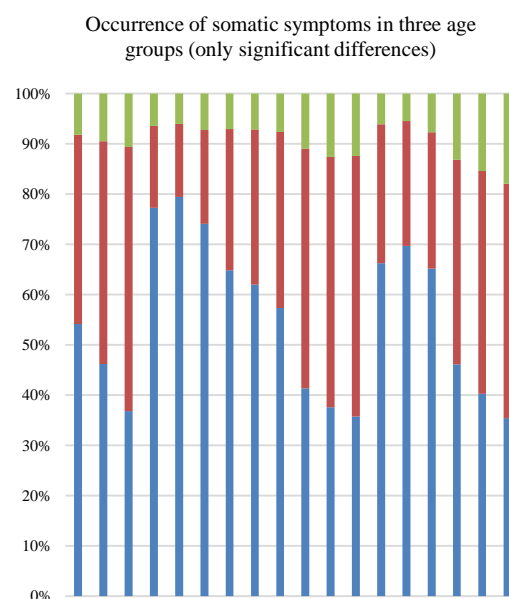
	a	b	c	d	e
r	.191**	-.059**	0,026	-.095**	-.213**
Sig.	0,000	0,000	0,077	0,000	0,000
N	4684	4687	4638	4674	4727

Legend: a = inconsistency of education, b = parental interest, c = parental supervision, d = parental affection, e = sense of security, f = somatic symptoms

RQ1: Are there significant differences in somatic symptoms among the age groups?

Within the range of somatic symptoms, 11 partial symptoms were identified. We observed differences in the occurrence or in the responses to the incidence (none – partial – total) in three age groups 12-13, 14-15, and 16-19-year-olds. The differences in individual items were determined using the Kruskal-Wallis test. Significant differences between the three groups (Figure 2) were reported by “I did not feel good”, “I felt sick”, “I felt that my health should be better”. The incidence of somatic problems is greatest in the 16-19-year-old adolescent group and least in the youngest age group. In the case of “I felt something hurt or ached”, we find the lowest occurrence of the phenomenon in the 12-13-year-old age group, which can be interpreted as a significantly smaller incidence (3.6%) compared to the other two groups (14-15, 16-19-year-olds) – between these groups, the difference in incidence is only 1.9%. In the case of “I was worried about my health”, we recorded a significantly lower partial or total incidence in the middle age group (14-16-year-olds – 30.3%) compared to 12-14-year-olds (33.5%) or 16-19-year-olds (34.8%). In the case of “I had rashes or skin problems”, most respondents reported a negative response in the group of 14-year-olds, slightly more in the group of 12-year-olds, and the highest number of adolescents who reported skin problems were in the group of 16-year-olds.

Figure 2 Occurrence of individual somatic symptoms



Legend: ■ none somatic symptoms, ■ partially somatic symptoms are present, ■ somatic symptoms occur completely

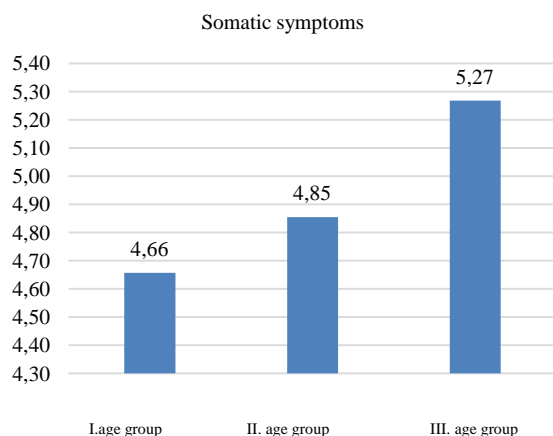
We interpret Figure 2 to mean that significant differences in the specific somatic symptoms were not found among the age groups: headache, abdominal pain, vomiting, nausea and eye problems. We also tested the differences among the groups in the range of somatic symptoms. We used the Kruskal-Wallis test to determine the statistical significance due to the non-normal distribution of the comparison variables. The results are shown in Table 3. In the last column, we can see that the differences between the age groups are significant. The highest score for somatic symptoms is found in 16-19-year-old adolescents, 14-16-year-olds have a lower incidence and 12-14-year-olds have the lowest. The average values are shown in Figure 3, where a more pronounced difference between the oldest age group and the second age group is seen and a slightly smaller difference between 14-16-year-old and 12-14-year-old adolescents. Therefore, the results are supplemented by a calculation of the difference between the pairs of adjacent age groups of students (12-13, 14-15 and 14-15, 16-19) that we tested using the Mann-Whitney U test (the second and third sections of Table 3). In both comparisons, the differences are interpreted as statistically significant (Sig. < 0.05). There is a slight increase in somatic symptoms in the 12-13-year-olds and 14-15-year-olds, in the case of the 16-19-year-old age group, the increase is more pronounced.

Table 3 Statistical test results of the differences in the range of somatic symptoms among age groups (Kruskal-Wallis test, Mann-Whitney U test)

	b	N	Average Rank	Kruskal-Wallis test	
a	I.	1,418	2,251.58	Chi-square	34.36
	II.	1,506	2,374.14	df	2
	III.	1,875	2,533.02	Sig.	0.000
	total	4,799			
a	I.	1,418	1,423.04	Mann-Whitney U	1011804
	II.	1,506	1,499.65	Z	-2.463
	total	2,924		Sig.	0.014
	II.	1,506	1,627.98	Mann-Whitney U	1316973
a	III.	1,875	1,741.61	Z	-3.378
	total	3,381		Sig.	6

Legend: a = somatic symptoms, b = age group, I. = age group (12-14 years), II. = age group (14-16 years), III. = age group (16-19 years)

Figure 3 Average values of somatic symptoms by age categories



Legend: 4,66 = average values of somatic symptoms by age categories I (12-14 age),

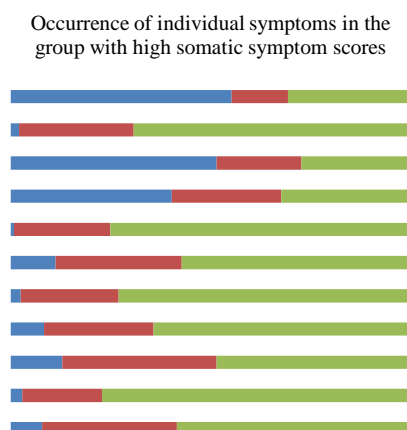
4,85 = average values of somatic symptoms by age categories II (14-16 age),

5,27 = average values of somatic symptoms by age categories III (16-19 age)

RQ2: Which somatic symptoms are associated with a higher level of somatization?

We analysed the distribution of individual somatic symptoms in respondents who scored at least 13 points (AM + 2SD) overall. In the N = 241 research sample, over the previous 30 days, more than 70% of adolescents had an overall response: "I felt sick", "I felt something hurt or ached" and "I had headache". More than 60% of respondents had a total incidence of abdominal pain and did not feel well. More than 55% of those with overall high scores of somatic symptoms had an intense feeling that their health should be better and reported nausea. Nearly half of adolescents with pronounced somatic problems strongly agreed that they were worried about their health and a fourth reported frequent vomiting, skin problems and eye problems (Figure 4).

Figure 4 The occurrence of individual somatic symptoms in the group of adolescents with high scores in the somatic symptoms range (N = 241)



Legend: ■ none somatic symptoms, ■ partially somatic symptoms are present, ■ somatic symptoms occur completely

In Table 4, we present the occurrence of combinations of the individual somatic symptoms in the group that have high scores for somatic symptoms. More than three-quarters of the individuals in the group said that in the last 30 days they had suffered headaches, abdominal discomfort, or pain, had been sick, did not feel well, or their health could be better. Nausea,

worrying about health, along with the combination of symptoms mentioned above, was reported by almost 60% of respondents with a high overall score. Approximately one third, having the first combination (abdominal pain, headache), reported that they also suffered from vomiting. More than a third of the individuals in the group, along with pain and unpleasant feelings, had a rash or skin problems. Less than half (46%) reported eye problems in addition to pain in the abdomen, headaches as well as uncomfortable feelings. From other combinations, we can see that in the past 30 days approximately a quarter of teenagers suffered from eye and skin problems, and, at the same time, approximately 20% of individuals suffered from nausea in the group with a high score for somatic symptoms. Nausea in combination with rashes and skin problems (along with pain and unpleasant feelings) was reported by nearly 30% of the respondents in the group.

Table 4 Frequency of selected symptom combinations in the group with a high score for somatic symptoms (N = 241)

a	%	a	%	a	%	a	%	a	%
X	77.2	+ C	67.6	+ F	59.8	+ H	34.4	+ I	20.3
								+ K	15.3
						+ I	29.1		
						+ K	26.9		
		+ F	68.9	+ H	39.8	+ I	22.8		
						+ K	17.8		
		+ H	46.1	+ I	25.3	+ K	10.4		
		+ I	35.3	+ K	14.5				
		+ K	32.4						

Legend: a = somatic symptoms, X = ABDGEJ symptoms (A = health problems, B = headache, C = feeling unhealthy, D = abdominal pain, E = other pain, F = feeling sick, G = other somatic pains, H = eye problems, I = skin problems, J = feeling of physical discomfort), + = symptom comorbidity, % = percent age of the most frequent symptoms

RQ3: Are there differences in the specific symptoms within the age groups?

To determine the statistical significance of the differences, we used the Kruskal-Wallis test. There were no significant differences in the number of N = 241 respondents (Sig. > 0.05). (Table 5).

Table 5 Differences in the most frequent somatic symptoms among groups (N = 241)

a	b	N	Average rank	Chi-square	1.547
a	I.	75	129.06		
a	II.	64	116.13	df	2
a	III.	102	118.13	sig.	0.461

Legend: a = somatic symptoms, b = age group, I. = age group (12-14 years), II. = age group (14- 16 years), III. = age group (16 -19 years)

RQ4: Which age cohort has the highest incidence of somatic symptoms?

A somatization variable was created based on a determination of high scores for somatic symptoms, namely for values in the range of 13-22 points. The categories of somatization occurrence and absence were compared among the three age groups using the chi-square test. The results are shown in Table 6. Based on a statistical significance of Sig. > 0.05, we interpret the differences in the high score rates as insignificant compared to the expected rates among the three age groups. In Table 6, the incidence of high scores for somatic symptoms is between 4.20 and 5.40% in all three groups.

Table 6 The occurrence comparison of somatic symptoms for age groups

Somatic symptoms		Low score	High score	Total
I.	N	1,343	75	1,418
	%	94.70%	5.30%	100.00%
II.	N	1,442	64	1,506
	%	95.80%	4.20%	100.00%
III.	N	1,773	102	1,875
	%	94.60%	5.40%	100.00%
	Value	df	Sig.	
Chi-square	2.782a	2	0.249	

Legend: I. = age group (12-14 years), II. = age group (14 - 16 years), III. = age group (16 -19 years)

RQ5: Is there a relationship between specific somatic symptoms and family factors?

We examined the relationship between individual symptoms and family factors. For each individual, we determined the occurrence or absence of somatic symptoms (11 separate symptoms) over the last 30 days. Subsequently, we compared family factors (inconsistency of education, parental interest, parental supervision, parental affection, and a sense of security) between two groups – according to the occurrence of symptoms. Thus, we made comparisons of the five family factors and 11 symptoms. The results are shown in Table 7 where we can see the statistical significance of differences found between groups, and arrows that show higher/lower scores in the group, in which a specific somatic symptom occurred. We can see that for two factors: inconsistency of education and a sense of security, there are significant differences with regard to the occurrence of all the symptoms. We interpret this to mean that for adolescents who experienced any partial or fully-fledged symptoms, there is a higher level of inconsistency of education and a lower sense of security in the family environment. Another factor, where we found the most significant differences for most of comparisons, is parental affection. This is lower for individuals who feel that they should be in a better condition, experiencing headaches, pain or aches, nausea or vomiting, discomfort, or eye problems. Similarly, lower values of parental interest were found for almost all the same symptoms as those reported for parental affection, with the exception of feelings of doubt regarding their health and headaches. The least significant differences with respect to individual symptoms were found in the parental supervision factor, where there were higher values for only those respondents with a feeling of anxiety about their health and abdominal pain.

Table 7 Comparison of family factors with regard to the occurrence of individual somatic symptoms (Mann-Whitney U test)

a	IE	PI	PS	PA	SS
A	^ 0.000	0.809	0.201	∇ 0.002	∇ 0.000
B	^ 0.000	0.169	0.165	∇ 0.008	∇ 0.000
C	^ 0.000	0.129	^ 0.004	0.520	∇ 0.000
D	^ 0.000	0.358	^ 0.031	0.072	∇ 0.000
E	^ 0.000	∇ 0.044	0.186	∇ 0.001	∇ 0.000
F	^ 0.000	∇ 0.000	0.085	∇ 0.000	∇ 0.000
G	^ 0.000	∇ 0.000	0.921	∇ 0.000	∇ 0.000
H	^ 0.000	∇ 0.020	0.896	∇ 0.000	∇ 0.000
I	^ 0.000	0.502	0.623	0.110	∇ 0.000
J	^ 0.000	∇ 0.000	0.691	∇ 0.000	∇ 0.000
K	^ 0.000	∇ 0.000	0.142	∇ 0.000	∇ 0.000

Legend: a = somatic symptoms, A = health problems, B = headache, C = feeling unhealthy, D = abdominal pain, E = other pain, F = feeling sick, G = other somatic pains, H = eye problems, I = skin problems, J = feeling of physical discomfort, K = vomiting, IE = inconsistency of education, PI = parental interest, PS = parental supervision, PA = parental affection, SS = sense of security

RQ6: Are there differences in somatic symptomatology among individual age cohorts?

We tested the relationship between somatic symptoms and family factors separately in the three age groups (12-13, 14-5 and 16-19-year-olds). The results of the Spearman's rank correlation coefficient calculations are presented in Table 8. We can see that in all three age groups we find the same degree of intensity – a weak relationship between somatic symptoms and inconsistency of education (positive direction) and between somatic symptoms and a sense of security (negative direction). In the youngest group of adolescents we also found a statistically significant weak negative relationship between somatic symptoms and parental affection, while in the older age groups this relationship is not significant (or significant, but negligible in intensity).

Table 8 Spearman's coefficient of rank correlation between somatic symptoms and family factors in three age groups

a	IE	PI	PS	PA	SS
	r	-.220**	-.066*	0.044	-.126**
	Sig.	0.000	0.015	0.104	0.000
I.	N	1,371	1,382	1,341	1,365
	r	.191**	-0.007	0.048	-.062*
	Sig.	0.000	0.988	0.104	0.039
	N	1,371	1,382	1,341	1,365

II.	Sig.	0.000	0.801	0.065	0.017	0.000
	N	1,474	1,470	1,457	1,470	1,481
	r	-.180**	-.071**	-.069**	-.071**	-.185**
III.	Sig.	0.000	0.002	0.003	0.002	0.000
	N	1,839	1,835	1,840	1,839	1,857

Legend: a = somatic symptoms, I. = age group (12-14 years), II. = age group (14-16 years), III. = age group (16-19 years), IE = inconsistency of education, PI = parental interest, PS = parental supervision, PA = parental affection, SS = sense of security

#### 4 Discussion

All emotional situations are a source of experience. As a result of the reaction to experiences, physiological changes appear in the body and with a long-term accumulation of problems not only psychological disturbances, but also problems – somatization, may occur. A significant environment that builds emotional levels is the family environment, which is a source of social support (Šolcová, Kebza, 2003). Particularly parental love and expressions of interest are a source of positive emotions. Dysfunction of family factors may be seen as a psychogenic factor in the development of somatic problems. Our findings confirm the link between somatic issues and the family factors: inconsistency, emotional affection, parental interest, and a sense of security. The importance of family factors in the prevention of somatic problems is confirmed by Danzer (2001). In all three age groups, we found significant relationships between the presence of somatic problems and inconsistency in the family environment, parental interest, and a sense of security. Somatic problems are associated with a family environment where consistency, adherence to established rules and boundaries, is less well applied. Inconsistency may lead to a challenge to orientation in everyday situations, which may then be the reason for misunderstandings between parents and adolescents and one of the causes of somatic symptomatology. The importance of consistency and the formation of boundaries in education are found in the authors: Vymětal (2003) and Matějček (2001). They point to the fact that educational inconsistency does not contribute to the creation of a feeling of certainty which is necessary for the formation of adolescent self-acceptance. According to Vymětal (2004), feelings of insecurity can also be the source of inappropriate concerns, fear, and low self-esteem. A feeling of insecurity, concern, fear, and low levels of self-acceptance are some of the sources of negative emotions, which may result in somatic problems.

A significant relationship between emotional affection and somatic problems was only found in the youngest group surveyed (12-13-year-olds). We believe that at the beginning of the period of adolescence a child is more saturated with the need for emotional relationships with parents compared to the older groups studied (14-15, and 16-19-year-olds). The need to form social relationships outside the family is of particular importance at the end of the maturity period. The significance of emotional ties at the beginning of the period of adolescence is confirmed by Vymětal (2003, 2004) and the increasing importance of peers by (Mičková, 2015a, b).

Feelings of parental interest also proved to be a significant factor in the context of somatic problems. Matějček (2001) states that shared time strengthens relationships, trust, communication, and influences the formation of experiences that are accompanied by positive emotions. As Danzer (2001) points out, positive emotions can have a positive effect, but may also have a negative impact on the processing of emotional experiences.

We can conclude that positive emotional experience in family relationships prevents the occurrence of somatic problems and conversely the absence of parental interest, love, sense of security and educational consistency may represent a source of anxiety, nausea, vomiting and other physical pain and helplessness. Because of frustration and stress, self-doubt, self-blame, depressive moods, nervousness, and physical distress come to the fore. Emotions that act as behavioural regulators while developing somatic problems can be a cause of somatic problems. Vymětal (2004) states that one of the sources of

anxiety is the absence of parental understanding, affection, and love.

Only one family factor was found to have no significant relationship, namely that between parental supervision and somatic problems. It may be that with increasingly frequent interactions of adolescents outside the family there is a less intense experience of parental control. Autonomy and borders may be discussed by teenagers and their parents. In research, we revealed findings where inappropriately manifested parental interest is conceived as a restraint, which is the cause of many misunderstandings (Rogge, 2005; Verešová and Hušvetyová, 2005). Concerns and dissatisfaction about parental strictness were found by Prokopčáková (1999, 2000; in: Blatný et al., 2005). The importance of control emphasizes, for example, Dick et. al. (2007). Parental supervision can also be perceived from the point of view of parental interest. For example, Matoušek and Kroftová (1998, p. 45) define parental supervision as "the degree of parental awareness of what their children do in their free time, what kind of friends they meet, where they stay when they are not at home, when and in what condition they return home".

In terms of the positive influence of control, it is therefore possible to highlight control in the sense of emotional guidelines. An adequate function of both the family relationship and organizational system, namely parental supervision, is one of the prerequisites for overcoming the problems of teenagers. Finding a relationship between family factors and somatic issues led us to examine the frequency of somatic symptoms. It is important to note that somatic problems of psychological origin or conditioned by psychogenic factors in the family were examined in the study. We examined the frequency of somatic symptoms in adolescence of three age cohorts. In our research, in relation to specific adolescence ages, no differences in the frequency of somatic symptoms were found, but differences were found in a somatic picture of specific problems. In this context, we were only concerned by those symptoms whose occurrence within the groups was statistically significant. Symptomatically specific somatic problems are highest among 16-19-year-olds, followed by 14-15-year-olds and the lowest incidence among 12-13-year-olds. According to Paulík (2017), the period of adolescence is determined by genetic factors, physiological and hormonal changes. It may be thought that hormonal changes, in particular, increase the frequency of somatic problems at the end of adolescence. For example, the higher frequency of skin problems in our sample occurred in the cohort of 16-19-year-olds. Headaches and abdominal pain are reported as the most common symptoms of adolescence by Vymětal (2004), Morschitzky, Sator (2007). We focused our psychological interpretation on somatic problems that were most commonly recorded. Gastrointestinal symptoms are an expression of emotional motives, for example, loss of appetite, vomiting. The psychosomatic reaction of the stomach can express a symbolic "hunger" for love, the absence of caresses. Somatic problems are associated with conflicting situations where, on the one hand, independence stands forth, and a strong desire for relation, love, and help exist on the other. Short-term headaches can represent hostility, anger, strain. Wrong decisions lead to the differentiation of conscious mistakes and those that are displaced into the unconscious with the subsequent complexes. The recognition of faulty steps can lead to depression from exhaustion. The skin forms the border of an individual. An unwanted penetration beyond the intimate border of an individual may also have life-long consequences, e.g. by violence. The skin is one of the most essential organs for the expression of emotions. Most of that which we are able to observe appears on the face that is always uncovered. The skin, especially its facial changes, reveals emotions even when we are trying to conceal our emotions. The skin reacts and reveals the state of internal organs and mirrors the psychic processes and reactions.

It is rightly considered to be a projection screen that highlights on-going processes (Kučírek, 2006). Another significant somatic symptom found in the research was eye problems. Kleinmann

(2011) states that the eyes are an important means of communication and that any psychosocial problem can transform into somatic problems. The causes of these difficulties in the family climate can be chronic stress, difficult life changes, negative experiences, etc. The research found that activities done with parents serve as a source of positive experiences (Mičková, 2015b). The importance of social relationships in the prevention of somatic problems is described by Kučírek (2006). The author emphasizes that psychosomatic symptoms are especially manifested in times of increased demands on an individual. We may regard these times as a period of transit as is adolescence. The individual must cope with the specific complications in family relationships and the method of dealing with them determines, to some extent, the emergence of somatic problems. As Křivohlavý (2001) points out, there are differences in the approach to problems.

Based on our findings, we can conclude that the quality of family factors is a prerequisite for the absence of somatic problems in adolescents. It is important to note that in the study we consider somatic problems in the context of somatoform disorders. We find support for the importance of parental affection in, for example, (Kučírek, 2006; Husovská, 2013; Siqueland, Rynn, Diamond, 2004; et al.). The significance of the quality of the family environment and its relationship to somatic problems is found in many other authors, (Dahlke, 1992; Baštecký, Šavlík, Šimek, 1993; Ponešický, 1999; Rattner, 2001; Trapková, Chvála, 2004; Kleinmann, 2011; et al.). The authors agree that a good personal relationship is important in the prevention of somatic problems as well as in therapy.

Based on the above it can be concluded that the quality of the emotional relationship, sufficient time for the adolescent and consistent education represent protective psychosocial factors in the prevention of somatic problems. It is important to state the limits of our research. The emergence of somatic problems is multifactorial. Different factors may act as a trigger for somatic difficulties. The experience and subsequent interpretation of problems affect emotional responses that can trigger somatic difficulties, for example, personality characteristics (Novotný, 2015; Šolcová, 2009), frustration tolerance, self-understanding (Vymětal, 2004), biological, social, and psychological influences (Fenichel in Danzer, 2001).

Based on our research findings, therefore, there is no clear causal relationship between family factors and somatic difficulties as only linear relationships were examined and other factors that contribute to the development of the disorders were not part of our research. However, based on linear causality, family factors can be considered as predictors of somatic problems. These factors act in causal contexts, specific causative factors may be determined by diagnostics. The study did not examine the causal relationships, but the somatic condition during the last month. Kleinmann (2011) states that even if there are no organic causes, we cannot prematurely talk about psychogenic effective factors as the only and true causes. We also emphasize this aspect with regard to our results, as we cannot rule out the emergence of health problems during the administration of the questionnaires. A pilot verification of the Slovak version of SAHA is currently underway and the results will be published (Rojková, 2016).

## 5 Conclusion

The study reveals significant links between family factors and somatic issues. Family factors such as parental interest, affection, family inconsistency, and a sense of security are involved in the emergence of somatic problems and can therefore be considered as risk factors for somatoform disorders.

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#### Primary Paper Section: A

#### Secondary Paper Section: AN



## LEGAL LIABILITY OF THE CONTRACT PROVISIONS BASED ON THE REFERENCE STATED IN ANOTHER CONTRACT

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**Abstract:** The author deals with the question of the legal liability of the "ancillary" contract, i.e. the attention is paid to the rights and obligations arising out of a contract concluded between other contracting parties. Furthermore, we focus on the manner of the "main" contract conclusion, while the "main" contract is only contains a reference to the "ancillary" contract and the consent of the parties to the "main" contract to the rights and obligations established by the "ancillary" contract. We discuss the legal liability of the "ancillary" contract as well as the rights and obligations established by the "ancillary" contract, while pointing to the provisions of the two contracts for the purpose of legally binding of the "ancillary" contract. In addition to the basic legislation, the author also points to the decisions of a court regarding the specific case that addresses the issue in question.

**Keywords:** legal liability, reference to the provisions of another contract, contractual freedom, court decision.

### 1 Introduction

The primary reason for writing this paper was a fact that it often occurs the situation in the Slovak Republic in which the contracting parties conclude the "main" contract, while this "main" contract contains only a reference to the "ancillary" contract and the consent of the contracting parties to the "main" contract to the rights and obligations established by the "ancillary" contract; thus they consider the rights and obligations of the "ancillary" contract as legally binding also for the "main" contract.

In this paper, it is necessary to clarify the terms as follows:

- (a) the main contract,
- (b) the ancillary contracts.

The main contract is a legally binding relationship between the contracting parties to this legally binding relationship, the provisions of which contain a reference to another legally binding relationship between the other contracting parties. At the same time, it also contains the consent of the contracting parties to this main legally binding relationship with the rights and obligations of other legal binding relationship established between other contracting parties.

An ancillary contract means a legally binding relationship between the contracting parties. The provisions of the main contract refer to the legally binding relationship of the ancillary contract established between other contracting parties and the rights and obligations of the ancillary contract are also applicable to the contracting parties of the main contract, based on the reference and the consent as stated in the main contract.

This paper focuses on the legal regulation of the above mentioned issues and, on the other hand, points out the decisions of the courts in a specific legal matter closely related to the addressed issue.

In the Slovak Republic, it often occurs the situation in which the contracting parties to the main contract refer to the ancillary contract and they consider the rights and obligations established by ancillary contract a legally binding also for the main contract. This is not always the case and therefore, we have decided to write this paper.

The basic legal regulation is included in Act no. 513/1991 Coll. Commercial Code, as amended (hereinafter referred to as the "Commercial Code") and Act no. 40/1964 Coll. Civil Code, as amended (hereinafter referred to as the "Civil Code").

However, the comprehensive legal framework of the issue in question is absent in the Slovak Republic. Under the comprehensive legal framework, we understand both the definition of the relevant concepts and the determination of the specific legal regime, as well as, the determination of the conditions of the legal liability of ancillary contract for the participants of the main contract.

### 2 Legal liability of the ancillary contract

In this part of the paper, we point to a specific example of the subject matter. Later on, on the basis of this example, we will draw a general conclusion.

In the context of a practical example, we point to a work contract the subject of which is defined as follows:

The Contractor undertakes to construct a work with a title the "Reconstruction and Restoration of the Manor in the Village", Project Code XYZ, under the conditions established in this contract, to the extent of the project documentation and in accordance with the terms and conditions specified in:

- the building permit issued for the realization of the work;
- Funding Agreement no. 123, as amended, concluded between the beneficiary (client) and the provider of a non-refundable financial contribution (NFC), i.e. the Ministry of Construction and Regional Development,
- the Guide for the beneficiaries of NFC from the Regional Operational Programme.

In our case, the main contract is a work contract under which the contractor undertakes to make the work "Reconstruction and Restoration of the Manor in the Village" Project code XYZ for the client.

The ancillary contract is the Funding Agreement no. 123, as amended, which was concluded between the client and the provider of a non-refundable financial contribution, i.e. the Ministry of Construction and Regional Development, thus another contracting party than a contractor.

Based on the provisions on the subject of the work, it is clear that the contractor, inter alia, undertakes to carry out the work in accordance with the Funding Agreement no. 123, as amended (hereinafter referred to as the "Funding Agreement"), which was concluded between the client and the provider of a non-refundable financial contribution, i.e. the Ministry of Construction and Regional Development.

Taking into account the provision on subject of the work, it is clear that the Funding Agreement, together with its General Terms and Conditions, undoubtedly also applies to the contracting parties to the work contract, i.e. also to legally binding relationship established by the work contract.

It is necessary to state that the Funding Agreement is not an annex to a work contract.

Based on the above mentioned, it is also clear that the Funding Agreement has to apply also to the legal relationship of the contracting parties to the main contract, whether it forms an annex to a work contract or not and whether the contractor leaned about this contract or not (in this case, the contractor is not a contracting party of the ancillary contract, and thus the contractor can decide whether to learn about the ancillary contract or not).

The work contract also involves provision as follows: The work contract shall enter into force on the date of its signature by both contracting parties and shall take effect on the date of signing the Funding Agreement between the client and the Ministry of

Construction and Regional Development of the Slovak Republic as the provider of the NFC.

The previous provision of the work contract says that the work contract takes effect on the date of signing the Funding Agreement between the client and the Ministry of Construction and Regional Development of the Slovak Republic as the provider of the NFC. This makes it clear that also the Funding Agreement relates to the contractor and that the contractor was informed about this Funding Agreement. If the contractor was not informed about Funding Agreement, this could be perceived as a result of the Contractor's own decision not to be informed about this Funding Agreement.

There is no need for the Funding Agreement to be annexed to the work contract in order to be applied also to the contractor.

Based on the above mentioned facts, it is clear that:

- the contractor has given his/ her consent to the Funding Agreement,
- the contractor has undertaken to perform the work in accordance with the Funding Agreement,
- the contractor has committed to complying with the terms and conditions of the Funding Agreement.

The only significant condition for the Funding Agreement to become a binding on the parties to the main contract is that this Funding Agreement was clearly and definitely specified in the work contract. Based on above mentioned facts and provisions of the work contract, that condition was fulfilled in the presented case study.

Since the Slovak legal regulation does not contain any provision of the law that would deal with the situation in question, we refer to the provision of Section 273, paragraph 1 of the Commercial Code: *"A part of the contract content may also be determined by the reference to the general business terms and conditions drawn up by professional or interest-based organizations or by reference to other business terms and conditions that are known to the contracting parties or that are attached to the contract."*<sup>1</sup>

Based on the cited Commercial Code provision and an analogous legal interpretation, it is clear that to make the Funding Agreement a legally binding, it does not have to be an annex to the contract. It is sufficient to make a reference to the Funding Agreement in the work contract.

At the same time, we state that the Funding Agreement was publicly available at the time of signing the contract, thus it has to be considered that it was known to the contractor. However, if the Funding Agreement was not known at the time of signing the work contract and that Funding Agreement was defined and specified in the work contract, the contractor would be compulsory, before signing the work contract, to request the Funding Agreement. Otherwise, it is supposed that the contractor is familiar with the term and conditions of the Funding Agreement.<sup>2</sup>

In addition to the above mentioned references to the Funding Agreement, the work contract also included the information as follows: The subject of the contract is implemented under the Regional Operational Program, Priority Axis 3 Strengthening the Cultural Potential of the Regions and the Tourism Infrastructure, Measure 3.1b Strengthening the Cultural Potential of the Regions – interventions in cultural monuments, the name of the project "Reconstruction and Restoration of the Manor in the Village" and therefore, the contractor undertakes:

- a) to accept the change of this contract if this change is caused by changes in the Funding Agreement concluded between the client and the Ministry of Construction and Regional

Development of the Slovak Republic or by changes in the Guide for the beneficiaries of NFC from the Regional Operational Programme,

- b) to endure the performance of the control/ audit/ verification related to the subject of performance during the validity and effectiveness of the Funding Agreement concluded between the client and the provider of non-refundable financial contributions. The control/ audit/ verification may be performed by the authorized persons in accordance with the General Terms and Conditions. The contractor is obliged to provide authorized persons with all the necessary co-operation. The contractor is also required to define this obligation in contracts with the subcontractors.

According to the above mentioned provision, it is again clear that the work under the work contract was to be carried out under the terms of the work contract itself, but also under the Funding Agreement, and therefore, inter alia, the terms of the Funding Agreement were known as well as binding on the contractor.

Before signing the contract, the contractor had the opportunity to learn about the Funding Agreement.

At the same time, it should be noted that it is absolutely irrelevant whether the contractor had an opportunity to interfere in the relationship between the client and the ministry or not, since the contractor had the opportunity to learn about all the documents before signing the contract.

In the contractor's opinion the invoice payment was not directly dependent on the financial resources from the non-repayable financial contribution, however, the financing was directly dependent on the financial resources from the non-repayable financial contribution from the Regional Operation Programme. Even if the financial resources were paid directly by the client to the contractor, it would be a breach of the Funding Agreement. These facts were available to the contractor prior to the conclusion of the work contract and hence, the contractor had the opportunity to get acquainted with them and to decide whether to conclude the contract in question or not.

The court in the given court proceedings found that the Funding Agreement had been concluded earlier than a work contract and therefore, the contractor was in a position to learn about this agreement at any time prior to the conclusion of the work contract.

The following facts have resulted from the conclusions of the court.

Despite the fact that the contractor knew the process of providing the financial contribution, as well as the payment due according to the Funding Agreement; in accordance with the work contract, the contractor has committed to a maturity of 90-day with respect to the client. In this regard, it is necessary to resolve the discrepancy in the client's and contractor's interpretations of the payment of remuneration for the work performed. The contractor claimed that the maturity of the remuneration for the work is to be set according to the work contract and the client claimed, that maturity is to be set in accordance with the Funding Agreement.

In spite of all above facts, as well as the discrepancy in the client's and contractor's interpretations of the payment; the court declares that it is necessary to prioritize the work contract since the subject of the work in the work contract is "Reconstruction and Restoration of the Manor in the Village", Project Code XYZ, under the conditions established in this Contract, to the extent of the project documentation and in accordance with the terms and conditions specified in:

- the building permit issued for the realization of the work;
- Funding Agreement no. 123, as amended, concluded between the beneficiary and the provider of a non-

<sup>1</sup> § 273 par. 1 of the Commercial Code

<sup>2</sup> (see comment on the Commercial Code - Mária Patakyová)



refundable financial contribution (NFC), i.e. the Ministry of Construction and Regional Development;

- the Guide for the beneficiaries of NFC from the Regional Operational Programme.

In relation to the fact that the work contract also contains the following provision, the work contract shall enter into force on the date of signature by both contracting parties and shall take effect on the date of signing the Funding Agreement between the client and the Ministry of Construction and Regional Development of the Slovak Republic, the provider of NFC, the court declares that there is a condition on the basis of which it cannot automatically be concluded that this contract also governs the rights and obligations of the contractor.

In relation to the analogous application of the provisions of § 273 par. 1 of the Commercial Code: *"A part of the contract content may also be determined by the reference to the general business terms and conditions prepared by professional organizations or interest groups or by reference to other business terms and conditions that are known to the contracting parties or attached to the contract."* the court declares that this provision is not relevant in this context, even though, there is no other legislation. The basic legal reasoning of the court is that the Funding Agreement cannot be called a general business conditions. However, in terms of the declared decision, the court did not provide any statement to the analogous application of the above provision. At the same time, the court declares, that if the court accepted the argument that it was a matter of general business terms and conditions, it would be necessary to consider that the work contract as such contains a payment due agreement. Therefore, the Funding Agreement cannot be legally binding since it also contains a payment due agreement, which is different from one in the work contract.

In the light of the above, it is clear that the contractor, inter alia, has:

- agreed to perform the work in accordance with the Funding Agreement, as amended;
- endorsed the manner of financing, i.e. repayment in the form of a non-repayable financial contribution;
- agreed with the manner of financing in terms of the Funding Agreement, as amended.

Despite all the facts, the courts acting at all levels declare that the Funding Agreement is not legally binding on contracting parties to the main contract, i.e. the work contract.

Such situation is very common in the Slovak Republic. The contracting parties to the main contract refer to an ancillary contract and thus, they consider the rights and obligations arising from the ancillary contract to be a legally binding also for the main contract. It is clear that, despite the unambiguous and certain reference to an ancillary contract, it is not legally binding on the contracting parties. Since this situation is very common in practice, it is appropriate to adopt legislation, which would set the precise conditions for such cases.

### 3 Conclusion

In the Slovak Republic it is very common that the contracting parties to the main contract refer to an ancillary contract and thus, they consider the rights and obligations arising from the ancillary contract to be legally binding also on the parties of the main contract. However, this very simple transfer of rights and obligations of the ancillary contract to the main contract is not legally binding in all situations and the rights and obligations of the ancillary contract cannot be fully taken over by the parties to the main contract.

In practice, however, the addressed situation is very common and that is why the jurisprudence should respond to the practical issues and try to resolve the current issue by adopting a new legislation.

The paper focuses on the legal regulation of the above mentioned issues and, on the other hand, points out the decisions of the courts in a specific legal matter related to the addressed issue.

A need to amend the Act is also evident from the interest of the professional public and the general public in the use of the transfer of rights and obligations of the ancillary contract to the main contract in the Slovak Republic.

### Literature:

1. Act No. 513/1991 Coll. Commercial Code Act, as amended.
2. Act No. 40/1964 Coll. Civil Code Act of Slovak Republic, as amended.
3. Act No. 89/2012 Coll. Civil Code Act of Czech Republic, as amended.

### Primary Paper Section: A

### Secondary Paper Section: AG

# EXAMINATION OF CONTROL AND COMMUNICATION FLOW PROCESSES IN ORGANIZATIONAL CULTURE

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**Abstract:** The paper deals with the control and communication flow processes present as part of the organizational culture, which is a popular concept in management science. The objective of the study is to classify the control and communication flow culture of the studied enterprises. We used the questionnaire for the assessment of organizational culture developed by Harrison and Handy in our survey. Following an introduction to relevant literature, the study discusses the outcomes of empirical research.

**Keywords:** communication, control, organizational culture

## 1 Introduction

The concept of organizational culture has recently gained a high popularity in the field of management and organizational theory. The reason for this is its connection to the achievements, output, competitiveness, competitive advantage and financial factors characterizing an organization (Zehir, Ertoşun, 2011; Tidor et al., 2012; Denison, Mishra, 1995). According to Arnold et al., organizational culture is a set of norms, convictions, principles, beliefs and behavioral patterns that gives a distinctive character to every organization (Arnold et al., 2005; Tang, Yeh, 2015). These elements determine the everyday activities of the group (Schein, 1996; Bowers et al., 2017). In essence, organizational culture is a cohesive force which is made up of visible and nonvisible elements (Daft, 2008). Robbins and Judge define organizational culture as a system of thought shared by the members of an organization which distinguishes that organization from other organizations (Robbins, Judge 2010).

Organizational culture has an indispensable role in the development and expansion of the business (Duman et al., 2015). This, along with other things, implies that the aim of organizational culture is to help the members of the organization identify with the company, to increase its internal and external potential and to develop and maintain a good reputation (Blažková, 2005). The most important key factors are the symbols and values that connect the employees to the company and form the company's reputation (Alvesson, 2013). The following are indispensable components of an effective organizational culture: the mission and aim of the organization, work environment, management and leadership style, organizational development and policy, recruitment and careers, rights and privileges (Barnes; Tohid, Jabbari, 2011).

## 2 The results of empirical research

### 2.1 Methodology

Our research utilized the organizational culture assessment questionnaire constructed by Harrison and Handy. The assessment includes 15 factors and their can each be assigned 4 alternative evaluations. These alternatives need to be evaluated by the employees. The factors of the questionnaire have the answers in the following order of culture typology: Power Culture (Zeus), Role Culture (Apollo), Task Culture (Athena), Person Culture (Dionysus). Our survey was conducted among the enterprises of District Komárno, Slovak Republic, in the year 2018.

Before conducting the survey, we formulated a hypothesis that read: *The control and communication flow processes in the studied enterprises are jointly characterized by power and task orientation.*

### 2.2 Results

We endeavored to prove our hypothesis by means of our questionnaire survey. We did various statistical calculations during our study in order to achieve this goal. We compiled various tables that allow us to analyze the direction of the information flow as well with regard to the structure of the communication and control process.

Table 1: The values of control and communication flow structure in the studied enterprises

		Power oriented control and communication flow structure	Role oriented control and communication flow structure	Task oriented control and communication flow structure	Person oriented control and communication flow structure
N	Valid	111	111	111	111
	Missing	0	0	0	0
Median		3,0000	3,0000	3,0000	2,0000
Variance		1,549	,945	1,134	1,088
Distance		3,00	3,00	3,00	3,00
Minimum		1,00	1,00	1,00	1,00
Maximum		4,00	4,00	4,00	4,00
Total Score		290,00	307,00	288,00	244,00

Source: own processing

We illustrated the median, variance, minimum and maximum values and aggregate scores of the individual culture types in table 1. The control and information flow is structured to the lowest degree for person orientation. We take this fact to mean that person orientation is not characteristic for control and communication processes.

Table 2: Control and communication flow structure occurrences and percentages of studied enterprises by the culture type

		Occurrences	Percentage	Valid percentage	Aggregate percentage
<i>Power Oriented</i>					
Valid	last place	31	27,9	27,9	27,9
	to a low degree	22	19,8	19,8	47,7
	second place	17	15,3	15,3	63,1
	first place	41	36,9	36,9	100,0
	Total	111	100,0	100,0	
<i>Role Oriented</i>					
Valid	last place	14	12,6	12,6	12,6
	to a low degree	26	23,4	23,4	36,0
	second place	43	38,7	38,7	74,8
	first place	28	25,2	25,2	100,0
	Total	111	100,0	100,0	
<i>Task Oriented</i>					
Valid	last place	23	20,7	20,7	20,7
	to a low degree	25	22,5	22,5	43,2
	second place	37	33,3	33,3	76,6
	first place	26	23,4	23,4	100,0
	Total	111	100,0	100,0	
<i>Person Oriented</i>					
Valid	last place	33	29,7	29,7	29,7
	to a low degree	41	36,9	36,9	66,7
	second place	19	17,1	17,1	83,8
	first place	18	16,2	16,2	100,0
	Total	111	100,0	100,0	

Source: own processing

Table 2 includes numerous pieces of data concerning the control and communication flow structure. The most important statement to make is that the control and communication flow of the enterprises studied in the Komárno District is quite power oriented (first place 36.9%). We can characterize this by saying that the information and instructions flow in a top-down manner. We came to an understanding that instructions can be given by the person higher up in the hierarchy in the studied enterprises, based on this top-down flow. The information flow is likewise characterized by a top-down direction, that is to say it flows

from the top management to the lower levels. Since the culture types by Harrison and Handy can most commonly be observed in the organizations in pairs, along with the power oriented information flow, a role oriented information flow and control is also detectable in the studied Komárno organizations (second place 38.7%). In this case, the hierarchy still plays a large role. Rules and guidelines flow from the leadership to the lower levels and information flows from the lower levels toward the leadership.

All this leads us to conclude that in the micro and small enterprises in the Komárno District, communication flows on some level from both levels towards the other, but rules and guidelines tend to flow from the top management toward the lower levels of the organization and information tends to flow from the lower levels towards the leadership levels. The least characteristic of the district's enterprises is for the people to discuss the rules, guidelines and the assignment of tasks among themselves.

### 3 Conclusions

In summary, we can conclude that in the case of the micro and small enterprises of the Komárno District, the dominant control culture is *power and role oriented* based on our survey (Table 2 illustrates this in detail).

Thus, our hypothesis has not been verified.

Therefore, the control and communication processes of the enterprises that comprised the sample are characterized by the following:

- control is based on rules, guidelines and by-laws;
- the leaders exhibit democratic behavior;
- the control process can be carried out by a person tasked with this or a person who has deep professional knowledge, which results in the development of the subordinates;
- information flows both top-down and bottom-up, rules and guidelines are communicated from the higher levels while information is propagated upward from lower levels.

The next table illustrates the power orientation and role orientation Phi, Cramer's V, Gamma, Spearman and Pearson's values against each other.

Table 3: The values of power orientation and role orientation

		Value	Approximate Significance
Nominal by Nominal	Phi	,731	,000
	Cramer's V	,422	,000
	Contingency Coefficient	,590	,000
Ordinal by Ordinal	Gamma	-,203	,021
	Spearman Correlation	-,196	,039
Interval by Interval	Pearson's R	-,158	,097
N of Valid Cases		111	

Source: own processing

We carried out an additional analysis to establish the reliability of our findings. We opted to make a reliability calculation that involved finding the Cronbach Alpha value. This is a value used to determine the reliability of our questionnaire: whether the results we reached are relevant or not.

We have a *Cronbach Alpha value of .905*. A Cronbach Alpha value of 0.7 or above is considered acceptable. This means that in our case, the value of 0.905 signals a high reliability. We can therefore conclude that our results are reliable and relevant.

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# INNOVATIVE APPROACHES TO TESTING AND TEACHING ENGLISH FOR SPECIFIC PURPOSES. COMPUTER-ASSISTED LANGUAGE LEARNING VIA COMPUTER-ASSISTED LANGUAGE TESTING

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**Abstract:** Most international organizations, private and governmental institutions across Europe and in Ukraine in particular require professionals with profound knowledge of English that is a lingua franca of the global community. Hence there is a need for new innovative global English assessment and training tools. Computer-assisted language testing (CALT) provides new possibilities in this direction as it may be used both for assessment of candidate's language knowledge and backwash, taking into account its positive effect as a component for blended learning. In this case better and more active development of language skills and competences may be achieved. This research covers the main theoretical and practical approaches to CALT as a way to change the shape and design of teaching tools to improve language skills and competences.

**Keywords:** foreign language, language assessment, CALL, CALT, skills.

## 1 Introduction

### 1.1 Statement of the problem

Interactive teaching methods and new information technologies positively influence the education process. Therefore CALT in our view may be considered as an integral part of Computer-Assisted Language Learning (CALL) as syllabus presupposes management by assessment and control.

Nowadays CALL has become an integral component in teaching and learning English for specific purposes (ESP). CALT and other forms of language assessment in our view is an optimal part of foreign language syllabus. It is the best means to manage the learning process as well as assessment of the learned material. Different forms of language assessment provide not only evaluation but also an important educational function.

Scientific and technological progress is the driving force of the educational process that leads to the introduction of innovative models for teaching foreign languages. The impact of information technology on society and education in mastering foreign languages by means of computer technology has become the focal point in teaching. Though this approach is justified due to several reasons: time economising; interaction that leads to higher motivation, positive influence on psychology (anxiety or even fear reduction), independence (possibility to self-regulate language evaluation and the whole process of doing the test completely). Computerized language provides automatic, objective scoring possibilities.

Modern approaches to teaching demand incorporation of innovative tools. In assessment of Language for Specific Purposes (LSP) multimedia provides "immersion" into the language environment, the ability to feel special features of the language. Multimedia can be used in the combination with other learning styles taking into account the requirements and needs of the target group. Developing speaking skills, target group is able to implement their knowledge, language skills, ability to solve specific communicative tasks in real life situations (Kutza, S.). Modern multimedia educational technologies have replaced static tools. Therefore language teachers apply approaches that encourage thinking, even critical thinking, cognitive process, learning and hence language fluency through immersion into authentic environment.

In this respect test-directed techniques are considered to be the most effective, objective and economical. They increase motivation for learning a foreign language, provide the most favorable, stress-free conditions to identify the level of knowledge of a student of a particular topic or subject both

independently and with the help of a teacher (Manvelova, 2014, p. 133-135).

The objective of our study is to analyse the theoretical background and to present alternative approaches to using CALT in educational process, to prove the multifaceted functions of CALT considering it as an important part of CALL.

There are different approaches to defining a test. It is considered as a method of pedagogical measurement to identify the level of linguistic, communicative and sociocultural competence (Azimov et. al, 2009, p. 311). It is the subject to a high degree of objectivity, reliability and validity. Though CALT provides more technical tools and possibilities to design, modernize and verify the test itself and more opportunities for test-takers (for example stop, precede, self-assess).

### 1.2 Analysis of recent research and publications.

The first work on computerized language testing was published in 1970. It was "Computer-assisted instruction testing and guidance" of Wayne H. Holtzman (Holtzman, 1970). With the evolution of computer technologies, the number of research in this field has increased worldwide. The problem of computerized adaptive language testing is researched in particular by Eggen T. J., Straetmans G. J. (Eggen et. al, 2000), Thissen D., Mislevy R. J. (Thissen et. al, 2000), Wainer H. (Wainer, 2009), Ockey G. J. (Ockey, 2009). The authors stress upon potential advantage of using computer technology in language skills assessment.

The works devoted to language testing and assessment and the CALT comprise a scope of theoretical, methodological and practical approaches that may be grouped in the following way:

- Language testing is viewed as a component of educational process optimization as it is an efficient means for target group activation (Shmatok et al, 2004).
- A test is a way of knowledge assessment that promotes activation of all elements of a teaching system by means of feedback that conditions double nature of control functioning (Babansky Yu., 1989).
- Test is considered not only as the most effective form of knowledge assessment but also a more objective indicator of the degree of mastering linguistic material. Systematic testing stimulates activity and attention of students in the classroom, increases their responsibility (Rogova et al, 1991).
- Methodological aspects for linguodidactic testing are test content criteria, methods of experimental verification of tests to identify the difficulty of tasks, validity and reliability of methods, principles of interpreting the acquired characteristics (Kokkoto V., 1989; Hughes A., 1997; Spolsky B., 2000).
- Typology of tests guarantees better assessment in teaching ESP as it may cover professionally oriented vocabulary, communicative and writing skills. According to the aim there are achievement tests, proficiency tests, aptitude tests and diagnostic tests (Davies A., 1997; Davies et al, 1999).
- Communicative model of language tests that includes grammar sociolinguistic and strategic competence improves their quality (Swain M., 1985).

### 1.3 The purpose of the article

In this respect it is necessary to identify the positive factors that prove the effectiveness of learning by means of multimedia and CALT in particular. They are as follows:

- better understanding of the material;
- motivation to percept new information;

- time economising due to significant reduction of time for repetition drills;
- knowledge remains in memory for a longer period thus it is easier to recover and apply in practice after a brief revision (Rabiichuk L., 2001; 2002).

Today language tutors actively use both classical and modern techniques and approaches to achieve better result in a short time. Language courses do not usually provide long sessions. So the main goal of a target group is to develop communication skills (using clichés, stamps, memorizing dialogues) and to overcome the psychological barrier though, as a rule, at the expense of grammar. Hence there arise new problems in communication though of a different character. Therefore the effective methods of securing knowledge and self-improvement are testing and use of new technologies as "a simulator". They will allow in a short period of time and quite effectively restore and improve knowledge (Rabiichuk L., 2001; 2002).

## 2 The theoretical backgrounds

Methodological literature indicates such forms of assessment as *placement* (carried out by a teacher to define the general knowledge); *summative* (carried out in the end of a course or project) and *formative* (carried out during the course to check on the progress of students and modify future teaching plans, for example quizzes); *self-assessment* (a form of diagnostic assessment that involves students assessing themselves, for example in pair work or to monitor progress); *forward-looking* (a student or a teacher asks those being assessed to consider themselves in hypothetical future situations) (Reed, 2006); *performance-based assessment* (focused on achievement) (Hughes, 1997, p. 9).

Modern educational technologies greatly facilitate the process of assessment. By means of certain programs, students can test and assess themselves identifying their level and spotting mistakes or gaps having a chance to do the exercise again.

Self-assessment is a mental skill that provides training via comparison of the achieved results (on the basis of a syllabus) with the content and relevant external design of (specified) foreign language material. This comparison is carried out on the basis of course material and personal experience to make further self-correction, which is to some extent self-conscious. Naturally, after evaluation (self-assessment and monitoring by a teacher) self-correction is a necessary action that logically completes the whole cycle of foreign language activities (Rabiichuk, 2001).

Supporters of this theory argue that self-esteem has several advantages. First, it increases the student's independence. Secondly, as David Nunan notes (1998), self-evaluation helps students develop critical self-knowledge of themselves as an active agent is involved in the learning process. Thirdly, self-assessment improves metacognition, which, in turn, leads to the development of critical thinking and has a positive impact on learning. Another advantage of this type of assessment is the increased motivation of students, their interest in the process of learning. The next advantage can be considered as an increase in self-confidence, which stimulates students to consciously, as soon as possible, eliminate the gaps in knowledge that they have discovered. Another advantage is the fact that students integrate theory and practice, relating knowledge to their own lives (Kusnic et. al, 1993).

An important aspect of the theory and practice of learning is monitoring, evaluation and assessment of knowledge. Without verification, acquired skills can not be a quality solution to this problem. Therefore knowledge and skills assessment has always been and will be an important part of the learning process, though attitude to it underwent some changes that is determined by the nature of the learning process.

## 3 Methods

There are some requirements to methods of the English language assessment:

1. Commitment. Monitoring should be directed to specific skills and speaking skills. The level of their achievement should be determined and evaluated.
2. Representation. Assessment should cover all the studied material.
3. Objectivity. Control must be very objective to ensure the efficiency of its main functions, namely, feedback and evaluation.
4. System. Control takes efficiency and is justified only if it is regular during the process of learning a foreign language. Systematic assessment and testing are implemented in the study of a particular topic to determine the level of formation of individual skill or ability, mastering of a certain portion of educational material), quizzes (after work on the subject, cycle, at the end of the month), final test (after a certain stage of learning a foreign language) (Rabiichuk, 2001; Backman et. al, 1996).

The dominant function of formative assessment is feedback. According to the results of formative assessment, a teacher receives information about the success or failure of the educational process in a foreign language that enables to promptly adjust the learning activities of students and activities during the learning process.

The function of formative and summative assessment is to determine and assess educational progress in mastering foreign-language skills and competences during a certain period of time or after a certain stage of training.

It should be noted that for the implementation of test tasks, it is not so important to choose the way of assessment but the next stage – to correct mistakes. In this case a student is offered a series of corrective exercises that promote the elimination of errors.

Language testing and assessment is effective and fulfills its function only if organized and conducted with defined particular objectives for assessment. A special approach is needed when determining objectives in verifying the success of learning a foreign language. It is essential in this context to master a foreign language communication, ability to speak, understand speech, express opinions in writing or to read and understand a text in a foreign language (Rabiichuk, 2001; 2002). Therefore, only mastering skills of various kinds - reading, speaking, listening, writing - can and should be the main objective of testing and assessment. They demonstrate the ability to communicate with a partner. To achieve the best result in communication there should be taken into consideration the ability to speak on the topic, lead a conversation, understand a foreign text or writing.

Most researchers conclude that testing is an effective form of control that meets the objectives of the control and ensures effective implementation of its functions in learning a foreign language (Rabiichuk, 2001). The main purpose of ELS is to use feedback and control. Therefore, the more connected testing and educational process, the more effective the educational process.

Linguodidactic test should be prepared according to specific requirements of complex tasks to define the level of linguistic and / or communicative competence of test-takers and evaluate test results on a pre-derived criteria (Azimov et al, 2009, p. 127).

The main quality indicators of a linguodidactic test are:

1. Validity - description of the test, showing what exactly it checks and how well it is measured. Validity means to

- determine the certain level of foreign language skills, and abilities.
2. Reliability – a necessary condition for the validity of the test. Reliability test determines the stability of its function as a measurement tool. Reliability test gives about the same results in every application.
  3. Differential ability – characteristics of the test, indicating the ability of this test to identify underachieving and making it tested, i.e. with sufficient and insufficient skills and abilities.
  4. Practicality – characteristics of a test which determine:
    - a) the availability and feasibility of test instructions and content of tests for the understanding of test-takers;
    - b) simple organization and composition of testing under different conditions;
    - c) simplicity of answer check, determination and evaluation of results.
  5. Cost - description of the test, which involves minimal time, effort and money to prepare (Rabiichuk, 2001; 2002).

Linguodidactic tests are standardized and non-standardized. Standardized test is one which has been passed preliminary by a large number of test-takers and has quality indicators. Preparation of such a test requires hard work and long time. Among the standardized tests are the following: TOEFL (Testing of English as a Foreign Language, USA); PET (Preliminary English Test); FCE (First Certificate in English) (Moskal, 2000).

Non-standardized tests are developed by the teacher. These tests consist of material on specific topics to check the formation of a skill. Non-standardized tests are used for formative or summative assessment to provide feedback in learning a foreign language. Non-standardized tests require the quantitative indicators of quality. But it is advisable to detect in this test too difficult and too easy questions (problems, tasks) and replace them with more appropriate ones. To determine the most difficult or easiest tasks the following method is used: calculation of the percentage of those who completed the test tasks. If only 15% or less test-takers completed the task correctly, it can be considered as difficult. If 85% of the tasks are accomplished, it is easy (Rapoport et al, 1987).

As well language tests can be divided into two groups: knowledge and skill tests. Knowledge tests evaluate mainly the linguistic competence of the test-takers. These are lexical and grammar tests. Skill tests (for testing productive - speaking and writing and receptive – reading and listening skills) are differentiated according to the form of assessment. There are also traditional (designed to identify general level of language and skills on reading, listening and writing through traditional techniques, such as question-answer tasks); pragmatic (dictations, etc.); communicative (this is basically a test of oral speech).

A test is the minimum unit test, which involves a verbal or nonverbal reactions of a test-taker. Each test task creates a specific linguistic and extralinguistic situation for a test-taker. Test situation provided by the impetus of the tasks can be verbal or nonverbal, that is visible (e.g. charts, tables, image, etc.). Verbal stimulus is the text of the test task. The expected answer can also be verbal or nonverbal (photography, performance). Verbal response may be selective (i.e. presupposes the correct answer among the wrong or alternative ones) or free (Nikolaeva et al, 1997).

The basic issue in the development, design, use and verification process is a form of testing. To date, the most appropriate, effective and time consuming for both administrator and student is a computer assisted test.

Multimedia testing systems combine text, graphic, animated and video materials in the most effective combinations and use simultaneously all channels to transfer information: text, image and sound. The scoring of questions and answers allows to exclude mistakes when the task is misread. Graphics (drawing, diagram, photograph) can be included for questions and answers.

#### 4 Findings

In our view the most appropriate for test constructing is a program "Simulator". It is a versatile system of testing. It is simple to use and requires no special knowledge in software or computer science. This program can be used for self-assessment at home and for class testing in particular. The program allows an unlimited number of topics, questions and answers. It supports five types of questions for various tests. Some music, sounds, images and video may be used. The material can be printed out, exported to files in different formats. This program is effective for designing test for ESP as it may be diversified in a special manner due to the demands of a target group. "Simulator" consists of two parts: "Test Constructor. Editor" that is used to insert and edit the information; "Test Constructor. Simulator" is used for testing itself.

Over a short period of time there appeared a significant number of new forms of testing (simulators), administered (on-line tests, for example TOEFL IBT). Currently such test as APTIS has become rather popular in Ukraine. It is an innovative tool to assess all language skills and language proficiency skills in particular. It has been designed by the British Council and is frequently used for testing employees of international organizations, governmental institutions. Among the advantages of the test are the following: it includes assessment of all skills (speaking, listening, reading, writing). The "Use of English" component is an essential and obligatory one though other components are optional due to the required skills. It is based on socio-cognitive framework. Taking into account the goals of employees of international organizations, speaking and listening sections are important, writing is a must for governmental employees as making documents is an essential part of their work.

Another example of standardized tests is the EuroExam which assesses the knowledge of international English. It contains three tasks for each section. Reading includes Short texts, Scan Reading, Multiple-Choice Reading. Writing comprises different tasks, from Form Filling to Essay Writing. What distinguishes this test is the translation section and speaking tasks that contain Interview, Presentation and Transactional Dialogues that help to assess the candidate's ability to use language functions in different situations. Such types of tasks provide the background for the assessment of proficiency language skills.

Hence both standardized and non-standardized tests may be effectively used taking into consideration the goals of the target group, teacher's vision of the way of assessment for this particular group. The use of CALT considerably improves the way of a testing method and the approach to CALL for ESP as a whole as the demands of the modern society are different and to meet them the approaches to the current education process should undergo constant reform and modernization.

The main didactic principles of assessment in terms of teaching ESP are:

- evaluation of knowledge;
- consistency;
- general and professionally oriented tasks and vocabulary;
- differentiation of knowledge assessment;
- language friendly environment;
- time and space are unlimited because a student can personally set convenient time and pace;
- skills development via thinking and cooperation with the teacher and the group;
- revision is possible, transportability and ease of use.

In this respect the functions of the test according to V. Kokkota (1989) can be divided into the following general groups:

- Didactic functions of training (involves identifying gaps in students' knowledge) and the function of education (cognitive, disciplining etc.);
- Information functions of the test results (control, research and training).

Among other functions of testing are *motivating* that is conditioned by individual psychological characteristics expressed in the desire of every individual to obtain assessment of the results of certain activities; *educational* function provides feedback as a prerequisite for maintaining the effectiveness and efficiency of the learning process. It involves two subjects – a teacher and a student; *management* is a unique one and is implemented in the process of assessment and evaluation. It is based on the planned educational interaction between a teacher and a student; *correcting* is implemented in two directions: doing correction exercises and achieving adequate control of educational tasks; *diagnostic* function serves to identify the level of knowledge.

In addition CALT is of great importance for the solution of such basic methodological tasks of teaching a foreign language as the process of cognition, assimilation, communicative competence, optimization of foreign language teaching for different target groups and others. The effectiveness of learning a foreign language increases due to the digital interaction that instigates motivation.

The CALT is seen “as a natural evolution in assessment practice” (Dunkel, 1999). Computer is a driving force that makes pedagogy develop a new direction to overcome limitations and disadvantages (Warschauer, 1996). However it is a teacher who is able to activate the complementary relationship between computer technology and appropriate teaching programs (Domingo, 2007).

However, the use of a computer can not replace the teacher or reduce his role. Since, in this case, the teacher acts as an intermediary between the audience and the media that guides the learning process and determines what products will be more or less effective for a particular type of work to achieve better results.

What is really important in application of multimedia and computer technology, is that the teacher acts as the liaison, transmitting knowledge through practice, and the main role is given to the audience, not a teacher. Moreover, this approach is aimed at improving communication skills and avoiding excessive concentration on correcting errors, allowing the audience to participate freely in these types of work, where the students cooperate rather than compete (Domingo, 2007).

## 5 Conclusions and prospects for further research

CALT is one of the most important and effective ways of organizing assessment of a foreign language. Innovations enhance language assessment mode and approaches to language teaching in particular. CALT as a means of assessment creates psychologically friendly language environment, stimulates motivation. Though communicative tests require new design, modernization and innovative techniques in the process of their design to make them more authentic. Tests must meet certain requirements, such as efficiency, availability, reliability, cost effectiveness, validity. CALT in our view should be regarded as some kind of correlation of testing and teaching, testing and learning.

Further theoretical foundations of ELA and CALL in particular, the development of basic requirements for the quality characteristics of the tests are required as they significantly affect the efficiency of testing and training process and should be considered at all stages of their implementation.

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**Primary Paper Section: A**

**Secondary Paper Section: AM**



## PROVINCIAL TOWN CHRONOTOPE SPECIFICS IN G. FLAUBERT'S "MADAME BOVARY"

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**Abstract:** The article is dedicated to understanding the chronotope of provincial town in Flaubert's novel "Madame Bovary". A provincial town chronotope has important plot significance in the novel. It is the organizing center of the main plot events of the novel, in which the plot nodes "are knotted and untied". The heroes of the novel live and act in a specific geographic space, which is characterized by the isolation and exaggerated length of the distances. In the chronotope of provincial town the fundamental importance has the images of a false home, a home hearth, a motif of sunlight. Throughout the work, a complex interaction of cyclical household and non-cyclical time is traced, which in turn are closely connected with household loci.

**Keywords:** Flaubert; 19th century French prose; novel; motive; "Madame Bovary"; chronotope; provincial town.

### 1 Introduction

In the second half of the XIX century, cities flourished. Their population increases, they become the centers of industrial, political and socio-cultural life. The outstanding European and Russian prose writers – V. Hugo, O. de Balzac, G. Flaubert, F. Dostoevsky, E. Zola, M. Proust, B. Pasternak, M. Bulgakov, and others – addressed in their works to urban themes. Later it develops into the mythology of the city (Vasilyeva 2005; Ivanova 2014; Marinina 2007; Nabilkina 2014; Ruban 2004). We emphasize that the images of a particular city as a special topographic space, the location of the hero, the background of the development of plot collisions, have always been reflected in the literature. On the one hand, the city shaped its personality type, exerting a very significant influence on the formation of character, value orientations of this or that hero, but on the other hand, it was an independent living being, a certain social, cultural, political "organism" determined by a particular topography.

The theme of the city was one of the central ones in the work of G. Flaubert (from his early works to "Madame Bovary", "Feelings Education", etc.), who was one of the classics of realism, the predecessor of the "naturalistic realism" of Emile Zola school. His creative achievements go far beyond the limits of French literature. It is well known that among the writer's vast heritage, "Madame Bovary" (1857) comes to the fore; he is recognized as a true masterpiece of realism and is the apex of Flaubert's work. The central problem of the novel and (and the whole of Western European art of the second half of the nineteenth century) was the problem of personality. However, a fundamental aspect is the special background of the plot development – a provincial town with its oppressive boredom and vulgarity of provincial bourgeois life. In Flaubert's novel, the chronotope of a provincial city is of paramount importance. He is the organizing center of the main plot events of the novel, he sets the course of the plot development, determines the consciousness and the most important characteristics of the main and secondary characters.

### 2 Materials and methods

The perception of Flaubert's heritage in Russia begins in the nineteenth century, when "Madame Bovary" was highly appreciated by indigenous criticism (V.G. Belinsky, F.M. Dostoevsky, etc.). In the twentieth century the interest to master's prose has resumed: we can recall detailed studies of the poetics of his works both by Russian and foreign researchers. The writer's relations with Russia were particularly close thanks to I.S. Turgenev, his personal friend and associate in the arts.

In 1874, Turgenev was about to write a great article about Flaubert. In 1877 "Vestnik Evrope" journal published a translation of "Herodiad" with a preface where the Russian writer called Flaubert the head of the French realists and the heir to Balzac. Turgenev contributed to the appearance of translations "The Temptation of

Saint Anthony" and "The Simple Soul"; he conveyed this tale to E.I. Blumberg in 1876. By this time the Russian reader was already familiar with the translations "Madame Bovary" and "Salambo".

In 1897 "Education of Senses" was translated for the first time by E.G. Beketova. In particular, Turgenev wrote that the reader must be specially trained to understand novel mentioned and "The Temptation of Saint Anthony". In foreign criticism, significant interest has the articles of contemporaries of Flaubert, well-known writers as A. France, G. de Maupassant, E. Zola, Goncourt Brothers. In the XX century to his works addressed to André Maurois, S. Maugham, V. Brombert, R. Dumesnil, J. Gaultier, E. Fage (Brombert 1966; Brombert 1971; Danger 1973; Dumesnil 1928; Dumesnil 1932; Dumesnil 1961; Faguet 1899; Gaultier 1907; Williams 1973). The methodological basis of the study was the works by Mikhail Bakhtin on the novel theory and chronotope (Bakhtin 2000). The analysis of texts is based on the principles of comparative-typological and structural methods.

### 3 Literature Review

A keen interest in the famous French artist arose in the twentieth century, when his work became widely known. Despite the fact that Flaubert's literary heritage is considered in all textbooks on the history on Western European literature, in particular, French literature, and his name is mentioned in many articles on various aspects of the history of French realism, the number of studies directly devoted to his work in Russian is relatively small. In this aspect it is necessary to note the works of A. Ivaschenko, B. Reizov, T. Perimov, A. Puzikov, S. Zenkin (Ivaschenko 1955, 1967; Reizov 1965; Perimov 1934; Puzikov, 1972; Zenkin 1999). It is noteworthy that Mikhail Bakhtin also turned to comprehending the work of the French prose writer. In particular, the scientist attempted to write a separate article on Flaubert's aesthetic principles that were realized both in the writer's early works and at a later time, after Flaubert gained the status of a skilled stylist. The study was not completed: the literary critic died, but his main ideas were presented in a published outline to the lecture on Flaubert. Mikhail Bakhtin is one of the first to begin to develop the concept of chronotope in the novel. Accordingly, Flaubert's novel "Madame Bovary" is considered in the context of this problematic. But Bakhtin rightly points out that "Madame Bovary" is a novel that was supposed to portray an "ugly and sad" reality, "life and lifestyle, vulgarity and vulgarity" (perpetuate that which is devoid of any internal rights to eternity)» (Bakhtin 2000, p. 286).

In "Lectures on Foreign literature," Vladimir Nabokov examined the stylistic side of the novel. He noted that Gogol called "a poem" his "Dead Souls"; "Flaubert's novel is also a poem in prose, but it is better built, it has a more subtle and dense structure" (Nabokov 1999, p. 208). Nabokov, in particular, noted one of the author's artistic techniques – "the most smooth and elegant transitions from the image of one object to another within one chapter" (Nabokov 1999, p. 208). He called them "structural transitions." Along with the "structural transition", Nabokov identifies the "deployment method", i.e. stringing of visual details, one thing on another, with the growth of a particular emotion.

Ideologically biased literary criticism of the "Soviet" period has also got a number of works devoted to the heritage of Flaubert (Ivaschenko 1955; Perimov 1934). An illustrative example is the

monograph by T. Perimov, which in no way pretends to be a comprehensive and all-round study of Flaubert's work. Although the literary scholar notes that Flaubert is "an extremely interesting and significant writer," he emphasizes, above all, the "social and political" significance of his heritage in the general paradigm of "socialist realism." He notes that, along with the purely historical-literary interest excited by his work, the latter is also of great importance as part of that literary legacy, which must be critically interpreted by subsequent generations of readers. The monograph of A.F. Ivaschenko presents an overview of the writer's career, which has a significant place among the nineteenth-century French critical realists.

The researcher gives an analysis of the main works of Flaubert ("Madame Bovary", "Salambo", and «Feelings Education»). The work of Flaubert, by virtue of the well-known middle of the last century ideological attitudes, he considers in connection with the wide social movement of his time (Ivaschenko 1955). The main pathos of the work, according to the scientist, is "a great hatred of the bourgeoisie"; it is characterized by fierce denial of the figment in art, morality, social ideals, which the bourgeoisie imposes on society" (Ivaschenko 1955, p. 116). N. A. Solovieva pays special attention to understanding writer's world-comprehension and his aesthetic principles. (The History of French Literature, ed. N. A. Solovieva, p.10).

Boris Reizov, one of the largest Russian researchers of French literature, exploring the writer's work in the context of his life, devoted two his major works to Flaubert, (Reizov 1955, 1977). The chapters of the book, which are devoted to the novel "Madam Bovary", have the greatest interest for our research. Reizov presents to the reader the story of the creation of the novel, explains the reasons for choosing the plot: "The novel, according to Flaubert's plan, was to portray a grimacing, ugly and sad modernity" (Reizov 1955, p. 198). It is important to note that the image of Bovary created by Flaubert acquires an immense force of generalization and becomes a symbol of modernity. Reizov emphasizes the psychological basis of the image of Emma Bovary, thereby determining the psychological method of the artist.

A fundamentally new approach to the study of Flaubert's art is demonstrated by S. Zenkin in his book "Works on French Literature" (1999). There is also a chapter dedicated to "Madame Bovary". The researcher traces the theme of the relationship between the author and the hero, but also develops one of the key problems for the world humanities of the twentieth century – the problem of body in culture. The author of the monograph analyzes the French literature in connection with the "old" literary criticism. This is due to the fact that "the tools for acquiring new truths can and should become the very traditions that were inherited from their predecessors – they simply should be reflected, understood as specific national features of the Russian national consciousness, that is a part of world culture" (Zenkin 1999, p. 9). Studying "Madame Bovary" Zenkin pays great attention to linguistic analysis and to the analysis of novel's composition.

Thus, despite a serious understanding of many problems of Flaubert's heritage, not all aspects of the writer's work find a detailed coverage. This concerns, first of all, to the study of the chronotope of a provincial town in "Madame Bovary".

#### 4 Results and Discussions

For the development of the plot in "Madame Bovary" was created a special background – a provincial city with oppressive boredom and vulgarity of provincial bourgeois life. At the same time, researchers of the Flaubert's art have repeatedly noted that the picture of a provincial city is given without amplification, thickening of colors, but with documentary accuracy, rigorous detailing in the depiction of objects, people and even physiological states (Nabokov 1998; Reizov 1955).

Mikhail Bakhtin paid attention to the creativity of the French writer, although in his legacy "Flaubert is a rather unexpected

name" (Bakhtin 2000, p. 297). In particular, scientist wrote a "laboratory text" (on Flaubert), devoted not just for individual moments that were aesthetically significant for Flaubert's texts, but containing a number of philosophical and theoretical themes that were central to Bakhtin himself. In addition, the name of Flaubert, along with Balzac, Stendhal, Dostoevsky and Tolstoy is often found in the "Forms of Time and Chronotope in the Novel". In particular, they were used as an illustration of the reasoning about the "intersection" of the temporal and spatial series in the work: "Time (in the literary and artistic chronotope) is thickening, condensed, becomes artistic and visible; space is intensified, drawn into the movement of time, plot, and history. Signs of time are revealed in space, and space is comprehended and revealed by time.

An artistic chronotope is characterized by this intersection of the rows and the merging" (Bakhtin 2000, p. 10). As part of his research, the scientist gives an exhaustive description of the types of spatial-temporal relations, and also gives a classification according to which Flaubert's "Madame Bovary" belongs to idyllic novels: "The provincial bourgeois town with its stagnant appearance is an extremely common place for the accomplishment of novel events in the XIX century (both before and after Flaubert). This town has several varieties, including the very important one – the idyllic" (Bakhtin 2000, p. 181). The researcher describes the literary time in the novel as "everyday trivial cyclic common" (Bakhtin 2000, p. 182), and devoid of progress: "The day is never a day, the year is not the year, life is not life. Day after day, the same everyday actions, the same topics of conversation, the same words, etc. are repeated. People in this time eat, drink, sleep, have wives, lovers, have little intrigue, sit in their shops or offices, play cards, gossip" (Bakhtin 2000, p. 182). But at the same time, Bakhtin notes that this time cannot be considered as the main one in the novel, the authors use it, as a rule, as a side role, which should be intertwined with other "non-cyclic time" (Bakhtin 2000, p. 182). Speaking about the connection of this time with space, the scientist points out that the signs of this time "are simple, roughly material, firmly fused with everyday locales: with small town houses and rooms, sleepy streets, dust and flies, clubs, billiards, and so on. Time is devoid of events here and therefore it seems almost to have stopped" (Bakhtin 2000, p. 182). It is necessary to pay attention to the remark of the researcher about the relationship of human life and nature: "The combination of human life with the life of nature, the unity of their rhythm, a common language for natural phenomena and the events of human life" (Bakhtin 2000, p. 159).

At the same time, despite the attribution of "Madam Bovary" to the group of "idyllic novels", Bakhtin notes that in the works of nineteenth-century novelists the problem of chronotope realization is interpreted differently. "The matter here is <...> about the collapse and breaking of the idyllic worldview and psychology, which are inadequate to the new capitalist world. The collapse of the provincial idealism and provincial romance of the heroes in the capitalist center is depicted. These heroes are not idealized; the capitalist world is not idealized either: its inhumanity is revealed, the destruction of all moral principles in it, the disintegration (under the influence of money) of all previous human relations - love, family, friendship; degeneration of the creative work of a scientist, artist, etc." (Bakhtin 2000, pp. 167-168). The hero in the piece of art is also depicted differently: "The positive person of the idyllic world becomes ridiculous, pitiful and unnecessary; he either dies or re-educated and becomes an egoistic predator" (Bakhtin 2000, pp. 167-168).

Indeed, in the space-time continuum of "Madam Bovary" by Flaubert the chronotope of the provincial city of Ionville, whose life is devoid of any significant events, becomes the key-point. The provincial city is a place of cyclical domestic time, since there are no real events here, but only repetitive "events". This is a thick time, "creeping" in space, devoid of progressive historical course. It moves in narrow circles: the circle of the day, the circle of the week, the month, the circle of the whole life. Therefore, it can not be the main time of the novel. It is, indeed,

used as an accessory time; it intertwined with other, non-cyclic time series.

In this connection, the biography of Charles Bovary – not a cyclical time series – that is the central time of the novel, acquires a special significance. It is against the background of the life story of the hero that the main action takes place. According to Flaubert, this tragic performance is played out in a space with a narrow geographical framework. All of the few provincial settlements – Rouen, Toast, Ionville, Berto's farm, Vobiersart Castle (the last three are fictional places, but their location is quite certain) are located in the same department of the Lower Seine (now the Maritime Seine), within a circle with a radius of twenty kilometers.

The scenery of provincial Yonville appears in the second part of the novel and precedes the arrival of the Bovary couple: "The town of Ionville – l'Abbay (named after the long-ruined Capuchin Abbey) stands eight miles from Rouen, between the Abbeville and Beaulieu roads, in the valley of the Rielle River which runs into the Andel and near its mouth drives three mills in motion and in which there are some trout representing the temptation for the boys – on Sundays, lined up on the shore, they fish in it. In Boisier, you turn off a large road and climb a dirt road on a sloping hill Le; from there you can enjoy a wide view of the valley. The river divides it into two completely different areas: to the left – meadows, to the right, – arable land. Meadows stretch under the edge of the mounds and merge behind with the pasture of Brae. To the east, the plain, rising imperceptibly to the eye, expands and, as far as the eye can see, golden stripes of wheat are spread. The color of grass and the color of crops do not turn into one another – they are separated by a light ribbon of running water, and the field here looks like a huge raincoat spread out with a green velvet collar trimmed with silver braid" (Flaubert 1983, p. 89).

However, behind a similar picture of a serene rural happiness and external appeasement hides a contradictory content: "Normandy, Picardie and Ile-de-France converge here. This is a land of confusion, where speaking is devoid of specificity, and the landscape has no originality. They make here the worst Nevshatel cheese in the whole district, and it is unprofitable to engage in arable farming here – loose, sandy, rocky soil requires too much fertilizer" (Flaubert 1983, p. 89). A similar mood is present in the following lines of the novel, where the prose writer debunks the original affable look of the town: "Near the walls, through the plaster of which the black shingled diagonally looks out, stunted pears grow <...> the yards gradually become more and more narrow, the little houses are sculpted one to another, the fences disappear ..." (Flaubert 1983, p. 90).

The topography of Ionville is as unremarkable as the geography of the surrounding area. The city consists of a single street, "long no further than a flight of a bullet" (Danger, p. 92), and the only square that is the focus of social and "cultural" life takes place in a provincial town that spread out "on the shore, like a shepherd in the hour of the midday heat" (Flaubert 1983, p. 90). In the limited space of the town square is the notary's house. This is the most beautiful white house in the area. In front of him is a round lawn decorated with cupid. He put a finger to his lips. On both sides of the entrance are stucco vases. A metal plate glitters on the door. Twenty steps away, on the opposite side, the church stands next to the square. It is surrounded by a small cemetery with a low stone wall. It is so cramped that old, ingrown plates form a solid floor on which grass draws regular green quadrangles. In the last years of the reign of Charles X, the church was rebuilt. But the wooden vault at the top is already rotting, in some places dark hollows appear on its blue background. <...> a good half of the town square is occupied by a covered market. This is a tiled canopy, which stands on about twenty pillars. On the corner, next to the pharmacy, is the Town Hall, which was "designed by a Parisian architect." It represents a kind of Greek temple. Below – three Ionic columns, on the second floor – a gallery with a narrow arch, on the pediment there is a Gallic rooster with one paw rests on the Charter, and the other holds the scales of justice. But the pharmacy of Mr.

Ome is especially striking. It stands opposite the Golden Lion tavern. In the evening, when the kenket is ignited, when the red and green orbs of the showcase creep along the ground, long colored stripes and on the balls, as if by a flash of Bengal fire, and then the shadow of the apothecary bent over the desk appears" (Flaubert 1983, p. 91).

The vulgarity, bad taste, the pretensions to luxury are obvious: the "cupids", lawns and Greek temples are located against the backdrop of a dusty country road and a dirty coach house, speaking in contrast to crumbling plaster and leaking roofs. Therefore, the words of Flaubert, which complete the description of the provincial little world, acquire a special satirical meaning: "There's nothing more to look at in Ionville" (Flaubert 1983, p. 91). Such a city becomes a trap for the main character – Emma Bovary, whose dreams are inspired by vulgar novels about the life of the capital's fashionable society. Emma buys the plan of Paris, "her Paris" is filled with the names of streets and boulevards; she reads magazines with the details of high-society life, and her ideal takes on concrete and complete forms.

Let's make a remark: the opposition of Paris and the provinces, the understanding of this opposition as a problem of French society was suggested by Balzac: he was the first to represent France as the opposition of Paris and the province. In the province, according to Balzac, there is still spiritual purity, morality, traditional morality. In Paris, the human soul is destroyed. Flaubert believed that all France was provincial. It is not by chance that in the novel "Madame Bovary" the image of Paris does not appear. The only road is the "big country road" (Flaubert 1983, p. 90), which leads from Ionville to Rouen, beyond which life is unthinkable, and even the characters' dreams do not extend beyond Rouen. The capital is not present in the minds of the characters, and the provinciality becomes a characteristic of their internal state, a criterion of their actions.

However, the artistic significance of space is not measured only by its physical characteristics. In a close provincial little world there are "force fields", the action of which determines the fate of the heroes. In this world, the spatial distance between the characters is a necessary condition for happy love. Proof of this is the story of the two marriages of Charles Bovary: his first wife was a resident of the same town as the tiny town of Toast, and this lack of distance predetermined the artificiality and worthlessness of their marriage. On the contrary, the story of Charles's marriage to Emma emphasizes the spatial distance of the bride and groom. To get to Berto, he has to overcome a considerable distance, and, as the commentators have found out, several times more than what the Toast and the village of Wassonville, next to which Papa Rouau's farm is located, divides. The prose writer fundamentally exaggerates, stretches the distance to make it more tangible to overcome. So, during his first trip to Berto, Charles wanders along the night roads, falls asleep in the saddle, and, having finally reached the goal, he seems to fall into the fabulous magic kingdom, where his betrothed is waiting.

To an even greater degree, the belief that the "right" love union must cover the distance is characteristic of Emma. Charlie's love was attractive to her only as long as they lived far from each other. But as soon as they settled together, love was supplanted by boredom and everyday life. Emma's first feeling for Leon quickly cools as well, since lovers are too close and live in the opposite houses. According to Flaubert, it is impossible to love "in the neighborhood," such a feeling is necessarily fleeting. The real passion flares up in the characters only when there is a between them – the distance that Emma overcomes during her trips to Rouen. Rodolphe Boulanger, it would seem, is a neighbor of Bovary, and his manor is located near Ionville. But the distance that separates them is symbolically accentuated: in order to go on rendezvous to her lover, Emma has to cross the river, overcome a dangerous crossing (the heroine walks over the cattle bridge, climbs over the plants, etc.).

But love lives not only by overcoming space – it expands it itself, expands the horizons. Love seems to Emma as an

opportunity to break out of the provincial narrowness: "Everything that surrounded her was village boredom, the dullness of bourgeois people, the misery of life seemed to her an exception, pure chance, she considered herself to be her victim, and beyond this chance she dreamed a vast edge of love and happiness" (Flaubert 1983, p. 80). As a result, Emma wants to go somewhere with Leon, then prepares to escape with Rodolphe, and then she is ready to run even with tenor Lagardi. However, all the aspirations of the heroine are in vain: the journey with Rodolphe is replaced by a circular movement of fiasco with Leon; dreams of long journeys are replaced by everyday trips to Rouen, since Emma is firmly "inscribed" in the world of a provincial city, first of all, spiritually.

According to Flaubert, the motionless life of the heroine ("frozen", according to Bakhtin) is her provinciality, which is an essential attribute of the "bourgeois" way of life in general. Emma's husband complains about the constant travels that he is forced to make by virtue of his profession; Leon Dupuis also speaks about his love of homeland; a voluptuous notary, Guilomen, sits at Emma's fireplace, the heroine herself reaches for the hearth, sits in a daze for a long time, makes "fireplace tongs red-hot" (Flaubert 1983, p. 111). However, despite the motif of a warming fire that periodically occurs in the novel, marking the space of the *Home*, writer debunks the existing "mythology" of the home as a symbol of intimate privacy, comfort and security. In the house of Bovary, there is always a cold, "walls in trickles and a damp floor" (Flaubert 1983, p. 86), draws "cold lime" (Flaubert 1983, p. 102). Emma's attempts to buy fancy trinkets to periodically rearrange furniture to create coziness are vain. The image of a ruined, alien, and non-residential house often appears in the text: "her life was cold as an attic with a dormer window to the north, and anguish wobble all corners of her heart in the shadow of a spider's web" (Flaubert 1983, p. 68); "The future seemed to her as a dark corridor that rested against a tightly closed door" (Flaubert 1983, p. 84). In our opinion, such images reflect not so much the experiences of the heroine, as they characterize her world, provincial, and narrow. The inability to live happily in a house is not just a subjective sensation of Emma, but it is her objective reality. It is not by chance that the picture of home comfort and luxury is presented to the heroine exclusively in other people's houses – in Vobjessar castle or in the notary's rich house, and Emma herself is compared to a poor passerby who "looks from the street to the windows of the once home and sees people at the table" (Flaubert 1983, p. 47).

The image of a home that arises in Emma's mind during her relationship with Rodolphe is an illusion: "they already were something like spouses who keep a steady flame in their home" (Flaubert 1983, p. 176). The same image appears in the episodes about Emma's meetings with Leon in the hotel "Boulogne": "They owned each other so completely that they thought it was their own home, where they would live forever as young spouses until the end of their days" (Flaubert 1983, p. 258). However, the *home* represented by the heroine is a fake, false house, since it was moved to the plane of not family love, but vulgar adultery. It is obvious that the chronotopic isolation of the heroine are marked in the novel by images of a false home and hearth. Only thrice the space expands due to the motif of sunlight. It is the motif of the "breaking in" light that marks the episodes of the transition of heroes from existence in a stupor to passionate animation. Thus, the decisive scene in the episode of Charles' acquaintance with Emma opens with a description of the "breaking in" light: "He went into the kitchen, but the shutters were closed, and he did not notice Emma at first. Making their way through the cracks in the walls, the sun's rays stretched in long thin strips on the floor, broke about the corners of kitchenware, and trembled on the ceiling" (Flaubert 1983, p. 49).

## Summary

The chronotope of a provincial town in Flaubert's novel has an important plot significance. He becomes the organizing center of

the main novel narrative events, in which, according to M. M. Bakhtin, plot nodes are "tied and untied". The heroes of "Madame Bovary" live and act in a specific geographical space, characterized by isolation and exaggerated length of distances. In the chronotope of a provincial town of Flaubert fundamental importance has the images of a false home, a home hearth, a motif of sunlight. Throughout the work, a complex interaction of cyclical household and non-cyclic time is traced, which in turn are closely connected with domestic loci.

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## Primary Paper Section: A

## Secondary Paper Section: AJ

## CONCEPTUALIZING THE POSSIBLE IMPLEMENTATION OF FOOD TAXES IN DEVELOPED ECONOMIES: CASE OF LATVIA

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**Abstract:** Broad system of taxes on unhealthy foods, possibly combined with subsidies for certain healthy foods is one of the public health policy directions. This paper assesses possible rationales for such a tax, examining arguments and historical development of health taxation in Latvia. The aim of study is to examine rationales for tax, including behavioural issues and develop proposals for the future development in Latvia. The conventional quantitative and qualitative data analysis methods of economics as well as inductive and deductive research methods were used. Proposals for the possible food tax system as a part of health financing model had resulted from this research.

**Keywords:** unhealthy food tax, taxation, health policy, excise tax on junk food.

### 1 Introduction

General tax revenues are important source of public spending and "sin taxes" – taxes on alcohol, tobacco have long been an important mean for raising revenues and reducing harmful targeted product consumption. Over the last decade politicians and scientists have shown additional interest on using of excise taxes on unhealthy products to achieve public health goals and reduce consumption of foods, such as sugar sweetened beverages and other targeted products. While the use of "sin taxes" on alcohol beverages and tobacco for fiscal and health policy purposes, changing consumers' behaviours is well-established, we have founded only few publications which synthesize research on "health tax" policy issues. Another question is whether and to what extent the revenues generated by specific taxes are sufficient for health-related spending. Earmarked ("hypothecation") revenues does not guarantee that overall spending for health promotion and prevention will be increased, partly because these measures are perceived to be less urgent, and partly because they tend to lead to the results over the longer term, making them less attractive for political process. There is no reason why revenues from a tax will match the funding needs of a corresponding public health effort. For example, the optimal subsidy for healthy foods might require twice as much money as a tax provides or only one-half. Linking the two policies too tightly may require compromising on one or both. Moreover, the imposition of a tax that improves public health by changing behaviour does not imply that the revenue should also be used to improve public health. Governments have many other useful ways to use their revenue. They may prefer to help people with low incomes (thus offsetting some of the regressivity of the tax), reduce taxes that weaken economic growth, invest in new opportunities that may or may not be related to health. This paper represents the review of experience with studying arguments and historical development of the tax system of health care. It seems obvious that broad system of taxes on unhealthy foods, possibly combined with subsidies for certain healthy foods, is one of the public health policy directions. This paper assesses possible rationales for such a tax, examining arguments and historical development of health taxation in Latvia. The purpose of the study is to examine rationales for taxation,

including behavioural issues and develop proposals for the future development in Latvia. The conventional quantitative and qualitative data analysis methods of economic data, as well as inductive and deductive research methods were used. Proposals for the possible food tax system as part of health financing model had resulted from the study.

### 2 Tax policy general considerations and countries' experience

Over the last few decades there has been a growing international trend towards development of taxation of unhealthy products and research devoted to this policy. Taxes on unhealthy products or "sins" such as alcohol, tobacco, certain foods and beverages are widely used. Historically, the primary objective of these taxes has been fiscal revenues to be generated, but nowadays policy and research interest in the ability of such measures to raise the cost of manufacturing, distributing and consuming of these products is increasing. Taxes imposed on consumed goods can be collected from manufacturers (as taxes on ingredients), distributors, retailers, or consumers (as sales or excise taxes on finished products). In several countries governments have employed taxes on alcohol and tobacco to promote reduced consumption (Wright et al. 2017). More recently, since 2010, countries including Finland, Denmark, Hungary, France, Mexico and England, have introduced sales taxes on foods or beverages deemed unhealthy. Food taxes are generally categorized as "junk food" or "fat" taxes, but while similar, only the latter attempts to modify behaviour (Fox et al. 2017, Roache & Gostin 2017). The intent of the "junk food taxes" seems to be used to promote healthier food choices, through reduction of consumption or usage of earmarked revenues for public health promotion to educate and inform the public about healthy diet. Regarding the "fat taxes", in general, this type of taxes is applied to foods considered to be high in fat or unhealthy. Many of the present-day food taxes were enacted without health concerns in mind. However the health impact of particular foods is subject to scientific uncertainty and often depends heavily on the other components in each individual's diet. Disease responses to food products are non-linear in quantity consumed and vary substantially across individuals. Individuals also are heterogeneous with respect to their preferences and self-control. A food tax scheme will result in an industry response and may spur both constructive and detrimental innovation.

The traditional view in economics has been that taxation can have a corrective role only if consumption causes negative externalities. However, recent literature on behavioural economics has shown that consumers sometimes make sub-optimal decisions even from the point of view of their own welfare. Consumers often behave myopically, and therefore consume too much of goods with delayed negative effects – excess consumption of unhealthy food and the resulting rise in obesity rates is an important example of this type of behaviour (O'Donoghue & Rabin 2006). Taxation can potentially be used to counteract this tendency for over-consumption. Relatedly, Lusk & Schroeter (2012) argue that policies such as the soda tax are hard to justify unless traditional rationality assumptions are relaxed. On the other hand, even if one dislikes paternalism in general, heavy taxation of unhealthy food may be justified by externalities arising through higher public health care expenditures, as well as by the need to protect children from the long-term consequences of their parents' unhealthy lifestyles (Brunello et al. 2009). Some studies (Allais et al. 2012; Cavaliere et al. 2017) also proposes analysis of the cost-effectiveness of conservative scenarios for two commonly proposed policy-based interventions: front-of-pack 'traffic-light' nutrition labelling (traffic-light labelling) and a tax on unhealthy foods ('junk-food' tax).

An unhealthy good causes health issues in the long run. It creates a misperceived utility loss and increases health care costs.

Conversely, a healthy good provides misperceived utility gains and reduces health care costs. People underestimate their future health costs from secondary disorders and, thus, choose unhealthy diet and weight. Individuals differ in income and in their degree of misperception; they vote over a fat tax according to their misperceived utility. A fraction of the tax proceeds is “earmarked” to reduce health insurance premiums; the remainder finances a subsidy on the healthy good. This earmarking rule is determined to maximize welfare, anticipating the induced political equilibrium. (Cremer et al. 2016). From policy making view the strongest role for a broad, health-based tax on foods would be as a health-insurance system component. Ideally, the tax amount would approximate the expected medical cost from consuming each unit of food, and the tax revenues would cover claims for the associated disease conditions as they arose. This tax - claim system could serve for major purposes. First, it would reduce moral hazard by causing individuals to make *ex ante* payments covering the expected covered costs of risky eating behaviour. Second, it would address the incomplete markets problem that consumers are restricted to short-term coverage by introducing a long-term component into the system. Third, it would aid in separating inherent risk over which individuals have no control from risk that is a function of behaviour. However as shown by (Mazzocchi et al. 2014) the main drivers of policy support are attitudinal factors, especially attribution of obesity to excessive availability of unhealthy foods, while socio-demographic characteristics and political preferences have little explanatory power. A high level of support for healthy eating policy does not translate into acceptance of higher taxes to fund them. The economic concept of externalities offers one way to think about appropriate tax levels. Externalities arise when consumer and business choices impose costs on third parties. Pollution from a power plant is a classic example; emissions harm people who have no role in purchasing or producing the electricity. With nutrition, the primary channel for potential externalities is through health insurance. Unhealthy foods and drinks can increase health care costs; insurance then spreads those costs across everyone in the same pool (if private) or across taxpayers (if public). Consumers have no reason to consider those spillover costs when they decide what to eat and drink. A tax can act as a proxy for those costs, however, leading consumers and businesses to make more efficient eating and drinking choices. The externality approach would thus calibrate taxes to any overlooked health care costs that would be passed on to other people through health insurance.

A newer approach, based on knowledge of behavioral economics, goes further and suggests that such taxes should also reflect any internal harms that people overlook (Marron et al. 2015). Such internalities occur if people make eating and drinking choices without being fully aware of the possible damage to their health. Taxes on unhealthy foods and drinks can proxy for those overlooked internal costs, just as they can for any external costs. The externality approach would thus calibrate taxes to any overlooked costs, whether borne by third parties or by consumers themselves.

In accordance with both approaches, appropriate tax levels might then be adjusted up or down based on distributional concerns. If taxing externalities would be highly regressive, for example, policymakers might choose a tax smaller than the externality. Under the internality approach, moreover, policymakers might also consider the welfare of people a policy is trying to help. From that paternalistic perspective, taxing unhealthy foods and drinks poses a tradeoff. Taxes can improve the health of people who do not account for potential health effects when making eating and drinking choices, but they also reduce enjoyment from eating and drinking and represent a new financial burden. As a result, the optimal paternalistic tax may be significantly less than the amount of the overlooked internal costs (Marron et al. 2015).

Franck et al. (2013) examined the advantages and disadvantages of implementing a junk food tax as an intervention to counter increasing obesity in North America. It seems approved that small excise taxes are likely to yield substantial revenue but are

unlikely to affect obesity rates. However high excise taxes are likely to have a direct impact on weight in at-risk populations but are less likely to be politically palatable or sustainable. Ultimately, the effectiveness of earmarked health programs and subsidies is likely to be a key determinant of tax success in the fight against obesity. Madden (2015) shows that to combat growing levels of obesity, health-related taxes have been suggested with taxes on foods high in fat or sugar. Such taxes have been criticised on the basis of their regressivity and potentially adverse impact upon poverty. Madden analyses the effect of such taxes on a range of poverty measures and also examines the effect of a revenue-neutral tax subsidy mixed with a tax on unhealthy food combined with a subsidy on more healthy food. Using Irish expenditure data, the results indicate that taxes on high fat/sugar goods on their own will be regressive but that a tax-subsidy combination can be broadly neutral with respect to poverty. Based on our own calculations and interviews with experts we can agree that despite short-term impact on household spending in the long run, changes in behaviour lead to changes in food demand and health outcomes. It is observed that taxation of sugar could lead to a statistically significant reduction in both the incidence of type 2 diabetes and coronary heart disease. The health effects appear to be most pronounced for low-income individuals, and the reforms may therefore reduce health inequality. This effect undermines the traditional regressivity argument against the heavy taxation of unhealthy food.

### 3 Tax base consideration

As a countermeasure against obesity and overweight, many countries have implemented taxes on unhealthy food, for instance, the soda taxes in France, Hungary, Mexico, Ireland and UK, the sugar tax in Norway and the fat tax in Denmark. In practice, the stated aim of implementing such sin taxes on unhealthy food is to reduce the prevalence of obesity. World Health organization experts (WHO 2016) argue that “evidence shows that a tax of 20% on sugary drinks can lead to a reduction in consumption of around 20%, thus preventing obesity and diabetes.”

Chilean experience (Cremer et al. 2016) shows that a tax on the same foods and beverages already delineated as unhealthy by the marketing controls and front-of-pack labelling should promote a healthier diet. To reduce obesity, diabetes and most other non-communicable diseases (NCDs), causing significant costs to societies and individuals tax base analysed included sweets and desserts; salty snacks and chips; meat products and fats; fruits, vegetables and seafood; grain-based staples; ready-to-drink SSB; SSB from concentrate; plain water, coffee and tea; and milk, which together represent 90% of food expenditures. Possible discussed taxes are 18% price tax on all foods and beverages exceeding thresholds on sodium, saturated fat, and added sugar and for which marketing is restricted (based on a Chilean law, effective June 16, 2016); 40% tax on SSBs (22% above the current tax level); and a 1 Chilean peso (0.2 US cents) per gram of sugar tax on products with added sugar. Chile is unique in currently having instituted a small current SSB tax as well as marketing controls and front-of-package labelling of unhealthy foods and beverages. The design of a more comprehensive tax to enhance the overall effect of these policies on healthier diets is a next critical step. The Danish fat tax (Bødker et al. 2015) had a marginal effect on population consumption of fat and risk of ischaemic heart disease (IHD). Examined effect of the Danish fat tax on consumption patterns and IHD risk shows that the total sales of twelve taxed foodstuff categories decreased by 0.9%, the intake of saturated fat, unsaturated fats and dietary cholesterol decreased and the risk of IHD decreased by 0.3%. Based on Danish taxation experience it can be concluded that fat taxes have to be carefully designed to prevent possible adverse effects from outweighing its beneficial effects on health outcomes. Policymakers must therefore be more ambitious in relation to food taxes, e.g. by implementing more comprehensive tax-subsidy schemes. Another decision making risk shown by Danish experience is related to the implementation process and rapid abolition of the fat tax. Findings (Backholer et al. 2017)

suggest that industry and trade associations were heavily involved in the political process of formulating the fat tax. Industry representatives used certain tactics to oppose the fat tax: threatening lawsuits, predicting welfare losses, casting doubt on evidence, diverting focus and requesting postponement. However, the fat tax received criticism for being poorly designed and gradually lost popularity among health professionals, politicians and the public. In the end, the fat tax was abolished for financial reasons. Denmark's experience with fat taxes speaks to the difficulty of imposing them, while also illustrating the impact of consumer tax avoidance on the local economy. Denmark was the first country in the EU to enact a health-related food tax levied taxes on confectionary items and soft drinks from 2008 to 2010 (Wideback et al. 2011). In the last few years the list of countries that have implemented a soda tax, or plan to, has grown rapidly (Cornelsen et al. 2018). Table 1 illustrates experience on health related food taxes introduced by different countries.

Table 1. Examples of health related food taxes

Country	Date introduced	Foods taxed	Tax rate
US	Various	Sugar sweetened drinks (in 23 states)	1- 8%
Norway	1981	Sugar, chocolate, and sugary drinks	Variable
Samoa	1984	Soft drinks	(€).14 per liter
Australia	2000	Soft drinks, confectionary, biscuits, and bakery products	10%
French Polynesia	2002	Sweetened drinks, confectionary, and ice cream	€0.55 for imported drinks
Fiji	2006	Soft drinks	5% on imported drinks
Finland	2011	Soft drinks and confectionary	
Hungary	2011	Foods high in sugar, fat, or salt and sugary drinks	10 forint per item
Denmark	2011	Products with more than 2.3% of saturated fat: meat, dairy products,	Kr16/kg (€2.15) of saturated fat, animal fats, and oils
France	2012	Drinks containing added sugar or sweetener	€072/L

Source: Authors constructed based on (Mytton et al. 2012; Bíró 2015; Bergman & Hansen 2016; Hagenaars et al. 2017; Härkänen et al. 2014; Marron et al. 2015) and involved countries experience.

Based on countries experiences (Wright et al. 2017) tax policy construction question also is on who is responsible for sending payments to the government, and determination of who ultimately bears the tax. If taxes are levied on businesses, they may absorb it in reduced profit margins, increase prices to pass some or all of it through to consumers, or bargain with workers and suppliers to pass some of it back onto them. If taxes are levied on consumers, businesses may keep their prices steady or may lower prices to offset some or all of the taxes consumers face. In relatively competitive markets, the interplay of demand and supply determines how taxes get shifted, with the less price-responsive side of the market bearing more of the tax and the more price-responsive side bearing less. In less competitive markets—those having just a few major sellers—tax shifting

also depends on how those sellers interact. Businesses with market power may absorb much of the tax, may shift it to consumers, or may even over shift, increasing retail prices by more than the tax. The magnitude of such shifting or over shifting depends on how the firms compete and how the tax is designed. Studies typically find that businesses pass on a large fraction of excise taxes they pay and do not reduce prices very much when taxes are levied on consumers. (Signal et al. 2017). Consumers thus bear most of sales and excise taxes via higher prices, and businesses bear relatively little of the burden through lower profit margins. In some cases, profit margins expand, with businesses raising prices more than the taxes. There are some exceptions, however; cigarette taxes are not fully passed on to consumers according to the most recent literature (Fox et al. 2017; Bergman & Hansen 2016). Studies of nutrition-focused taxes have generally confirmed substantial pass-through and, in some cases, over-shifting. For example, excise taxes are more likely to be over shifted than sales taxes (Bergman & Hansen 2013). Taxes can be calibrated in several ways, focusing on content, volume, or sales. Those choices have different implications for reducing unhealthy eating and drinking (Caro et al. 2017). If policymakers want to use taxes to reduce health risks, the most efficient approach is to target harmful product characteristics. If calories are the problem, the tax should be on calories. If sugar is the problem, the tax should be on sugar. And so on. Such targeting encourages consumers to reduce the amount of harmful ingredients they consume and encourages businesses to offer healthier products.

One additional concern is the administrative cost of implementing different tax regimes. Taxes that parallel a jurisdiction's existing tax structure may be easier to collect. If a government already levies a retail sales tax, for example, it may be less costly to implement a nutrition-focused tax at a different sales tax rate, rather than on volume or ingredient contents. Policymakers will have to balance such administrative concerns against the benefits of better targeting such taxes. Denmark's short-lived fat tax targeted saturated fat. But the tax was levied on saturated fat used in production, rather than the amount in food itself, and flat rates were used for meat categories (e.g., beef, chicken, pork) independent of the saturated fat content in specific products (Bødker et al. 2015). The tax thus did not closely track the actual content of saturated fats. Another approach would be to categorize food and beverages on a broad healthiness scale and tax those found insufficiently healthy (Engelhardt et al. 2009). Discussions of taxing unhealthy foods and drinks often focus on tax rates that average about 10 to 20 percent of a product's cost. Taxes at that level would likely inspire consumers to cut back on taxed products and switch to other, hopefully healthier, ones. The potential for such shifts does not tell us, however, whether taxes at this level are optimal. Without further context, it is not possible to know whether such taxes, and the behavior changes they inspire, are too large, too small, or just right. Pomeranz et al. 2018 shows that from legal and administrative perspectives, a federal junk food tax appears feasible based on product categories or combination category-plus-nutrient approaches, using a manufacturer excise tax, with additional support for sugar and graduated tax strategies. However tax base and definition of the object is also crucial. For instance, a tax based on energy density rather than components such as fat might best address the obesity epidemic. Preliminary estimates show that such a tax, if focused on foods that are nutritionally poor as well as energy dense, might be quite large compared to existing prices for many such foods. The paper also considers the possibility of basing the tax partially or wholly on certain biomarkers (weight, blood chemistry, etc.) and briefly considers litigation as an alternative to taxation.

#### 4 Latvian experience in taxation

Latvian experience related to excise taxation of "unhealthy" goods is related to excise tax on coffee and sugar sweetened beverages. The taxable object of excise tax on non-alcoholic beverages is water and mineral water with added sugar, other sweetener or flavouring, and other non-alcoholic beverages, as well as other beverages not conforming to the definition of



alcoholic beverages referred to in this Law (Law On Excise Duties), except fruit and vegetable juice and nectar, beverages which contain not less than 10 per cent of juice (except fruit juices made of concentrate), not more than 10 per cent of added sugar and which do not contain food additives and flavourings, natural water and mineral water, water enriched with minerals and vitamins, and without added sugar, other sweetener or flavouring. The taxable object of excise tax on coffee is ground or not ground, roasted or not roasted, with caffeine or decaffeinated, which is classified within the Combined Nomenclature under the code 0901, as well as coffee extracts, essences and concentrates and products based on such extracts, essences or concentrates on coffee, which is classified within the Combined Nomenclature under the codes 210 111 or 210 112. The rates of tax are shown in Table 2. Rates on coffee remains unchanged, and rates on non-alcoholic sweetened beverages are harmonised with excise tax rates on beer.

Table 2. Excise tax rates for non-alcoholic beverages and coffee, EUR

Product	01.01.2016.	01.01.2017.	01.01.2018.
Non-alcoholic drinks, per 100 litres	7.40	7.40	7.40
Coffee, per 100 kg	142.29	142.29	142.29

Source: Authors constructed based on law "On excise tax".

From fiscal perspective generated revenues are not so significant and all other excises (other than EU traditional tobacco, alcohol and energy products) in 2017 constituted only 15,3 millions Euro and it is projected for 2018 that revenues will be 16 millions Euros (0,18% of the total state budget expenditures).

Over recent years the Ministry of Health several times has made various proposals to place excise tax on several grocery products that the Ministry of Health consider "unhealthy". The tax proposal expected to allow capitalizing on the consumption of these products as well as limiting the consumption itself. Similar to above mentioned scientific literature some authors argued in public discussion in medias that this excise duty have purely fiscal nature and can cause several complications such as financial pressure on not-well-off households. According to the calculations of Ministry of health and calculations of authors (see Table 3) possible excise tax on unhealthy products could generate 22,3 millions Euros (0,25% of the total state budget expenditures). The estimation is based on other countries approaches to tax final processed products (except for palm oil, where estimation is based on imported amounts) which are potentially unhealthy and to change the consumer's attitude. Taxation proposal could be justified also by other countries experience. Thus, Bíró (2015) estimated that consumed quantities of processed food to decrease by 3.4% due to the unhealthy food tax, while the consumed quantities of unprocessed food increased by 1.1%.

Table 3. Preliminary annual revenue estimates, the introduction of excise duty on certain food groups

Preliminary annual revenue estimates, the introduction of excise duty on certain food groups					
Food products	A	B	C	D	E
	Average consumption of food per household member in 2016	Tax rate (euro) per 100 kg	Annual consumption of total population (1931200 inhabitants) (kg)	Tax revenues estimation 2017 assumption (euro)	Revenues per capita (euro)
Sausage, cooked and smoked meats (kg)	20.71	21.00	39995152.00	8398981.92	4.35
Fresh lard, other animal fat (kg)	0.35	41.00	675920.00	277127.20	0.14
Chocolate sweets (kg)	1.97	41.00	3804464.00	1559830.24	0.81
Chocolate (kg)	0.69	41.00	1332528.00	546336.48	0.28
Caramels, toffees (kg)	1.32	41.00	2549184.00	1045165.44	0.54
Confectionery (kg)	4.88	41.00	9424256.00	3863944.96	2.00
Biscuits, crackers, rusks (kg)	6.40	41.00	12359680.00	5067468.80	2.62
Prepared soups and broths, preparations for making them (kg)	0.67	41.00	1291768.00	529624.88	0.27
Chips (kg)	0.58	41.00	1120096.00	459239.36	0.24
Palm oil (kg)	0.75	41.00	1456916.00	597335.56	0.31

Source: Authors constructed based on Central Statistical Bureau of Latvia 2018.

Placing the excise duty on products would consequently increase the price of the product, and it can be agreed with Bergman & Hansen 2016 that the response to tax changes is asymmetric, and the tax incidence is dependent on the relative size of the tax. Since the excise duty is a consumption tax, it will directly affect lower income citizens, as they spend the majority of their income on grocery products. According to authors the financial regressivity of taxes on unhealthy foods and drinks can be softened or amplified depending on how the revenue is used. Using the revenue to increase tax credits for families, expand transfer programs, or support programs in lower-income communities, for example, could offset or even reverse the initial regressivity of the tax. Effects on individual families would vary, however, depending on how much they continue to buy taxed products and how much of the tax reductions or spending increases benefit them. Using the revenue to reduce income taxes, by contrast, would primarily benefit higher-income households and thus increase the regressivity of the overall policy. Distributional effects also depend on any health improvements resulting from a tax. Many of those gains would go to any individuals whose health improves because of the tax. If people with lower incomes are systematically large beneficiaries from the health improvements, the tax might thus generate a regressive financial burden but progressive health benefits. If health gains result in lower health care spending, however, some gains will also accrue more broadly to the

workers who pay for private health insurance and the taxpayers who pay for public health programs.

## 5 Conclusion

Introduction of excise tax could be pilot project for Latvian health policy with main goal to change the diet and reduce risks of ICD. However in general remaining problems are cross border trade issues and research on substitution effects: that is, what products will consumers substitute in place of taxed items? Consumers may elect to substitute healthier items, but they may also elect to purchase products that have similarly harmful health consequences as the items being taxed. Consumers appear to find it easier to switch away from sugary drinks, which have many alternatives, than from other foods and drinks. In principle, taxes can encourage businesses to develop and market healthier products; in practice, most existing and proposed taxes fail to do so. Taxing sugary drinks based on their volume, for example, does nothing to encourage businesses to reduce the sugar content of their products (unless they can eliminate it). Taxing sugar content would be more effective. It would encourage businesses to reduce the sugar in existing drinks and to introduce new, lower-sugar alternatives, and it would encourage consumers to switch to less-sugary drinks. Policymakers should give careful thought to how they use revenues from taxing unhealthy foods and drinks. That revenue could be used to fund subsidies to fruits



and vegetables, healthy eating information campaigns, obesity prevention, and similar efforts. Several aspects of nutrition-focused taxes remain under-studied. These include how taxes change overall diets including food in restaurants, schools, and other locations outside the home, how businesses change their product offerings in response to different tax designs, and how policymakers should determine the magnitude of potential taxes.

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#### Primary Paper Section: A

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## PROBLEMS IN SPECIFYING ALEXITHYMIA: A REVIEW OF THE EMPIRICAL LITERATURE

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**Abstract:** Alexithymia represents an interesting phenomenon, which ranks among border concepts of psychosomatic medicine. It can be understood as a border concept of psychosomatics, as there is no general consensus in its etiology. Objective: The review focuses on interpretation and specification of alexithymia. It classifies alexithymia into basic and more detailed groups derived from diagnostic questionnaire methods. From the view of etiology it concentrates on psychoanalytical, sociological, cognitive-neuropsychological and neurochemical interpretations. Methods: We used the mapping, analysis and review of the studies of alexithymia etiology from various perspectives. Results: In our opinion, the connection of the psychodynamic approach with the neuroscientific research is a crucial and bearing platform for further research in the area of alexithymia. Conclusions: We can pronounce that a complex platform where both important theories can meet has still not been found.

**Keywords:** alexithymia, etiology, psychoanalytical model, neuropsychological model, typology.

### 1 Alexithymia

The concept of alexithymia appears frequently in the psychosomatic literature. Many current studies examine alexithymia in relation to certain psychosomatic problems and mental disorders. Nonetheless, alexithymia remains debatable, disapproved by a few scientists, and fairly unclear. The concept of alexithymia is not clearly classified within psychosomatic theories. It may be understood as a borderline concept within psychosomatics, as there is no general consensus on its etiology. In research the term "alexithymia" is used as a so-called "heuristic construct", which is suitable for researching the role of personality and emotions in the pathogenesis of somatic illnesses (Taylor, 2000). Thus, the purposes of this paper are to specify the term "alexithymia," synthesize existing knowledge in this area, and identify issues for future research.

The term "alexithymia" might be translated as "no words for emotions". The term was coined by the psychiatrist Peter E. Sifneos of Beth Israel Hospital in Boston (Baštecká and Goldman, 2001). Alexithymia might be defined as a deficiency in the modulation of emotions, which results in maladaptive styles during final processing and expression of emotions. It is both a verbal and non-verbal disorder of understanding emotions and transferring them into words. Alexithymia might also be seen as a problem in the area of mentalization (symbolization) of emotions in the mind, such that emotional states are minimally differentiated and are experienced as somatic tension or physical unease. This process manifests itself in individuals' communications with their surroundings. These individuals fail to find words for their feelings. They describe their emotional states in connection with somatic tension. Such expression is associated with an insufficient ability to understand feelings and low introspection, which is compensated by turning away from the inner self to the outside world. Due to the clear cognitive and personality features of such individuals, early concepts of alexithymia were connected with the terms "infantile personality" (Ruesch, 1948) and "operational thinking" (Marty and de M'Uzan, 1963).

Recently, a co-occurrence has been demonstrated with several clinical disorders such as somatoform disorders, panic disorder, depression with dominant somatic symptoms, post-traumatic stress disorders, and eating disorders (Vanheule, 2008). Naturally, we cannot claim that each of these disorders is caused by alexithymia; however, there is evidence that these disorders are somehow related to alexithymia (Frewen, Pain, Dozois, and Lanius, 2006; Hund and Espelage, 2005; Mueller and Buehner, 2006; Speranza, Laos, Wallier, and Corcos, 2007; Taylor,

Bagby, and Parker, 1997; Vanheule, Desmet, Verhaeghe, and Bogaerts, 2007; Verhaeghe, Vanheule, and De Rick, 2007).

### 1.1 Clinical typology and manifestation of alexithymia

It is within the context of psychosomatic disorders that the term "alexithymia" gains particular importance. Emphasis is often put on alexithymic aspects in communication, in the form of a stereotypical description of somatic changes lacking expression of one's own emotional response, and further in the form of a poor fantasy life and thoughts connected with external events.

Provided that the concept of alexithymia is defined (operationalized) by these behavioral manifestations, it may be divided into primary and secondary types. Primary alexithymia represents a disposition which causes and/or maintains a somatic illness. Alexithymia is thought to be secondary if it is a consequence of a certain somatic illness. From this point of view, alexithymia might be understood as a coping strategy that the individual has developed in relation to his/her illness.

Baštecký, Šimek, Šavlík and Svoboda (1993) state that alexithymic patients are characterized by the following features:

1. They chronically describe physical symptoms that are not related to the fundamental illness.
2. They complain of tension, irritation, frustration, aches and pains, boredom, emptiness, unease, agitation, nervousness, etc.
3. They significantly lack a fantasy life; however, they carefully describe unimportant details of their environment.
4. They have great difficulties in finding the proper words to express their emotions.
5. Either they cry very little, or a lot – however, in the latter case the tears do not seem to be related to the corresponding feelings, such as grief or anger.
6. They rarely remember their dreams.
7. Their emotions are often excessive.
8. Their interpersonal relations are often poor, showing significant dependence or preference for seclusion and rejection of people.
9. Personalities are frequently narcissistic, submissive, passive-aggressive, passively dependent, or psychopathic.
10. Physicians and/or therapists are usually bored with such patients. They seem to be very dull.

The development of scales for measuring alexithymia has brought progress in understanding of the concept. For example, the Toronto Alexithymia Scale (TAS) distinguishes three factors in the concept of alexithymia. The first factor represents failure to express one's own emotions; the person experiences undifferentiated emotional excitement. The second factor represents inability to describe one's emotions. The third factor emerges out of externally-oriented thinking, represented by a restricted fantasy life.

In the area of projective assessment of alexithymia, Porcelli's (2007) Rorschach Alexithymia Index bears mention. With this index it is possible to identify phenomena connected with alexithymic characteristics by the Rorschach method. The index consists of variables that are associated with the lack of mentalization (M=0-1), insufficient emotional expression (WSumC=1-2), concrete thinking (F%>0.73), high social conformity (P>7), interpersonal problems (CDI positive), and problems in developing close relationships (T=0). According to Porcelli, a reliable alexithymia predictor is achieved if at least three of the above-stated criteria are fulfilled.

The Bermond-Vorst Alexithymia Questionnaire (BVAQ) (2001) is another approach of interest. It divides the concept of alexithymia into subtypes. These authors describe alexithymia as a reduced ability to distinguish among emotional feelings, a reduced ability to fantasize, a reduced ability to verbalize emotional experience, and a reduced tendency to think about

and/or be concerned with examination of one's own emotions. The subtypes that emerged based on this method are Type I alexithymia; Type II alexithymia; Type III alexithymia; lexithymia; and the modal type. Each of these is described below.

### 1.2 Type I Alexithymia

This is understood as a reduced ability to experience emotions and identify feelings, a weakened ability to fantasize, and insufficient understanding of emotional processes. This type is characterized mainly by distant social relations and limited extent of emotional expression in interpersonal relations, which is caused by a deficit of empathy and sociability. These individuals are socially and emotionally impoverished. They respond to stressful situations with the mechanism of projection. They tend to rationalize everything without any emotional accompaniment. While this might be convenient in certain professions, they may encounter problems in private life, friendships, and other relations due to their emotionally cold behaviour. This characteristic description is similar to schizoid personality descriptions.

### 1.3 Type II Alexithymia

This type is characterized by a good ability to experience emotions and an identification of feelings and fantasy life, with a low understanding of emotional processes. These individuals suffer from insufficient emotional stability. They may complain about somatic problems and/or insomnia. They may suffer from anxiety, panic attacks, and/or depression. Occasionally, paranoid ideation may appear (Vingerhoets, Nyklíček, and Denolet, 2008). They respond to stressful situations by developing symptoms of anxiety and depression. They also react to strain by dissociation (Moormann, Bermond, and Albach 2004, in Nyklíček, Vingerhoets, and Temoshok, 2004). Patients with Type II alexithymia are less resistant to stress. Their self-respect is reduced and they feel ineffective. This type of alexithymia is found predominantly among women, and frequently with children who have been sexually abused (Albach, Moormann, and Bermond, 1996). Compared with the previous type, the characteristic description is more varied, more likely approaching a disorganization of psychic functions and a propensity to decompensate under the influence of strain, which is found with asthenic, emotionally unstable, avoidant, and histrionic personality types.

### 1.4 Type III Alexithymia

This type is characterized by a low level of emotion and fantasy life, but a high level of understanding of one's emotional processes. In this respect, the question arises: how can these individuals have well-developed cognition while having low emotion and a poor fantasy life? Cognitive neuropsychologists have tried to deal with this problem and have concluded that these individuals, in spite of the identified deficiencies, still have an ability to respond to other people's emotions in a socially acceptable way (Moormann, Bermond, and Albach 2004, in Nyklíček, Vingerhoets, and Temoshok, 2004). A possible explanation may also be found in the way they complete the BVAQ self-assessment questionnaire, wherein they may understand acceptance of their own emotionality as weakness. These individuals can easily get along with others in their social environment and are socially skilled. They have high self-esteem and try to keep problems and tasks under control. In reaction to illness or a stressful situation, individuals with Type III alexithymia might be called repressors. Also, research has shown that individuals with Type III alexithymia tend to manipulate others (Niessen, 2001). In conclusion, Type III alexithymia shows similarities with a narcissistic personality structure.

### 1.5 Lexithymia

Lexithymia is characterized by high emotion, a high level of fantasy life and a well-developed understanding of emotional processes. Lexithymic individuals are used to experiencing an affectionate relationship with a mother, which supports the idea

that early childhood experiences shape personality later in life (Moormann, Bermond, and Albach, 2004, in Nyklíček, Vingerhoets, and Temoshok, 2004). Both Freud and Erikson assumed that an emotionally warm child-caregiver relationship based on trust contributes to optimal personality development (Carver and Scheier, 2000). The importance of a high-quality early relationship with a mother (caregiver) to cultivating emotional life was emphasized by many of Freud's followers and supporters of psychoanalytic and dynamic approaches, e.g., Winnicott, Mahler, Sullivan, Klein, Horney, and many others. This perspective is further highlighted mainly in works by Bowlby (2010) within attachment theory, and in studies on mental deprivation by Czech authors, mainly Matějček (1969).

Generally, lexithymic individuals are emotionally intelligent and have the ability to overcome difficult life situations. They also have high self-esteem and self-assessment, which is considered to be a solid base for realization of their creative and expressive potential. Oldham and Morris (1990) point out that a dramatic or theatrical style strongly emphasizes emotions, and such people can express themselves easily and openly. This dramatic or rather theatrical type might be understood as a subtype of lexithymia. This interpretation is also supported by the finding that lexithymic individuals, in comparison with the modal type, had significantly different scores on emotional perception, emotional expression, and social intelligence (Niessen, 2001). This means that individuals with a dramatic style are intuitive and have a sense of empathy.

A second lexithymia subtype is marked as an outgoing type. Lexithymic individuals of this subtype focus more on sociability than theatrics (Millon, Weiss, Millon, and Davis, 1994). They greatly believe in their own charm and effect on others and they may have a tendency to manipulate others.

Generally, we may suppose that lexithymic individuals, due to their theatricality and/or belief in their influence and charm, are popular guests of TV talk-shows. The behavior arising from the theatricality and dramatic style of one's own expression predisposes an individual to succeed in shows and programs of different types, which to a certain extent clearly is a hallmark of modern western culture based on exhibitionism.

### 1.6 Modal type

The modal type can be translated as a "typical" type. It is characterized by an average emotionality and fantasy life, and average accompanying cognition. People of this kind are not too conspicuous. They may have a pessimistic view of the future.

## 2 Theories of alexithymia development

Having briefly specified alexithymia and its manifestations, the discussion will now focus on interpretations of the etiology of alexithymia. Psychoanalytic, psychodynamic, sociological, neuroanatomical (cognitive-neuropsychological), and neurochemical models will be examined.

### 2.1 Psychoanalytic and psychodynamic interpretations of alexithymia

Psychoanalytic theories propose that developmental stages are important in the formation of alexithymia. McDougal (1982) suggests that instinctive impulses are not mentally processed by alexithymic patients, but they directly affect the body. This is caused by disruption in the mother-child interaction in the earliest stage of their relationship, and the child's failure to create inner representations for instinctive impulses. Due to this inability, instinctive impulses are expressed by being directly released instead of being filtered and connected to fantasies and semantic symbols. McDougal (1982) posits this inability to name, distinguish and work out affective states as a defense structure that protects alexithymic patients from psychotic anxiety (due to mental or physical fragmentation, or loss of the feeling of danger in uncontrolled explorative action).

Another researcher, M'Uzan (1976), suggests a similar approach. He emphasizes that it is essential for the development of alexithymia that a child fails to be able to use fantasy (hallucinatory phenomena) as a means of gaining protection and delight. Later on, this results in an inability to use mental activities that serve the same function. M'Uzan is a representative of the French school, which views psychosomatic symptoms mainly as products of mental conflict dynamics and/or consequences of specific ego deficits.

This interpretation is very close to the concepts of ego psychology. Ego psychology has largely expanded our understanding of Ego and its functions (i.e. self preservation, postponing instinctive wishes, and employing defense mechanisms) since Freud's original assumptions about setting goals, intentions, and self-fulfilment. Some researchers assume that the so-called "non-conflict part of Ego" is not affected by basic instinctive conflicts and supports other important parts of the mind, e.g. perceptive, motor, cognitive functions, etc.

Ego psychology supporters presuppose that internalization processes are key mechanisms in the shaping of personality. Introjection is one form of internalization. Introjections are understood as mental representations of significant people, mainly parents. The introjections formed in childhood affect interpersonal relations. They help the individual to guess the thoughts, emotions and motives of other people and to presuppose their reactions. Healthy inner dialogue with parent introjections reduces anxiety and enables decision-making in accordance with the values and attitudes formed in childhood. Poor introjections lead to feelings of dependence, uncertainty, helplessness, and emptiness. Demanding and cruel introjections cause feelings of guilt, failure, and uselessness (Millon, Lerner, and Weiner, 2003).

Ego psychological models work with a three-type concept of intrapsychic dysfunction: lower Ego power, maladaptive Ego defense mechanisms, and dysfunctional introjections. The insufficiently powerful Ego cannot test reality in an adaptive way; it has a distorted perception of inner and outer psychic contents. Maladaptive defense mechanisms cannot satisfactorily control stress and anxiety. Dysfunctional introjections cause improper perception of self and others. The key idea for the concept of alexithymia is that of dysfunctional introjections, which form the basis for misinterpretation of mental processes and lead to improper perceptive contact with one's own experience and that of others. The worsened perceptive contact with inner and outer reality may induce other important features connected with alexithymic individuals, that is, increased effort at social adaptation, adherence to social roles, poor fantasy life and sticking to conservative arrangements. Considering how important the quality of perception is when confronting changeable conditions, these manifestations help alexithymic individuals to cope with life's demands.

Stephanos (1975) was concerned with an ego deficit structure of mind, emphasizing that with alexithymic patients, this is understood as a defense mechanism from an early mother-child relationship, therefore it is meant as a defect in early identification process. What Stephanos proposed was that absolute dependence on an object (mother) is developed in the first year of life, while the father is pushed into the background in the parent-child relationship and therefore he becomes featureless, unclear, and without Oedipal potency. In this period a phenomenon of reduplication is developed as well. Reduplication means that patients see other people stereotypically, unclearly delineated, and without distinguishable individuality (Mohapl, 1988). Psychosomatic patients have problems distinguishing other people's characteristic features and they close in on themselves. In other words, they tend to perceive an object according to their own self-image model, which is unstructured.

A final example of a psychoanalytic interpretation of alexithymia is the Pinocchio syndrome, which has been applied to indicate alexithymic characteristics (von Rad and Rüppel, 1975). Pinocchio is a fairy-tale puppet hero who was

manipulated by his master, Lorenzini. In this conceptualization, alexithymia is formed when a mother projects her narcissist conflicts upon a child, manipulates with the child's physical manifestations, and responds to the child in a rejecting or hyper-protective way. In this respect, the individual's fixation on impulses is considered a defense system, or rather a specific response to mental strain. Inasmuch as the mother-child relationship plays a crucial role in the psychoanalytic approach, provided that this relationship is lost, somatic symptoms may develop in the child. Narcissistic behavior and/or response to the loss of a key person might also be understood as psychosomatic symptoms in this respect.

## 2.2 The sociological model of alexithymia

The sociological model of alexithymia development indicates that the patient's psychosomatic behavior is a consequence of functional adaptation to social standards and conventional pressure (Ahrens, Gyldenfeldt, and Runde, 1979). Alexithymic patients, due to their way of thinking and speech, seem to be dysfunctional in a psychiatrist's office, but not in daily life (Mohapl, 1988). Tabooing of emotions and an alexithymic way of communicating belong to the world of work and professional career. In this realm, it is not often socially acceptable to express emotions. Listening to someone's account of emotions is unpleasant and emotional expression is undesirable. The sociological perspective implies that alongside economic and social standard growth, people should show less of their emotions to achieve success.

Alexithymia in a sociological context might be understood as the internalization of social standards that are derived from the progress achieved by society. From this point of view, alexithymia is thought to be instrumental, i.e., an indicator of socially conditioned adaptation. Within the perspective of the instrumental orientation, emotional experience and expression seem to be non-functional manifestations of personality. However, human beings have needs associated with affects that are suppressed due to the instrumentalization. Thus, an alexithymic patient shows conformity with society and gives up his/her individuality, i.e. the reduplication process that has been mentioned.

## 2.3 Cognitive neuropsychological concepts of alexithymia

Cognitive neuropsychological research aims to explain the etiology of alexithymia in relation to the brain and brain structures. In this regard, the following discussion will first focus on general knowledge, followed by detailed analysis.

Initial neuroscientific findings indicated that the nature of emotional problems is anchored in the limbic system and its connection to the neocortex. The limbic system takes part in emotions, feelings, and experience, whereas the neocortex is responsible for intelligence, perception, and motor skills. From this point of view, the etiology of alexithymia is understood as suppression of impulses in the limbic system leading to the neocortex, which results in disorders in emotion and fantasy life. Nebylin (1971) mentions alexithymia in relation to EEG patterns and factor analysis. He proposes that emotions result from activity in front of the limbic system, where the limbic system acts as a generator of emotional impulses, whereas the medial-basal and orbital cortex is their modulator. The following discussion will now concentrate on findings in regard to individual brain parts.

## 2.4 Corpus callosum and alexithymia

Various studies of humans have demonstrated that verbal expression, consciousness and serial information processing are located in the left hemisphere, whereas unconsciousness, non-verbality and parallel holistic information processing occur in the right hemisphere (Gazzaniga, 1989). As a result of this finding, emotional processes were attached to the right hemisphere. This conclusion suggests that agenesis or interruption of the corpus callosum structure leads to alexithymia. Several researchers have supported this hypothesis

(TenHouten, Walter, Hoppe, and Bogen, 1988). Based on this knowledge we may speculate that dysfunction of the corpus callosum results in a specific type of alexithymia, in which an individual experiences emotions, but also experiences undistinguishable excitement that is unconsciously related to the experienced emotional feelings.

### 2.5 Anterior commissure and alexithymia

The anterior commissure serves to connect olfactory parts of the brain (paleocortex). Gazzaniga's theory (1989) proposes that people with a disrupted function of the anterior commissure are unable to experience emotion, whereas they may have access to an accompanying cognition in the course of time. This conclusion was based on an experience with a female patient whose corpus callosum and anterior commissure were disrupted. This patient responded to emotional stimuli which were presented to the left visual field by giggling. When researchers asked her why she was giggling she answered: "That is a funny machine". She meant the machine that was monitoring her at the moment. It is important to note that such an answer appears only with people whose corpus callosum is disrupted. This finding posed a problem in relation to prior research on emotional experience. Even though the finding was based on objective indicators, researchers concluded that this patient's performance should be interpreted as behavior resulting from an unknown cause, instead of a disruption of transfer between hemispheres. The reason for this lies in experiments in which individuals with a disrupted corpus callosum did not have any difficulties in processing emotional stimuli that were presented to their left visual field, i.e. processed by the right hemisphere. This phenomenon was explained as follows: cognitive components are realized in the left hemisphere directly through the corpus callosum, whereas emotional components go first to the limbic system and later on they reach the left hemisphere through the anterior commissure. These results show that people are able to experience emotions even if their anterior commissure is disrupted.

### 2.6 Right hemisphere and alexithymia

The relationship between alexithymia and the right hemisphere was examined by Ross and Rusch (1981). This research was concerned with patients with a unilateral lesion directly in the right hemisphere cortex. These patients showed symptoms of depression, such as lack of appetite, insomnia, irritability, social avoidance, etc. According to the Dexamethasone Suppression Test, their plasma cortisol level was not suppressive, which often appears with depressive disorders. Nonetheless, these patients claimed they were well and felt all right. All of the symptoms mentioned above, excluding lack of emotional interest, disappeared after antidepressants had been administered. The authors suggested that these patients were unable to describe their own emotional reactions; however, they could describe emotional responses of other people. Their existing emotional reactions before their lesions occurred showed that alexithymic features were not caused by motor or cognitive inabilities.

Research on absence of emotions in cases of a right hemisphere injury concluded that 30% of such patients showed emotional numbness (Gainotti, 1972). Thus right hemisphere injury may result in the development of alexithymia. Wechsler (1973) states that patients with a unilateral lesion of the right hemisphere have problems with emotion-based memory information; however, they do not have any problems with neutral information. Wechsler (1973) explains that physical sensations, like electric discharges, pain, swelling, abnormal tingling or numbness, might be induced upon patients with a lesion of the right hemisphere cortex. Due to these sensations, such patients may be diagnosed as suffering from a hypochondriac disorder. This is the reason why alexithymic patients are supposed to suffer from hypochondriac disorders. In this respect to the alexithymia issue, it was finally concluded that these patients sometimes respond by means of emotional expression without the presence of affect (Krystal, 1988).

### 2.7 Anterior cingulum and alexithymia

As early as in 1937 Papez stated that the anterior cingulate cortex (ACC) takes part in the regulation of emotions, i.e., emotions are related to this structure. The cingulate cortex also helps to process attention, pain, maternal behavior, skeletal motor functions, etc. It can be divided into dorsal and rostral parts, the former being cognitive and the latter being affective. The rostral affective part of the cingulum is emotional, whereas the dorsal cognitive part is not primarily intended for emotional processing, even though it is influenced by the rostral part. From this point of view, alexithymia might be understood as a deficit in intentional emotional experience connected with a concomitant autonomous activation, which can be mediated by a functional disruption of afferent interceptive emotional information in the ACC. In connection with this, alexithymia may also be seen as an emotional equivalent to blindsight. Blindsight is a phenomenon that is connected with a lesion of the primary visual area V1 (such patients claim that they do not see, even though it is proven that they visually perceive; thus, they are not able to realize that they can see). Gündel et al. (2004) claim that alexithymia correlates with the extent of the right anterior cingulum.

### 2.8 Frontal cortex and alexithymia

A theory of emotions developed by Damasio (1994) divides emotions into primary and secondary ones. In this conceptualization, the primary emotions cover manifestations of the basic emotions, such as fear, happiness, disgust, anger, etc. The primary emotions are ensured by the limbic system and gyrus cinguli. The secondary emotions develop as mental representations of the primary ones, i.e. pre-frontal systems play an important role during their development.

Difficulties in emotions might be observed both on 1) the primary emotion level, when the limbic system is obviously damaged, leading to emotional numbness, and 2) the secondary emotion level, i.e. in the pre-frontal system, when patients have difficulties in expressing and processing their feelings. This conceptualization suggests that alexithymia is a deficit in the secondary emotions, i.e. the ability to realize representations of the primary emotions. Various research studies have been carried out on the frontal cortex, some of which will be mentioned here. Hornak et al. (1996) gave an account of patients with lesions in the pre-frontal cortex who described difficulties in experiencing emotions compared to their premorbid state. Aftanas, Varlamov, Reva, and Pavlov (2003) studied the pre-frontal cortex in connection with alexithymia by means of ERP (Event Related Potential). The results of measurements showed a dysregulation in the assessment of emotional stimuli among alexithymic patients. Similarly, Kano et al. (2003), by means of PET, emphasized that alexithymic patients showed lower activation in the right pre-frontal cortex when responding to emotional stimuli in comparison with a control group. Much has been achieved in regard to the alexithymia – pre-frontal cortex relation; nevertheless, the results are still disputable and do not bring a clear answer about the etiology of alexithymia.

### 2.9 Neurochemical interpretations of alexithymia: Dopamine theory and alexithymia

Neurochemical interpretations prevalently concentrate on dopamine as it is related to psychic difficulties. As a result, it is assumed that alexithymia is connected to functional limitations of dopamine. This assumption is supported by various evidence. For instance, most nerve structures that mediate and strengthen instrumental brain activity are innervated by dopaminergic fibers. Dopaminergic fibers are also very important to the medial frontal brain, which has a crucial emotional regulatory function. Further, treatment by means of 6-OHDA (6-hydroxydopamine, which results in dopamine cell damage) or dopamine receptor inhibitors (alfaflupentixole) lead to genital response decrease in both men and women.

The nucleus accumbens provides yet another point of view. It is thought to play an important role in the reward system. During

presentation of sexual stimuli, dopamine increases in this part of the mesolimbic system, so dopamine also plays an important role in sexual motivation regulation. De Bruin (1990) argues that dopamine projects into the pre-frontal and orbitofrontal cortex and is slightly represented in the dorsal lateral cortex. In the case of a lesion in the orbitofrontal cortex area, emotional expression changes, provided that 6-OHDA is applied and dopamine cells in the ventral tegment are damaged. In conclusion, the dopamine cells in the ventral tegment and the dopamine receptors in the orbitofrontal cortex participate in emotion regulation.

### 3 Conclusion

This literature review has aimed to describe various approaches to understanding the borderline psychosomatic concept of alexithymia. Due to lack of space, we realize that a number of interesting psychological concepts could not be mentioned. The etiology of alexithymia remains unclear, and research results have still not provided a complex explanation for this phenomenon. In our opinion, traditional psychodynamic theories suggest a variety of possible connections between early parent-child relations and the potential development of alexithymia. However, they do not contain a theoretical description of neuropsychological mechanisms causing the development of alexithymia. Contemporary neuropsychological approaches focus on possible alternatives to the development of alexithymia, from the view of structural and functional aspects of the human brain. However, there is no connection with human development of relationships. In our opinion, the connection of the traditional psychodynamic approach with the contemporary neuroscientific research is crucial and provides a platform for further research in the area of alexithymia.

Research on stress and its effects on personality formation in various stages of human development may provide an important link. From the neuroscientific point of view, there is great potential in research on the pre-frontal cortex and its connection to an individual's social experience. A complex platform where both important theories can meet has still not been found. This is an important direction for further research in this area.

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**Primary Paper Section: A**

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# INTERPRETATION OF VISUAL INPUTS AS A TOOL FOR MEASURING THE EFFECTIVENESS OF FINE ARTS EDUCATION WITH AN EMPHASIS ON THE DISCIPLINES OF THEORY AND ART HISTORY

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**Abstract:** The paper deals with the problem of visual literacy of university students - the future Fine arts teachers, in relation to their critical thinking systematically developing during their pregradual preparation within the disciplines focused on theory and history of Fine arts at the Department of Creative Arts and Art Education at the Faculty of Education at Constantine the Philosopher University in Nitra. The paper looks into students' competencies of given area via questionnaire, focusing on interpretation of visual inputs based on triadic semiotics of Charles Sanders Peirce known as an icon (Likeness, etc.) - index (Sign) - symbol (General sign). The author explores the problem in relation to project goals supported by Slovak Research and Development Agency, according to Act No. APVV-15 - 0368 in context of present requirements of teacher training program in the area of critical thinking and creativity.

**Keywords:** visual inputs, fine arts education, interpretation, critical thinking

## 1 Introduction

Visual literacy defined by Bristor and Drake (1994) as a "person's ability to understand, interpret and evaluate visual messages" is undoubtedly one of the most important competencies of Fine arts teachers. Naturally, visual literacy is nowadays an inevitable part for successful functioning and social status of every individual, therefore an existing issue is paid a lot of attention to (Sinatra, 1986, Stokes, 2002, Zanin-Yost et Donaldson, 2005, etc.). Complex perspective on visual literacy problems in Slovak language is pointed out by Šupšáková (2015). Developing visual literacy in future teachers of fine arts during their pregradual preparation is according to the author, provided by the structure of syllabi in bachelor's and master's study programme in the context of practical and theoretical disciplines. Application of basic operations of thoughts (analysis, synthesis, comparison, abstraction, concretization, generalization, induction, deduction and analogy), presenting core of thinking and defined from the point of view of general psychology (Daniel and coll., 2003), students have the possibility to perceive them in the broadest spectrum and in the synthetic form within their study disciplines, focused on theory and history of Fine arts, especially within the subject Analysis and Interpretation of work of art at Master's level of study, which in connection with the structure of the study program at Bachelor's level, presumes certain predisposition, adequate skills and knowledge. At bachelor's level of study the students - future Fine art teachers, deal with the art in terms of diachronic and synchronic aspect, including world, European and domestic art culture. Seminars such as: Introduction to Art Culture, Art of Primeval and Ancient times, History of Medieval Art, Modern Age from Renaissance to the end of 19th Century, Art of the first half of 20th Century to Present times, Analysis and Interpretation of a work of art, Gallery and museum excursions, provide the space for development of a wide range expertise for future teachers. By exegetical interpretation of certain works of art, students acquire methods of art historical analysis closely related to archetypal, genealogical, stylistic, formal or more precisely form related, taxonomical, genological, contentual, statistical and compositional analysis, whereas comparative and semiotic analysis develops critical thinking and verifies their already acquired knowledge within interdisciplinary and intermedial context.

### 1.1 Theoretical background

As mentioned before, in the process of developing visual literacy focused on critical thinking during pregradual preparation of future Fine art teachers, we consider methods of art

interpretation using comparative and semiotic analysis as relevant.

Lot of scientific disciplines put comparative analysis into effect. Comparative method as a specific field of research is usually associated with literary science or theory of culture, however nowadays it presents discipline linking wide range of interdisciplinary overlaps and a large diapason of interpretative aspects (Zemanek, Nebrig, 2012). French literary scientist Paul van Tieghem accredited comparatistics the role of exploration mainly exploration of binary relations among the works of arts (Van Tieghem, 1931). René Wellek a well known Czech-American comparative literary critic was developing critical aspect of comparison (Wellek, 1969). So called German version in literary comparison represented Hans Robert Jauss, featuring wider view of comparison, including theory and method of reception aesthetics and hermeneutics (Jauss, 1982). Comparison or rather comparative competencies in relation with artistic education with the focus on preparation of future teachers of Fine arts, represents the complex of closely related subjective and objective indicators confirming universal character of creative language or rather creative mean of expression. Comparative method is mostly used within disciplines of undergraduates - future Fine arts teachers, concentrated on theory and history of Fine arts.

Within the preparation of future teachers of Fine arts, we consider convenient, during the interpretations of works of art, applying various approaches of comparative method already mentioned before. Comparative philosophy of Paul van Tieghem based on exploration of purely binary relations among the works of art was anticipated by Swiss art historian and philosopher Heinrich Wölfflin in 1915, who in his work *Kunstgeschichtliche Grundbegriffe* (Wölfflin, 1915) defined "basic concepts of Art History" in form of five pairs, through which he recognized the differences between two ways of "vision" and display by comparing renaissance and baroque works of art (see also Wölfflin, 1888). His pairs: 1. Linear and Painterly (ger. *Das Linerale und das Malerische*), 2. Planar and Recessional (ger. *Fläche und Tiefe*), 3. Closed form and Open form (ger. *Geschlossene form und Offene form*), this pair refined as tectonic and atectonic (ger. *Tektonisch und Atektionisch*), 4. Multiplicity and Unity (ger. *Vielheit und Einheit*), refined as multifarious unity and unified unity (ger. *Vielheitliche Einheit und Einheitliche Einheit*), 5. Clarity and Unclearity (ger. *Klarheit und Unklarheit*), refined by Wölfflin as an absolute clarity and relative clarity (ger. *Unbedingte und bedingte Klarheit*).

With the help of Wölfflin's pairs and iconography it is possible within the subjects focused on art's development until the 19th century interpret - analyze formally and contentually, synthesize and compare the whole number of works of art by describing and analyzing themes, their typologies and attributes. With our students - future teachers of Fine arts, we also try to develop competencies for interpretation of artworks in geographical, historical, cultural, religious and philosophical connections by applying iconology. Iconology as a methodological conception of art history interpreting the work of art in different semantic folds, was being formed as such at the end of 19th century thanks to German art historian Aby Warburg who applied this method for the first time in 1892 whilst analyzing two of Botticelli's works of art (The Birth of Venus and Primavera) and later defined it. The Warburg Institute named after its founder (see The Warburg Institute, <http://warburg.sas.ac.uk/home>) based in London focuses on cultural history and role of paintings in culture. Iconology of Aby Warburg was later developed by a German art historian Erwin Panofsky (Panofsky, 2013) in early 30s of the 20th century into a three level methodological conception consisting of so called pre-iconographic description (ger. *Präikonographische Analyse*), iconographic analysis (ger. *Ikonoographische Analyse*) and iconological synthesis (ger.



*Ikologische Interpretation*). The first level of primary visual subject matter presumes our basic experience and verbal skills relying on our knowledge of styles, which in certain periods of time influenced the ways of describing objects, motives and the story. The second level presents secondary or more conventional purpose of the subject matter such as world of allegories, images and stories, presuming familiarity and deeper knowledge of literary sources besides knowledge of typological attributes of concrete topics and characters. The third level presenting iconographic synthesis presumes knowledge of cultural events in broader sense of geographical, philosophical, religious and political consequences. It represents the world of inner values and symbols which could have a historical, actual, universal or regional value. More approaches originated in the 20th century accentuating philosophical, sociological, psychological, ethical, mass communicative and mass cultural dimension (H. M. McLuhan, C. G. Jung, R. Arnheim, V. Flusser, W. Benjamin) or other connections with interpretation of art in postmodern period (M.P. Foucault, U. Eco, J. F. Lyotard, G. Deleuze, J. Derrida etc.). Knowledge of mentioned trends altogether with the new tendencies, surely enrich the process of perception, reception and interpretation of works of art in the context of Fine arts education.

Semiotic analysis within the framework of interpretation of works of art of future teachers of Fine arts, is based on theory of semiotician Charles Sanders Peirce (1839 -1914) (In Bergman, Paavola, 2014), according to which we perceive a work of art as a specific complex of signs and their meanings in terms of a triadic relation *icon* (Likeness, etc.) - based on analogy, outer similarity, or objective conformity, *index* (Sign) - based on factual (causal or physical) coherence and a *symbol* (General sign) based on an agreement, tradition or convention.

The above mentioned approaches in Fine arts education we consider as relevant theoretical resources for differentiation among formal, contentual and semantical level in visual culture and understanding of these differences from the students' point of view altogether with implementation of these approaches within the education, we perceive as adequate tool for critical thinking and development of students' creativity.

## **2 Interpretation of visual inputs as a tool for measuring the effectiveness of Fine arts education with an emphasis on the disciplines of theory and art history**

### **2.1 Research objectives**

The aim of our research was to find out what are the competencies of our students - future teachers of Fine arts in area of visual literacy in relation to presumed skills gathered during their pregradual preparation in bachelor's and master's level of study, with the focus on their knowledge and skills gathered within theoretical disciplines focused on theory and history of fine arts. Our aim was to find out whether students are ready and competent to apply their knowledge, wisdom and skills obtained during their studies in relation to identification analogy (*icon*), factual coherence (*index*) and convention (*symbol*) according to Pierce's theory of signs, in the form of interpretation of non artistic visual inputs - photos presenting:

1. One apple
2. Two apples
3. A closed book
4. An open book
5. An empty plastic box
6. Plastic box containing a small object
7. Compilation of photos containing photos 1- 6

Implementation of non artistic visual inputs within our research was intentional. Our aim was to secure perception, reception and interpretation of universal "picture", clear of potential students' artistic-historical experiences and memories thus test the effectiveness of our tuition performed within disciplines focused on theory and history of fine arts.

### **2.2 Research hypotheses**

We assumed that:

1. According to the picture showing two different apples, will be more students who will point out not only a numeric data but also a wide spectrum of qualitative relations than those, who will limit themselves pointing out only a numeric data and confined spectrum of qualitative relations.
2. In the master's degree in Fine Arts Teaching study program there will be more respondents who associate the iconographic and iconological contexts of this subject as an attribute of many mythological stories in relation to the image of an apple than in the bachelor's degree in the same study program.
3. Among all of the respondents there will be more of those, who in connection with the plastic box will associate and highlight the ecological context, environmental problem or the risk than those not associating and not pointing out the context as such.
4. Among all of the respondents there will be more of those who in connection with the picture number 7 containing all of the aforementioned pictures from the questionnaire as a complex visual inputs will associate it with the fairy tale Snow White and the Seven Dwarfs than those, who will not associate it with the story.

### **2.3 Research plan and research file**

Our research sample consisted of 143 respondents altogether, 98 studying full time - Fine Arts Education in academic year of 2018/2019. Particularly: Bachelor's degree - 38 students in the first year, Bachelor's degree - 16 students in the second year, Bachelor's degree - 16 students in the third year, Master's degree - 8 students in the first year, Master's degree - 20 students in the second year and 45 attenders of further education within University of the Third Age, CPU in Nitra studying: History of Fine Arts and Creative Art, under the patronage of Department of Creative Arts and Art Education at the Faculty of Education, Constantine the Philosopher University in Nitra. The questionnaire was filled in by attenders studying at University of the Third Age in above mentioned program in a two year study - second and third year of the first grade (winter semester of the first year covering general subjects is taught at other departments) and in all three years of study of the second grade. The main purpose of integrating the students of Third Age University into our research was to obtain opinions from the group of respondents much older (45 plus), therefore we can assume that they have more visual skills than the respondents studying full time, specifically studying Teaching of Fine Arts (19-25). On the contrary in comparison with full time students of master's degree, students of the University of the Third Age, based on the nature and concept of interest-based learning within this form of further education, did not take the subject specialized in analysis and interpretation of fine arts aimed at theoretical and practical aspects of perception, reception and interpretation of art works and visual culture.

### **2.4 Research methods**

The main method of data gathering was an anonymous questionnaire consisting of preliminary basic questions and 7 articles. By asking the basic questions we were trying to ascertain the affiliation of respondents according to their applicable study or educational programme, year of study, previous education i.e. secondary or university education and sex.

The first six articles included visual inputs - photographs and three open questions:

1. What is the picture describing (representing)?
2. What associations (images, connections) come to your mind with the object shown in the picture?
3. What does the object in the picture symbolize (semantically)?

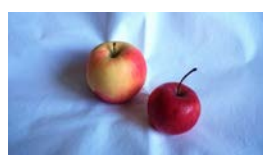
Article No.7 was containing all of the above mentioned pictures as a complex of visual inputs. This article contained only one assignment in the text: If you look at pictures 1 - 6 altogether, what associations (images, stories) do you reflect on in connection with these pictures?

The questionnaire deliberately omits any formulations, definitions of above mentioned authors or our theoretical conclusions which our students came across during their studies. We were trying to monitor interest and ability of our students to apply acquired knowledge and skills in practice.

To complete the data we present the pictures used in questionnaire according to the 7th article. Concrete description of pictures: picture No.1 - one apple, picture No.2 - two apples, picture No.3 - a closed book, picture No.4 - an open book, picture No.5 - an empty plastic box, picture No.6 - plastic box containing a small object.



Pict. 1



Pict. 2



Pict. 3



Pict. 4



Pict. 5



Pict. 6

(Photo: Adriana Récka, 2018)

The research was carried out during the winter semester of academic year 2018/2019. Method of data processing was quantitative and qualitative analyses of answers from the questionnaire reflected in verbal interpretation as well as verification and evaluation of hypothesis.

According to the nature of our questionnaire, including articles, open questions and our ambition to make reference to our respondents' formulations, each filled in questionnaire was marked according to the following key: numeric index of the year of study (1,2, or 3), abbreviation of study programme (Bc - Bachelor degree, MA - Master degree, U3A - University of the Third Age, 1. Level, U3Ad - University of the third age, 2nd level), serial number (1 - number of respondents in certain group). Our respondents are marked as 1Bc1 - 38, 2Bc1 -16, 3Bc1 - 16, 1MA1 - 8, 2MA1 -20, 2U3A1 - 10, 3U3A1 - 11, 1U3Ad1 - 7, 2U3Ad1 - 9, 3U3Ad1 - 8.

### 3 Research results

As mentioned above, the partial results of our research are presented both quantitatively and qualitatively in relation to the selected items of the questionnaire and by evaluation of previously determined hypothesis. Interpreting the results of our questionnaire in items that we do not discuss in this paper (e.g. a closed and open book) will be discussed and evaluated in our next contribution. All relevant information regarding number of respondents in particular year and form of education are presented in our tables. University of the Third Age students (altogether 45) were put into the same group, as their affiliation to a particular year of study did not play an important role in regard to our preferred indices. For clearer arrangement numeric data altogether with research findings by percentage in certain groups were colour-coded. The first hypothesis explored respondents'

competencies in the area of critical (evaluative) thinking focused on identification of formal and contentual relations of visual inputs. The results of our experiment supported the first hypothesis and brought along a few interesting findings. Respondents have stated a wide spectrum of qualitative relational links, which could be classified as notions from Theory of Art related to evaluation of formal or visual point of view of certain impulses, or as notions coincided with socio-psychological, biological or emotional aspect of perception of visual inputs. In the group of notions from Theory of Art the most frequent ones were: *colour, contrast, light, shade, diversity, difference, relation, composition, still life, red, small, big, bigger, smaller* (see table No.1).

Table 1 Frequently used terms from Theory of Art

Terms from Theory of Art	1. year Bc. 38	2. year Bc. 16	3. year Bc. 16	1. year MA 8	2. year MA 20	U3A 45	Altogether 143
Colour	13 34%	14 58%	3 19%	2 25%	6 30%	37 58%	75 52%
Still life	14 37%	10 63%	11 69%	3 38%	8 40%	16 34%	62 43%
Red	7	3	5 31%	0	3	14 31%	32
Difference	10	6 38%	2	2	1	4	25 18%
Small	6	3	3	1	2	10 22%	25 18%
Diversity	10	4	2	3 38%	2	3	24 17%
Contrast	7	7 44%	1	2	3	3	23/ 16%
Relation	7	7 44%	3	2	3	0	22 15%
Shade	2	2	0	2	0	10 22%	16 11%
Light	2	4 25%	1	0	2	5	14 10%
Big	2	2 13%	1	1	1	4	11 8%
Composition	4	3	0	2 25%	1	1	11 8%
Bigger	3	1	1	0	1	4 9%	10 7%
Smaller	2	1	1	0	1	4 9%	9 6%

Source: Own arrangements

Notably richer was vocabulary of socio-psychological, emotional and biological area. Respondents associated a wide spectrum of particular and abstract notions such as: *health/healthy, autumn, fruit, taste, vitamins, life/lifestyle, sweet, tree, juicy, food, friendship, relationship, garden, cake, Snow White, nourishment/nourishing, couple, warm (feeling), maturity/immaturity, hunger, Christmas, harvesting, child, pair, family, security, sour/sourness, coherence, parent, grandmother, marriage, partnership, childhood, man, woman* (see table No.2).

The second hypothesis explored respondents' competencies in the area of identification and appellation of iconographical and iconological relations with an apple as an attribute of various mythological stories. The results of our experiment supported the second hypothesis.

Table 2 Frequently used socio-psychological and biological terms

Socio-psychological and biological terms	1. year Bc. 38	2. year Bc. 16	3. year Bc. 16	1. year MA 8	2. year MA 20	U3A 45	Altogether 143
Health/Healthy	20 53%	13 81%	15 94%	2 25%	16 80%	33 73%	99 69%
Autumn	24 63%	10 63%	5 31%	3 38%	15 75%	25 56%	83 58%
Fruit	9 24%	5 31%	9 56%	22 25%	10 50%	17 38%	52 36%
Taste	10 26%	3 19%	5 31%	2 25%	6 30%	23 51%	51 36%

Vita-min	4 11%	2 13%	6 38%	1 13%	4 20%	20 44%	37 26%
Life/Life-style	12	5	6 38%	1	4	5	33 23%
Sweet	8	1	5	2	8 40%	9	33 23%
Tree	9	2	5	1	8 40%	7	32 22%
Juicy	1	0	2	0	4	20 44%	27 19%
Food	7	2	3	2	7 35%	5	26 18%
Friendship	13 34%	1	2	2	3	1	22 15%
Relationship	7	7 44%	3	2	3	0	22 15%
Garden	2	1	5 31%	1	5	7	21 15%
Cake	3	0	4 25%	1	5 25%	6	19
Snow White	4	1	4 25%	2	5 25%	1	17
Nourishment/Nourishing	2	0	3	2	4 20%	6	17
Pair	2	1	2	2 25%	4	6	17
Warm feeling	5	3	0	2 25%	1	4	15
Maturity/imam-turity	4	5 31%	1	0	1	4	15
Hunger	5	5 31%	1	0	2	2	15
Christmas	2	0	3	0	1	9 20%	15
Harvesting	1	0	1	0	3	9 20%	14
Child	4	1	1	0	2	2	10
Couple	1	4 25%	1	0	1	3	10
Family	3	0	0	0	2	3	8
Woman	3	0	0	1	2	2	8
Protection	2	1	0	0	0	5	8
Sourness/sour	4	0	1	0	1	2	8
Coherence	2	1	1	0	0	3	7
Parent	4	1	1	0	0	0	6
Grandmother	3	1	1	0	0	1	6
Marriage	3	2	0	0	0	0	5
Man	2	0	0	1	0	2	5
Partnership	1	0	0	0	2	1	4
Childhood	1	0	0	0	1	1	3

Source: Own arrangements

At the Master's degree, percentage of respondents who in connection with the picture of an apple associated various iconographical and iconological relations of this subject as an attribute of various mythological stories was 60,7%. Specifically: in the 1st year 2 out of 8 respondents, in the 2nd year 15 out of 20 respondents stated some connectivity. Particularly gratifying was percentage ratio in the 2nd year of Master's degree within the group of students who in summer semester of their 1st year took the course Analysis and interpretation of Work of Art. Within this subject we purposefully and systematically lead our students to gaining their knowledge and skills in the area of perception and reception of visual culture. Our research has shown that 75% of respondents from a particular year, link apple with mythology and in their answers occurred not only terms such as: *Adam and Eve, Garden of Eden, forbidden fruit, Original sin*, but also terms such as: *temptation, snake, tree of knowledge, reason for expulsion from the Garden of Eden*, expanding terminological base used by our

respondents-Bachelor's degree students in connection with this Bible story. Besides associations with the frequented meaning of an apple we found other mythological connections in their answers only sporadically. We were pleasantly surprised by two Bachelor's degree students (in the 1st and 3rd year) who besides the biblical context of an apple associated it with a Greek mythology as *Golden Apple of Discord* (triggering the Trojan War).

More successful was the connection of an apple with fertility from a Greek mythology, where Mother Earth goddess Gaia presented a golden apple to Hera and Zeus at their wedding as a symbol of their love and *fertility*. Five respondents at Bachelor's and Master's degree associated an apple with the symbol of love known also from ancient times (see table No.3). Another three respondents, Bachelor's degree students (one student from each year) associated *Newton's law of universal gravitation* (out of 143 students only three students) and only one respondent out of all (143) associated an apple with a famous American technology company that designs and develops electronics including smartphones. The results show that the type of secondary school our respondents attended before university does not have any significant impact on their answers. We also found out that overwhelming majority of our respondents do not differentiate between the categories *icon/index/symbol* and terms stated in tables 1,2 and 3 were linked with certain categories inadequately. The third hypothesis explored whether in the group of all respondents will be more of those who in connection with the plastic box will associate and name the ecological context, environmental problem and risk than those who will not associate and name the problem as such. Our hypothesis assuming a higher number of respondents recognizing the issue was unsupported by the research, on the contrary, the results have shown that our respondents disregarding their year of study or age group do not associate the picture of a plastic box with any environmental issues. The only term they used was a word *plastic*, but not necessarily in a negative sense. Frequency of terms referring to environmental issues in connection with plastic assigned by our respondents was minimal. Used terms: *waste, environment, pollution, environmental problem, negative effects of plastics* (see table No.4).

It was an interesting discovery that Bachelor's and Master's degree students associated the picture of an empty plastic box with feelings such as: *emptiness, introversion, nothingness* current negative phenomenon of modern society, whereas with respondents studying at University of the Third Age notably dominated the aspect of practical usage of a plastic box such as: *for storing/putting away things, for safekeeping, tidiness, practical usage, tidy away* (see table. No.5). Another interesting fact was that out of 143 respondents only 6 (2<sup>nd</sup> Year, Bc.-2, 2<sup>nd</sup> year MA -2, U3A -2) connected the picture of a non labeled plastic box with a package of chocolate and hazelnut truffles produced by a famous Italian chocolatier, intensively advertised in Slovakia.

Table 3 Frequently used iconographical terms

Iconographical terms	1. year Bc. 38	2. year Bc. 16	3. year Bc. 16	1. year MA 8	2. year MA 20	U3A 45	Altogether 143
Original sin	4	2	3	1	11 55%	4	25 17%
Eve	6	4 25%	0	1	5 25%	9	25 17%
Adam	6	4 25%	0	1	5 25%	7	23 16%
Paradise/paradisaal	1	1	1	1	7 35%	9	20 14%
Fertility	3	3 19%	0	1	2	2	11 8%
Forbidden fruit	2	1	1	0	4 20%	1	9 6%

Love	4	2 13%	0	0	2	1	9 6%
Bible, Biblical	3	0	0	1	3 15%	1	8 6%
Knowledge	0	0	0	0	2 10%	3	5 3,5%
Temptation	0	1	1	0	2 10%	0	4 3%
Golden Apple of Discord	1	0	1	0	0	1	3 2%

Source: Own arrangements

Table 4 Frequently used terms within environmental context

Frequently used terms within environmental context	1. year Bc. 38	2. year Bc. 16	3. year Bc. 16	1. year MA 8	2. year MA 20	U3A 45	Al-to-ge-the-r 143
Plastic	6	7	5	2	2	12	34 24%
Waste	1	1	2	0	1	3	7 5%
Environment	0	0	0	0	0	3	3 2%
Pollution	0	0	0	0	1	1	2 1,5%
Environmental problem	0	0	0	1	0	0	1 0,7%
Negative effect of plastics	0	0	1	0	0	0	1 0,7%

Source: Own arrangements

The fourth hypothesis explored to what extent the collection of visual inputs influence our respondents to association with the fairy tale - Snow White and the Seven Dwarfs. The results of an experiment did not support the fourth hypothesis. Out of 143 respondents only 5 students associated the group of 6 pictures with the aforementioned fairy tale or their main character. More precisely three Bachelor's degree students and two Master's degree students related the fairy tale with pictures of independently presented items (apple, plastic box). The term fairy tale was used only by 11 respondents out of 143. Association with a *poisoned apple* (for Snow White) stated 5 respondents, *coffin/casket* (for Snow White) stated three out of 143 respondents. Even though the students did not link the fairy tale about a Snow White and the Seven Dwarfs with the picture number 7 containing set of all pictures from the questionnaire, our respondents stated their own creative stories reflecting their own experiences, attitude and emotional state of mind. Six respondents did not associate anything with the set of six pictures (see Table No.6).

Table 5 Frequently used terms in connection with an empty plastic box

Frequently used terms in connection with an empty plastic box	1. year Bc. 38	2. year Bc. 16	3. year Bc. 16	1. year MA 8	2. year MA 20	U3A 45	Al-to-ge-the-r 143
Empty/Empty-ness	23 61%	11 69%	10 63%	4 50%	9 45%	6 13%	63 44%
Closeness	6	3	4 25%	3 38%	5 25%	3	25 17,5%
For storing/	4	0	1	0	2	14 31%	21 15%

putting away things							
Airtightness	5	3 19%	1	1	2	5	17 12%
Safe-keeping	0	0	0	1	0	7 16%	8 6%
Tidiness	4	0	0	0	0	4 9%	8 6%
Practical usage	1	1	0	0	0	5 11%	7 5%
Uselessness	2	1	1	0	0	1	5 3,5%
Tiding things	0	0	0	0	0	2	2 1,5%
Nothingness	2	0	0	0	0	0	2 1,5%

Source: Own arrangements

Table 6 Frequently used terms with hypothesis No. 4

Frequently used terms with hypothesis No. 4	1. year Bc. 38	2. year Bc. 16	3. year Bc. 16	2. year MA 8	2. year MA 20	U3A 45	Al-to-ge-the-r 143
Snow White	4	1	4 25%	2	5 25%	1	17 12%
Fairy tale	3	0	4 25%	0	4	0	11
Coffin	2	1	1	0	1	0	5
Casket	0	1	1	0	2	1	5
Poisoned apple	0	2	2	0	1	0	5
No association	3	0	0	0	1	2	6

Source: Own arrangements

#### 4 Conclusion

Aim of our research was to find out students' competencies - future teachers of Fine Arts in area of visual literacy in relation to presumed experiences gathered during their pregradual preparation at Bachelor's and Master's level of study with an emphasis placed on their skills and knowledge adopted within theoretical disciplines focused on Theory and History of Fine Arts. Students applying to universities from different types of secondary schools dispose of various initial knowledge and skills. The results of our research show that in connection to competencies which we observed, type of school does not play a significant role. It is very gratifying to know that our educational activities focused on diachronic and synchronic understanding of arts development especially within The Analysis and Interpretation of Fine arts in the first year of Master's study programme proves to be an effective tool for development of critical thinking and creativity. We also found out that our respondents operate with a wide spectrum of terms in area of interpretation of formal and contentual aspects of visual phenomena. On the other hand we were unpleasantly surprised to find out how little attention our respondents paid to environmental issues disregarding year of their study and age group, because our students are attending already in the bachelor's degree several courses focused on contemporary art movements that deal with environmental issues from different perspectives (e.g. Land art, Recycle art, etc.). Memories of the details and episodes of the well known fairy tale Snow White and the Seven Dwarfs which we were trying to evoke with the help of summarized pictures presuming that this visual inputs will be a sufficient stimulus for generating an association proved to be "forgotten".

The research results are a great impulse and significant motivation for us to create future educational activities focusing on development of interpretative skills in relation to formal, contentual and semiotical aspect of visual culture.

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## RELATIONSHIP BETWEEN PATH-GOAL LEADERSHIP BEHAVIOR AND DECISION-MAKING STYLES ACCORDING TO PERSONAL AND WORKING PARAMETERS

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**Abstract:** Decision-making is the key competence of leaders, the outcome of which is primarily influenced by the personality of the leader defined through his or her style of leadership and as well the style of decision-making. The research paper deals with the relationship between the decision-making style of a manager and his or her leadership style in association with personal and working parameters. The parametric One way ANOVA was used to identify and determine the size of the difference in the achievement of the style of leadership within the personal and working parameters. The results reveal that the difference achieved in the number of "Directive" points differs significantly within the duration of the current management position. Point scores in leadership styles also vary significantly across individual decision styles. **Abstract:** Abstract needs to be written in English, Times New Roman, Font 6. The abstract should be no longer than 10 lines, alignment to blocks.

**Keywords:** Decision making style, leadership style, working and personal parameters

### 1 Introduction

The style of decision-making and the style of leadership are two different constructs that are individually expressed. Decision style is the result of the cognitive process, leading to the selection of solutions from several alternatives, based on the decision-maker's way of thinking. The style of decision-making is based on the theory of cognitive styles and leadership styles of behavioral attitudes and interactions with other people. Studies prove that the relationship between decision-making and leadership lead to ambiguous results and are practically divided into two groups. One group of studies claims that there is a dependency (Uzonwanne, 2015; Hariri et al, 2014; Alkharabsheh, 2014; Amir et al, 2014; Muhammad, 2010; Keng & AlQudah, 2017) between the styles and the second group says that dependency does not exist (Verma et al, 2015; Ejimabo, 2015). Several studies deal with decision styles and manager leadership potential, such as visionary leadership, tutoring skills approach, and the role of motivator and his ethics (Chikeleze & Baehrend, 2017; Porvaznik et al, 2017), follow the influence of leadership style on organizational efficiency (Ljudvigová, 2018, Paisi Lazarescu, 2015). This results claiming that the rational style of decision-making positively affects the efficiency of the organization. Autocratic style, on the contrary, has a negative impact on its effectiveness. Based on the researchers authors have confirmed that the style of decision making is a significant indicator of the efficiency of the organization.

### 1 Literature overview about leadership style and decision making style

#### *Leadership style*

Relative to the situational leadership (Hersey and Blanchard, 1969) and its later development (Blanchard et al., 1993; Blanchard et al., 2013), which suggest that a leader must adapt to the development level of followers, path-goal theory give priority to the relationship between leadership style and characteristics of followers and tasks. House and Evans developed path - goal theory of leadership in the 1970s, where the key idea of the model is based on the fact that the style of leadership always depends on the situation in which the manager is located, and can therefore apply several styles of leadership. The basic components of path-goal leadership can be divided into the following groups - leader behavior, follower characteristics, task characteristics, the characteristics of the

environment and the motivation that affects the subordinates. The characteristics of the subordinates are determined primarily by the needs, skills and maturity of the group as well as of each individual. The characteristics of environment and task characteristics are caused by the structure and difficulty of the task and the key factor is existing team dynamics of the group.

The basic idea of the path-goal theory is to manage subordinates in a way they are able to achieve goals and effective performance. This process is implemented through defining goals, clarifying path, removing obstacles and providing support. Path - goal theory defines directive, supportive, participative and achievement - oriented leadership behavior (Northouse, 2016) as follow - Directive leadership, Supportive leadership, Participative leadership, Achievement-oriented leadership. The strong point of this theory is that provides a very useful theoretical framework for understanding the variety of leadership styles used in terms of characteristic of group members which will ultimately cause positive changes in the group's performance. In addition, the theory attempts to integrate the basic principles of motivation into leadership theory and at the same time offers a simple application of individual styles of leadership depending on the character of the group and the character of the task. This makes it easy for the manager to find out which style will be the most effective in the situation. The path-goal theory of leadership created the background of charismatic leadership theory that was based in 1976. This theory also formed background for elaborating and extending the theory of value-oriented leadership published by House in 1996 (Lussier-Achua, 2012).

In contrast to trait approach of leadership (Bass, 1990; Stogdill, 1974) and skills approach of leadership (Katz, 1955; Mumford et al., 2000) that are focused on especially on the personality of leader, his or her traits and skills, path-goal theory give us more complex view on leadership considering not just the leader but also followers and the organizational setting.

#### *Decision making style*

Decision styles can be identified by standardized tests. The most commonly used are "Decision making style inventory" (DMSI), "Myaers - Bricks type indicator" (MBTI) or "Cognitive style inventory" (CSI). All three tests assess the style of decision-making from two point of view - the way of obtaining information and processing and the way of using the information in the decision-making process. DMSI testing provides four decision styles: systematic-internal, systematic-external, spontaneous-internal, spontaneous-external. Testing with MBTI provides four decision styles: sensing, thinking, feeling, intuiting. CSI testing provides two decision styles: systematic, intuitive.

A deeper insight into the decision-making style of a manager is provided by Driver (2006), according to whom the decision-making style is understood as a trained manner of thinking. Driver created an original conceptual model for identifying a decision-making style - the "Driver Dynamic Decision Style Model". The first part is focused on the amount of information, which managers typically use during decision-making and the second part focuses on whether managers focus on a concrete step in a determined procedure or generate a variety of variants (uni-focus and multi-focus) (Driver, 1999).

Connecting decision style, self-interest, and personality type can predict the individual styles of "attachment" (Deniz, 2011), which are built within an individual since birth (Bowlby, 1982) and the "attachment" theory explains the process of building relationships and interpersonal relationships (Simpson, Rholes, 1998). The "safe" style of attachment is a significant indicator of self-interest, and the "vigilant", "evasive", and "procrastinative" decision-making styles. Predicting a "hyper-

vigilant" style of decision-making can again make the attachment style "frightening".

A Dutch study (French et.al, 1993) assessed the connection between the style of a person's driving and their decision-making style. Seven independent decision-making styles were created – control, instinct, social resistance, perfectionism, idealism, rigor, hesitancy and six styles of driving – social resistance, speed, calmness, concentration, planning and deviations. The study confirmed that people's driving methods demonstrate their basic decision-making style and thus they get themselves to different degrees of accident risk (West et.al,1992). It was discovered that drivers aged up to 60 who achieved a low score in the "rigor" decision-making style are more at risk of accidents and the style of driving turned out to be faster and more aggressive. Drivers aged over sixty years of age, characterized by less rigor and more hesitancy and fast driving, demonstrated an independence in relation to higher accident rates.

Cognitive skills and working memory that support rational decision-making are aggravated by age (Verhaeghen et al., 1993). There are emotional and affective skills that support intuition and these skills can remain stable or even age-enhanced. (Blanchard-Fields, 2007; Charles, Carstensen, 2010; Kennedy, Mather, 2007; Hanák, 2014).

## 2 Methodology

The purpose of the research study is to identify the style of leadership and the decision making style of managers in leading positions in Slovak enterprises and to measure their mutual association and their dependence on elements of working and personal parameters.

In the research presented here, the decision-making style of managers in leading positions in Slovak companies was determined and associated with others personal (such age, owning the current position) and working parameters (functional area of control, management level, team size, gender, decision problem). The statistical sample (N = 250 respondents) is comprised of managers operating in tactical and top management. The sample was created in PSPP by random selection. The researchers have ensured the measurement objectivity by using data collection tools in electronic form to prevent influencing the research subject. The participants were instructed in writing by one researcher.

The observation survey was conducted using a questionnaire on the decision-making of managers. To identify the decision-making styles in the research project, a test based on a MB-type indicator was used, observing two dichotomies sensing/intuiting and thinking/feeling. The Path-Goal Leadership Questionnaire was used to identify these styles of leadership. (Northouse, 2016).

The reason for using the MBTI is its high reliability. The Cronbach's alpha ( $\alpha$ ) was used to analyze reliability of the decision-making style test in SR conditions. Reliability scale „Intuiting"/„Sensing"/„Thinking"/„Feeling" ranged from 0.83 to 0.86. By comparing the reliability values with other authors and testing tools, the values presented here represent an acceptable reliability level of the MBTI test for the decision-making style.

### Data analysis

The data obtained through the questionnaire about decision-making are of a nominal (level of management, functional area of control, gender) and ordinal variable (the number of team members, age of the manager, owning the current management position - number of years). The data obtained from MB – type indicator denote interval variables, presented as Score of decision making style (Score of DMS) and the data from Path-Goal Leadership Questionnaire presented as Score of leadership style. Two-dimensional inductive statistics methods were used

to test the dependence of the variables. The non-parametric Chi Square Test of Independence was used to test the dependence of the Leadership style (directive, achievement-oriented, participative, supportive) and personal and working parameters and the association between decision making style and leadership style. The strength of association was measured through Spearman, Kendall Tau – c and the ETA coefficients and the proportion of variability explained by nominal variable ( $\eta^2$ ). The Cohen scale was used to interpret the strength of association between variables (Cohen, 1988).

The parametric One-way ANOVA was used to identify and define the range in differences between decision-making style scores of managers within groups of nominal variables. Then the effect size  $r$  was calculated as a square root of the percent variance between groups (SSM) and total variance (SST). The assumption of homogeneity of variance and sphericity assumption was measured through Levenev's test.

The assumption of homogeneity of variance and sphericity assumption was measured through Levenev's test. The data were analysed in PSPP statistical software. Hypotheses were tested at a significance level of  $p \leq 0.05$ ; while maintaining the primary rule of the Chi-Square Test of Independence, where the theoretical frequencies did not fall below a value of 5 in 80%, and for other values  $X > 1$  applied. Null and alternative hypotheses were tested, which we present in individual results.

## 3 Research results and discussion

Based on the results of descriptive statistics on leadership styles, we can say that respondents are more directives (M = 21.93) than participative (M = 19.11). Simultaneously, when rating individual styles there was higher variability variable in the Participative scale (SD=2.39) compared to the Directive scale (SD = 2.28).

Kurtosis and skewness has reached at all scales the following values: Directive score (kurtosis = .74, skewness = -.91), Supportive score (kurtosis = .47, skewness = -.37), Participative score (kurtosis = -.14, skewness = -.21), Achievement score (kurtosis = .78, skewness = -.38)

Table 1 Frequency table for leadership style score

Variable	N	Mean	Std Dev	Var	Kurtosis	Skewness	S.E. Skewness	Range	Min	Max
Directive score	250	21.93	2.28	5.21	.74	-.91	.15	13	13	26
Supportive score	250	18.95	2.25	5.07	.47	-.37	.15	12	12	24
Participative score	250	19.11	2.39	5.70	-.14	-.21	.15	13	12	25
Achievement score	250	18.94	2.38	5.65	.78	-.38	.15	14	11	25

Source: own processing

The style of decision-making and the style of leadership are two different constructs that are individually expressed. To clarify the differences in both styles, we observed their interdependence, which was not confirmed. We tested hypotheses:

- H0= There is no statistically significant dependence between decision making style and leadership style
- H1= Decision making style and leadership style are related to one another

Table 2 Correlation between Decision making style & Leadership style [Spearman  $\rho$ , Kendall Tau – c, p-value]

Variables	D_S	S_S	P_S	A_S
Intuiting score	-.12	.05	.09	.14
	-.08	.03	.07	.10
	.492	.121	.852	.371



Sensing score	.12 .09 .549	-.03 -.04 .170	-.09 -.06 .159	-.15 -.11 .114
Thinking score	.09 .07 .531	-.19 -.14 .000	-.07 -.05 .932	.01 .01 .416
Feeling score	-.09 -.06 .332	.20 .14 .000	.08 .08 .951	-.01 -.01 .217

Source: own processing with PSPP

(Note: Leadership style: Directive score = D\_S, Supportive score = S\_S, Participative score = P\_S, Achievement score = A\_S)

We reject the H1 hypothesis at the significance level  $p \leq .05$ , and accept the null hypothesis H0. There is no statistically significant dependency between the number of points achieved in the leadership styles test and the decision-making styles: Directive\_score  $\rho = -.12$ , Supportive\_score  $\rho = .05$ , Participative\_score  $\rho = .09$ , Achievement\_score  $\rho = .14$  at Intuiting\_score, which is an insubstantial dependence between variables, with  $p \text{ value} > .1$ . Very similar results were reached also for other decision-making styles to the relationship to leadership styles. Statistically significant dependence was only confirmed in the relationship Supportive\_score and Thinking\_score, Feeling\_score ( $p = .000$ ).

However, the dependence strength is weak and negative in Supportive\_score and Thinking\_score ( $\rho = -.19$ ), which also indicates the dependency direction. If the number of points in the Thinking decision style increases, the number of points in the Supportive leadership style decreases. The Supportive\_score and Feeling\_score score also showed weak ( $\rho = .20$ ), but statistically significant dependence ( $p = .000$ ). The results show that by reaching a higher number of points in the style of Feeling\_decision style, it will reach a higher number of points in the Supportive\_decision style.

The non-parametric Chi Square Test of Independence was used to test the dependence of Score of decision-making style and the personal and working parameters. The Eta coefficient measures the relationship between the nominal and the interval variables. The summary results are shown in table 3. The following hypotheses were tested:

- H0 = there is no dependence between the Score of leadership style and the personal and working parameters
- H1 = the Score of leadership style and the personal (age, owning the current position) and working parameters (functional area of control, management level, team size, gender) are related to one another

Table 3 Summary results table for association between Score of leadership style and others parameters [ETA;  $\eta^2$ ; p-value]

Variables	A_S	P_S	S_S	D_S
Functional area of control	.20 .04 .144	.27 .0729 .885	.14 .0196 .754	.29 .0841 .330
Management level	.17 .0289 .603	.23 .0529 .074	.16 .0256 .374	.14 .0196 .546
Gender	.08 .0064 .503	.12 .0144 .928	.05 .0025 .164	.11 .0121 .163

Source: own processing with PSPP

(Note: Leadership style: Directive score = D\_S, Supportive score = S\_S, Participative score = P\_S, Achievement score = A\_S)

We reject the hypothesis H1 at the significance level  $p \leq .05$ . There is no statistically significant dependence on the composition of the team from the gender perspective (only men, only women, both) and the number of points in the leadership style ( $p \text{ A}_S = .503$ ,  $p \text{ P}_S = .928$ ,  $p \text{ S}_S = .164$ ,  $p$

$\text{D}_S = .163$ ). The variable composition of the team explains only a very low proportion of variability in the number of points of the leadership style ( $\eta^2 \text{ A}_S = 0.64\%$ ,  $\eta^2 \text{ P}_S = 1.44\%$ ,  $\eta^2 \text{ S}_S = 0.25\%$ ,  $\eta^2 \text{ D}_S = 1.21\%$ ). We also reject the hypothesis H1 at the level of significance  $p \leq .05$  about the dependency of the functional area of management as well as the level of management and the number of points in the leadership style.

Table 4 Summary results table for correlation between Score of leadership style and others parameters [Kendall Tau - c, Somers' d, p-value]

Variables	D_S	S_S	P_S	A_S
Owning of current position	-.19 -.20 .232	-.01 -.01 .317	.07 .07 .575	-.02 -.02 .418
No. of team members	-.02 -.02 .043	-.07 -.08 .388	.04 .05 .119	.04 .04 .344
Age interval	-.18 -.19 .022	-.12 -.13 .608	-.11 -.12 .108	-.02 -.02 .745

Source: own processing with PSPP

(Note: Leadership style: Directive score = D\_S, Supportive score = S\_S, Participative score = P\_S, Achievement score = A\_S)

We reject the hypothesis H1 at the significance level  $p \leq .05$ , and we accept the null hypothesis H0. There is no statistically significant dependence between the examined variables. All values show a very low dependence, this dependence being statistically insignificant. The number of points achieved in the leadership style test is not related to how long the manager is in the current leadership position.

Statistically significant dependence was confirmed only in the relationship of Directive\_score and the size of the team  $p = .043$  but by the trivial strength of dependence Tau-c = -.02. As well as the weak dependence between Directive\_score and the age of manager Tau-c = -.18,  $p = .022$ .

The parametric test One way ANOVA has been used to identify and determine the size of the difference in the achieved human-style leadership score within the groups of nominal variables. The results of the Levene's test for the analysis of the sphericity and homogeneity of variance do not confirm the violation of this assumption if  $p > .05$ . Then, we have followed the basic hypothesis of statistically significant differences in the area of working parameters (functional area of control, management level, number of team members) and personal parameters (gender, length of the current managerial position, age of managers) that differ in the number of points of the leadership style. The following hypotheses were tested:

- H0: There is no statistically significant difference in Score of leadership style between the groups of Functional area of control/ Management level/ No. of team members/ Gender, Owning of current position, Age of managers.
- H1: There is statistically significant difference in Score of leadership style between the groups of Functional area of control/ Management level/ No. of team members/ Gender, Owning of current position, Age of managers.

The results of the statistical analysis ANOVA and conditions for its implementation (Levene statistic and data normality testing) are presented in the following tables.

Table 5 Summary results table for ANOVA and Homogeneity of variance\_Directive style

Variables	Directive style				
	Levene Stat.	Sig.	F	Sig.	r
Functional	1.81	.098	1.88	.084	



area of control					
Gender	.96	.385	1.58	.208	
Management level	1.16	.314	.93	.396	
Decision making style	.59	.620	.47	.702	
Owning of current position	.90	.465	3.08	.017	.212
No. of team members	3.65	.027	9.84	.000	
Age_interval	1.04	.374	3.40	.018	

Source: own processing with PSPP

Table 6 Summary results table for ANOVA and Homogeneity of variance\_Supportive style

Variables	Supportive style				
	Levene Stat.	Sig.	F	Sig.	r
Functional area of control	.43	.861	.53	.782	
Gender	1.26	.285	1.47	.232	
Management level	1.38	.253	.30	.741	
Decision making style	.32	.808	3.48	.017	.197
Owning of current position	.00	1	1.85	.120	
No. of team members	.28	.756	6.26	.002	
Age_interval	.18	.907	1.23	.301	

Source: own processing with PSPP

Table 7 Summary results table for ANOVA and Homogeneity of variance\_Achievement style

Variables	Achievement style				
	Levene Stat.	Sig.	F	Sig.	r
Functional area of control	2.40	.028	2.40	.028	
Gender	6.71	.001	2.50	.084	
Management level	.15	.860	3.69	.026	.164
Decision making style	.29	.832	2.57	.055	.170
Owning of current position	1.03	.393	2.00	.096	
No. of team members	2.59	.077	2.19	.114	
Age_interval	1.75	.157	.42	.736	

Source: own processing with PSPP

Table 8 Summary results table for ANOVA and Homogeneity of variance\_Participative style

Variables	Participative style				
	Levene Stat.	Sig.	F	Sig.	r
Functional area of control	.53	.784	2.01	.065	
Gender	.32	.724	.15	.864	
Management level	.90	.406	3.28	.039	.158
Decision making style	.17	.919	2.53	.058	.167
Owning of current	.33	.860	.55	.696	

position					
No. of team members	.19	.831	4.58	.011	
Age_interval	.81	.489	.49	.693	

Source: own processing with PSPP

Based on the results of the ANOVA statistical analysis presented in tables 5, 6, 7 and 8 we can state that the individual groups of managers, divided by functional areas of management, do not differ in the number of points reached in the leadership style. Also, the composition of the team members (gender basic: male, female, or both) that the manager manages, does not affect the manager's style of leadership. The difference achieved in the number of points in the "Directive" style  $F(2,250) = 3.08$ ,  $p < .05$  with the effect of the difference  $r = .212$  is statistically significantly different within the length of the action at the current management position. Top leadership scores are achieved by managers who are in the current position from five to eight years. The lowest score have managers running on a leading position within three years.

The statistically significant difference in the leadership style "Achievement" and "Participative", appears at the individual levels of management. Achievement leadership style gets  $F(2,250) = 3.69$ ,  $p < .05$ , with the effect size  $r = .164$  and Participative leadership style gets  $F(2,250) = 3.28$ ,  $p < .05$ , with the effect size  $r = .158$  being the most represented among managers in top management. According to the number of members in the team (Remenova et al., 2018), managers have a different number of points in the leadership style "Participative"  $F(2,250) = 4.58$ ,  $p < .05$  and "Supportive"  $F(2,250) = 6.26$ ,  $p < .05$ . A statistically significant number of points is achieved by a manager with "Supportive" and "Participative" style in managing a team of over 13 members.

The age of the manager is a statistically significant indicator in the "Directive" style  $F(2,250) = 3.40$ ,  $p = .018$ , where managers in age 31 to 40 reach the highest number of points in this leadership style.

Difference in the number of leadership style between Achievement-oriented, Participative and Supportive "Achievement"  $F(2,250) = 2.57$ ,  $p < .055$ , "Participative"  $F(2,250) = 2.53$ ,  $p < .058$  and "Supportive"  $F(2,250) = 3.48$ ,  $p = .017$ , was proved to be statistically significant. The highest score of points in the "Achievement" and "Participative" leadership style make Intuiting-Thinking style of decision-making; in the "Supportive", leadership style is it Sensing-Feeling style of decision-making.

#### 4 Conclusion

The leadership style is defined through the behavioral attitudes and interactions with other people. Which style of leadership style is represented among Slovak managers we have identified through the Path-Goal Leadership Questionnaire.

The most represented leadership style is Directive style (almost 73% of respondents), the second one is Achievement - oriented style (12% of managers), the third one is Participative style (less than 10%) and the last one is Supportive style 3.70%. The intriguing dependence between leadership style and decision style has proven positive in Feeling decision making and Supportive leadership. Between the Supportive leadership and Thinking decision-making was negative, which emphasizes that by increasing the number of points in the Thinking decision-making style, the number of points in Supportive leadership style decreases in proportion. The dependence of other styles did not occur. We also found the dependence of working and personal parameters and individual styles of leadership. The association has emerged between the Directive leadership and the age of the manager and the size of the team he or she leads.

Using ANOVA testing, authors evaluated the difference in the achieved Path – goal theory defined leadership styles scores in individual work and personal parameters. The difference in the score of the number of leadership style points did not differ according to functional areas of management, nor the structure of the team members (in terms of gender - men, women, both). The difference in the number of points in the "Directive" leadership style varies significantly within the length of the current management position. The leadership styles: "Achievement-oriented" and "Participative", represent the highest proportion of managers in top management.

Point scores in leadership styles also vary significantly across individual decision-making styles. The most points in the "Achievement-oriented" and "Participative" leadership style achieve Intuiting-Thinking style of decision-making; in the "Supportive" leadership style is it Sensing-Feeling style of decision-making.

Authors found several studies focused on relationship between leadership and decision making in specific areas like education focused on University Development Context (R. Van Loveren, 2007) or in health services, focused on impact among nurses managerial level (Abood, Thabet, 2017). This research paper included mainly respondents from business environment and from companies operates in Slovakia. Overall research results are applicable in development of management theory and practice.

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**Primary Paper Section: A**

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## EEG STUDY OF THE EFFECT OF VIRTUAL REALITY

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**Abstract:** This study examines the effect of virtual reality on the human brain in terms of how much virtual reality is capable of replacing real-world experiences and affect the human brain. The focus of the study is on the area of neuromarketing where the purpose of our own investigation is to determine the effect of a 360° advertising spot using a neuromarketing approach. The main objective of our own research is to find out through the EEG brain the effectiveness of advertising spot presented using virtual reality.

**Keywords:** neuromarketing, electroencephalography, virtual reality, spot advertising, marketing communication, efficiency.

### 1 Introduction

The area of digital technology is constantly evolving and new applications of various technologies are found every day [1]. One of them is a virtual reality technology that gradually finds wider application, although initial efforts to implement it can be observed in the second half of the 20th century [2]. The popularization of virtual reality goes hand in hand with the on-going affordability of these devices. The consumer at home can afford virtual reality for hundreds of crowns - from the cheapest virtual glasses for smart mobile phones to more sophisticated systems with high quality and content that require a lot of computing power. Virtual reality appears in many areas. The most popular is the gaming industry, but it can also be found in the field of marketing or human resources and the recruitment of new employees into companies.

In connection with the above, the question arises as to how this virtual reality affects the human brain from the point of view of the quality of mediating reality, or the extent to which it can replace reality. Based on this, the aim of this study was to: Identify using the EEG the effectiveness of the performance of a commercial spot presented using virtual reality. For this purpose, a neuromarketing approach to data collection will be used to find out the effect of virtual reality on the human brain, or the level of attention and intensity of emotions experienced.

### 2 Neuromarketing

The Neuromarketing Approach to Primary Data Collection will be used in the own survey methodology. Neuromarketing is a relatively new approach. The combination of neuro and marketing suggests a combination of two areas of neuroscience and marketing. The concept of neuromarketing began to appear in 2002 [3]. Neuromarketing is a relatively new domain of applied marketing research that studies cognitive and affective customer responses to marketing incentives [4]. In addition to neuromarketing, it is useful to mention the term neuroeconomics, which is a multidisciplinary discipline aiming at the neural level to understand human decision making in the economic environment. Researchers explore processes in the brain in situations where people decide, evaluate options, choose preferences [5]. Neuromarketing combines knowledge from neuropsychology, cognitive psychology and neuroscience with the environment of marketing [6]. In summary, neuromarketing can be understood as linking the application of biomedical technology and marketing research [7].

The neuromarketing methods are used to investigate anatomical and physiological functions and behavioural analysis. Most of

these methods have their origins in the medical field. It is very often the monitoring of cardiac activity, for example by means of electrocardiography (ECG), skin-galvanic reflex (GSR), eye tracking, or monitoring brain activity by the electroencephalography (EEG) method used in this study to collect primary data [8].

The EEG method can show brain activity in certain mental states such as alertness or drowsiness. Electroencephalography (EEG) is used to detect bioelectric activity of the brain. This activity is shown as form of brain wave, each of which has its own frequency and course reported in Hertz (Hz). Each type of brain wave corresponds to a specific behaviour of humans, gamma waves are related with significant emotional experiences. BETA brain waves associate with thinking, mental activity and considerable effort to focus on the challenge. Brain waves called SMR (sensorimotor) have a relationship to the physical motor, the movements or skills of humans [9].

Although there are a number of other methods to monitor brain activity, such as functional magnetic resonance imaging (fMRI), there are some advantages or disadvantages for each method. The advantage is that nowadays there are portable EEG devices, so collecting primary data may not necessarily be limited to laboratory conditions or only to medical facilities where these methods are commonly used. At the same time, EEG data collection is significantly more cost-effective than functional magnetic resonance imaging [8]. This brings many benefits, since it is possible to study brain activity when observed in a natural environment.

### 3 Methodology of its own investigation

Based on the goal, a survey was carried out using the EEG to test the effectiveness of a advertising spot presented by virtual reality. Following the goal set, to the selected respondents with VR headset an advertising spot was presented, while they were connected to the EEG device to measure the electrical activity of the brain. The survey also includes a control group of respondents who watched the same advertising spot on mobile phone without VR headset. The survey is also complemented by a semi-structured interview.

During the survey, the Teekanne tea spot was presented to the respondents. This spot was chosen because of its format, which is the 360° video allowing a full-featured presentation through virtual reality. At the same time, it is a promotion of a product that is gender-neutral, and the respondents' gender should not influence the results than if a commercial spot promoting perfume or clothing was chosen. The ad was played using the Youtube portal, which allows uploading and then playing back videos of this format. The content of the advertising spot was the preparation of tea, its pouring into a cup and then shots into a tranquil oriental garden. It is important to note that video content must be conceived in accordance with the video format that allows virtual reality. The above-mentioned video format allows the viewer to move around 360 degrees, which is achieved by moving with VR headset placed on the head. For the control group of respondents, which is described in the next part of this article, the movement of a mobile phone while watching an ad spot replaces VR headset.

Within the survey, respondents were divided into two groups. The first group watched the commercial spot using the headset (glasses) for the virtual reality of the TBW brand with the VR BOX VR-X2. The iPhone SE mobile phone (4-inch screen size) on which the ad spot was played was placed in to this headset. Using a mobile phone accelerometer to detect the orientation of the phone, respondents could look at the 360 ° spot through head movements. The goal is to make sure that the respondent immerses in the video and that it brings the illusion of reality. The quality of this experience depends on the technology used. VR headset, which was used, is both financial and hardware

unpretentious option for simply trying out virtual reality. In the survey, a second, control group of respondents was set up to watch the same spot without using the headset. Respondents from control group watched spot only on the screen of the iPhone SE mobile phone.

Since this was an experimental survey, a sample of respondents comprised of 20 people, divided evenly into two groups - the group that the ad spot was presented with glasses to the virtual reality (headset) and the control group, which was spotted only by the mobile phone. The number of respondents in each group was 10 persons. The selection of respondents took place on the basis of volunteering from bachelor students of the University of Finance and Administration in Most, with an age limit of 18-30 years, given that this younger generation may be more inclined towards digital technologies.

The data collection took place in a quiet, undisturbed room, which was free of external influences such as noise in the corridor etc. The measuring technique was placed in the room behind the respondent's back so that the administrator did not disturb and did not influence respondent during the data collection. Respondents were invited to the room individually, and the time schedule for their invitation was tailored so that they did not meet in the room and could not pass on knowledge from the data collection, which would disrupt the standardization of conditions. Respondents from the first group, who watched the spot with VR headset, were given the Philips headphones before they began collecting data, ensuring a better understanding of audience information from the spot.

After the respondent was seated in the room, the EEG measuring electrodes were placed. In the case of this investigation, the 10-20 EEG electrodes were placed at point Fz. The ground electrode was placed on the respondent's left ear or point A1 according to standard 10-20. Nexus-10 was used to retrieve the data, including the BioTrace + software, used to record, display measured data, and to analyse it. This program allows you to select values for specific respondents and export the measured data to the ".txt" text format. Data are subsequently processed in the analytical software. EEG monitored the following brain waves: SMR, beta and gamma. Beta waves are typically in the range of 14 - 30 Hz and are related to concentration, logical-analytical thinking. Gamma waves have a frequency of 30 Hz or more and are associated with emotions and more stressful situations [10]. Using this method, there was a difference in the level of attention and emotion when watching the selected commercial spot compared to the resting state. The resulting values were further compared between the two groups of respondents.

Before the presenting of the selected advertising spot itself, it was necessary to record the values of so-called resting state of the respondents against whom the measured data were compared when watching an advertising spot. Certain calming of respondents (particularly certain stress from EEG measurements) was achieved by a video presentation containing a time lapse record of the blue sky and moving clouds. This is a peaceful shot that is neutral and should not cause significant emotional responses. The footage of this video was 35 seconds. The advertising spot was then presented to the respondents, this process is described in more detail in the previous paragraphs of this article.

When analysing the data, the values of the degree of attention and emotional reactions and their difference were compared to the resting state. The degree of attention was determined by the merging of brain waves SMR and beta, emotional responses were determined based on brain waves of gamma. To determine the extent to which virtual reality influence the level of attention and emotion, the resting state of the respondents (based on a 35-second spot with the sky) is compared with the results measured during the presentation of the advertising spot. This makes it possible to determine how much the percentage of attention or emotional responses has changed when watching an ad spot compared to the rest of the respondents. Based on the collected

data, the average value of attention and emotional response of respondents who watched the spot using the headset and using a mobile phone was determined by adjusting the data. The resulting data is summarized in Table 1 below.

The survey was further complemented by a post-test in the form of semi-structured personal interviewing, which aimed to find additional data, especially subjective assessments. The form of personal interview was chosen in relation to the type of inquiry, as it allows interviewer to react to the respondent and to obtain deeper information [11]. The interview consisted of eleven questions related to how subjectively respondents rate the presented spot. In addition, the questions concerned virtual reality and the idea of its potential use in marketing were contained. Among other things, the experiences of respondents with virtual reality and their opinion on technologies of this type were surveyed. Specifically, these were questions about whether the respondent would be interested in the advertising presented in this way or whether the virtual reality has a future in marketing. The interview consisted of 9 open questions and 2 questions that included a five- and ten-point numerical rating scale.

#### 4 Results

As mentioned above, the BioTrace + software was used to evaluate the data, from which the data was exported to a text format for subsequent statistical processing in Excel after the reduction of artefacts. From these numerical values, a summary table representing the measured data for both groups of respondents - for respondents following the spot using VR headset (row 2 in the table) and the control group watching the spot without glasses using the mobile phone - was created (row 3 in the table).

Tab. 1: Summary data from brain EEG measurements

	Attention (%)	Emotions (%)
VR headset	106,60	94,80
Mobile phone	74,25	70,25

The table above shows the difference in respondents' attention and emotions when viewing the presented advertising spot compared to the resting state measured at the beginning when watching a time lapse image of the sky. Resting state has a default value of 0% and represents a landmark that can be used to define an increase in the respondent's attention when watching an ad spot. It can be seen from the table that respondents who had VR headset during the measurements had developed a higher level of attention than the other group. Specifically, the difference is 32.35%.

In the next column, there is a difference in the degree of emotion compared to the resting state. For emotions, the difference between test groups was 24.55%. In this case, the group with the head of virtual reality has also reached higher values compared to the control group.

EEG findings show that respondents are more attracted when watching an advertising spot with VR head, as evidenced by the increased attention and emotional responses experienced by the respondents. The results can be attributed to the fact that virtual reality allows the viewer to immerse into the game and to convey to him a deeper, more credible experience, which is also reflected in the brain activity. On the basis of the values found, the human brain can perceive virtual reality suggestions as a certain copy of it, but it has a rather strong effect compared to the effect of a mobile phone. At the same time, another factor may be the fact that virtual reality technology is currently not widespread among the public (see Figure 1) and so the respondents perceive VR as something new and unknown.

Part of the survey methodology was also a semi-structured interview that took place immediately after the end of the EEG data collection. In the interview, the respondents were first asked

about the current verbal rating of the ad viewed. Respondents from the group with VR headset rated the commercials more often as an entirely positive (90% of total respondents). In the second, the control group, the respondents rated the advertising spot as mostly positive or mixed (40% rated it positively).

Whether this will be a positive experience also depends on a certain amount of comfort when watching the ad. Respondents who watched the spot using the headset were asked if the experience was pleasant. For this purpose, a five-point numerical rating scale was used, in which the value 1 was "very pleasant" and the value of 5 was "very unpleasant". This question was considered only for the group with VR headset so only 10 respondents answered this question. Values marked on the scale were processed by all 10 respondents using descriptive statistics, the results of which are summarized in table 2 below.

Tab. 2: Evaluation of the five-point rating scale

Diameter	2,4
Median	2,0
Standard deviation	0,5

The average rating of the respondents was 2.4, which represents the approximate centre of the scale and therefore the rating that is not entirely positive but not entirely negative. After additional queries, it was found that most respondents were rather neutral about this form of spot tracking. It is important to mention here that the quality of the experience also depends on the technology used. The better source content and better technology, the better the experience of virtual reality. The vast majority of respondents claim that virtual reality has a future and potential in marketing. Specifically, it is 80% of the respondents. The remaining 20% of those who responded negatively added their comment that they could not imagine a specific use in marketing and also mentioned the limits of this technology at the moment.

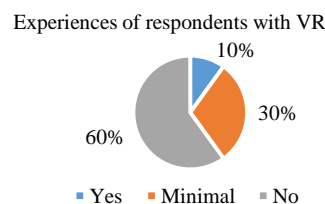
Part of the interview was also the question of subjective evaluation of an advertising spot presented using virtual reality. For this purpose, the 10-point Likert scale was used, where the respondent assessed the claim using the scale: "the presentation spot was very interesting". Within the Likert scale used, the value of 1 was "disagree" and the value of 10 represented the "agree" rating. The results are processed for both groups of respondents, using descriptive statistics.

Tab. 3: Evaluation of the 10-point Likert scale

	VR headset	Mobile phone
Diameter	8,6	5,8
Median	9,0	7,5
Standard deviation	1,4	1,9

It's clear from the table that the ad was more appealing to the respondents who watched her with virtual reality glasses. This was followed by another question that explored the reasons for such an assessment, with the result that respondents with glasses most often cited the creativity and originality of advertising spot, which may also be influenced by virtual reality technology. Another part of the interview was a question addressed to the respondents' experience with virtual reality technology. In this case, it was again an open question. According to Figure 1 below, it is clear that over half of respondents (60% in total) have no experience with virtual reality. Based on an additional comment, these respondents have heard only briefly about this technology. This survey was the first direct experience of virtual reality for respondents. A further 30% of respondents tried virtual reality at least once, and only 10% had more experiences with virtual reality, such as PlayStation VR. Interestingly, no respondent noticed virtual reality in marketing. However, it is possible to discuss that some people who encounter virtual reality do not even realize that – for example there are some mobile applications that allow virtual reality but are not fully exploited by the user.

Fig. 1: Evaluation of question 8 of the interview



## 5 Conclusion

The survey shows that viewing advertising through virtual reality increases the level of attention and emotion compared to watching only through the mobile phone screen. From the point of view of the possibilities of virtual reality in marketing, based on the results, it offers a tool that can convey deeper action and better transmission of the message. According to other results, it was found that advertising presented using virtual reality is mostly positively perceived. Interestingly, the majority of respondents did not encounter virtual reality, and this fact shows little public awareness of the area. Virtual reality is currently expanding mainly in the gaming industry, and it penetrates marketing rather slowly, although there are already marketing uses, for example in the real estate market. Most respondents, however, think that virtual reality has a future in marketing. This is conditioned, in particular, by technological advancement and accessibility, where high-quality virtual reality headsets are very costly and demand high-performance hardware.

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## Primary Paper Section: A

## Secondary Paper Section: AN, AH, IN

# THE STUDENTS' WRITTEN REFLECTIONS AT THE POP ART ARTISTS' ARTWORKS AS A TOOL OF DEVELOPMENT OF CRITICAL THINKING

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**Abstract:** The paper deals with the results of the research, which identified attitudes of the students' of the study program "Teaching of Fine Arts in Combination" towards the artistic creation of selected artists. The presented results are a part of the project aimed at identifying key strategies for developing the creativity and critical thinking of the future teachers. The results of qualitative research point to the appropriateness of student verbal reflection on the artworks, developing creativity as well as the ability to express and present their views during the realization.

**Keywords:** Fine arts, Education, Future teacher, Creativity, Critical thinking, Reflection.

## 1 Introduction

Very important part of didactic preparation for our students' pedagogic practice - the future teachers, is knowledge of the interesting artists. Through their creation we are able to inspire the students to think, reflect and interpret the artworks. At the Constantine the Philosopher University in Nitra, we prepare the future teachers of fine art education for the second degree of primary schools, for high schools and for the fine art sections of art schools.

The basic competencies for the future teachers of fine art education are creativity and critical thinking. Through verbal and visual, practical and artistic interpretation of artworks, our students learn how to think critically about them and how to reflect on them. They have to say and write what they like or do not like about the artist. Then they create and write their reflections and listen to their classmates' opinions. We worked this way with the pop art artists Władysław Hasiór and Andy Warhol.

At first, the students had to say what they had already known about them, then we looked at their photos and artworks on the Internet or in a book. We talked about them, thinking about their life and about form and content of their artworks. The students had to say their opinions about the artworks and also support them. According to our experiences, the students considered this task quite difficult. They can easily say if they like or don't like something, but they had trouble to explain why. To express our reason for opinions is for us the critical part of thinking. After the introductions, the reflective part of the lesson started, when the students wrote down their feelings and thoughts in a few sentences, inspired by the artworks of the artists.

## 2 Theory

L. B. Nilson (2016) finds a common basis of various theories of critical thinking in fact, that it includes cognitive interpretations and / or analyzes, often followed by evaluation. Critical thinking is difficult: we have natural tendency to selectively perceive and confirm what we "know" to be true.

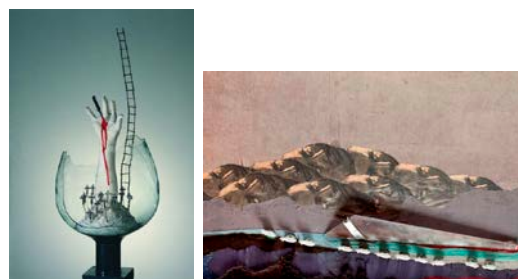
Critical thinking therefore involves not only knowledge but also the character of a personality that decides for personal development. Students must tend to prioritize the facts of prejudices, accept and overcome the challenges, commit themselves to fair assessment of their own thinking, and to abandon misconceptions by accepting and understanding new and more valid ways of thinking.

L. B. Nilson sets out common elements of teaching methods of critical thinking development: the ability to activate a student;

build on his previous experience; naturally encourage research, analysis and evaluation; stimulate students' curiosity; lead them to their own questions and explain them, and justify their arguments.

The official state web site of Poland art, Culture PL, considers Władysław Hasiór as one of the most prolific contemporary Polish artists. He was an extraordinary personality, and a very colourful and magnetic individuality. In the West, he was hailed as "the most talented student of Rauschenberg and Warhol". In Poland, his work is considered as a precursor to pop art and assemblage. Hasiór regarded artistic activity as an intellectual and creative provocation. He entered the art world and soon became a "cult" artist for generations of the 60s and 70s. His work had shocked and delighted, aroused extreme emotions and judgement, and his controversial attitude compelled audiences to ask questions about the nature of art, and the artistic license of choosing the language of expression. Hasiór used degraded elements of technological civilization as art materials (Culture PL, 2018). The pictures 1 and 2 are from the same official web site.

The information about Andy Warhol are taken out the official website of a 501 ©3 Non-profit Organization for Educators (<https://www.theartstory.org/artist-warhol-andy.htm>, 2018). Andy Warhol was the most successful and highly paid commercial illustrator in New York. His screenprinted images of Marilyn Monroe, soup cans, and sensational newspaper stories, quickly became synonymous with Pop art. His crowning achievement was the elevation of his own persona to the level of a popular icon, representing a new kind of fame and celebrity for a fine artist. Warhol learned how to handle with popular tastes and his drawings were often comic and decorative. Some of his pictures show frank expressions of his sorrow at public events. Warhol's paintings from the early 1960s were important in pioneering these developments. The pictures of Andy Warhol's (picture 3) art are taken out the official website of Andy Warhol Museum of Modern Art in Medzilaborce (2018), founded in 1991, now dealing mainly with current tendencies in contemporary art and especially the life and work of Andy Warhol (<https://www.muzeumaw.sk/>).



1. Picture 1. Władysław Hasiór, Golgotha III, 1972, assemblage 93x35, from the collection of National Museum in Wrocław, photo: photographic studio MNW. Online: <https://culture.pl/en/artist/wladyslaw-hasior>  
Picture 2. Władysław Hasiór, Inquietudes (detail), 1966, assemblage 100 x 200, private collection, photo: not named. Online: <https://culture.pl/en/artist/wladyslaw-hasior>

## 3 Research

### Aim of the study

To discover, if and how the students' reflections of the art works develop the critical thinking.

### Hypotheses

According to the principles of qualitative research (Strauss, Corbinová, 1999), we don't have any hypotheses, we only assume some results, based on our previous experiences.



### Material

We get research material from the students during the didactic disciplines: Didactics of Fine Arts Education I., and Methodics of Fine Arts Education, which are included in the Master's study program „Teaching of Fine Arts in Combination“ in the first and the second year of study. There were 15 students reflecting on the art of W. Hasior, two of them were boys, and 17 students reflecting on the art of A. Warhol, three of them were boys.

### Research plan

In November 2016 we reacted at the Polish artist Wladyslaw Hasior, in November 2017 at an American artist Andy Warhol. We collected the art works from the students from November 2016 until November 2017, and we did the analysis during Summer 2018.

### Methods

The methods of data collection was written reflections from the students. Processing method was qualitative content analysis of the written students' reflections.

## 4 Research material

We present the students' written reflections in order in which we have received them, and in order in which we have worked with the authors: at first W. Hasior, the second A. Warhol.

Students' written reflections of Wladyslaw Hasior's artworks:

„His works require a longer observation. Their real nature can be discovered only after closer observation of details. Basing on several scary scenes we can conclude that the author experienced trauma, such as a war, in his childhood. His works are both very personal and at a high technical level.“

„His art makes me sad. In his works I noticed signs of child's drawing as if the author had a childhood trauma. Some of his works combine children's drawings with horror scenes. The artist's work seems bleak.“

„Hasior's works are very interesting. Personally, I can see the consequences of war because artworks are a little morbid and in their creation are used unusual materials (hair, rusty metal). I appreciate using it.“

„Hasior's works evoke me a kind of mirror of society – artist reflects the problems of society by his works. I think that in the past he went through something that inspired him to do it, respectively something gave him an inner need to get it out from him just by artworks. Although his artworks seem very strange, they hid some mystery. Artworks are made in a very interesting and attractive way, which impels to think about their substance and structure. In my opinion, art should be just about that.“

„His art seems gently morbid with a touch of child's drawing. Used shapes were maybe formed impulsively, without thinking, and then they are completed with specific forms. My overall impression does not cause negative feelings, I am rather interested in this art.“

„Wladyslaw Hasior is apparently an accomplished author with severe life story and the dark memories. It seems like he researched the life and death and found the link between them. Author's artworks look cold and melancholic but I observe them with interest. They evoke a lot of feelings and I think it is really important in visual arts.“

„I liked the artworks, although I suppose it's rather a feeling of author's state of mind. In my opinion, the author tried to cope with his experiences. The works did not seem depressive to me, rather I felt sorrow from them.“

„Author Wladyslaw Hasior creates artworks which, from my point of view, seem to be sorrowful to general public. At first glance I thought the same about them, too, but when I looked closer and thought again of his work, I changed my mind. I think

the author is trying to give the image of a real fear of death and war. His works are trying to show these topics in a simple nakedness without hiding.“

„I think the works of artist are created in that way because of the war, they look somber and they cause some discomfort in me, but nevertheless I think they are interesting and someone can enjoy them.“

„The Polish artist Wladyslaw Hasior and his art makes me gloomy, I think the themes of his works are based on the Holocaust. These are the personal experiences which are based on the internal state of mind of the author. In general, I liked his artwork, but I feel very intensive kind of sadness.“

„Looking at some of the works (gun, hair, human face) I automatically connected his art with Polish trauma of war. I feel sadness from them but also they seem bitter and hilarious (peacocks, animals). Thematically, it seems to be critical to society but also looks as an internal help how to copy with life. I like that the author goes through various media (painting, assemblage, sculpture).“

„Author makes me very melancholic under the pressure of the environment appearing in his works. The environment does not have any light, any touch of the sun... It does not influence me negatively or positively but I like his artworks.“

„Within the works of author Wladyslaw Hasior, I noticed symbolic motives that have associated me in connection with the Holocaust. The feeling inside me intensified after discovery that the author is from Poland, which is for me a country that has been affected badly by Holocaust.“

„Polish author Hasior's art seems to be rather negative, but it does not make me feel bad. I can see the child naivete and at the same time dark elements linked to the death and tragedy. His assemblages evoke very intense feelings and make me reflect the author's life and mind-set.“

„The artist's works look surreal and controversial, they are full of contradictions. Author captures the depressing site of tragic history of his culture through the symbols.“

Student's written reflections of the Andy Warhol's artworks:

„I like the artistic creation of Andy Warhol, because he portrayed the society with both its positive and negative aspects, which he transformed into his pictures.“

„Andy Warhol is interesting, because he brought a new air into art.“

„He used a lot of colours in his works, that's why I perceive his artworks as merry.“

„I like Andy Warhol, because he has brought a new style of displaying things and brought a new touch to art.“

„I like his creative style and his use of colours.“

„Warhol is a prominent figure, because he created a new artistic style - pop art.“

„Although I do not like this artistic style, I appreciate his ability to criticize a consumerist society. I appreciate this expression in art and, in my view, thus art has moved one step further.“

„I like Andy Warhol, because he used colours which cause images are popping out to space.“

„His works are depressive and daunting, because they portray the themes which are deterrent for me – violence, consume, conflicts...“



„I consider his works as uninteresting, because they did not touch me.“

„Andy was, in my opinion, a product of a society. I wonder if he had actually been without a public pressure, how he would have expressed in another time.“

„I like his paintings, because of the use of a pure colour on the large surfaces.“

„He is original, because he moved art into the advertising consumer goods.“

„He displayed the ordinary things and I like how he portrayed Marylin in various colours.“

„He was able to wipe off the borders between art and the mass-produced objects through the reproduction of his artworks.“

„Warhol seems to be a silent extrovert, but he puts his feelings in his artworks, which seem crazy for me, but they are also interesting.“

„I have mixed feelings for Andy Warhol, because his works cause me negative emotions, but on the other hand I like his critical attitude towards society.“

## 5 Research results

The written students' reflections of Wladyslaw Hasior's artworks display variety of motives, techniques, emotions and thoughts.

Motives: war, signs of child's drawing, gun, hair, human face, hilarious peacocks and animals, symbols, scary scenes, horror scenes, no light, no touch of the sun, dark elements.

Techniques: unusual materials (hair, rusty metal), made in a very interesting and attractive way, various media (painting, assemblage, sculpture), high technical level.

Emotions: sad, bleak, morbid, cold, melancholic, sorrowful, fear of death and war, somber, gloomy, intensive sadness, bitter, depressing.

Thoughts (conclusions): strange, mystery, mirror of a society, childhood trauma, severe life story, dark memory, link between life and death, simple nakedness without hiding, Holocaust, Polish trauma of war, critical to society, internal help how to copy with life, the child naivete, death and tragedy, surreal, controversial, contradictions, tragic history.

The written student's reflections of the Andy Warhol's artworks are interesting, too, and they include descriptions, motives, techniques, emotions and thoughts, too, but they are shorter and not so deep.

Motives: portrayed Marylin in various colours, violence, consume, conflicts, displayed the ordinary things, advertising consumer goods.

Techniques: a lot of colours, his use of colours, images are popping out to space, pure colour on the large surfaces.

Emotions: merry, depressive and daunting, deterrent for me, crazy, I have mixed feelings, cause me negative emotions.

Thoughts (conclusions): he brought a new air into art, a new touch to art, creative style, art has moved one step further, he created a new artistic style - pop art, he is original, able to wipe off the borders between art and the mass-produced objects through the reproduction, a product of a society, public pressure, he portrayed the society with both its positive and negative aspects, ability to criticize a consumerist society, his critical attitude towards society, a prominent figure, seems to be a silent extrovert, he puts his feelings in his artworks.

Beside the appreciation, that the artist created the new style, the students commented the author's ability to criticize society, and they tried to describe his personality. One of the reflections told us, that the art works are „uninteresting, because they did not touch me“.

## 6 Discussion

At first glance, we can see the difference between two dimensions of the reflections: the first is the size, the second it the depth of the reflections. Both are bigger (stronger) in the first reflections (on W. Hasior). There are two possible reasons: the first is that the students have already known the art of A. Warhol and it was not so inspirative for them anymore, but they did know anything about W. Hasior, so it was new and interesting for them. The second reason might be, that the art of W. Hasior is more controverse, more intense. Of course, also in art of A. Warhol there are the motives of death and suffering (The Electric Chair, The Green Disaster...), but maybe the power of their social critical message is covered by his other art works. On the other hand, the students thought about the artistic style and about the place of A. Warhol in history of art. Although we think the meeting with the art works of W. Hasior is not easy, they touched the students personally and deeply, inspired them to interesting thoughts and to the vivid discussion. We can say without doubts, that these type of reaction on art can develop critical thinking - it is included in every self-expression of the students, it explains the opinion, and it is highly individual.

Of course, we are aware this type of qualitative research brings the knowledge of the specific group in a specific environment, and the research process could be affected by another circumstances, also the results could be interpreted another way as we did, but we consider all that as a normal characteristic of the qualitative research.

## 7 Conclusion

Creative and critical thinking is essential for art, the same time for teaching of art. We could think all artistic work is creative, but it is not, because a creation is not the same as creativity. Both, creative and critical thinking, are the basic competencies of the future teachers of fine art education. At the Constantine the Philosopher University in Nitra, the very important part of didactic preparation for pedagogical practice for our students – the future teachers, is the knowledge of many important, inspirational and interesting artists. Through their artworks the students learn how to think about them and how to reflect them (Récka, 2017a, 2017b, 2018). They are thinking about what they like and don't like about the artists, they create and write their reflections, listen to the different opinions, talk about them. The students are inspired by the form and content of the artworks. Thus art is a tool of development of student's personality. That is important, because the future teacher should be able to think critically, to create originally, to speak wisely, to be tolerant of another opinions, to stand for his/her opinion, but other time to be flexible and change the opinion after listening to good arguments. We can say, the representatives of pop art are very proper for the students' reflections, because they can start the discussion about current social problems, so we consider this method as a perfect one. The presented artworks inspired our student to interesting ideas and in accordance to our previous experiences we suppose they will transfer their obtained skills to their pupils, so the process of personality development will continue. These types of challenges are inspirative not only for the students but also for the teachers.

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**Primary Paper Section: A**

**Secondary Paper Section: AM**

## DEVELOPING CHILDREN'S AUTONOMY IN PRE-PRIMARY EDUCATION FROM PARENTS PERSPECTIVE

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This publication originated as part of the project: KEGA No. 070UK-4/2016 Concept of early childhood education.

**Abstract:** This scientific study presents the concept of a qualitative research of children's autonomy in pre-primary education. It is focused on the issues of children's autonomy in kindergarten from the parent's point of view in Slovakia. The study presents representations of the mentioned construct and children's autonomy, which were thematized by sole actors in conducted focus groups. The results of the research in the form of the methodological interpretation of the phenomenon studied are conceptualized by a metaphorical description. Based on our findings in focus groups, we report that participating subjects (parents) are interested in the issue. They are thinking about the phenomena that are characteristic of the present and directly affect the education of children, their manifestations of autonomy.

**Keywords:** children's autonomy, focus group, qualitative methodology, pre-primary education, parents

### 1 Family education

The process by which a human individual goes through his or her development is very complex. Various changes are underway in this process, which are conditioned by four basic factors: the inheritance, education, environment and active participation of the subject. Family-based education is the process of transferring socio-historical experience to prepare the young generation for family life and work in new social conditions. It is the initial stage of the whole child's educational process, in which schooling and out-of-school education will later arise. The family is a small group whose members are bound by strong emotional connections (Rozinajová, 1988). The first years in education are the most important, because their influence is the longest. The child most needs the certainty of dealing with its immediate family. To survive at all, it must have people around who provide him / her with help and protection. Helping a defenseless and helpless child must be a deeply rooted psychological need, because otherwise the mechanism would not work. "Human maternal love," and this relationship is a miraculous mechanism of mutual satisfaction of psychological needs (Matejček, 2008). Childhood is the first stage of our life, our personal history (Helus, 2004). The experience and experiences of childhood are stored in memories, but they also form the personality of the child. It is the responsibility of the parents to make the child at this stage acquire everything that is important and necessary for the next life, so that it can be a reflective bridge for fulfilling dreams, aspirations and goals. An important prerequisite for good education is to know what we want from a child, "what to order him / her to do and what to ban". To raise a child, however, is not only about prohibitions and orders, but also about his / her strength and ability, about certain freedom in his / her manifestations, because the possibilities of a child's development are manifested in spontaneous and natural activity. Education is an activity of conscious and purposeful acts which have affect on the educated and the educator (Rozinajová, 1988). If the child is a subject of education, it means that it is actively involved in achieving educational goals, in its own formation. It is essential to provide conditions in which education goes hand in hand with self-education, for which the child itself is more and more responsible (Helus, 2004). Parents should encourage the child to develop traits that are necessary for being not only educated, but for an individual who is involved in their / its upbringing. Based on this, we can say that the success of parenting depends, to a large extent, on the active participation of the child in his or her own education. Education influences the knowledge, the development of abilities, interests, needs, feelings, will, convictions, character and the whole personality - its thinking and action (Rozinajová, 1988). This can be achieved with the

active participation of the child if it is internally identified and convinced of the relevance of his / her own participation in the process. The role of parents is therefore to convince their child of the need for such cooperation, of the importance of its participation. In order for a child to be able to self-educate, parents should combine initiative, activity and independence in their education. First, parents are active but gradually abandon this position and give this opportunity for the child. They later constantly create the conditions and space for the child to show / demonstrate its autonomy and initiative. Consequently, they do not remain in the same educational methods, but change them according to circumstances. They create enough opportunities for a child to act as a self-acting individual, whom they will be able to counsel, help, explain without embarrassment or humiliation. A child's natural activity is a condition for developing self-reliance and independence. The success of the education process also depends on how the parent can direct and support the child's own transformation efforts (Rozinajová, 1988). Parents want a self-acting, self-confident, autonomous child, but these personality traits can sometimes turn against them, their ideas and wishes. The stronger the parents bind their child, where some make it impossible for them to develop and become self-reliant, the more effort the child spends to backpedal from them. Parents should not withhold their child from their own experience. Children need parents who support, help, carry through, but do not detain.

#### 1.1 Educational styles

The way parents can harmonize their demands on a child with the child's needs, how they can attune the emotional and rational aspect of education as they communicate with their children, we call educational (parenting) style. Care must be taken to ensure that family education is unified, positive, and parental behavior is targeted and conscious. A loving relationship with children, the right demands, the understanding of their needs and desires, creates a healthy family environment which has a great impact on the child and helps it resist the various hazards and temptations from the outside. Depending on the style of parenting, parents give their child the opportunity to acquire different abilities and quality of independence, based on their own experience and experiences. A serious deficiency in parenting is sometimes that it forgets to address the relationship between the child's need to assert and the pursuit of parental educational intentions. Both components have their place and importance in education and should form a unity. When unifying these components, it is often the case that, parents slip into some unilateralism. Styles of education in families are various. Depending on what demands parents have on their children, how they meet their children's needs, how they manifest their love, what communication they have between each other, we can determine what style of education they prefer. At least four different styles are recognized, combining two areas of parental behavior. The first one is based on the contrast of care demanding / controlling and the non-demanding / uncontrolling. In the second area, childcare is contrasted as accepting / responsive / oriented towards the child and childcare as rejecting / non-responsive / oriented towards the parents. Their combination brings forth the four educational styles mentioned above: authoritative, authoritarian, permissive and uninvolved (Fontana, 1997).

##### 1.1.1 Authoritative parenting style

It is a style that is equally focused on the child, as well as on the parent. Parents are interested in their child, its opinions, needs, feelings and interests. The child has a certain degree of freedom, making some decisions for himself / herself. Parents place demands on their children adequate to their abilities and expect them to behave accordingly. Parents support their child's initiative, act by their own example, use fewer orders and prohibitions in education, explain and justify their demands. A

child who is educated in such a style is independent, friendly, cooperative, striving for the best possible performance, successful (Fontana, 1997).

### 1.1.2 Authoritarian parenting style

In preference to this educational style, parents require obedience from the child. There are many orders, prohibitions, rules, threats in their upbringing which causes that parents do not see what their child desires for, what is it capable of, what is its knowledge enabling the child to do. The child must show respect towards tradition and authority. This style is missing two-way communication. In relation to the child, the behavioral demands are too high, perfect performance is required. But not every child has enough strength to meet such demands. Parents do not put up with child negligence, with some mistakes that a child might make, do not tolerate unfinished activity etc. Average achievement is not accepted. The child is under constant pressure; parents decide about everything where the child's opinion does not meet with any interest. This leads to the fact that the child loses joy in activity because it constantly focuses on performance. Due to high demands on the performance of the child, some serious disorders may occur, causing disorders of self-confidence. Children suffer from feelings of inferiority, leading to self-underestimating, isolation tendencies and lack of spontaneity. Girls often suffer from subordination and boys tend to be aggressive (Fontana, 1997).

### 1.1.3 Permissive parenting style

The child manipulates with his / her parents and is the master of the family. Education is thus confined to protecting the child, justifying its weakness and inappropriate behavior. Little is required from the child, its demonstrations are impulsive. There are no demands in this education, not even age appropriate. The child is not burdened with any duties and is uninvolved in family life. If the child has all permission, it does not recognize prohibitions and orders. Parents give in to everything, are unnecessarily lenient, supporting a selfish and aggressive individual who can not rely on him / herself (Fontana, 1997).

### 1.1.4 Uninvolved parenting style

Parents are too busy with themselves so they do not show interest in their child, its needs and interests, they do not take part in their child's life. Opinions and feelings of the child are indifferent to them. They often entrust the child to the care of different people, simply to avoid communication. Parents do not feel obliged to provide their children with their needs and requirements. A child whose parents behave indifferently and coldly ends up as an individual which matures egoistic and socially dissatisfied, moody, with little ability to concentrate (Fontana, 1997).

## 2 Education versus development of the child in the family

Today's parents know a lot about the upbringing / education, but minimum about the child's development, which can cause many problems. Not only the parental style of education is reflected in the child's behavior; patterns of child behavior are at the same time a manifestation of the stage of development the child is currently experiencing, and are also an expression of its temper, character and individuality (Rogge, 2007). With age, the child changes not only physically but also mentally. For instance, the thinking, will, feelings undergo major changes, leading to a different understanding of its position among people. Its relationship is changing not only towards people but also to itself. These changes also mean higher demands on parents. Because the child is constantly developing, it is necessary for parents to develop hand in hand with their relationship towards each other. It is also important that parents take into account the developmental changes of the child, because it is beneficial for the well being of the child. Parents should realize that in each age period "they always face a different object of education." As the age of the child changes, the content of education, methods, forms, etc., should also be changed. With an optimally

developing individual, parents should gradually increase the demands on the child and equally on themselves. In an accountably executed education, parents support the child's natural desire for knowledge, satisfy its need for motion, social contacts and appropriately guide its defiance. Such parents are aware that the family environment "is a basic forming factor", therefore they pay their love and care to the family. Deficiency of love and care in the family environment causes mental deprivation as a result of lacking emotional stimuli. One of the most influential positive factors involved in forming a child's personality is a personal positive example of a parent. It is a great contradiction for a child if parental behavior is not in line with their requirements (Rozinajová, 1988). It is important for parents to strive to determine the importance of balance and still create it in relation to children, to the family and to themselves, because only a balanced education can lead to a balanced personality. Education is a huge challenge which leads children to autonomy and identity - that are two goals suggesting a particular form of disengagement. Daily rituals and rhythm are the first factors promoting the balance of children. When parents find that their child is losing or has lost balance in some way, they should help to identify the causes of this condition by observing the day-to-day activities. Parents are obliged to take care of their children's inner life and their personal development. It is necessary to find the middle path, which is sometimes quite complex. It means to find harmony between the excessive organization of their children's lives together with the failure to respect their interests, and the condition in which parents do not have enough time and energy for their child. Many parenting accusative statements are related to the quantity problem. Parents should ask questions: Is there little? Is there a lot? Is that okay / enough? These are the mistakes that come from misdirection of different attitudes and feelings. However, a child can not yet predict the right standard, it can not naturally use its talents and apply the values it has gained so far. We can not ask children to be as balanced as we are, as we can not give them everything we have achieved so far (Ferrero and Pacucciová, 2007; Tománková and Kostrub, 2018). It is important and necessary for parents to provide a feeling of security for their child. It is usually the mother who performs this task. The question of certainty and insecurity, anxiety and defense is one of the fundamental questions in human life. In the early childhood, the foundations of trust, self-esteem, self-confidence arise. The child thus gains a solid foundation to further develop its social skills, manage anxiety and satisfy curiosity. The feeling of anxiety from the separation overcomes the child throughout the whole development period. For the first time it happens when its about one year and when the toddling begins. Its the first disengagement from confidentially known persons, even if for a minimum period of time. When it comes to walking, it's all about getting disengaged. The first steps do not only imply physical autonomy, but they also represent the first manifestations of psychic self-esteem and autonomy. The child begins to realize itself as a personality, as an individuality. This autonomy is affected and jeopardized by the emotional fluctuations of the child. Self-confidence may change very quickly into a feeling of inferiority, so it is important for the child to constantly receive parental support in the form of trust. In order for an individual to grow up in a self-reliant and self-confident personality, he / she must also go through periods of anxiety in its development. It is for parents to help children constructively handle these conditions. It would be a mistake to assume that it is better to make the situation easier, fun, or threaten the child, or more, try to avoid such situations. If a child has a strong emotional background, self-education should encourage the child to grow up in a self-confident individual who "can consciously deal with anxiety from separation" (Rogge, 2007). The period of defiance at the third year of life of the individual with the period of puberty are two stages, particularly, when the child is independent. These stages can not be skipped or accelerated, they occur in the development of a child, no matter what parenting has or has not done for them. Usually, a child does not develop equally in every aspect - social, emotional, linguistic, physical. It simply does not reach the same level. In each of these areas, the child has its own pace, and it may happen that in one area it will reach a much higher

stage of development in a certain period than in the other. Each child has its own pace and the way to get over the given period. The role of parents is to respect that fact (Rogge, 2007). As parents try to speed up or slow down the pace, children react with resentment. This is a necessary basic attitude of parents needed in education. Children want to be accepted as they are. In the period of the first defiance, around the third year of life, the child manifests its autonomy significantly. The child displays the power and strength that it constantly and persistently endeavors. It constantly emphasizes its will for self-reliance - myself. Children's awareness of power develops with increasing awareness and control of their bodies. The period of defiance is an important stage in a child's life, as it becomes aware of his or her own competence and independence. Through education parents try to achieve harmonized development, so that their child is independent, confident, competent on all levels. Account must also be taken of the child's stubbornness, the promotion of its own will, the lack of tolerance to frustration, the exercise of its own power without which it would not achieve the necessary level of autonomy. The frequent cause of child defiance is the misunderstanding of the stages of development by parents (Rozinajová, 1988). The child enters the stage of self-determination, self-awareness and self-reliance over a period of three years. This is particularly evident in the effort to act without the help of an adult. For the child's further emotional development, the period of defiance is important because it is also a period of self-confidence. Resistance is a manifestation of internal tension which results from a move in developmental milestones (Rogge, 2007). The child is proud of its competencies, but must adhere to, and respect certain limits, limitations, rules. Many it still does not know, many it can not or is not allowed to do. It wants to do something on its own, but he / she can not / is not able to do it. The defiance is not directed towards a particular person, it is not in the child's interest to interfere with the relationship, therefore it must be distinguished from disobedience and stubbornness. Children who are aware of their competencies and have experienced a sense of independence require that they be taken seriously, so that they can decide on certain matters, that they can express their opinion, which will be respected. They need to have a minimal sense of power at least. They need to experience the feeling that they can assert their own will. Who does not understand the child as an equal partner causes an imbalance of power. Parents often struggle within this "battle", because the child causes them helplessness by its perseverance and reluctance to surrender the competencies it has once obtained. In the process of self-realization, the teacher, parent is only the one who is supposed to make easier - facilitate. Every person has his / her individual goals, but also goals that are generally valid. These new goals and values are not seen as final, but as process values. Such values are considered to be a self-actualization process, in which the value and dignity of each person increases by developing own choices, moving towards enriching and stimulating experiences and individual creativity adaptation, to the ever-changing world (Zelina, 1995). Self-confidence, personal development, may be a danger which threatens the development of the personality, if powered by an insensitive management of a child's life. Various ways of control and manipulation bar the child's ability to be itself. This means, that a child can not express what it wants, solve a problem solo, discover something new, or try out what it can do by itself. A child has its own way of understanding, thinking and feeling. And it therefore needs such a goal which enables it to reach a new milestone, further from its current developmental level. In such a shift, it has a feeling of freedom and satisfaction. The child needs to be burdened with tasks and requirements that do not exceed its abilities and powers. It needs demands and requirements which will enable to self-see, to self-develop, to be capable of self-realization. In this way, the child learns to respect him / herself, and to be responsible for his / her actions. In order for the child to develop, both external and internal potential is needed. For this development to be successful, their relationship is important. Outward possibilities are what surrounds the child, the world around it. The inner potential must be found by the child itself, so that it is in agreement with what he / she wants, what he / she can and is capable of doing. The role of family education is to

ensure a harmonious relationship between these two potentials, which is very demanding. Parents can not avoid this responsibility. Instead, they should ask themselves whether they have done everything to realize the child's inner and outer potential within its abilities, interests, creativity, etc. It is important for the child to receive incentives and to be actively led to such activities, where it can use its potential. Children then devote their interest to such activities, respond to them with an increased interest in continuing, improving them. The possibilities for child development are in the child itself (Helus, 2004). If parents take their mission seriously and responsibly, in order to approach their child's development, they must look for opportunities to actively engage their child, such as bringing it up with the child's own participation. When developing their own potential, it is important for the child to take adult help at crucial moments when acquiring competencies. The child performs various activities, improves them, and when it controls them at a sufficient level, it should move forward, making the next crucial step in knowing. It can not do it by itself, but it may be able to handle it with minimal help from others. For instance, in the form of an alert, suggestion, by asking a suitable question, etc. The direction in which the child will further develop its potential, what other knowledge, experience it will be gaining, is referred to as the "Zone of Proximal Development" (Helus, 2004). Most parents set it up intuitively, randomly, not purposefully, as teachers do. If parents appreciate their child and show proper respect, the child gains proper self-esteem. The manifestations of respect can not be "as if". They are a manifestation of trust and the increasing responsibility of the child. It is important for parents to give the child the opportunity to handle, at least, a minimum of autonomy and independence. The child perceives self-worth, which is self-esteem. It is a combination of information about oneself which comes from outside, but also from inside. It's a comparison of both. In addition to the confidence shown, other important points in the formation of the child's self-esteem are also the presence of attention (listening), observation, endeavor to understand, the perception of nonverbal expressions, etc. It is not a manifestation of the weakness of parents if they give children the chance to act in their own way, letting them succeed in different life situations. In the pursuit of greater autonomy, it is rather a requirement to respect their personality, their individuality. Stubbornness is paradoxically understood as a positive feature (in this case). Stubbornness, with which the various activities begin, resembles only an approximate estimate of the ratio between success and the risk of failure. It is not important to talk a lot, but to choose the right speech when we talk to children. It is important to talk to children, speak less and listen more, to give them the opportunity to express themselves, not to talk for them, not to complete the beginnings of their ideas, thoughts, sentences, etc. Talking with children is demanding and not all parents can master it. The essence of the narrative with children is to teach them the basic rules of good communication and basic rules for solving problems. A child "equipped" with such competencies is more self-confident. Also friendships are made with ease. The best proof of parental interest for the child is to listen to its stories attentively to the end, although they may be sometimes boring for an adult. Only when listening, the logic of the child's stories can appear. This will allow the parent to point to another aspect in which the child can discover certain advantages and new possibilities of solving a problem. Teaching a child to think is challenging and one of the best methods is to put forward indicative questions. It means not to require the right answers to the questions asked, but to require their own thoughts, their own opinion about the matter, without fear of being ridiculed, embarrassed, humiliated, just because their opinion does not conform the opinion of adults. It's the parent's fault when they speak with their children in a "childish speech" and talk to their child in such a way. When the child discovers the differences between the normal language and the language used by its parents, it does not take their words seriously. The older the child is, the more it realizes these differences and the communication between the child and its parents gets worse. A child who has sufficient self-confidence, relies on his / her own judgment, can express his / her opinion, easily manage new and ambiguous situations, and focuses his / her energy on

performance (Kostrub, 2007). The best encouragement for a child is to help it acquire its own self-evaluation, to help it see itself positively, to let it know that its thoughts are important. Its important to create a family environment in which the child will feel good, confident. It will feel that it is needed, that it is an integral part of the whole, and that it is doing well in this environment. Only commands, prohibitions, lectures, or negative evaluation, do not encourage the child. In addition to assisting the child with self-evaluation, parents should help children also develop self-control, in particular, by creating sufficient space for both. By developing a sense of responsibility, the autonomy of children grows. It is precisely the fulfillment of everyday duties which are commensurate with their abilities. Even for small progress, recognition and praise must be given, together with allowing mistakes and errors. Parents should always let their children know that as parents they are on their side. This does not mean, however, that at the first failure or the fatigue of the parents, they should do things instead of them. Although parents should leave children some autonomy, they must always be ready to help them. They have to evaluate what is better for the child, wait and let him / her solve the problem itself according to his / her abilities. In some cases it is best to intervene before the child gets caught up in the situation. Children need to have enough time to practice what they learn (e.g. self-help skills: dressing, cleaning, washing, etc.). Parents should not forget that children need to learn to do certain activities themselves and need to feel self-esteem and pride, not shame and humiliation. Parents should not protect their children from failure by taking the initiative and their courage, as they will make children insecure and dependent on adults. New experience is gained by a child in the process of self-awareness and self-determination. It is primarily about emotions and the willingness of the child to experience something new. It is about the building self-confidence, and thus the new experience becomes the motivation to continue. New experiences enrich the child, show him / her things from another perspective, allow him / her to move further on the path for independence. On this road, the child often has to give up something to get something else. Experience is "non-transferable" and "irreplaceable", but very important in the process of gradually "releasing" children. It is important to encourage children to look at the world optimistically, from the better perspective, in order to help them to see the world around them cheerfully. The way to such a worldview is praise (Kostrub, 2007). "It's a profit." In addition, it is important to encourage, to show trust, to take notice and pay attention to people and the child, and to respect the child as a person. Positive thinking of parents assumes, that they believe in the good of an individual, believe in their children, encourage them, praise them for the deeds they do, to achieve more autonomy, more self-confidence. When a child does not do everything according to the idea of adults, it is important to be able to judge it properly (to accordingly criticize). It means not condemn him / her as a person, but evaluate just a specific performance. It is important to accept a person as he / she is, but to disagree with his current behavior (Zelina, 1995). Being competent means to adequately cope with the different demands from the surrounding environment and to succeed in evolving in different situations. It is the ability to use the competences achieved in the current situation, with a focus on the implementation of the various operations. Each child has the ability to control various activities, but the quality of real management is individual. A competent child is able to apply, act, perform operations with a variety of tools in different contexts and environments. A child becomes autonomous, by gradually becoming less dependent on different levels. It gains relative independence, which means that if it has space for exercising autonomy in the proceedings, it is capable of acting within a certain relationship framework. If a child is mentally free, independent and competent, it displays great creativity in its actions. The child, assisted in autonomy, develops its personality smoothly and qualitatively - "I am what I can do freely and by myself" (Kostrub, 2007).

### 3 Problematisation of the subject matter

The research problem is an assumption of researchers which originated from observation, analysis, interpretation of cultural

and discourse practices in the educational context, as well as in the extracurricular educational context. Inconsistency, randomness, disregard, inattention, incomprehension of the adult-themed (parents) topic, which is to promote the development of the child's autonomy, is considered a problem. This area is scarcely examined in our regional context. That is why we were interested in how parents perceive the subject matter. The subject of our research were the views of parents, their attitudes, their ideas of supporting the development of the child's autonomy. Within research, we applied the methodology of qualitative research, using the tool of focus group, to identify subjective and socially conditioned views. At the present, increased demand is being placed on a child in terms of expressing autonomy, especially in thinking. Demand is aimed at the child which is expected to express his / her own opinion within self-reflection. We believe that parents need access to new information in this area, and thus gain awareness of high-quality out-of-school education for the child. Parents meet their children's physical, psychological, social, emotional needs. As each child is different, each parent is different, which could mean, that different parents may have different ideas about the child's autonomy and the possibilities of their support and development. In our research, we focused on parenting which relates to supporting the development of the child's autonomy. Our role was not to evaluate them, to assess the performance and role of the parent, to determine what is right, wrong, what is better or worse. We only aimed to identify their knowledge about this area / subject matter and their views on the problem. Our task was to understand them, or to give parents a reason to think, because there is no instruction or model according to which it is necessary to promote the development of a child's autonomy.

### 4 Methodology, methodics and organization of research

For examining the problem, we were dealing with, we had decided to apply qualitative research. We came to this decision on the basis that since we examine opinions and attitudes, they can not be counted, expressed in percentage and put in a table. Qualitative research was optimal for us mainly because it places emphasis on individual and group understanding of the world. Qualitative research is in our case appropriate because it is used to identify motivation, attitudes and behavior (Kotler et al., 2007). The advantage of qualitative research is working with a small group of people / subjects where each person can interpret their own opinion, which does not get unnoticed due to a large number of other subjects (Gavora, 2006; Lehotařová, 2018; Wieruszewska-Duraj, 2015). Qualitative research captures life in an authentic environment. The subject is examined in his / her natural environment. Qualitative research is holistically oriented - a person, a group, their products, or an event are explored as far as possible throughout their breadth and all possible dimensions. In addition, there is an effort to understand all these dimensions in an integrated manner - in their interdependencies and contexts (Ferjenčik, 2010). The essence of qualitative research lies in the collection of broad data without a predetermined hypothesis. Such research is not dependent on the theory that anyone would have previously created. Qualitative research does not need to confirm or disconfirm it. Its task is to get as much information and data as possible about the research problem. After collecting the data, it establishes certain regularities between them and sets out preliminary conclusions. If the researcher has the ability to rely on other data, he / she can formulate a new theory. A qualitative approach is a process of exploring phenomena and problems in an authentic environment, in order to get a comprehensive picture of these phenomena based on deep data and the specificity of the relationship between the researcher and the participant in the research (Švařiček and Šedřová, 2007). The most commonly used methods in qualitative research include observation, in-depth interview, and focal group discussion. We have chosen a focus group, because in direct interviews with the participants the cultural and social aspect of the life of the people studied is highlighted and there is a lesser probability of diverting from the nature of the problem by moderating the discussion. Its priority is the direct contact of the participant and the researcher, it is communication face to face. The moderator

drives the discussion to find out the true feelings and thoughts of the individual and the group. The moderator discreetly directs the conversation to point to the central issue, so that it does not deviate from the original theme. He / she conducts the discussion in the given direction and, if necessary, addresses some of the issues in more detail (Švaříček and Šedová, 2007). The advantage of this method is also "dynamic interaction between participants" which encourages a discussion in which members of the group react to one another. This dynamics is known as a synergistic group effect (Gavora, 2006; Severini and Kostrub, 2018).

#### 4.1 Research objective

The aim of the study was to identify the significance in parents' interpretations of the possibilities of developing a child's autonomy.

#### 4.2 Research Questions

1. How do parents explain (understand) the concept of child's autonomy?
2. What are the options and parental implications for developing a child's autonomy?

#### 4.3 Research sample

The researched subjects were intentionally selected. It was essential for us that the group was homogeneously experienced, so that all participants had experience with the problem which we elaborated in our research. Since our research focused on supporting the development of a child's autonomy from the perspective of parents, we had addressed parents. Participants were parents of children attending kindergarten (other characteristics such as gender, achieved education, age, etc., were considered irrelevant). Parents have different life experience, come from a variety of environments, each of them perceive the world from an individual perspective. We approached the parents whom we already observed and found out that they had different demands, requirements on their children. We also revealed that they are not as consistent in guiding the fulfillment of the set requirements. By this, we wanted to avoid focusing on average cases. We assumed that they had different views on the topic, which could be of benefit to us, and help to intensify the group discussion. We approached twelve parents with whom we planned to discuss, but only nine parents, eight mothers and one father attended the focus group due to child illness. Our research was carried out at a kindergarten in Bratislava.

#### 4.4 Elaboration of research material

Data analysis was a challenging task as a large amount of research material had been obtained. Its elaboration included countless hours of thorough analysis and re-entering into the field. Qualitative methodology requires a researcher to interpret subjective concepts, which are owned by research subjects, and to conceptualize them in a form of mental abstraction in such a way that they do not in any way deviate from the original concepts of investigated subjects. Within the analysis of individual reporting protocols of the subjects in the focus group, all their testimonies were included and a perspective was sought in terms of the possibilities of developing a child's autonomy; we searched for answers to the research questions. Conceptual designation has been assigned to individual events, cases, and other occurrences of the phenomenon. Categories represent the classes of concepts that appeared when the compared concepts seemed to belong to a similar phenomenon. The process of analyzing, examining, comparing, categorizing, coding and conceptualizing data was implemented by open coding. In each reporting / interpreting protocol, the main ideas expressed by the subjects in a particular sentence (concepts) were categorized. The perspective of the view on the possibilities of supporting the development of a child's autonomy presented by the parents was identified and used in interpretations of the research results.

Tab. 1 List of identified categories and concepts found in individual protocols for the key concept: How to promote the development of a child's autonomy?

Category	Concepts	
The parents performance	The parent reminds. The parent observes. The parent counsels. The parent helps. The parent motivates. The parent supports. The parent demonstrates. The parent shows. The parent provides information. The parent encourages. The parent praises. The parent orders. The parent compares. The parent threatens. The parent, through trust, supports the development of autonomy. The parent discusses with the child.	The parent plans games, activities. The parent assigns tasks. The parent creates conditions. The parent motivates through another child. The parent organizes. The parent creates problematic situations. The parent checks. The parent rewards. The parent supports the child's initiative. The parent allows the child to gain experience. The parent gives the child space for realization.
The parent's role	Parent as observer. Parent as an assistant. Parent as a counselor. Parent as an organizer. Parent as supporter. Parent as a teammate. Parent as a listener.	The parent who shows. The parent who performs. The parent who explains. The parent who trusts.
The child's performance	The child is able to „function“ alone during the day for a few minutes without parents. The child performs a certain task, e.g. playing, tidying up toys. The child performs various age-appropriate acts. The child carries out activities without the help of the parent, another person. The child performs spontaneously. The child solves the tasks independently. The child expresses its own opinion. The child will assume some duty. The child will make up a play. The child chooses an activity. The child is thinking about what to do. The child decides for the activity. The child rehearses	The child discusses. The child performs activities that has not done before. The child takes on responsibility for his or her conduct and actions. The child engages in solving increasingly challenging tasks. The child realizes his / her ideas in play. The child finds solutions by self-realization. The child experiences different ways of solving. The child asks for help if necessary. The child uses space for realization. The child receives assistance from parents, siblings. The child practices the activity several times. The child discovers the essence, purpose of toys. The child improves

	and practices. The child independently acts out basic activities, dresses, goes to the toilet. The child is able to take care of itself appropriate to age.	in self-help. The child learns. The child can manage the first failure. The child is plays logical games. The child develops his / her skills in areas of interest.
Condition	Parents should not put pressure on the child, forcing it to repeat activities in case of failure. Parents should provide children with enough information from areas of (their) interest. Parents should appropriately motivate children to be active. Parents should praise children even for partial success. Parents should provide enough space for self-realization of their children. Parents should allow children to play logical games. Parents should ensure activity and experience in areas where the child is interested. Parents should support the development of autonomy in a playful manner / form.	

Source: author's own elaboration

#### 4.5 Research findings

Based on our findings in the focus group, we note that parents are interested in the issue. They think about phenomena that are characteristic of the present and directly affect the education of children, their manifestations of autonomy. They agreed that the biggest problem is lack of time, the fast pace of life and the sharp rise in digital technology. They notice that not all of them behave in the same way to their children, they have different demands on them, and they are not as consistent in their fulfillment. Sometimes it is quicker and more convenient for them to do some work for / instead of a child, even though they know it is not right. They are not satisfied with the condition, but always find a good reason (for themselves) for what they did or did not do. It is usually a lack of time, sometimes emotions, lack of trust in the strength of the child. Child care in the pre-school age is usually provided by the mother. Today's mothers also have job responsibilities, take care of the household or another child. To be able to handle these activities, which are physically and time-consuming, mothers have greater demands on the child and his / her autonomy than the father, who spends less time with their children. It turns out that parents have different views / opinions on the autonomy and competence of children, because they spend a different amount of time with children and / or have other social experience, memories of childhood. They also acknowledge the inconsistency of parenting which results in the child (miss)using it to his or her benefit. Inconsistency and non-uniformity in the requirements on a child together with lack of time give parents and, in particular, the child the possibility of violating the rules, if they are determined (rules are the most important element of education - they must be set. They must be determined / set by parents together with children first followed by parents and then the children, not the other way round. If not followed, as a result there are situations where parents can not find a solution. It occurs that the child does / completes one action / task without opposing, but refuses to do it again or to do another one. Parents are convinced that a child can handle it, but they can not adequately motivate him / her, even though trying to be a positive model, a counselor, a supporter, a friend. Parents respond to the changing needs of their children, their interests. Parents react by signing their children up to various extra-curricular and leisure time activities where they expect a high degree of independence from the child. Sometimes they are disappointed when the child does not want to be without them, because it constantly needs their closeness, help and support.

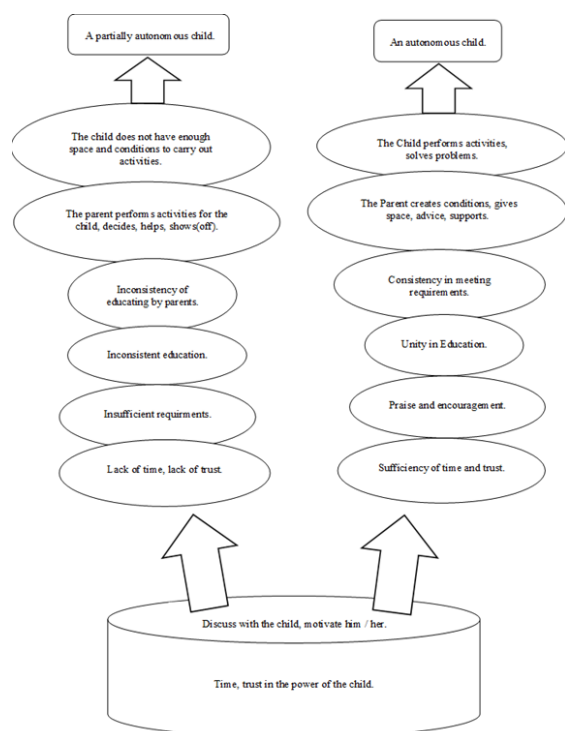
The child thus shows low self-confidence, low self-esteem, it experiences anxiety with which it can not adequately cope.

The notion of autonomy - most of the discussing parents refer to the child's independent play as one of the most important demonstrations of autonomy. It is important to them that the child plays for a certain period of time autonomously, so they could do other work / activities. Minimum parents support self-reliance of the child in self-help (care) skills (parents are willing to do a lot of activities for the child, including those that the child already masters). Instead, parents require that the child should manage its own program and play independently for a while. An autonomous child should use the information and experience of joint activities for internal motivation, for his / her own play, activity - that is what parents expect.

Supporting the development of autonomy - the majority of the participants are aware that the child's autonomy develops primarily in activity. They try to motivate the child, propose different activities, but leave little space for the child to demonstrate its autonomy. They show little confidence in the abilities of their children and most of the activities are done by the parents themselves. They often show, demonstrate, explain, but do not let the child act independently for an appropriate period of time. They try to transfer their own experience to the child (not accepting the fact that experience is non-transferable). Problems in developing autonomy - the bulk of the disputants suggests that they prefer to do certain activities for children to avoid having to argue, persuade, motivate them. Parents can not adequately assess the child's level of autonomy. As if they already knew that they would succumb / give in to their children, their appeals, or their perseverance with which they resist and refuse to do the / an activity. Children can use these parental failures to their benefit, remember them, and try to get their parents back into a similar situation they would benefit from - this is a cycle of addiction (Tománková and Kostrub, 2018). Parents have self-condemned the inconsistency in the requirements put on their children, which they justified mainly by lack of time. Organizational problems are especially in the early hours when leaving the house. It's a time when they ease-up on requirements. Lack of patience, inconsistency, and non-uniformity among parents also create conditions from which children can benefit from even in the evening when they are put to sleep. This opens up space for the emotional blackmail of parents and their exploit age to do some activities for the children. Parents do not create enough space and variety of situations to help the child develop its autonomy, just the opposite. They do not let children perform activities that they have enough knowledge and skills to perform.



Scheme 1 Supporting the development of a child's autonomy from the perspective of parents.



Source: author's own elaboration

We ensure the validity of our research by generalizing the results of the research. We have determined the degree of independence between what is discovered and the original context. At the same time, we seek for clarity in whether the constructions which have emerged come from researchers or terrain. We declare that we are impartial and unbiased to the field under investigation and to the findings from the research subjects. In this research study we present findings derived exclusively from the subjects of our research. We have used both constructive and interpretive processes, to work with research material. As evidence, serve the following questions: What is the dependency between the parent's influence and the behavior of the child? What represents the trust in the parent-child relationship, and vice versa? Can the theoretical stratification of educational styles be considered to be overcome with respect to the current practice of parenting?

## 5 Conclusion

Parents verbally declare that they have no problem with upbringing in their family environment. However, for example, in the focus group they began to discuss and publicly admit that there are several issues. Parents struggle to define some of their issues but moreover, struggle to define the cause of their problems. Their considerations are not subject to a more serious analysis, but they point out that they are to "educate rather than theorize". The aim of this research was to identify opinions on the support of the development of a child's autonomy, in cooperation (interaction) with parents of children attending kindergarten. The research explores concepts, interpretations of the experience of parents of children in Slovakia. Research results show that the concepts which parents have created are a conjunction created on the basis of what is expected from them (what the theories put forward) and what they do in reality. The findings are categorized based on the construction and design of supporting the development of a child's autonomy in the family environment. The purpose of the presented study was to provide a scientific reflection, to find out the views / opinions on supporting the development of a child's autonomy from the point of view of parents, based on the qualitative research carried out together with the presentation of the research results.

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## Primary Paper Section: A

## Secondary Paper Section: AM

# THE STATUS AND PRIORITIES FOR DEVELOPMENT OF THE COMPETENCIES OF THE ENGINEERING PERSONNEL IN THE IRON AND STEEL INDUSTRY

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**Abstract:** This article presents the results of the investigation of the demand for the engineering personnel competencies in the iron and steel industry. The paper provides competency profiles of the research engineers involved in designing energy-efficient production technologies and predicting quality indicators of steel products. It is established that development of competencies required for implementation of innovations is only possible in case of close and coordinated cooperation between educational institutions and steelmaking enterprises.

**Keywords:** iron and steel industry, engineering personnel, competencies, innovative production

## Introduction

The effective development of the iron and steel industry, which constitutes a basis for many other industrial sectors, is driven not only by investments, but by the provision of steelmaking companies with highly qualified personnel. The latter fact makes investigations into the knowledge and skills of the engineering personnel in the iron and steel industry of great importance. In present-day conditions, the knowledge and skills not only become a source of innovative development, but a main driver of economic growth as well. It is uncontroversial that the innovative development, which is aimed at designing new technologies and improvement of the existing ones in order to manufacture high-end steel products with new application properties, is strongly dependent on the readiness of the engineering personnel to work efficiently.

## 1 Current condition of the problem

Over the recent years, a lot of iron and steel making companies have been upgrading their steelmaking operations. Technical availability and environmental performance of iron and steel works have been improved, consumption of all types of utilities has been reduced. At the same time, the problem of provision of iron and steel making companies with the most valuable resource - highly qualified personnel - has been aggravated, hindering the proper development of the industry. Resources of personnel are determined by the set of competencies they possess and the level of development of these competences, and depend on the quality of higher technical education, including the content, relevance and adequacy of the knowledge and skills obtained.

## 2 Recent experience in personell training

For the purpose of implementation of efficient HR policy in the iron and steel industry the urgent tasks are selection and training of highly qualified professionals with due regard to the demand for new competencies needed in the course of adoption of technological innovations. Early identification of the need for new competencies enables iron and steel companies and their employees to prevent and quickly cope with the lack of the required skills, to timely organize the required higher professional training and to formalize the set of the required competencies and skills.

Cherepovets State University has completed a pilot study of the demand for the engineering personnel competencies in the iron and steel industry.

### 2.1 Methods of problem solving

First, an array of competencies was identified based on the analysis of theoretical and practical works in the area of

education, management, staffing requirements of iron and steel companies, interviews with executives, benchmarking and assessment of the engineering personnel professionalism [1–7]. Further study of the identified array of competencies showed that it would be appropriate to split competencies into general competencies (Fig. 1) and special competencies (Fig. 2), which are associated with the specific area of expertise - development and adoption of technological innovations.

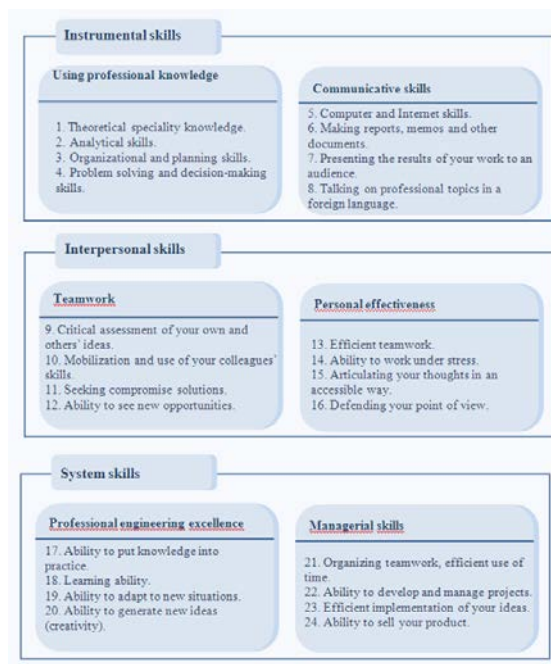


Fig. 1. Classification of general competences of engineers

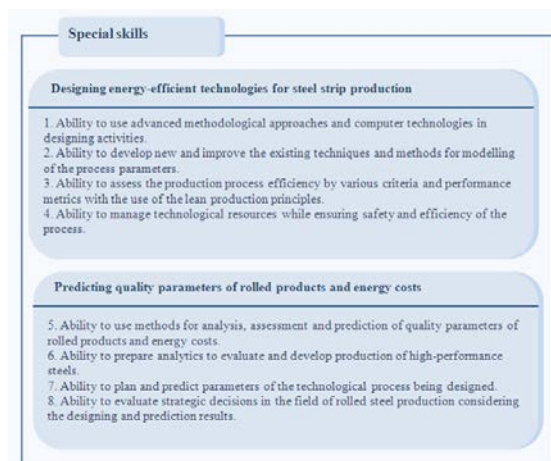


Fig. 2. Categories of special competencies

General competencies, which do not depend on the area in which an engineer works, were divided into the following groups: 1) instrumental competencies, characterizing professional knowledge and communicative skills; 2) interpersonal competencies, representing functional flexibility and teamwork; 3) system competencies, characterizing managerial skills, the ability to mobilize the available resources, the ability to perceive the new. Special competencies were the ones related to the implementation of innovations as part of the current development activities of Severstal in designing energy-efficient technologies and high-performance steels. These development

areas were selected in line with the strategy of the Russian iron and steel industry development for 2014 – 2020 and for the period up to 2030 (Order of the Ministry of Industry and Trade of the Russian Federation No. 839 dd. May 5, 2014).

The survey which was conducted as part of the study of the engineering personnel competencies in the iron and steel industry covered only general competencies. The tools used in the survey were the ones presented in the European study [8] and in paper [4]. These tools involve self-assessment of competencies by respondents based on the offered list of competencies on the unified 7-point scale for each of the 24 skills on the list. The survey was conducted among the engineers from various disciplines, all of them employed by the industrial enterprises of the Severstal Russian Steel division. The total sample size amounted to 125 respondents.

Based on the survey results, competency profiles were developed for two professional groups – research engineers and production engineers (Fig. 3). The competencies are indicated by their sequence numbers as given in Fig. 1.

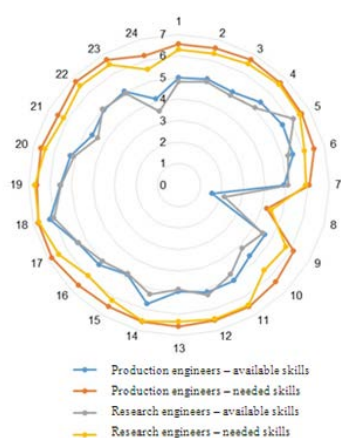


Fig. 3. Competency profiles of the research engineers and production engineers

Also the evaluation of the competency profile of the engineers not holding an advanced degree and of the engineers holding an advanced degree (Fig. 4) was done. Results of the evaluation showed that, when performing a self-assessment, the latter put higher demands on themselves, while having a higher level of the available competencies.

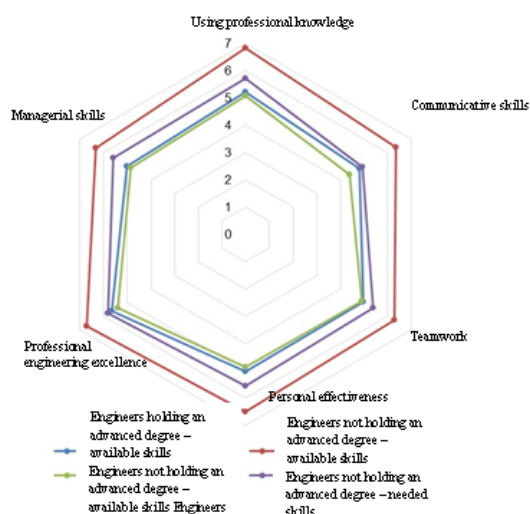


Fig. 4. Competency profiles of the engineers holding an advanced degree and of the engineers not holding an advanced degree

## 2.2 Results and its discussion

The competency profiles of research engineers and production engineers are very close to each other in terms of both the available and the needed skills and abilities. The biggest gaps between the available and the needed skills are observed for the following competencies: holding a discussion on professional topics in a foreign language (competency 8), organization and coordination of teamwork (competency 21), ability to sell your product (competency 24).

Regarding self-assessment of the available skills, the research engineers were more critical in assessment of most of their available skills, which can be explained by the specifics of their work – the level of criticality in the judgements of the research engineers is higher, and this is where the lower scores are coming from.

The self-assessment results show that the engineers of different groups give rather high scores to almost all the knowledge and skills offered for assessment: the scores given are hardly ever lower than 5 out of 7 possible points. At the same time, it can be seen that the required competency proficiency level is higher than the available one, which means that most of the engineers have low level or lack of competencies that are supposed to have been obtained during their study at technical educational institutions.

The expert surveys conducted among HR experts in the field of recruitment and training of personnel for iron and steel companies suggest that despite a large variety of skills and knowledge required of engineers, a common set of skills (core skills) may be identified. This set of skills includes:

- theoretical speciality knowledge;
- ability to use modern software tools;
- efficient teamwork and ability to see new opportunities;
- ability to put knowledge into practice;
- ability to adapt to new situations;
- ability to generate new ideas; efficient implementation of the conceived ideas.

According to the experts, a lack of all the mentioned competencies related to designing energy-efficient technologies for steel strip production (Fig. 2) is observed already now, and the situation may become significantly worse unless measures on targeted and systematic development of these skills during training at the educational institutions are taken.

Among other underdeveloped skills and abilities required for work in the field of development and implementation of fundamentally new steel products and processes the experts indicated the ability to use methods of analysis, assessment and prediction of quality parameters of rolled products and energy costs and the ability to plan and predict parameters of the technological process being designed.

## 3 Summary

The results of the conducted investigation show that the priorities for development of the competencies of the engineering personnel in the iron and steel industry are linked to forecasting the future innovation-focused development of iron and steel making plants. Development of the competencies required for implementation of innovations is only possible when technical graduates have solid fundamental academic background, when they are able to work in a team, to go beyond the scope of narrowly assigned tasks, to act in a constantly changing environment, and thus, when they are able to adapt, to generate and implement new ideas.

The growing demand for skills in designing energy-efficient technologies and predicting quality indicators of steel products requires close and coordinated cooperation between educational institutions and steelmaking enterprises. Such cooperation is a guarantee of the proper transfer of knowledge and development

of those particular skills and abilities that will be needed by industrial employers in the future.

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**Primary Paper Section: A****Secondary Paper Section: AM, J**

## LANGUAGE EDUCATION OF SENIORS AS A TOOL OF ACTIVE AGEING

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**Abstract:** The world population is getting old rapidly, the number of old people is increasing and this mentioned fact represents an opportunity and a challenge for particular societies. It is important so that the seniors can live actively up to their very old age, they can participate in the social events and so that they are healthy, self-sufficient and independent on the help of other people. One of the tools of active ageing is also education. In the education and active living of the old age there is hidden a potential which is necessary to use for the benefit of the current and future generations of seniors. The article deals with the topic of language education as one of the tools of active ageing. Seniors are not a marginal group and it is important to pay adequate attention to them in the society.

**Key words:** old age, ageing, active ageing, education of seniors, language education of seniors, specific features of education of seniors

### 1 Introduction

The European Union is experiencing a rapid ageing of population which is caused mainly by the increasing life expectancy in combination with the low birth rate. The mentioned fact is considered to be one of the main European challenges, the social systems are being transformed, the requirements for the health care are being increased, the ageing of population has an impact on the employment, economic growth and the competitiveness of the regions. The concept of ageing is generally understood as a complex of changes in the structure and functions of the organism which influence its increased vulnerability and decrease the ability and performance of an individual (Langmeier, Krejčířová, 2006). With the growing age there gradually occurs the slowdown of the developmental changes, the faster growth of certain dispositions and functions is accompanied with the slowing of other functions (Směkal, 2012). The virtue of this life period is the wisdom as a result of the whole developmental cycle of an individual (Drapela, 2011). However, the ageing is individual and different by every individual. The breakthrough is the leaving of the working life and beginning of the retirement. With leaving of their profession seniors can lose social contacts and they can get into the social isolation (Vágnerová, 2007). It is important so that seniors find a new meaning of their life.

There are growing also the demands and needs of seniors which should lead to the improvement of the quality of their life. The basic need is the health and it is related to the creating of conditions in order to motivate seniors to the healthy lifestyle. The need of health is immediately followed by the need of safety. Almost on the top of their needs there is the need of appreciation and the need to be useful, to transmit their legacy to younger generation and, last but not least, there are also the social needs. More and more opportunities are created in providing new services aimed on the older generation. One of the provided services, connected with the active ageing of population, is the education which can have different forms and kinds. The language education belongs to the preferred ones (Oreský et al., 2016).

Education belongs to the significant activities in the life of the man and its importance is changed in particular periods. Education is a lifelong process and all age categories should have an access to it. Thanks to the education and activities the man keeps his/her good physical and psychic condition and he/she is getting old actively.

### 2 Ageing and the old age

Nowadays, the ageing of population is one of the significant demographic trends. In Europe there the number of people older than 60 will increase up to 35% in the year 2050. The biggest growth is supposed in the category of long-living people, i.e. the

oldest ones. The given demographic situation is influencing all the areas of the social life (Bútorová et al., 2013).

It is important to distinguish between the concepts of ageing and the old age. "The concept of *the old age* marks a certain period of the life cycle of the man which is related to the period of the legal right of the man for the receipt of the retirement pension and to the period when the man notices more involutionary changes in his/her organism and personality" (Határ, 2011, in: Határ, 2014a, p. 45).

*Ageing* is "a process of gradual involution with the accompanying biological, psychic and social changes in the organism and personality of the man" (Hotár, Paška, Perhács et al., 2000, in: Határ, 2014a, p. 46). Křivohlavý (2011) says that the maturing and growth of the personality and its integration does not finish when the man leaves the working process, it can fully develop in the third phase of life (above the age of 70). It was proved that the man in the period of the old age can also learn something new because there are created new cells and nerve connections. It was confirmed that people in the third phase of life (above the age of 70) are, in average, more clever and the wisdom becomes independent on the intelligence, the man acquires it in the course of his/her life. The third phase of life involves also the period of the biggest measure of happiness. Several researches confirmed that the happiest people feel to be the people above the age of 70. It is related with the fact that people above the age of 70 have a calmer daily regime, more free time they have at their disposal without any restrictions. The task of the period of the old age is to grow and mature personally to become a completely developed, integrated, respectable and harmonic personality who still tries to participate in the cultural legacy and to pass it further (Křivohlavý, 2011).

Ageing people differ from each other, the reasons are in different genetic predispositions, in the environment where the man lived during his/her life so far, in the way the man has lived, what he/she has experienced and how he/she has coped with it, what he/she has encountered in his/her life and how he/she has been influenced with it. Regarding this fact, we talk about the biological, chronological and psychological age (Křivohlavý, 2011).

A radical change for the man happens with his/her retiring. The senior suddenly has a lot of free time, he/she can decide what he/she will do. He/she has enough time for himself/herself, the senior learns the art to live, he/she looks for peace and relax. The senior personally matures and he/she concentrates on himself/herself and his/her inner living, he/she releases from work and deepens into himself/herself. There occurs deeper self-knowing, he/she is still interested in being someone. The senior acquires spiritual satisfaction, his/her identity is being changed and also the society of people the senior is in contact with, there are changes in his/her attitude towards what has been, is and what will be. The senior changes his/her approach to all what he/she wants from the life and also his/her orientation of hobbies (Křivohlavý, 2011).

The man in his/her old age reviews his/her life and his/her important aim is to achieve a general harmony which depends on his/her ability to adjust to the life conditions, to change his/her behaviour in the course of time, to cope with difficult life situations by means of selection (to concentrate only on a certain point of interest), prioritization (the need to break with all what we have done until now), optimization and compensation. It is important to acquire the feeling of satisfaction, inner safety and integrity, belief, hope and love, thankfulness and realistic self-perception, to achieve the feeling of happiness, to experience well-being and joy whose source is the meaningfulness of life - a higher measure of religiosity, spirituality, engagement and pleasing of other people (Křivohlavý, 2011).

### 3 Active ageing and lifelong education

Active ageing is a process of optimizing the opportunities for health, participation and safety with the aim to support the quality of life in the process of ageing of people. (WHO, 2002, in: Repková, 2012). The concept active ageing was introduced by the World Health Organization at the end of the 90' and it includes not only the healthcare, there are also possibilities of participation of the seniors in the social events, one of the options can be also the volunteering of seniors.

According to the World Health Organization, the concept of "active" in relation to the ageing means not to stop participating in social, economic, cultural and spiritual matters, as well as the ability to stay in the working process as long as possible. (Active Ageing - A Policy Framework, 2002).

The demographical changes in the population development led to the thinking about a meaningful and quality living of the senior age and about active, successful, productive and healthy ageing. The result was the acceptance of several national and transnational documents, resolutions and programmes out of which we mention the documents adopted in the year 2013, namely: *Stratégia aktívneho starnutia* (Strategy of active ageing), *Akčný plán naplňania stratégie aktívneho starnutia* (Action plan for fulfilling the strategy of active ageing) and *Národný program aktívneho starnutia pre roky 2014-2020* (National programme of active ageing for the years 2014-2020). In these documents there was fully established the idea of active ageing (Bútorová et al., 2013, in: Határ, 2014a).

The document *Stratégia aktívneho starnutia* (Strategy of active ageing) deals with the lifelong education of older people what can be one of the tools of active ageing. The concept of lifelong education represents two levels - the whole-society level and the individual level. From the point of view of the whole society, this concept is becoming very meaningful due to the reason of keeping and increasing the competitiveness of the economics in general, there are changes in the nature and character of work and also changes in the labour market. The individual positive approach to the lifelong education increases the civic responsibility. It means that the senior can keep his/her active attitude for long time and he/she can participate in the social events (*Stratégia aktívneho starnutia*, 2013).

The document *Akčný plán naplňania stratégie aktívneho starnutia* (Action plan for fulfilling the strategy of active ageing) sets specific aims in relation to the education of older people. These aims are centred on how to make the lifelong education attractive for older people and support it by all participating actors. At the same time, it emphasizes the improving of language skills as well as skills in Information Communication Technologies (*Akčný plán naplňania stratégie aktívneho starnutia*, 2013).

The document *Národný program aktívneho starnutia pre roky 2014-2020* (National programme of active ageing for the years 2014-2020) deals with the topic of the lifelong education. At this time the education of older people is provided by the institutions of further education, Universities of Third Age at 16 universities in the Slovak Republic, Academies of Third Age, the daily centres for seniors and other educational institutions (e.g. the civic organizations). The demand of older people for education is much higher than the possibilities of the mentioned institutions. It is necessary to widen the possibilities of education of older people and to orientate them not only on the interest education and free-time activities but also on the professional education at the labour market. The contribution of education is not only in the support of the active way of life of older people but it is also reflected in the increased economic and whole-society contribution of older individuals (*Národný program aktívneho starnutia pre roky 2014-2020*, 2013).

„One of the first influential definitions of lifelong education was that of Dave who regarded lifelong education as a process of accomplishing personal, social and professional development

throughout the lifespan of individuals in order to enhance the quality of life of both individuals and their collectivities“ (Jarvis, 2004, s. 62).

### 4 Education as a tool of active ageing

The education of seniors means a purposeful process which has its inner principles, aims, methods and means (Špatenková, Směkalová, 2015). J. Průcha and J. Veteška (2012, in: Špatenková, Směkalová, 2015) say that in the professional meaning learning is denominated with the concept of "education", i.e. it is a process of guided learning and teaching which takes place in the educational environment of the school or in another educational environment.

R. Čornaničová (2005) mentions several factors which support the development of the education of seniors: the increase of the number of seniors in the population, the prolonging of the human age, respectively prolonging of the old age, changing expectations of seniors about the life in the retired age, the effort to achieve the quality and dignity of life in the old age, the search for the social mission of the old age, the secondary economic aspects of education, the factor of change as a phenomenon of the present time, the democratization of the society and looking for the new models of life in the old age, the increasing model of the lifelong education of the man, the social support of the education of seniors (in: Balogová, 2009).

From the point of view of the target orientation, R. Čornaničová (2009) distinguishes four groups of the programmes of senior education:

- a) programmes primarily aimed on the institutional interest education (e.g. U3V, A3V),
- b) programmes primarily aimed on the professional - civic engagement of seniors (e.g. social - educational activities for the employees in the pre-retirement and retired age, volunteering of seniors, civic engagement in the retirement),
- c) programmes primarily aimed on the cultural - social activities of seniors and the social climate for the benefit of the senium (e.g. education of seniors in the cultural centres, libraries, daily centres, greeting activities during the life anniversaries, transgenerational educational activities with the participation of seniors),
- d) programmes primarily aimed on the biological-psychological-social and spiritual support of the adaptation of seniors to the changes related to the ageing and the old age in the residential facilities for seniors (in: Határ, 2014a, p. 66).

The significance of the education for an older man and his/her environment can be subsequently defined: education as a prevention of social segregation of seniors, as a prevention of psychosomatic illnesses and a tool of elimination of the consequences of illnesses in the old age, as a tool of creating of the society based on the knowledge, as a tool of personal development, respectively stabilization (keeping) of the personal potential of seniors, as a meaning of life of seniors, as a tool (of help) for solving real and/or potential problems of seniors, as a tool of elimination of the processes of ageing, as a tool of forming new ways of behavior by seniors and as a tool of increasing the quality of life of seniors (Határ, 2014a, p. 70-71).

### 5 Language education of seniors

Nowadays the topic of education of seniors by means of providing different programmes and courses is very up-to-date. After the leaving from the active productive age into the retirement, seniors have enough free time and therefore it is necessary to find suitable activities for filling the time. It is important so that seniors use their free time in the active, quality and meaningful way, i.e. they do things which fill them with joy, feeling of satisfaction and pleasure. One of these ways can also be the language education. The aim and meaning of the education of seniors is the cultivation of life and its enrichment, understanding of the developmental tasks of the senior age and



easier adaptation to the changed way of life, keeping, help by the orientation in the current and rapidly changing world (Petřková, Čornaničová, 2004).

Seniors represent a specific target group for the language education. With the growing age there begin to be evident involuntary processes, involuntary changes and therefore it is necessary to take them into the consideration and respect them within the educational programmes and activities for seniors. According to Čornaničová (1998), seniors in the educational process differ mainly with their interests, motivation to fulfil their educational needs and interests, with their acquired education, social environment, creativity, work requirements (already in the working phase of life), social involvement, health condition, adaptation to the retirement, search for new tasks, challenges and life programme, level of specific competences, potentials and abilities (in: Špatenková, Směkalová, 2015).

Regarding the specific features of seniors, it is indispensable to respect the personality of seniors, their possibilities and limitations in the education, to support their positive thinking and to strengthen their self-confidence, to take into account the age, psychic, physical or individual differences of older people, to communicate with them effectively, to choose the topics of education carefully, to make use of working and life experiences of participants in the education as much as possible, to lead them to the self-education (Špatenková, 2013). Seniors, who educate themselves, have a better-quality life and they keep their intellectual abilities and physical power. The self-realization and keeping of dignity are closely connected with the further education of seniors. Seniors who participate in educational activities actively, are more self-confident and self-assured, more active and strenuous, they keep their independence longer than passive seniors, the passivity is pathogenic. It is important so that seniors are educated in the calm, non-formal and friendly environment (Ondráková et al., 2012).

## 6 Individual specific features of seniors in the language education

In the language education there it is necessary to take into consideration individual specific features in learning of a foreign language. It is indispensable to be aware of the influence of many specific features, interpsychic and intrapsychic differences among the learning individuals which determine their individual success. The success in learning a foreign language depends more on what is happening inside the man than on the materials, techniques and linguistic analyses (Stevick, 1980, in: Lojová, 2005). Excessive concentration on the contents, methodology and environment overshadows the personality of the learning individual. Stevick (1980, in: Lojová, 2005) emphasized the importance of not only the linguistic and cognitive factors but also of the affective and personal factors mainly determining the success in learning of a foreign language. Language education is aimed on the communicative part, in the centre of attention there is a learning individual what is based on the humanistic psychology. All what is being achieved within the framework of the language education, ultimately depends on what is happening in the psychic of the learning individual and the teacher has to be prepared for it. In the centre of attention there is the man himself/herself (Lojová, 2005).

It is necessary to take into consideration which characteristic features of learning people are 1. relatively common, biologically influenced such as working of the memory of seniors (crystalline, fluid), working of the brain and which characteristic features are 2. *partially given*, i.e. their further development is determined by the factors of the outer environment. The teacher with his/her acting influences their working to a certain extent. For example, here are included the respecting of the specific features of seniors, the knowledge about the language skills, styles of learning, personal qualities. The third group is formed by 3. *relative characteristic features* which are changing and unstable. Here belong emotions, emotional barriers, attitudes, needs, motivation, acquired strategies of learning and several personal features. In order to

respect individual features of learning people, the teacher needs to be really involved, he/she has to have empathy, sensibility and effort to achieve the best result possible. Every learning person is a personality himself/herself with his/her individual needs. Knowing of the individual features, needs, aims, interests or motivation enables to individualize the education (Lojová, 2005).

Learning of foreign languages is a psychic process which is influenced by the working of its "material base", i.e. the nervous system and mainly the brain. The knowing of the principles of its working in older age opens the way also to the understanding of the process of learning a foreign language. The teacher has to know the principles of working of the brain/memory of the learning individuals, respect them and adapt them to the teaching - learning process and he/she has to adjust his/her educational acting to it. Speaking is the youngest, most complicated and most vulnerable psychic function and whatever stressful situation, inner tension or strong emotions are reflected mainly in the spoken expression, not to mention the spoken expression in a foreign language (Lojová, 2005).

It is also equally important in the language education to take into consideration the working of hemispheres. A learning person with the right-hemisphere dominance has a tendency to express more feelings, emotions, humour and to use a different intonation. A person with the left-hemisphere dominance uses mainly the logic, facts, his/her conversation is structured, it has its clear orientation and aim. It is important so that the teacher knows what kind of learning seniors he/she has in his/her class and subsequently the teacher has to adjust his/her educational acting to it (Lojová, 2005).

It is suitable to take into account the gender differences in the language education. Women master grammar, spelling and interpunction better, they have better developed verbal skills. Men have more limited speaking skills, they usually speak briefly, directly, clearly and with more facts. However, also here it is important to regard individual features of individuals (Lojová, 2005).

A significant role in the language education is played by the age, the usage of the left hemisphere is dominant by adults when they learn a foreign language whereas children make use of the right hemisphere. However, we all use the right hemisphere in the beginning phases of learning a foreign language irrespective of the age. Learning of grammar in higher age is more problematic than in younger age. The right hemisphere influences the non-formal mastering of the language in the natural environment and the left hemisphere impacts the formal learning of the language at the lessons (Fabbro, 2001, in: Lojová 2005).

Learning people with the left-hemisphere dominance like to gather information about the system of the language, they like to learn grammar, they prefer analytical exercises. In the practical usage of the language they make use of the created system of the language and of the principles they apply consciously. In their communication there is evident a logical story line, they do not have problems with spelling. In reading and listening they catch partial pieces of information and subsequently they can create a general picture out of them. They memorize vocabulary, they create mental maps and they translate texts literally. They can express themselves more easily, exactly but it can be at the expense of the fluency of the spoken expression. Learning people with the right-hemisphere dominance like to use different illustrations, memory maps and posters when they learn grammar and vocabulary. They learn more easily by means of cards, illustrative materials in order to create associations. They use the language in a creative way, they like imaginative exercises, games, roleplays, they prefer learning grammar by means of games, puzzles, funny solutions and mysteries. They rather make use of the language feeling than of the learnt grammar rules. Their communication is aimed on emotions, atmosphere and general impression. They can make mistakes in reading and writing. In listening they are able to perceive the

whole text, they understand the meaning intuitively, they make grammar mistakes more often, in their spoken expression are mistakes but it is fluent. It is suitable so that the teacher takes into consideration the mentioned specific features and he/she knows what kind of learning people are in his/her class. In this way the teacher can adjust the activities to both kinds of students. However, adult people make use of the left hemisphere in a higher extent than of the right hemisphere. Students, who master the language at a higher level, use rather the left hemisphere as well. It is important to combine the activities and to try to activate both hemispheres. The teacher should also know which is his/her own dominant hemisphere and according to this fact he/she should adjust his/her own educational acting so that it is not too unilateral (Lojová, 2005).

According to Krashen (1983) we know two ways of acquiring a foreign language - *unaware learning*, i.e. mastering of the foreign language and *conscious learning*, i.e. the formal acquiring of foreign-language knowledge. Unaware learning occurs by children when they live in the foreign-language environment, their acquisition of the language is spontaneous. Adult people master a foreign language with more difficulties. If an adult person has to start to use the foreign language actively in the phase when it is still not acquired completely, he/she often uses incorrect constructions and wrong phrases. These mistakes and bad habits can be removed in a difficult way. The guided learning takes place in artificial conditions. More complicated acquisition of the foreign language by adults is connected with the development of abstract thinking. The mastering of the foreign language is not related to the age but to the form of learning. An adult student learns by means of audio-lingual habits or analysis of the language structures (in: Ondráková et al., 2012).

It was proved that the opinion saying that a senior is able to learn a foreign language only with difficulties, is incorrect. The ability to learn a foreign language is changed during the course of life but it never disappears completely. The age is not a decisive factor. It depends more on the conditions and methodological approach (Lojová, 2005). Older learning people have a bigger motivation, ambition, effort and mastered learning strategies. A very significant factor by the seniors is their voluntary approach to learn a foreign language, it is their decision to start studying, they are not under the pressure, they are not forced by the situation around them and they can change this activity for another one whenever they want. Learning of the foreign language is connected also with the talent. Learning people differ from each other with a level and area of the talent. The ability to acquire a foreign language depends also on the teacher and his/her approach (Ondráková et al., 2012).

Seniors have problems to master logically non-structured information, their acquisition of new knowledge requires more time. The problem is also in the insufficiently mastered strategy of learning. The topic, which is presented with higher speed, sets bigger limitations in the quality and quantity of the mastered information by seniors more evidently than it can be seen by younger people. A very important role in the acquisition of a foreign language is played by the psychic and physical condition of the individual and his/her health limitations. Seniors need to have topics explained in the mother tongue. Choděra (2007) holds and opinion that a mother tongue should be used only when its presence is more effective than the presence of a foreign language, e.g. in the grammar overviews. On the other side, Butzkamm (1993) prefers the usage of the mother tongue in the acquisition of a foreign language (in: Ondráková et al., 2012).

One of the main reasons why the seniors want to educate themselves is the inclusion into a collective, a certain community of people where they have a possibility to develop their social contacts, relationships, they do not feel lonely, they want to fulfil their dream to study what they could not study before. Seniors study a foreign language in order to perfect their language competences, to improve their communication abroad, e.g. on holidays or with family members living abroad. Their motivation

is also to keep their physical and psychic condition and to train their memory at the same time. The motivation is also in the need to have a regular activity and the need to renew forgotten knowledge and skills, a language as a hobby, a life partner coming from abroad and the effort to speak with him/her fluently, their desire to speak with the grandchildren (Ondráková et al., 2012) and their wish to know other cultural environment by means of a foreign language (Repka, Halušková, 2005).

A very important factor in the acquisition of a foreign language are the skills which are genetically predisposed (Cook, 2001, in: Lojová, 2005). There are mentioned certain problems in learning a foreign language by seniors such as the inability to understand audio recordings due to the running physiological changes (hearing impairment, decreasing of the functions of the sensory organs), difficulties in learning new vocabulary what is related to the different working of the memory, difficulties in creating grammatically correct sentences. The problem can also be in the incorrectly formed habits in a foreign language, reactions to the questions are slower, they lack a contact with a native speaker. It is necessary to repeat the topics more frequently, seniors do not like incessant changes and they appreciate rewards (Ondráková et al., 2012). In the current style of teaching there is dominant the communicative method with the intercultural dimension which is the most preferred method by students (Repka, Halušková, 2005).

The environment should be adjusted to the needs of seniors, i.e. bigger boards, comfortable sitting, good acoustics, a big room suitable for comfortable moving of seniors in the class, the place of education should be in the nearest area, the possibilities of education should be in different localities so that seniors can access them without any problems. The teacher should be kind, friendly, sensitive, empathic, communicative, patient. He/she should not behave to the seniors as to less competent people. The teacher plays a significant role, students very often attend courses due to the personality of the teacher (Ondráková et al., 2012). Every teacher should study a publication dealing with the developmental psychology before the beginning of the course. According to Choděra (2007) a teacher should start to learn a new language every five years so that he/she can better understand the situation of learning people (in: Ondráková et al., 2012).

## 7 A survey of the language education of seniors

Due to the submitted article there was carried out a survey in the community centre in Bratislava (we do not mention its name in order to keep its anonymity) which provides social, professional and humanitarian services without a residence of a client, it organizes preventive and interest activities. The survey took place within the months June and July 2017 at the sample of 18 seniors (14 women and 4 men) at the age from 60 to 85 who attend courses of German and English language in their free time. The survey was carried out by means of a questionnaire created by us (in formulating questions we were inspired with the work of Ondráková et al., 2012). The questionnaire consisted of 10 items/opened questions. However, only 6 questions were quantitatively (percentually) and qualitatively evaluated for the needs of this article. These are the following ones:

What is your motivation for attending a language course: 70% of seniors mentioned that they want to improve in the foreign language they learnt already before, they want to further educate themselves, repeat the language and go into more details in it. 10% of seniors said they want to establish new relationships, to be in the company of people and they do not want to sit at home. 10% of seniors want to fill their free time with learning and the remaining 10% of seniors have relatives and friends living in Germany and Austria and they attend the course in order to be able to communicate with them. The attendance of the course provides to the seniors a good feeling, joy, enrichment and meaningful spending of their free time.

What kind of activity would you appreciate besides the course of German and English language: 80% of seniors mentioned they



would appreciate other language courses, they would like to learn Russian, Italian, French and Spanish language. Other seniors mentioned courses such as a literary course, a course of self-defence, a course of healthy lifestyle, a course of psychology about the coexistence and mutual understanding of older and younger generation, different courses of physical exercises.

What should be the teacher of a foreign language like? 95% of seniors mentioned that the teacher should be patient, kind, likeable, empathetic, friendly and communicative. The seniors also said that the teacher should be at the adequate language level with a pleasant acting, he/she should be able to motivate, enthuse and keep the attention of students with correctly chosen methodological approaches, he/she should be creative, sensible, smiling and optimistic as well.

Is it important to stay active and why: 100% of seniors said that it is very important for them to keep themselves active. The reason is creating of social contacts, keeping fit and healthy so that they are not a burden for their family. They want to be useful for the others, for family and to help other seniors. The activities provide them satisfaction and other knowledge. Activity is life. However, the regularity of the activity sometimes seems to be problematic because seniors are sometimes ill and they have health problems and not enough energy or they care about their grandchildren.

What style of teaching and learning would you prefer: 90% of seniors mentioned that they prefer the communicative method. The others said that they like variability, illustrative examples, games, practical exercises, songs.

What kind of problems regarding the learning do you encounter with at the course: 85% of seniors mentioned that they learn and remember new things with more difficulties. The others said that they do not want to write already. They prefer just talking about different topics from life, they do not want to work with a textbook, the lesson should be running spontaneously so that they can feel that they do this activity for pleasure and not because they have to do it.

It is evident from the given survey that active ageing is very important for the seniors, they are more self-confident, independent, healthier and they feel more useful. A similar survey using the questionnaire method aimed on active ageing and language education was carried out in the Czech Republic at the Universities of the Third Age in Hradec Králové and Liberec. In the survey participated 14 students of German language and 20 students of English language from the University of the Third Age in Hradec Králové and the same number of participants of language courses from the University of the Third Age in Liberec (Ondráková et al., 2012). 42 participants filled in the questionnaires, i.e. 61,76% out of the total number of 68 distributed questionnaires. The questionnaire consisted of questions with the possibility to mark the answer from the given options. The questions in the questionnaire were similar to the questions in our questionnaire which was prepared for the community centre in Bratislava. Besides the reasons for studying a foreign language which were mentioned also by Slovak seniors, here appeared answers such as: the studying of a foreign language perceived as a training of the memory, the understanding of the computer language, the ability to understand instructions written in a foreign language. Seniors would appreciate also other courses such as photographing, a course of tourism and travelling, a course of legal minimum, astronomy, psychology of the period of the old age, history. The teacher should have an ability to teach seniors, to choose an individual approach regarding the senior age and health limitations. The participants of the survey mentioned that, within the study at the University of the Third Age, they are the most satisfied with the teacher of the foreign language. The personality of the teacher represents a key factor for them. It was clear from the answers that the style of teaching should be chosen with regard to the specific features of seniors, the education should be carried out in a slower speed. Regarding the

problems with learning seniors encounter with at the course, the seniors mentioned that they have problem to understand audio recordings, to create grammatically correct sentences, to perceive a spoken language and to react promptly (Ondráková et al., 2012). The results of the questionnaire survey could serve as an aid for improving certain areas, such as the area of methodology of teaching a foreign language for the seniors.

## 8 Conclusion

Ageing is a natural process the man is going through. The old age is an equally meaningful period which has an individual meaning for every person but also a social mission. All particular periods have their own value. Seniors represent a considerable group in our society, the life expectancy is increasing and therefore it is necessary to pay such attention to the seniors they deserve and to appreciate the role they have had and still have in the contribution to the development of the society. Ch. Bühlerová says that old people can contribute to it with a unique way not only due to their experience but also due to their ability to evaluate social issues from a wider perspective (in: Langmeier, Krejčířová, 2006). It is important so that seniors stay active after being retired and they use their free time meaningfully and effectively. According Ch. Bühlerová a E. H. Erikson, every person should have an experience of inner satisfaction which is typical of the man who fulfilled his/her best assumptions in the world and human society (in: Langmeier, Krejčířová, 2006).

It is important so that seniors are self-dependent, productive and personally happy as long as possible. It is necessary to take into consideration all individual possibilities and wishes of every man because changes are reflected by every individual in a unique way. Education is undoubtedly one of the ways to keep active life. Language learning has become a favourite kind of education and there are manifold offers of language courses in different institutions. These courses should respect the specific features of seniors as an educated group and to take into account their individual character and potential.

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**Secondary Paper Section: AM**

## RADICALIZATION AND EXTREMISM AS ADOLESCENT RISKY BEHAVIOURS

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The paper was created in the framework of the grant project Vega 1/0285/18 entitled "Risk behaviours of adolescents as clients of social work due to their loneliness".

**Abstract:** Extremism and radicalism are nowadays an urgent problem for many countries, irrespective of their political and socio-economic progress. Manifestations of hatred against groups of different races, nationalities, ethnic or religious groups pose a latent threat to any democratic society and can significantly disrupt the stability of society and the national political system. Extremism appears on the one hand as a product of a democratic society, its part, while on the other hand the lack of democracy acts as a driving mechanism for violent extremism, which can then be understood within the framework of one of the forms of risky behaviour. The paper theoretically analyzes radicalization and extremism as risky behaviours, focusing specifically on young people as a group characterized by expanded risky behaviour, a group endangered by extremism.

**Keywords:** Adolescence, Extremism, Radicalization, Risky Behaviour.

### 1 Adolescents in the context of radicalization and extremism

Radicalization and extremism are currently a socially sensitive issues. For extremist groups, young people become an interesting target group, while being also the most vulnerable group in society. The current generation of young people meets the values and standards presented by extremist groups in the society. It inclines to opinions that criticize and question the values and traditions of society, points out deficiencies and presents its attitudes more radically than the rest of the society. We assume that this phenomenon is related to the new characteristics of the youth.

Growing up is a transition period of human development between periods of adulthood and childhood, and is characterized as the period of the second resistance. According to developmental psychology, it is classified to the periods of puberty and adolescence (Vágnerová, 2004). Adolescence is perceived as a period of rapid physical, mental, socio-cultural and cognitive changes (Ginzberg, 1991), as well as the period of defining own attitudes and promoting changes in an individual's relationship to other people and social institutions (Gestsdottir, Lerner, 2008). Creating a sense of identity and autonomy is characteristic for this period (Ginzberg, 1991). The age limit of adolescence is, according to many authors, very difficult. On the lower end, we can observe the acceleration trend of earlier onset of biological and psychological maturation. The upper limit of transition to adulthood, on the other hand, moves to a higher age. Nevertheless, changes in the physical, mental and social development mean that this phase is a period of increased vulnerability and adaptation (Steinberg, 2005).

Adolescence represents a phase of turbulence and reorganization. For some adolescents, it brings inner separation from primary caregivers and identifying one's own identity, but in parallel it can also lead to a loss of confidence, fear of loneliness and abandonment (Rolling, Corduan, 2018; Ludot, Radjack, Moro, 2016). Adolescents tend to be very sensitive, but also easy to manipulate (Pétiová, 2016). In addition to the above-mentioned formation of self-identity, one the main adolescent's developmental tasks are to create a sense of self-value, to adopt society standards, to become independent of parental authority (Erikson, in: Končeková 2014). Adolescent, according to Končeková (2014), matures into a human personality who is socially matched among adults as their equal partner. Very important is the need for the recognition of adulthood by the surrounding people. Adolescent's self-confidence is growing, he/she shows an interest in political issues and a deeper

understanding of public and political life, as well as the struggle for personal autonomy, independence.

However, it is also a period, in which young people are involved in risk behaviours, and to a greater extent than in other developmental stages (e.g. Steinberg, 2006). Lichner and Šlosár (2017) also perceive adolescents as the riskiest group in the developmental perspective and summarize the impacts during the period of adolescence (changes in personality, social impacts of the wider social environment and peers, weakening influence of primary social groups and formal authorities) that are associated with the involvement of adolescents into various forms of risky behaviours.

Office of Disease Prevention and Health Promotion (1993) has suggested, already in the 1990s, that risky behaviours of adolescents will be more problematic in the future. It pointed out to the increasingly younger age of adolescents in which risky behaviours occur, but also to more young people vulnerable to experimentation and initiation of risky behaviours. In this context, authors emphasize new forms of risky behaviours currently emerging among adolescents.

### 2 Radicalization and extremism as a form of risky behaviour

Man is a bio-psycho-social, self- and world-transforming being that exists only in synergy with other beings (in the system of social relationships). Relationships are a prerequisite for social cooperation, which is determined by needs, interests and goals. But human cooperation also produces inequality, a different degree of freedom, social roles, and status, which consequently leads to socially undesirable phenomena. These are also included human intolerance towards everything that is strange and unknown. Causes of this procedure become an obstacle to civic cooperation in a democratic society, resulting in the emergence and deepening of long-standing conflicts.

The vast majority of extreme activities is an immediate reaction to the state of society. The presence of intolerance in society, which is the basis of the ideology of the majority of extremist groups, is often characterized by the emergence of extreme activities (Milo, 2004). Nevertheless, in professional terminology, the term of extremism is often confused with the term of radicalism and it is not distinguished between them. But they are definitely not equivalents.

Generally speaking, the term extremism originates in the Latin term "extremus" and its meaning is "the furthest" or "outermost" position. In this sense, extremism is perceived as any ideology or activity that is directed against the current political system as such and aims to eliminate it and replace it by its own alternative. In contrast, the term radical has its basis in the Latin word "radix", which refers to "root". Radicalism is therefore a process that "goes to the root" (Charvát, 2007). In its epistemological sense, it therefore refers to anchoring yourself in knowledge, opinions, values, and believes to define one's own behaviour (Alava, Frau-Meigs, Hassan, 2017). Although the etymological meaning of these words is different, both terms have become part of the current political and publicistic discourse (Charvát, 2007). According to Khosrokhavar (2014), radicalization is the process by which an individual or group adopts a violent form of action that is directly linked to an extremist ideology of social, religious or political content that undermines the established political, social or cultural order.

However, such definitions are very broad or general, and they are interpreted differently in different cultures and societies. The authors' papers perceive radical engagement and extremist behaviour as one of the forms of risky behaviours. This idea is supported, for example, also by Bačová, Žiaková (2018), who consider extremist behaviour for socially risky behaviour. Miovský (2010) refers to risky behaviour manifestations of racism, xenophobia, intolerance, anti-Semitism, Macek (2003) refers their racial intolerance and discrimination of some groups

based on their belonging to some race, nation, nationality, skin color, ethnic group, origin, gender or religion. Šlosár, Plavnická (2018) draw attention to the risky behaviours that can manifest in the form of expressing radical and extremist opinions and behaviours, as well as Nielsen Sobotková (2014) into extremist behaviour or intolerance.

### 3 Risk factors of radicalization and extremism in adolescents

Many experts and sciences are trying to decipher this phenomenon, identify predisposing and protective factors, subgroups or profiles of adolescents involved in risky behaviour. Theoretically, the paper analyzes the selected factors that are related in the social context to radicalization and extremism as risky behaviours in adolescent age, as the basis for social work.

Adolescence itself is, by authors such as Rolling and Corduan (2018) or Ludot, Radjack, Moro (2016), indicated as the risk factor of radicalization. One of the most important biological factors, associated with radicalization and extremism, are age and gender, even though the causal relationship is not entirely unambiguous.

In connection with radicalization and extremism, various predisposing factors, such as depressive tendencies or suicidal thoughts (Merari, 2010; Victoroff, 2005), vulnerability (Kruglanski. et al., 2013), feelings of injustice or humiliation (Victoroff et al., 2010), have been pointed out. Other authors insist on the concepts of identity and belonging (McCauley, Scheckter, 2008; McGilloway, Ghosh, Bhui, 2015; Kruglanski et al., 2009). Searching for identity is an important factor for young people entering an extremist group or youth gang (Bjørger, Carlsson, 2005). During this period, the need for excitement, testing of their own limits and exposure to potentially dangerous situations, appears in young people. Therefore, they engage in more destructive activities such as crime, drug abuse, political extremism or violence (Bartlett, Birdwell, King, 2010).

During this development stage, young people can also encounter difficulties such as financial problems, conflicts with parents, social exclusion, cultural humiliation, feelings of worthlessness, etc., which they must overcome (Sieckelink, 2017), and they can be considered causes of radicalization and the so-called "push factors" that push adolescents to radical groups (Schmid, 2013).

In adolescence, social interactions become more important than in any other developmental period (Crone, Dahl, 2012). The desire for acceptance and lasting social relationships are the basic needs of every human being (Aydin, Fisher, Frey, 2010). However, during the adolescence, man seeks his/her own position in the world, strives for emancipation from the family environment and independence, on the other hand, it is necessary to identify himself/herself with another, in most cases, a peer group of people. Therefore, as a particularly powerful form of social interaction at a given period, there is a social exclusion or rejection by peers (Williams, 2007), which may adversely affect individual and interpersonal behaviour (Baumeister, 2005; Ayduk, Gyurak, Luerksen, 2008; Twenge, Catanese, Baumeister, 2002), and can lead to antisocial behaviour (Adams, 2011), providing a link to the involvement of adolescents in risky behaviours (Dishion, Owen, 2002; La Greca, 2001; Simons-Morton, 2005). Sampson and Laub (1997) explain that adolescents with a vulnerable or unmet need may engage in risky activities or behaviours in order to obtain recognition of peers or to form an opposing identity to the identity of their "rejecters." These characteristics also include the risk, and among young people, the resulting need to seek excitement, to test their own limits and to exposure to potentially dangerous situations. Therefore, they engage in more destructive activities such as crime, drug abuse, and political extremism. Typical attitudes are also affinities with violence, violent behaviour and attitudes approving violent behaviour. (Bartlett, Birdwell, King, 2010) The question is whether it is possible to limit the growth of these socially undesirable phenomena.

Baumeister, Twenge and Nuss (2002) state that socially excluded people commit more crimes than socially included. Adams et al., (2011) goes on to state that social exclusion is related to radicalization. For young people, who have experienced social exclusion, the invitation to a radicalized group represents a real experience of social inclusion (Taylor, Louis, 2004; Borum, 2010). Young people who have been or feel socially excluded from one group may be tempted to join radicalized and extremist groups and movements (Richmond, 2002). This factor can be evaluated as a risk factor but also as a protective factor. This means that a specific factor can support the process of radicalization, but also protect from it. In this context, Adams et al. (2011) point out that a desire for social inclusion can support the process of radicalization, but it can also encourage positive behaviour, such as increased pro-social behaviour and motivation to form or restore social ties. Based on this, it is necessary to perceive social inclusion as a significant factor in the risky behaviour of adolescents with an emphasis on the process of radicalization.

Peer group may be, in the process of radicalization, and in connection with extremism, also important in another relation. Searching for feelings that reflects the need for diverse, new and complex experiences, encourages an active willingness to accept physical and social risks (Blum et al., 2001). Such perception and behaviour usually does not appear isolated (Connop, King, Boyce, 1999), and it is often associated with the activities of the peer group (Blum et al., 2001). The connection between adolescents and peers, who are involved in risky behaviours, is a strong predictor of own risky behaviour of adolescents (Prinstein, Boergers, Spirito, 2001; Osgood et al., 2013). Jaccard (2005) also states that one of the strongest and most consistent predictors of risky behaviours in adolescents is whether the individual has friends, who are involved in risky behaviours. In the context of the group, therefore, adolescents may find it easier to accept opinions and beliefs of more extreme group members (Silke, 2008). Speaking about the peer group, risky behaviour can also be conditioned by an effort to gain or maintain a higher social status in the group (Hawley, 2003).

An important factor can be, in addition to the peer, family or school environment. Sikkens et al. (2017) states that the (problematic) family situation can affect the process of radicalization. Inappropriate parenting styles are considered risk factors as well (e.g. Jaynes, 2005; Spera, 2005). Čerešník (2017) deals with the question of whether the educational environment does not create the conditions for the adolescent population to produce risky behaviours, and that this behavior is overlooked, respectively tolerated. Arman (2007), as part of the conducted research, found out that factors of school environment, such as the administrative structure, the teacher-student relationship, school security, are significant in relation to the tendency of students towards violence. Certain characteristics of the school may have a negative impact on the level of risky behaviour (Sutton, Utting, Farrington, 2004). In particular, low expectations from students, incorrectly defined rules and patterns of behaviour, inconsistently applied (Anderson et al., 2001), the question of school security and discipline, clarity of school rules, school satisfaction, bullying and victimization, involvement of schools in sports activities or use of discussions, positive reinforcement of teachers, which can be labeled as the quality of the school environment in the global index (Bhabra, Dinos, Ghate, 2006). On the other hand, well-organized schools with consistent policies of bullying and antisocial behaviour support good relationships with their students, and thus apply a protective influence (Anderson et al., 2001). Therefore, Souwla (2015) believes that quality schools and education are an effective protective factor of radicalization. The process of radicalization takes place on the basis of a simplified view of the world, and education is used to combat the simplified perspective and as a form of prevention of the radicalization process.

Along with the school environment, it is necessary to mention (not) achievement of success in the school, which has numerous additional consequences, even beyond the individual level of

each student (Dornbusch et al., 1996). As Crosnoe (2002) states, students who do not achieve the required learning outcomes are excluded from extracurricular activities that have a positive impact on the development of adolescents, as a result of poor school performance, tense relationships can develop between adolescents and their parents (Repetti, 1996), is associated to perceived social inequality (Needham, Crosnoe, Muller, 2004), adolescent loses self-confidence, reduces effort, and is therefore again likely to fail (Kamal, Bener, 2009). Adolescents, who fail at school, try to improve their position in areas that are not related to their areas of inadequacy (Eccles et al., 1997). More often, such adolescents engage in risky behaviours such as smoking, alcohol use (Byrd, 2005, Honken, Ralston, 2013), or risky sexual behaviour. Such students seek reinforcement from their peers to compensate for the negative academic "feedback" (Honken, Ralston, 2013), and radicalization can be an optimal response to perceived failure (Ferrero, 2002). Harris, Duncan, and Boisjoly (2002) found out that adolescents with high expectations of their future education will perceive greater risks associated with participation in risky behaviours and avoid risks, adolescents with low expectations of their future, on the contrary, do not fully consider risks. To address school success is therefore necessary, in the context of risky behaviours.

Dependence on the radical group can also act as a substitute product and replace the previous dependencies (Ludot, Radjack, Moro, 2016). Several authors also mention the importance of a trigger event as the determining factor. The list of events includes the occurrence of trauma related to a close person (e.g. death, disease, separation) (Bouzar, Martin, 2016; Schuurman, Horgan, 2016), disappointment in love, watching a video that has again caused deep suffering associated with family history (Bazex, Mensat, 2016), experiences of discrimination (Bouzar, Martin, 2016).

Another specific variable is the nihilism of today's youth. This term can be used in various ways. The meaning of the word can be deduced from the term "nihilum" - i.e. "nothing" (failure of "being", its denial). Nihilism rejects the social order, considers valid values as worthless fiction (Brugger, 1994). It is based on the belief that nothing in the world is of absolute value or validity. It concludes that nothing is valid, nothing is of value. It rejects any foundation of truth or good that one would be bound by obedience or loyalty (Sokol, 2010). Since the end of the 18th century, it has been used to designate those teachings that deny a certain system of values, or even more radical, the very existence of objective reality (Rajský, 2009). It represents the will to "nothingness," to denial, to negation, to losing faith, values, it is the faith in the "nothing," in the degradation of life, clinging to egoism (Olšovský, 2011). At the present, it is most often associated with the unfortunate features of modern and, in particular, postmodern society, deprived of hope and happiness, certainty and safety. In common language, it often replaces terms such as depression, apathy, resignation, meaninglessness, skepticism, individualism, indifference, isolation, nostalgia, anxiety, and others. The term can be perceived in a positive and negative sense. In the positive one, it refers to the philosophical destruction of any bias that refers to metaphysically defined existence. In the negative sense, it denotes the destruction of records and certainties of common sense, as well as the loss of the theoretical and ethical principles and norms (Rajský, 2009).

The term nihilism was popularized by Friedrich Nietzsche, who made it the base term of his own theoretical concept, and he understood his own philosophy as overcoming of nihilism with the emphasis on human will and creativity (Anzenbacher, 2010). However, the real history of this concept began with Jacobi's polemic with Ficht and their joint condemnation of Kant's transcendental theory. Nietzsche defined nihilism as a state aimlessness, where there is no answer to the question "why?" and even the highest values are losing price. He denotes this state as a "dreadful guest", who stands at the door and cannot get rid of it. Heidegger goes even deeper, who adds that this guest has already been invisibly wandering around the house a long time ago, and the only thing we can do is to notice him and look him right in the face (Rajský, 2009). Galimberti (2008), a

contemporary Italian psychologist and philosopher, states that nihilism has crept into the soul of the young, penetrated into their thoughts, mixed with their emotions, demolished their perspectives, and so on. The young are not experiencing joy or peace, they are soaked by latent anxiety of meaninglessness tomorrow, despite the market offers of explosive and adrenaline entertainment, by which they fill their present day. According to Benasayag and Schmit (2007), today's adolescents are experiencing deep frustration and hidden sadness, which does not have an individual psychopathological background, but it is a flat reflection of general social helplessness. Instead of a future as a promise, the concept of a future as a threat has come, and if the future has nothing to offer, then the logical setting of a man is to focus on the present, to enjoy today, when tomorrow is without guarantee. This is the reason why assisting professionals struggle with demotivation, isolation, escalation of violence and the increase in drug use in the environment of the youth. Hedonism has become a central value of our contemporary culture. Affluent society that encourages an individual to try to increase his/her standard of living is atomized and radically de-socialized. Galimberti (2008) emphasizes that young people experience loneliness and depression not as their existential developmental crisis, but rather as a cultural crisis that is all the more radical, that it does not provide a promise of overcoming in the adulthood stage. As predicted by Nietzsche, humanity is seized by existential sadness (Rajský, 2009).

The society does not show an interest in young people. A certain interest in the youth is shown by market that offers them entertainment and consumption, but the object of their consumption are not the goods and services, but their own lives instead. These do not represent plans for the future, as it does not make any promises. The youth are experiencing the present with maximum intensity - not because it gives them joy, but because they are looking for a way to forget about the existential loneliness and anxiety. They are flooded with emotional illiteracy - they cannot even express their restlessness. Strong music, drug use, the experiences of group, as well as of individual violence, suppress loneliness. They abandoned traditional values. They suffer from the fact that they do not see the meaning of existence, they are missing the meaning of suffering and life as a whole. Galimberti (2008) describes several symptoms of the nihilism of the youth:

- no interest in school,
- bullying,
- emotional aridity,
- the loss of sense of intimacy,
- attraction to drugs,
- inclination to death,
- indifference, psychopathy, sociopathy,
- ritual violence (Rajský, 2009).

Changing the nature of the society produces a change in the nature of social risks, whose main denominator is loneliness, fear and uncertainty. Social work, in order to optimize the social functioning of individuals, should reflect these changes as the new social risks of the hypermodern age pose new challenging life situations, and thus the change of the clientele of social work (Jašková, Sabolová Fabiánová, 2018). Another threat of the present is the Internet. As society changes, the Internet has revolutionized social interaction, and the number of young people who are spending a considerable amount of time online, is increasing (Hawdon, Oksanen, Räsänen, 2015), it is important to draw attention to the dark side of the online environment. The benefits of the cyberspace, as well as the regular internet users, are also exploited by extremist groups, and they use information and communication technologies and the social media in order to spread extremist ideas and radicalism. According to Awan (2017), the objective of using the Internet is to radicalize, to spread propaganda and ideology among sympathizers around the world online. In this online way, the fundamentals of extremist groups, acquiring of members, advocating violence and creating international communities through websites, blogs, chat rooms, discussion groups, internet communities, online video games, and more, is supported. (Amster, 2009; Burris, Smith, Strahm,

2000; Hawdon, Oksanen, Räsänen, 2015). The main reason for targeting of group of young people by extremist is the fact that they spend more time online and are therefore more likely to encounter online extremist material. It is the most vulnerable group, and young people can react to such material in a different way than people of other age groups (Costello, Hawdon, Cross, 2017).

Open space of the Internet and social networks is abused to spread racism, xenophobia and anti-Semitism among young people (Cenkner, 2017). Institute of Human Rights has produced a report for the Council of Europe with an overview of national instruments to fight hate crimes. The report shows that 25% of young people received an e-mail materials containing extremist information about specific groups. 16% of young Internet users wrote online comments that were hateful towards a person or group of people, of which 60% were men.

In relation to the use of the Internet, the so-called Facebookastination (Meier, Reinecke, Meltzer, 2016) is mentioned too, when in favor of the use of Facebook social network, important tasks are delayed (Junco, 2012; Panek, 2014; Rosen, 2013; Thompson, 2013). We speak of procrastination, when it is about performing an alternative activity to the intended one, but this is not synonymous with inactivity (Schouwenburg, 2004). According to Arem, Williams and Adesin (2011), procrastination refers to self-regulatory failure, which refers to the postponement of the necessary steps to successful and timely completion of tasks, while engaging in activities that are more rewarding. Procrastination is not a new phenomenon, but at present it brings different and more negative connotations (Ferrari, Johnson, McCown, 1995; Steel, Ferrari, 2013). It leads to inefficient time management, reduced performance, inability to regulate negative emotions (Schubert Walker, Stewart, 2000; Ferrari, Díaz-Morales, 2014) and is associated with risky behaviour. The construct of problematic Internet use fills is a factor of the use of the Internet as a means of escape, avoidance and distraction from duties and tasks (Davis, Flett, Besser, 2002). Procrastination is also seen as a maladaptive coping strategy, a form of defensive avoidance that occurs when there is a potential problem, but there is also a certain pessimism towards the availability of its solution (Janis, Mann, 1977; Ferrari, 2011; Steel, 2007; Van Eerde, 2003). Based on this, it is appropriate to examine procrastination as a factor related to various forms of adolescent risky behaviours, as well as to radicalization and extremism.

## Conclusion

Monitoring the extent of the problem is clearly crucial to understanding the extent of covered areas, target groups, but it is also important for choosing effective ways to solve the problem. Undoubtedly, social work with the youth plays here an important role. There are several initiatives at local, national and international level that are addressing the issue of extremism. In general, we distinguish those that are more focused on the primary prevention of extremism and so-called intervention programs that are focused on already active members of extremist groups. Their aim is primarily social inclusion (i.e. inclusion, integration) of young people and, as such, the main elements of this process are: active involvement of young people in the community, development and maintenance of young people's social connections with other people, attention to the meaning and the need for belonging, thus making young people less vulnerable to the threat of extremism. As examples we can mention:

- Canadian community program, aimed at providing assistance to the youth that is already an active participant of extremist groups, known under name Youth Alliance Against Gang Violence ([www.publicsafety.gc.ca](http://www.publicsafety.gc.ca)),
- preventive model called the Office of Juvenile Justice and Delinquency Prevention, which is aimed at vulnerable children and youth, providing them appropriate intervention services in order to prevent delinquent behaviour ([www.ojjdp.gov](http://www.ojjdp.gov)),

- training against violence and training competencies called Anti-Gewalt- und Kompetenz-Training, which provides an assistance to young people from the Muslim environment in order to prevent radicalization and integration into extremist groups ([www.violence-prevention-network.de](http://www.violence-prevention-network.de)),
- BanHate mobile application, which represents an innovative option focused against expressing hatred ([www.banhate.com](http://www.banhate.com)),
- Austrian nationwide line called Counseling Center against Extremism that offers distance counseling, crisis intervention, as well as personal counseling meetings and even various educational activities for the youth focused on introducing the basic concept of extremism, and subsequently changing the perspective on the manifestations of extremism and hatred on social networks, and others ([www.beratungsstelleextremismus.at](http://www.beratungsstelleextremismus.at)).

However, the presented programs are not currently available in most of the EU Member States, despite their effectiveness. Education and social work with the youth are key areas that can help young people to prevent and to expose extremist ideas, or to provide intervention programs aimed at active members of extremist groups ensuring social reintegration into society.

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**Primary Paper Section: A**

**Secondary Paper Section: AN**

## EMPLOYEE BENEFITS PRACTICE IN SLOVAKIA

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The authors of the paper together with other research fellows at the Faculty of Economics, J. Selye University have been researching and analyzing the practice of employee benefits in Slovakia since 2012. Scientific Paper was elaborated within the framework of the projects KEGA 001UCM-4/2016, and GAAA 19/2018.

**Abstract:** Nowadays we can observe the shortage of workforce with the skills required - for a growing number of vacancies, - that makes looming problem for the companies in the region. Due to the shortage of suitable candidates, it is quite common that companies are struggling to hire new talents and retain the existing one. Several international researches (Blanchard, 2003) have shown, that traditional „money based“ compensation cannot be the sufficient tool in the previous mentioned competition. According to an old business proverb, only employees who themselves are well treated will be loyal to their employer (and treat the customers well). It is, of course, important to acknowledge that this aim can most easily be achieved by creating a motivating working environment and a pleasant and flexible organizational structure, all of which enables employees to produce their best. Recognizing the value represented by employee benefits is, in fact, of increased importance in complicated situations such as those recently experienced. The category of ‘employee benefits’ comprises the whole range of non-wage ‘reward tools’, and there is, in fact, no company which does not provide some benefits to its employees. However the aim of the employers providing benefits is more or less similar, we can explore huge differences in the way they are providing them and the amount of provided benefits compared to the wage. Determinative disparities can be identified in the context of significant differences in the field of labor law regulation. There is no doubt that the need for comparativism is growing, due to the ever expanding communications and information technology, as international cooperation develops and the free movement of labor increases. This study, based upon a research, arranged in 2016 provides insight into the Slovak practice of employee benefits.

**Keywords:** employee benefits, cafeteria, labor market, Slovakia.

### 1 Introduction

The rapid technological change we may experience at the beginning of the 21st century represents the biggest challenge for today’s business leaders (Morrison, 2017; Csókás and Machová, 2017; Reschreiter, 2015). Employers, that wishing to keep up in the era of Industry 4.0 have to pay special attention to their human resource management, as they are inevitably facing with lack of skilled labor that results a more intensive competition to acquire them (Mura et al., 2017; Gavurová and Glova, 2012b; Prákapavičiūtė, Korsakienė, 2016; Otter and Halasi, 2018). This trend also poses serious demands on educational institutions, since most of them are unable to adapt quickly to the new needs of labor market (Hitka, 2018; Švec, 2011). New professions are born, others disappear. (Perry, 2016) According to a 2013 report on Oxford academic research, 47% of American workers have jobs at high risk of potential automation (Mahdawi, 2017, Cseh Papp et al., 2018). This accelerated change, called digitalization is ringing throughout the entire economy. The major challenges of the business world at the beginning of the Fourth Industrial Revolution are the following:

- globalization (Razminiene & Tvaronaviciene, 2017),
- digitalization,
- shortage of skilled labor,
- labor migration (brain drain) (Lincényi, 2017),
- cyber security/ handling big data.

“Keeping up with the rate of digital advancement (automation, harnessing big data, emerging technologies and cyber security) will add a whole new layer of complexity for the future leaders, as they try to stay ahead of competitors and innovate”, said Siegers, CEMS executive director. Lack of candidates with suitable skills does not hit solely the companies with advanced R&D activities, but all employers as well in the CEE region, due to:

- labor mobility and the so called brain drain (Olšovská and Švec, 2017). According to Kahanec and Zimmermann (2016) there were approximately 230.000-250.000 Slovakian workers employed abroad in 2007, that means 10-12% of the active labor force.
- non-targeted education.

The phenomenon is absolutely bidirectional. The other segment of the labor market also suffers from the reported situation. Although, there is a constantly growing demand for labor in numbers, the large proportion of job seekers can’t meet the current labor market expectations. “We often meet with candidates without a chance to find an appropriate job,” said Ričányová, the regional manager of Grafton Recruitment in Košice, adding that this is true mostly for graduates of managerial programs, lawyers, teachers, translators, graduates of political sciences and international relations. In case of these graduates we build many times on the knowledge of foreign languages and they find jobs, for example in client service.” Similarly to other CEE (Central Eastern European) countries, strong dissonance can be observed at the Slovak labor market with lack of workforce with appropriate skills, and overqualified hopeless job seekers at one time.

### 2 Empirical background

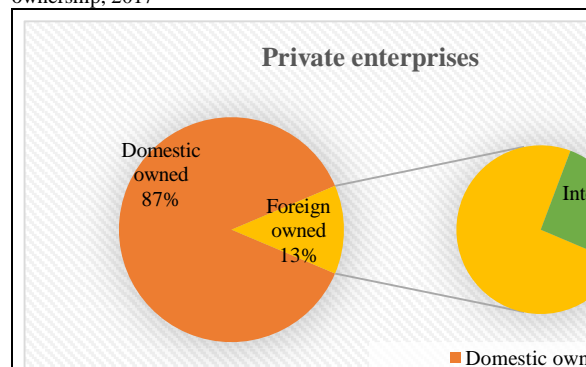
During the last two decades the Slovak economy experienced the so called „investment driven stage“ by Porter (2011), that is characterized by high rate of capital inflows - as the economy is not enough prepared to have been driven by innovation – primarily the labor-intensive industries are targeted by foreign direct investors. Slovakia has become an „assembly workshop“ for Western and Northern European automotive and electrical products manufacturing for a long term. Well trained technical specialists and relatively cheap workforce represented an excellent opportunity to increase their profits by outsourcing some of the manufacturing operations to Slovakia (Liptáková, 2015; Kádár 2017). According to the current (2017) Sario report, the car industry - directly by the 3 car producers: VW, PSA, Kia and their Tier 1 suppliers - employs cca. 80.000 people. Together with subcontractors and other related sectors and services, the automotive industry gives jobs to more than 200.000 people, and generates 13 percent of the country’s gross domestic product (GDP). Production of transport vehicles, which for the first time in 2010 represented more than 20 percent of total industrial sales and gradually increased its share up to 35% in the first half of 2017 (Sario, 2017), played important role in bringing down unemployment from the near 20 percent levels experienced at the beginning of the century. On the other hand, labor migration had even bigger impact on the decline in the unemployment rate. It is complicated to get accurate information about work migration abroad. However the official statistics display 134.000 Slovaks worked abroad in 2014, local experts presume, that the exact number may be even higher. According to Baláž, prognosticator at the Slovak Academy of Sciences, the realistic estimation may be up to 250.000 active workers (Minarechová, 2015). By 2007, the destinations Slovaks headed to, were mostly the Czech Republic, followed by the UK, Hungary and Austria. Two thirds of them were men, 70 percent were aged 25-44 years, 80 percent had secondary education and 15 percent university education, based on Infostat data. After the beginning of the crisis in 2008 the number of Slovaks working in Austria has increased significantly, while the interest in working in the UK has declined (Jurčová, 2015).

Latest happenings, which can have significant effect on the situation at the Slovak labor market are Brexit, as an external influencing factor, and the current development of FDI inflow experienced particularly within automotive industry, as global carmakers are extending their production in Slovakia to the entire production process, most cases including research and development – as an internal factor influencing the current situation at the Slovak market.

The Automotive Innovation Slovakia Survey 2014, published by KPMG in December 2014 noted that as many as 26 subcontractors in Slovakia have their own R&D centers, employing altogether 700 people, and some 16 others are set to launch within three years. The number of big car manufactures hosted by the country reaches number four, as in 2015 the British Jaguar Land Rover (JLR) carmaker, owned by the Indian Tata Group, announced its intention to set up its new manufacturing plant in western Slovakia. The reported volume of investment in 2016-2018 reaches €2 billion. Total employment at the facility will initially exceed 1.500 and expected to climb close to twice the amount, while total employment at subcontractors could initially reach 5.000 and could gradually climb to nearly 9.000 overall. Analysts and market watchers nonetheless warn that the availability of labor force might be a problem as several companies are already complaining about the lack of qualified labor force. Another 3 car factories that have earlier settled in the country are KIA Motors – 3800 employees, PSA Peugeot – 3500 employees, and Volkswagen Slovakia – 9900 employees (Liptáková, 2015). The statistics show that the proportion of large enterprises accounts only 1% of the total number of businesses, while the remaining 99 percent belong to the category of small and medium-sized enterprises (SME). SME's are seen a substantial segment of the Slovak economy, offering job opportunities to nearly three quarters (73.6%) of the active work force and participated with more than half (52.8%) in the creation of added value. (Slovak Business Agency, 2016) Based on the data processed by the Slovak Statistics Office (2017), there has been 210.766 registered business ventures in 2017, out of which only 644 are large enterprises.

The dominance of domestic owned companies can be observed based on the data, collected by the Slovak Statistics Office. The total number of registered private entities is 210.187, out of which 26,208 are foreign owned.

Figure 1 Private enterprises registered in Slovakia categorized by ownership, 2017



Source: own processing according to the data collected by the Slovak Statistical Office

The above-mentioned trends raise the question of what tools employers are using to acquire and retain talents. Whether the demonstrated change of circumstances have any effect on the companies' HR practices, at all? Let's have a look at the data collected and analyzed by the Slovak National Bank on changes in wage and labor productivity compared to the last year (Table 1). The average nominal wage increased by 3.3% during 2016. At the private sector and at the whole economy, real wage growth reached almost the level of the pre-crisis period (i.e. from Q1 2007 to Q3 2008).

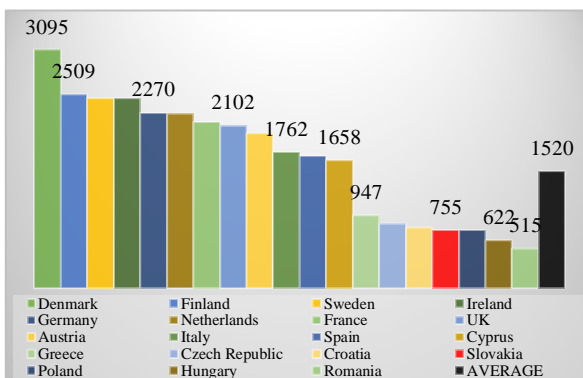
Table 1. Wages and labor productivity (annual change in percentage)

	Q1	Q2	2016 Q3	Q4	Q1-Q4	2017 Q1
Average wage (headline)	3.3	2.7	3.3	3.6	3.3	3.5
Consumer price inflation	-0.5	-0.7	-0.7	-0.1	-0.5	0.9
Average real wage (headline)	3.8	3.4	4	3.7	3.8	2.6
Average wage (ESA 2010)	2.7	1.8	2	3.3	2.5	2.6
Compensation per employee (ESA 2010)	2.2	1.4	0.8	2.5	1.8	3.5
Nominal labor productivity (ESA 2010)	0.7	1.1	-0.1	0.3	0.5	1.9
Real labor productivity (ESA 2010)	1.1	1.5	0.5	0.4	0.9	1

Source: own processing

The report says, that behind the wage growth stays the growing demand for labor, and the perceived shortage of skilled labor. Wage levels are expected to be influenced in the next quarters by labor productivity and profit growth. (National Bank of Slovakia, 2017) An important question is whether the current average wage of EUR 755 will be able to compete for Slovak workforce in the open European labor-market. Considering the significant difference in average wages inside the European Union (Figure 2) we have no reason to be optimistic. Of course, various other aspects must be considered when choosing a job, not to mention if this involves change of residence as well. But it is also a fact that wage equalization cannot be the goal of foreign investors. They are probably going to find some alternative way to attract local workforce, or get it from other countries with even lower wage expectations.

Figure 2 List of European countries by average wage 2017



Source: Fisher, 2017

### 3 Theoretical Background

This study investigates the characteristic features of recent compensation practice at the Slovak labor market. First base of the research is the existence of non-financial compensation forms that have vital influence on employee engagement and retention (Messmer 2007; Myšková et al. 2016; Gavurová and Glova, 2012a; Sungatullina and Neizvestnaya, 2017).

The category of 'employee benefits' comprises the whole range of non-financial 'reward tools', including those quite unrelated to performance (Hitka-Sirotiaková, 2011). There is, in fact, no company which does not provide some benefits to its employees. The three most important types are as follows: firstly, mandatory or compulsory benefits, whilst a second group, serving to improve the living or working conditions of employees (Snell-Bohlander, 2007). The third are distributed on the basis of the social needs of employees. One strategic issue of the reward system is the decision making process involved in providing employee benefits. The possibilities are:

- fixed system – in which the benefits are identical for all employees,
- flexible system – which permits free choice from several forms of benefit.

Traditional reward systems have a fixed character, in that they offer similar benefits to everyone, even if, perhaps, subject to a value- or quantity determining formula. Administration is relatively simple, but the system itself is quite inflexible (Lorincová, 2018; Mura, 2017). The ‘cafeteria’ model is one of the newer solutions in the field of reward management; it originated in the USA, although by now it is used worldwide. The greatest success in Europe was achieved in the UK, but, due to taxation rules in Germany and Austria, the model is relatively rarely used in these countries (Kasper-Mayrhofer, 2002).

Employee benefits have a great importance in creating a pleasant and motivating working environment (Išoraitė, 2013; Ubrežiová et al., 2015; Vlacseková-Mura, 2017). Since it is an important area for both workers and employers, a wide range of surveys are being carried out around Europe to monitor employee benefits.

Taking into account several researches conducted by local consulting firms and university research teams as well, as a comparative basis for our research we have chosen the research on employee benefits carried out by Cranet International Research Network. In the research of HRM model in Europe the previously mentioned Cranet researches have played pioneering role. “The Cranfield Network on International Human Resource Management, launched in 1989, was established to meet the need for ready access to information on best practice and comparative performance within Europe and globally. Cranet is now an established research collaboration, coordinated by Cranfield School of Management, Cranet is the acknowledged leader in all aspects of international human resource management, both theoretical and practical, with a distinguished reputation worldwide. The Network itself is a collaboration between over 40 universities and business schools” (Cranfield.uk).

### 3.1 Cranet research on employee benefit practice

The questionnaire of Cranet research consists of seven parts. Questions on incentive schemes are contained in part five. The answers have been analyzed on the basis of three major samples - the whole world, Central and Eastern European countries and Slovakia.

#### 3.1.1 Characteristics of participating organizations

Table 2. Repartition of organizations in the international Cranet sample by ownership form

Sector	All	CEE	Slovakia
Private sector	69.50%	71.70%	90.10%
Public sector	22.70%	25.20%	8.80%
Nonprofit	4.30%	1.30%	0.00%
Mixed ownership	3.50%	1.80%	1.1%
All	100.00%	100.00%	100.00%

Source: own processing according to the data collected by Cranet

Based on the analysis of the sample, it can be seen that most of the examined organizations belong to the public sector, the private sector is being presented to a lesser extent, while non-profit and mixed-type organizations have the lowest rate in the sample. The global breakdown by sector is similar to that of Central and Eastern European countries, but Slovakia has a significantly higher private sector share.

Table 3. Repartition of the organizations in the international Cranet sample by sector

Sector	All	CEE	Slovakia
Industry and Constructions	32.00%	35.10%	36.30%
Services	50.00%	51.00%	43.90%
Agriculture	3.10%	4.90%	3.80%
Other	14.90%	9.00%	16.00%
All	100%	100%	100%

Source: own processing according to the data collected by Cranet

Globally as well as in the CEE region, half of the organizations surveyed provide services and only a minimal part of the organizations are working in agriculture. The sectoral breakdown of each Central and Eastern European countries does not differ significantly from all the countries in the CEE region, the repartition of the Slovak sample is also similar to the whole sample. In the latest survey? There are fewer service providers and some more industrial manufacturing companies.

Table 4. Repartition of organizations in the international Cranet sample by size

Size – number of employees	All	CEE	Slovakia
less than 100	8.10%	10.00%	15.30%
100 – 250	23.90%	33.90%	47.30%
251 – 1000	40.00%	38.60%	22.90%
1001 – 5000	20.50%	14.10%	12.60%
more than 5000	7.50%	3.40%	1.90%
All	100.00%	100.00%	100.00%

Source: own processing

The most common company size of respondents is between 250 and 1000 employee headcount.

Proportion of large enterprises, over 5000 employee headcount is 7.5% of all respondents, while in Central and Eastern Europe it is even less, 3.4%. The majority of respondents in Slovakia belongs to organizations having 100-250 employees. Their proportion is significantly higher (47%) than in the region (34%) and the total sample (24%), and the proportion of companies employing more than 5000 people is only 2%.

#### 3.1.2 Application of flexible benefits

The research examines how the ownership, organizational size and sector of operation affect the application of flexible benefits. Considering the private sector, 44 percent of all respondents, as well as private sector organizations, and regional respondents use flexible form of benefits provision, while in Slovakia this figure is somewhat lower, 40% percent. In the public sector, there is a significant disparity relative to the proportion of flexible benefits, while it is 28% globally, 23% in the region, 44% in Slovakia.

Table 5. The proportion of organizations using flexible benefits by ownership category

Sector	All	CEE	Slovakia
Private sector	44.10%	43.60%	39.80%
Public sector	27.50%	23.30%	43.50%
Nonprofit	32.30%	9.10%	
Mixed (public & private)	34.50%	35.70%	33.30%

Source: own processing according to the data obtained during the research

Flexible form of benefits have been used in the highest proportion (44 %) at industry sector respondents, but the other sectors are either far behind. The proportions are even more balanced in the sample of Central and Eastern European region, but the industry is here also the leader (39%). The proportions are similar in the Slovak sample, 45% of respondents, providing

flexible benefits represent the industrial sector. The share of agricultural organizations is somewhat higher (40%) than at the aggregated and regional samples.

Table 6. The proportion of organizations using flexible benefits by sector

Sector	All	CEE	Slovakia
Industry and construction	43.70%	39.30%	45.30%
Services	37.00%	38.40%	38.30%
Agriculture	35.30%	33.80%	40.00%
Other	39.30%	35.20%	33.30%

Source: own processing according to the data obtained during the research

The Chi squared test shows significant correlation with the sector only for the aggregated sample, but the strength of the relation represented by the Cramer's V indicates weak relation, the value of the coefficient is 0.063. (The Chi square test cannot be performed in case of Slovakia.)

In relation of the organization size, there is no significant difference in the application of flexible benefit form. The largest proportion of respondents (46%) globally using flexible benefits are the organizations with over 5,000 employees, but the other categories are following them with 37 to 40%. The proportions are very similar as well as in Central and Eastern Europe. This value is somewhat higher (43,70%) in Slovakia, while its proportion is only 40% in the whole sample and in the regional as well.

Table 7. The proportion of organizations using flexible benefits by size

Size number of employees	All	CEE	Slovakia
less than 100	38.20%	36.10%	32.50%
100-250	36.80%	37.10%	39.50%
251-1000	38.10%	36.40%	40.00%
1001-5000	39.80%	39.80%	51.50%
more than 5000	46.20%	43.90%	40.00%
All	38.70%	37.40%	43.70%

Source: Composed by the authors according to the data obtained during the research

The Chi square test shows significant correlation between application of flexible benefits and the organizational size for the whole sample but the relation is very weak (Cramer's V=0,048). There is no significant relationship between the variables in the Central and Eastern European neither in the Slovakian sample.

#### 4 Empirical experiences

The research conducted among Slovakian employers in 2016 is based on a questionnaire comprising 10 kinds of question group. The questionnaire consists of the following main parts:

- name of the company and contact information,
- characteristics of the participants,
- benefits provided by participants ,
- granted benefits,
- flexible benefits,
- organizational features of the operation of cafeteria systems,
- cafeteria frame sums,
- operation of cafeteria systems in the changed tax environment,
- intention of the introduction of cafeteria system, if not used yet,
- future of benefits.

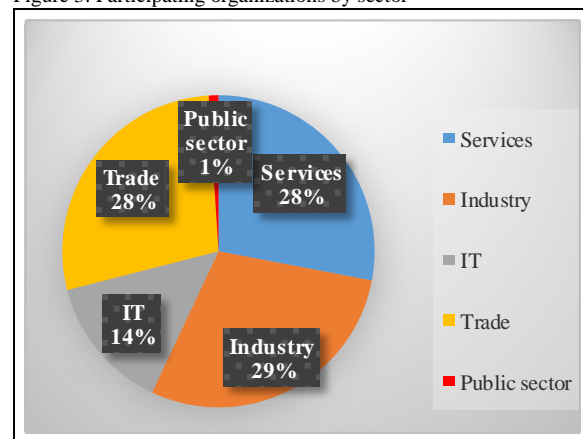
The findings of the report are based on the exertion of general statistical methods (average, frequency and repartition). For our research we had 85 completed questionnaires. The research has a benchmark character that is able to provide a basis for further

comparison, queries and research. The aim of the research is to picture of how respondents think about the current role of employee benefits.

#### 4.1 Research sample

99% of respondents belong to the private sector, and only 1% represents the public sector. Most of the business sector respondents operate in the field of industry, trade and services.

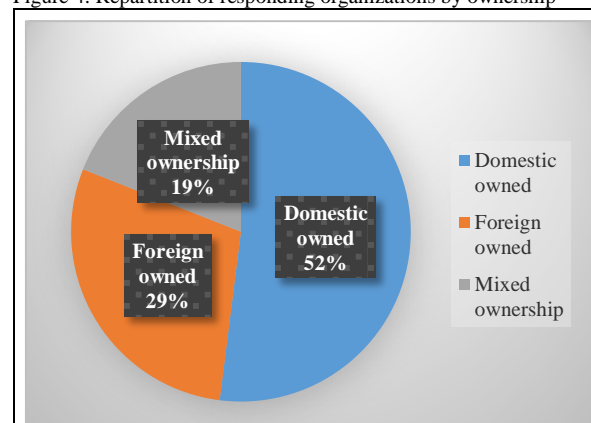
Figure 3. Participating organizations by sector



Source: own processing

Most of the respondents (52%) are domestically owned, while 29% are in foreign ownership. The remaining 19% are in mixed ownership.

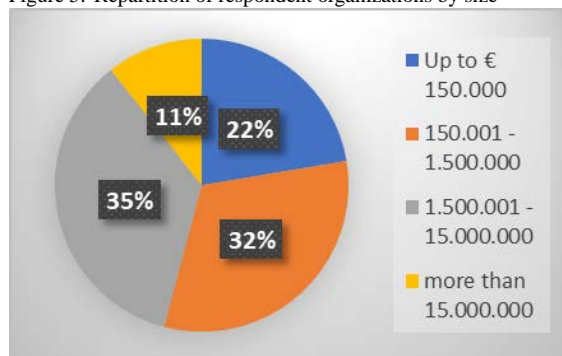
Figure 4. Repartition of responding organizations by ownership



Source: own processing

The dominance of small and medium-sized enterprises can be observed in the sample, but some of the companies surveyed are classified as large companies in terms of annual sales revenue.

Figure 5. Repartition of respondent organizations by size



Source: own processing

#### 4.2 Legal framework of benefits

Legal framework of employee benefits in Slovakia has been determined in the Labor Code, the Personal Income Tax Act, the Law on the Social Fund, the Act on Workplace Safety and Health Protection, the Travel Contribution Act, and the Act on Salary Pay for a Temporary Invalidation Worker.

Compulsory non-financial benefits are referred in Chapter 7 of the Labor Code, and the benefits listed therein are required to provide for all employee. The most basic such a benefit is the warm meal, for which every employee is entitled to, if works at least 4 hours a day, and is entitled to 2 hot dishes after 11 hours of work per day. According to the law, at least 55% of the meal price must be reimbursed by the employer.

The Labor Code requires the employer to insure the continuous training and development of the employee, with special regard to cases when the employee does not possess the skills required for the position, or if he changes his position to another. The law obliges not only the employer to provide trainings for the employees, but also the employee to participate in these trainings.

Pursuant to Article 7, §156 of the Labor Code, the employer is obliged to insure each of his employee for the case of permanent incapacity.

The employer is obliged to ensure the protection of health and life of his employees during the working time in all respect. One of the tools, named in the act is the provision of the necessary protective equipment and workwear, the cost of which is entirely borne by the employer.

The Law on the Social Fund stipulates that every economic entity that operates in the territory of the Slovak Republic and employs at least 1 manpower shall establish a social fund. The amount and the way of its use is accurately defined by the law.

#### 4.3 Taxation of benefits

The Slovak Income Tax Act, does not distinguish the earnings according to their financial character. Every earning regardless of whether it is earned in cash or non-financial benefit, have to be taxed. The income tax rate of natural persons is 19% up to €198.09/month, and 25% above. Nevertheless there exist some „fringe benefits” that are freed from under taxation.

4.3.1. The following benefits are payable free of tax charge in Slovakia

- Benefits funded by the Social Fund
- Mandatory travel allowance
- The value of required protective equipment and workwear
- Contribution to regeneration and recreation, as well as the cost of preventive medical treatment in some cases
- Repayment of costs related to the employee's position
- The amount spent by the employer to the employee trainings

- Meal allowance up to the prescribed limit of law (55% of €4,2), above it, the exemption exists only if it is financed by the social fund.
- Value of non-alcoholic beverages provided by the employer at the workplace.
- Requisition of recreational, health, educational or sports facility provided by the employer.
- Compulsory insurance paid by the employer.
- Wage supplements paid by the employer in case of the employees incapacity.
- Profession related and social benefits to members of the armed forces, armed security forces, Mountain Rescue Service, National Security Bureau, Fire Service, Military Service and the Slovak Information Service.
- Material rewards of firefighters and rescue teams.
- Sum of the wage premium paid according to the §32 of the Income Tax Act.
- Non-financial benefits from the employer's own products up to €200 only in the case of agricultural ventures.
- Social assistance in case of death of a worker's close relative up to the limit of €2000 per year.

Except for those named as an exception, all other benefits increases the tax base. The tax base, however, may be reduced by the so-called “tax-free part”. In 2017 this sum reaches the annual € 803,33.

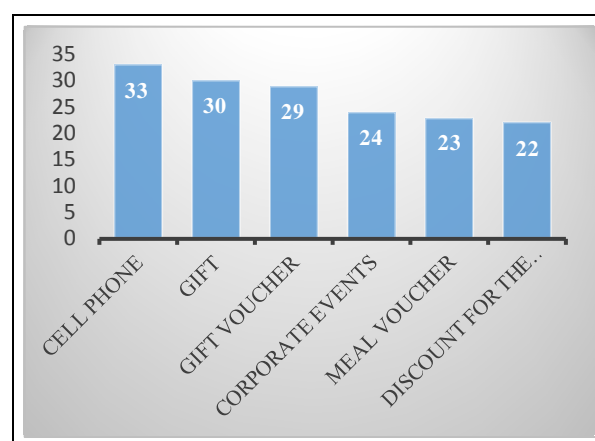
#### 4.4. Research results

Participant organizations provide eight kind of benefits on average. The amount of benefits offered is closely related to the size of the company.

Hot meal provided in or near the workplace, meal allowance, workwear required for safe work, as well as the necessary training, have been provided for all employee.

Based on the survey results we have found that, despite the tax free opportunity to support the employee to get to the workplace by the Social Fund, a relatively low proportion of employers chose this form of employee benefits.

Figure 6. Most often provided non-compulsory benefits by the 85 respondents

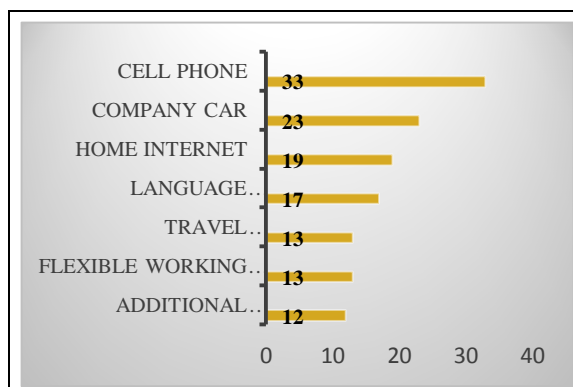


Source: own processing

Benefits, provided exclusively for certain groups of employees are company car for private access, cell phone for private use, vouchers of several cultural events, more payed holiday, flexible working time, as well as professional or language trainings.

Figure 7. Benefits provided exclusively for certain groups of employees

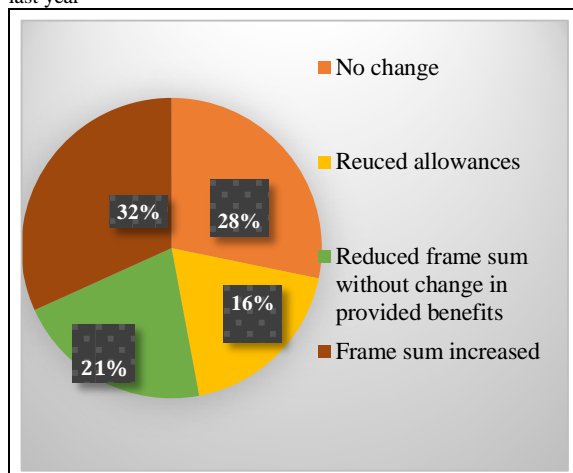




Source: own processing

Only 28% of the participating organizations did not changed the amount spent for benefits compared to the last year. 32% of respondents increased the frame sum spent on employee benefits. 40% reduced the frame sum or the number of provided benefits.

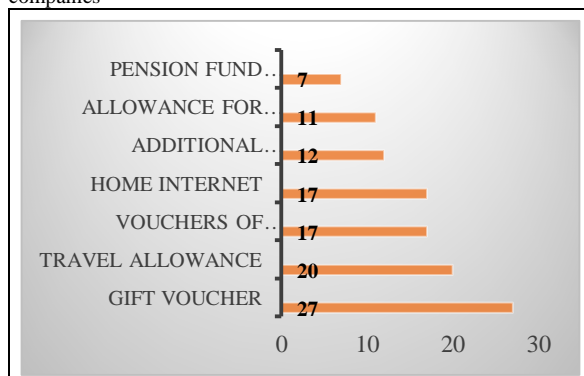
Figure 8: Changes in value spent for benefits compared to the last year



Source: own processing

According to the respondents' answers, most of the organizations provide flexible form benefits. Only 22% of participating organizations do not allow free choice between benefits for any group of employees.

Figure 9: Most frequent cafeteria items in 2016 at the respondent companies



Source: own processing

The validity of the following two hypotheses were analyzed during our study:

*Hypotheses 1: There is a connection between the main factors involved in the development of the benefit system and the sectoral distribution of the companies.*

In the context of our first hypothesis we have examined the following three factors:

- the benefit system increases employee motivation,
- the benefit system means predictable, well-designed costs
- applying benefit system contributes to increasing employee satisfaction

Table 8. Statistical analysis of the sectoral affiliation (N=85)

Source: own processing

Important factors		The benefit system increases motivation among employees	The benefit system means predictable, well-designed costs	Applying the benefit system contributes to increasing employee satisfaction
Sectors				
Industry	Mean	3.27	3.20	2.92
	N	26	26	26
	Standard deviation	1.31	1.01	1.16
Service	Mean	3.78	3	3.46
	N	59	59	59
	Standard deviation	0.95	0.85	1.25
Sum	Mean	3.62	3.01	3.29
	N	85	85	85
	Standard deviation	1.09	0.93	1.24

From the table above, we can see that on average, the highest values were achieved by the motivational factors. In the case of services, the value is 3,78; while in industry 3,27. Increasing employee satisfaction was moderately important factor in the industrial sector, while it was far more important in the service sector. In most cases, the size of the standard deviation exceeds 1, and this number indicates that the respondents considered these criteria to be very important or less important in almost all cases. Based on the ANOVA test, there is a statistically significant difference on the 95% confidence interval level (Sig = 0,046) between the following variables: the benefit system increases motivation among employees; and sectoral affiliation. However, the connection between these variables was weak (Eta = 0,047) This test was also carried out on the two remaining criteria. We also found statistically significant difference (Sig = 0,067) in the case of employee satisfaction, however, as in the previous case, there is a weak connection between the two variables (Eta = 0,04). At the third criterion we didn't found statistically significant difference. According to our analysis we can say that there is a connection between the main factors involved in the development of the benefit system and the sectoral repartition of the companies.

*Hypothesis 2: There is a connection between companies with large revenue and the number of provided flexible benefits.*

In the following figure we can see, which benefits were considered as flexible benefits by the examined companies.

Table 9. List of the flexible benefits

Flexible benefits	Percentage
catering at work (canteen)	19.40%
gift card	16.70%
support public transportation	11.60%
internet	9.30%
PC	8.80%
vouchers for cultural events	8.30%
none	6.50%
season ticket (public transportation)	5.10%
sport events vouchers	5.10%
pension fund	2.80%
Insurance above compulsory insurance	2.30%

support of housing	1.90%
supporting sport activities	1.40%
vouchers for recreational activities	0.90%
Sum	100%

Source: own processing

We can see at the table above that the most popular flexible benefits are the following: canteen, that is provided by 19,4% of respondents. This is followed by the gift card 16,7% and 11,6% provide travel allowance. Among the least-used flexible benefits are the following: vouchers for recreational activities (0,9%) and supporting sport activities (1,4%).

Table 10. Number of provided flexible benefits according to revenue categories (N=85)

Number of flexible benefits	0	1	2	3	4	5	6	7
0 – 300 000	8	7	13	8	6	0	0	0
300 001 – 15 000 000	6	3	6	6	8	3	2	0
15 000 001 <	0	3	0	3	1	0	1	1
Sum	14	13	19	17	15	3	3	1
Mean	2.38							
Standard deviation	1.66							

Source: own processing

At the table above, we can see how many types of flexible benefits have been provided to the employees. In 14 cases companies do not provide any flexible benefit to their employees. They are mainly small businesses. Most companies offer two, three or four flexible benefits to their employees. There are some companies, offering five, six or seven kind of flexible benefits. Their revenue is above 10 million, they represent the biggest companies of our sample.

The conducted ANOVA test between the variables of the number of flexible benefits and the sales revenue showed the following results: There is a statistically significant difference (Sig = 0,034) on the 95% confidence interval level, but the connection between the two variables proved to be weak (Eta = 0,079). The size of the standard deviation is 1,66, which shows us how much we differ from the average number of flexible benefits. According to our analysis there is relationship between the number of provided flexible benefits and the size of the company by annual revenue.

## Conclusions

Our examination and the international Cranet research of established reward practice in Slovakia revealed, that most of the organizations in Slovakia consider employee benefits as an indispensable compensation tool. There is almost no employer that does not provide something beyond mandatory benefits. As benefits provision is a general trend in Slovakia and in the EU, no employer can avoid it. Providing more benefits and making free choice available between them is considered as general mainly at large enterprises. The statistical analyses have proved that the number of provided benefits is in relation with the company size. The respondents, providing only mandatory benefits represents the category of smallest ventures in the sample. Based on the observation of the forms of provided benefits we can conclude, that biggest part of benefits have been used to motivate specialized groups of employees. Benefit forms that are used to support all employee are very rarely used. Such kind of a benefit is the travel allowance, which in spite of that it could be funded by the social fund, relatively small proportion of employers provide it. Since the basic level of social care of employees is the employer's duty prescribed by the law, most of the employers consider them as sufficient contribution in case of operative workforce. Retention and motivation of specialists and

professionals are considered as the most important HR challenge. The respondents' answers point out, that employers find employee benefits as an effective and useful motivation tool. Benefits, provided exclusively for certain groups of employees are company car for private access, cell phone for private use, vouchers of several cultural events, more payed holiday, flexible working time, as well as professional or language trainings.

According to the research, conducted by Cranet research center, it can be stated that Slovak employers are not in the leading position in terms of employee benefits provision in comparison with other EU countries. Taking into consideration, that the average wage in Slovakia is not competitive at the common European labor market, in terms of employee benefits they should be more powerful. Moreover, 40% of respondents in our sample reduced the provided benefits, or the frame sum, compared to the last year.

Overall, it can be stated that despite the fact that respondents consider employee benefits as an important motivation tool they still do not use this alternative form of compensation to the appropriate extent.

The present situation in the labor market would justify the expansion of the frame sum and the number of provided benefits as well as the introduction of new, innovative benefit forms in order to increase employer competitiveness. Presumably this trend may be expected in the future. The authors are planning to repeat the research, and monitor the changes of compensation practice at the Slovak labor market.

## Acknowledgement

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## STRATEGIC HUMAN RESOURCES MANAGEMENT IN SLOVAKIA

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This paper is an outcome of research projects: „Exploring concepts of human resource management systems in relation to the specifics of competitive business models of existing organizations of the European Business Area, VEGA No. 1/0609/16.

**Abstract:** Our research is focused on examining the human resources management systems in relation to the specificities of organizations operating in the European Economic Area. The object of our research are differences in Human Resources Management (HRM) practices of organizations in the field of Strategic Human Resources Management in Slovakia. The main goal of the study is to analyze an association between the existence of Human Resource department and each of following strategies/statements – Company strategy, Ethical Codex, Human Resource Management strategy and Corporate social responsibility statement. The methods used in data gathering were the standardized questionnaire predominantly gathered through an online and email survey, combined with an in-person visit, paper survey, and telephone call to support return rate. The Chi-Square Test of Independence and the coefficients for determining the association of the individual variables for the nominal data were Cramer's V, and the Phi coefficient. The data were analyzed in SPSS statistical software. Hypotheses were tested at a significance level of  $p \leq 0.05$ . The results confirm statistically significant dependence between the researched variables – the existence of Human resource department and each of tested strategies – Company strategy, Human Resource Management strategy, Corporate social responsibility statement and Ethical codex. We confirmed moderate association between the existence of Human resource department and Human Resource Management strategy and the existence of the Human resource department and Ethical codex.

**Keywords:** Human Resource Management, Business strategy, strategic management, Cranet

### Introduction

Strategic Human Resource Management (SHRM) has become a dominant approach to Human Resource Management (HRM) policy over the last 30 years. Based on Armstrong and Taylor (2014) strategic Human Resource management takes the notion of Human Resource Management as a strategic, integrated and coherent process and associates it with an approach to management that involves adopting a broad on long-term view of where the business is going and managing it in ways that ensure that this strategic thrust is maintained. Towards the end of the twentieth century, human relations are increasingly perceived in management theory as a strategic area of expertise that contributes to sustainable organizational success. One of these contributions was defined by David Ulrich in 1997: implementing a strategy, enabling change, enhancing employee efficiency and increasing efficiency. The need to define future developments in the management of human resources in the European Economic Area is so urgent that we have decided to cover selected specifics of strategic human resources management systems in Slovakia. Dave Ulrich has combined two dimensions and has created human resource roles that lead to the development of people and businesses along with implementation. It is essential that the human role becomes a more powerful and more influential function, because it champions many elements that constitute the business cycle, but its existence can also lead to other functions and departments becoming dehumanized. The problem lies in how human resources can do more without trying to do more to lessen people. Everyone should have a chance for growth and development, HR should be clear about this because businesses grow by combining opposites.

### 1 Literature Review

Several authors (Becker and Huselid 2006; Khili and Wang 2006; Purcell and Hutchinson 2007; Teo and Rodwell 2007; Stanton et al. 2010) have paid attention to the issue of execution and implementation of HRM policies throughout the SHRM approach. The failure to implement formal policy and the experience of HRM practices have been helpful in understanding polarities in HRM.

CEOs, middle and line managers are key players in implementation (Mayrhofer et al. 2004; Purcell and Hutchinson 2007). The CEO provides sanity to HRM policies, commits resources and influences within-group agreement within the organisational hierarchy (Bowen and Ostroff 2004; Bartram et al. 2007; Stanton et al. 2010). Middle and line managers implement HRM policies (Purcell and Hutchinson 2007; Teo and Rodwell 2007). CEO, middle and line managers have been understood as the key stakeholders for supporting employee commitment and they are expected to behave in comply to it towards employees, too.

Implementation of HRM policies have been strengthen by CEO support and consistent messages by line and middle managers and employees. Desired employee behaviour, the link between HRM and performance and the relevance of the policies are the key outcomes. At the same time, the HR policies need to be perceived as fair and be understood as the agreement among principal decision-makers and legitimacy of authority (Bowen and Ostroff 2004; Stanton et al. 2010). The use of cultural and structural changes in developing effective HRM systems, employee involvement, family – friendly policies and making HRM departments accessible have been contributed to effective implementation (Khilji and Wang 2006). The implementation of HRM involves also political aspects (Bartram et al. 2007; Sheehan, Cooper, Holland and De Cieri 2007), social, cultural and power factors. Innovative methods in management are described in Remenova (2016, 2017).

Karazijene and Jurgelevicius (2016) propose expanded concept of human capital differentiating it into three dimensions (qualitative, quantitative and value orientation) and empirically apply this concept for European countries. They believe: "...that classical understanding of human capital as skills, knowledge and educational attainment is incomplete. The values and attitudes are embodied in individuals the same as skills and knowledge. Having high level of educational attainment can be treated only as necessary but not sufficient requirement for human capital's value growth." They assumed that value orientation is complementary for human capital value creation. The results revealed that: "... societies with higher qualitative dimension of human capital possess with more tolerance, more openness for different individuals with various cultural backgrounds, trust people more and are more motivational. The strong and positive relationship has been identified between these two dimensions. Scandinavian and Western European countries scored the highest points. Meanwhile Eastern, Central and Southern European countries were categorized as countries with low and very low scores." Research has been pointed out the benchmark group of the level of accumulated human capital and strategic orientation for policy makers: "...essential and critical to understand the significance of expanded human capital concept is a key factor for economic development especially in the context of knowledge based economy."

Brewster (2007) is well known European thinker on perspective on Human Resource Management (HRM). It addresses issues through comparative analyzes of human resources management systems, conceptual approaches, and in the context of national disparities that make it possible to look for differences and similarities in human resources in Europe. Beer et al. (2015) explained in his research how the subject of Human Resources Management has been developed during last 30 years. He identifies the importance of a wider view of stakeholders to practitioners and how academic studies on the periphery of HRM are beginning to adopt such a view. "We need to take a wider, more contextual, more multi-layered approach founded on the long-term needs of all relevant stakeholders..." Montemayor (1996) has executed seven theoretical propositions concerning the link between business-level competitive strategy and pay policy. 261 responses to a national survey show that high-performing firms whose strategy is dominated by Cost Leadership, Innovation, or Differentiation tactics adopt different pay policies. Further his analysis shows that internal firm

performance has been associated with the lack of fit between pay policy and business strategy. Results of the survey support the necessity for a contingency approach in the design of pay policy.

Remenova et al. (2018) in their research determined the influence by the functional area of control, the level of management, the managerial position, the age of the manager, the size and composition of the team. This research shows that the size of the team is not related to the level of control that depends on the functional control area. The age of the manager is a weak indicator of the sustainability on the management position under the conditions of the current management.

## 2 Research methodology and characteristics of research sample

A research sample of the survey, based on the international CRANET survey, implemented in 2017, contains responses from 181 respondents. Due to the fact that the survey has some continuity and awareness in the HR leadership community in Slovakia, as well as a combination of personal meetings and electronic data collection tools, a high return on replies (98.15%) was achieved.

The subject of the study are processes, procedures, methods and practices of the various functions of the Human Resources systems and they are forming the work potential and managing the work performance.

In 2017 the survey was extended across the strategic and operational position of personnel units according to the Ulrich's model of four roles (Ulrich, 2009), and characteristics of the business model according to the CANVAS methodology. Questions are a combination of closed and open questions, predominantly closed, based on Likert's scale.

The data obtained through the questionnaire method are nominal (existence of HR department and existence of strategies/statements). Two-dimensional inductive statistics methods were used to test the dependence of the nominal variables by a non-parametric test - The Chi-Square Test of Independence, and the coefficients for determining the dependence of the individual variables for the nominal data were Cramer's V, and the Phi coefficient. The Cohen scale was used to interpret the value of coefficients (Cohen, 1988). The data were analysed in PSPP statistical software. Hypotheses were tested at a significance level of  $p \leq 0.05$ ; while maintaining the primary rule of the Chi-Square Test of Independence, where the theoretical frequencies did not fall below a value of 5 in 80%, and for other values  $X > 1$  applied. Null and alternative hypotheses were tested, which we present in individual results.

The object of the survey are businesses established to generate profit as well as organizations of a non-profit nature, state administration or public service organizations in Slovakia. The characteristics of the composition of the sample in terms of size by number of employees are shown in the table. Micro businesses and family businesses (32.7%) make up a third of the sample, and large businesses (7.2%) are also represented. For purposes of investigation, we will further analyse organizations with more than 50 employees.

Most of the organization's research sample operates in the private sector (86.4%), other organizations operate in the public sector, or in a mixed-ownership organization. More than a third (37.2%) of organizations have established their activities largely worldwide, others are national (31.4%) or regional (25%). We record regional coverage in particular for small businesses that will not be further investigated.

### 2.1 Research results

In table 1 we can find the results concerning the existence of HR department in company. More than 66% of respondents confirmed to have HR department. We compared our results with Cranet survey (2017), based on which most organizations in the EU have an HR department. The highest proportions with an HR department are in Italy (100%), Spain (99.0%) and Germany

(98.5%) and much less in Lithuania (73.8%), Croatia (75.4), Cyprus (77.0%) and Slovenia (77.2%).

Table 2 presents our findings about the position of HR directors on the board of directors or equivalent top management team within the company. HR directors are the members of the board in 55% of companies. These results were compared with Cranet survey (2017), based on their results, among EU member states, Sweden confirmed 89.0% and Spain 84.7% of HR managers on the board. Less than half of this proportion of HR managers have a position on the Board or equivalent in Latvia (29.9%) and in Cyprus (34.5%). (Cranet, 2017)

Tab. 1: Existence of HR department in company

<i>Existence of HR department in company</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
<i>Yes</i>	120	66.3	71.9
<i>No</i>	47	26.0	28.1
<i>Total</i>	167	92.3	100.0
<i>Missing answer</i>	14	7.7	
<i>Total</i>	181	100.0	

Source: Own processing

Tab. 2: Place of HR manager on the board or top management

<i>Place of HR manager on the board/top management</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
<i>Yes</i>	100	55.2	66.7
<i>No</i>	50	27.6	33.3
<i>Total</i>	150	82.9	100.0
<i>Missing</i>	31	17.1	
<i>Total</i>	181	100.0	

Source: Own processing

Following tables 3, 4, 5, 6 presents our results in the area of strategies existing in written form. The existence of Company strategy was confirmed by more than 61% of respondents. This number is very low in comparison with Cranet survey (2017), where more than 80% of respondents confirmed the existence of Company strategy in written form. For detail results see table 3.

Tab. 3: Existence of Company strategy in written form

<i>Company strategy in written form</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
<i>Yes</i>	111	61.3	69.4
<i>No</i>	49	27.1	30.6
<i>Total</i>	160	88.4	100.0
<i>Missing</i>	21	11.6	
<i>Total</i>	181	100.0	

Source: Own processing

Table 4 represents our findings about the existence of HR strategy in written form. We found out only 43% of respondents who have formal HR strategy. Less prevalence of HR documents was confirmed as well by Cranet survey (2017), however they confirmed higher number of companies – 67.1% worldwide having the HR strategy. For detailed results see table 4.

Tab. 4: Existence of Human resource strategy in written form

<i>HR strategy in written form</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
<i>Yes</i>	78	43.1	47.9
<i>No</i>	85	47.0	52.1
<i>Total</i>	163	90.1	100.0
<i>Missing</i>	18	9.9	
<i>Total</i>	181	100.0	

Source: Own processing

Ethical codex in written form is used by more than 60% of companies, as it is confirmed by table 5. Formal Corporate social responsibility statement was confirmed by 42% of companies.

Comparing this result with Cranet survey (2017), where more than 50% of worldwide companies have this document, we see our results as very low.

Tab. 5: Existence of Ethical codex in written form

<i>Ethical codex in written form</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
Yes	110	60.8	67.5
No	53	29.3	32.5
Total	163	90.1	100.0
Missing	18	9.9	
Total	181	100.0	

Source: Own processing

Tab. 6: Existence of Corporate social responsibility statement in written form

<i>Corporate social responsibility statement</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>
Yes	76	42.0	47.2
No	85	47.0	52.8
Total	161	89.0	100.0
Missing	20	11.0	
Total	181	100.0	

Source: Own processing

We tested following hypotheses:

- There is an association between the existence of the HR department and the Company strategy.
- There is an association between the existence of the HR department and the Human Resource/Personnel strategy.
- There is an association between the existence of the HR department and the Ethical codex.
- There is an association between the existence of the HR department and the Corporate social responsibility statement.

#### *Association between the existence of HR department and the Company strategy*

For deeper analysis of relationship between the existence of the HR department and the Company strategy, following hypotheses were formulated:

H<sub>1</sub>: There is an association between the existence of HR department and the Company strategy.

H<sub>0</sub>: There is no association between the existence of HR department and the Company strategy.

Tab. 7: Strength of Association between the existence of HR department and the Company strategy

<i>Category</i>	<i>Statistic</i>	<i>Value</i>
Nominal by Nominal	Phi	.27
	Cramer's V	.27
N of Valid Cases		154

Source: Own processing with PSPP

We rejected null hypothesis H<sub>0</sub> at the significance level of  $p \leq .05$ , and accept alternative hypothesis H<sub>1</sub>. There is statistically significant dependence between the researched variables ( $p = .001$ , ChiSQ = 11.08, df = 1). Based on the results, we can state, that the existence of implemented company strategy directly depends on the existence of HR department, with moderate strength of this association  $V = .27$ .

#### *Association between the existence of HR department and the Human resource management strategy*

For deeper analysis of relationship between the existence of HR department and the Human resource management strategy, following hypotheses were formulated:

H<sub>1</sub>: There is an association between the existence of HR department and the Human resource management strategy.

H<sub>0</sub>: There is no association between the existence of HR department and the Human resource management strategy.

Tab. 8: Strength of Association between the existence of HR department and the HRM strategy

<i>Category</i>	<i>Statistic</i>	<i>Value</i>
Nominal by Nominal	Phi	.36
	Cramer's V	.36
N of Valid Cases		154

Source: own processing with PSPP

We reject null hypothesis H<sub>0</sub> at the significance level of  $p \leq .05$ , and accept alternative hypothesis H<sub>1</sub>. There is statistically significant dependence between the researched variables ( $p = .000$ , ChiSQ = 19.93, df = 1). Based on the results, we can state, that the existence of implemented Human Resource Management/Personnel strategy depends on the existence of HR department, with moderate strength of this association  $V = .36$ .

#### *Association between the existence of HR department and the Ethical codex*

For deeper analysis of relationship between the existence of HR department and the Ethical codex, following hypotheses were formulated:

H<sub>1</sub> There is an association between the existence of HR department and the Ethical codex.

H<sub>0</sub> There is no association between the existence of HR department and the Ethical codex.

Tab. 9: Strength of Association between the existence of Human resource department and the Ethical codex

<i>Category</i>	<i>Statistic</i>	<i>Value</i>
Nominal by Nominal	Phi	.30
	Cramer's V	.30
N of Valid Cases		154

Source: own processing with PSPP

We reject null hypothesis H<sub>0</sub> at the significance level of  $p \leq .05$ , and accept alternative hypothesis H<sub>1</sub>. There is statistically significant dependence between the researched variables ( $p = .000$ , ChiSQ = 13.7, df = 1). Based on the results, we can state, that the existence of the implemented Ethical codex depends on the existence of HR department, with moderate strength of this association  $V = .30$ .

#### *Association between the existence of HR department and the Corporate social responsibility statement*

For deeper analysis of relationship between HR department and the existence of *Corporate social responsibility statement* following hypotheses were formulated:

H<sub>1</sub> There is an association between the existence of HR department and the Corporate social responsibility statement.

H<sub>0</sub> There is no association between existence of HR department and the Corporate social responsibility statement.

Tab. 10: Strength of Association between the existence of Human resource department and the Corporate social responsibility statement

<i>Category</i>	<i>Statistic</i>	<i>Value</i>
Nominal by Nominal	Phi	.28
	Cramer's V	.28
N of Valid Cases		154

Source: own processing with PSPP

We reject null hypothesis H<sub>0</sub> at the significance level of  $p \leq .05$ , and accept alternative hypothesis H<sub>1</sub>. There is statistically significant dependence between the researched variables ( $p = .000$ , ChiSQ = 12.4, df=1). Based on the results, we can state, that the existence of the implemented Ethical codex depends on the existence of HR department, with moderate strength of this association  $V = .30$ .

### 3 Discussion

In comparison to results of HR model section based on Ulrich's approach part it can be concluded that organizations in Slovakia are highly process-oriented personnel departments that put their expertise in the concept of the content of human resources management systems and human resource management at the

operational level. Values that are declared as pillars of business organization strategies are modern to reflect the current challenges of managing people. Personnel departments are aware of the importance of formalizing strategic orientation as well as the importance of self-ability to contribute to process-based, as well as implementation-oriented, human orientation. Personnel departments of organizations are ready to contribute to the competitiveness of organizations through Strategic Business Partner roles methodically, value-fully and expertly, but they cannot confirm its position systemically. Human resources departments are part of the role of business partner, partner in adding value to the organization, the alliance of departments gain a formal position in senior management, as the presence of experts in managing people at the stage of creating a business strategy is desirable. However, staff specialists in Slovakia tend to concentrate more on the implementation of processes than on their outcome. This tendency needs to be changed by focusing on the results of their work, the efficiency and effectiveness they have achieved, and their meaning for the value-producing activity of the organization. In order to meet this requirement, the effectiveness of HRM processes should be measurable and their impact on other processes of the organization demonstrable. However, the HRM system can, by means of measurable results, only justify the significance of its activities and the extent to which it affects the overall performance of the organization, which is essential for acquiring the character of a strategic partner. The overall level of performance of the personnel roles in the companies is fair, according to the survey results, but it is possible to identify apparent reserves. Human resource management still dominates the focus on administrative support for processes. As a result, HRM focuses primarily on administrative support for management, and at the same time acts as an ombudsman for the staff of the organization. Both of these roles are established in the short-term management dimension. Partial lagging behind is the perspective-oriented role of strategic partners and agents of change. It can be a handicap at a time when people's management is perceived primarily by its contribution to business results, unlike a traditional approach that perceives this area as a service environment, focusing primarily on content and processes in this area. Competitive management of people gains a strategic character and becomes a creator of added value for all involved the organization, its employees as well as the customers. The increasing pace of change in all relevant business interacting environments raises the need to overcome existing views and patterns of behaviour that have been created and functioning in the past but are not sufficient today.

Some of the writers on sustainable HRM raise issues for the practice of HRM. These issues focus on the capabilities, the complexity and ambiguities associated with HRM execution and implementation and the role of HR professionals. The specific capabilities identified are those required to operate in the current and future environment (Wilkinson et al. 2001; Clarke 2011) and particularly in an increasingly fragile ecological environment (Renwick et al. 2011).

Processes of HRM have been framed within the SHRM literature predominantly within a rational view of organisations. The exception is Colbert (2004) who applies a complexity lens to the resource-based view. Although there is no explicit discussion within the sustainable HRM literature about the role of an emergent iterative approach to HRM process, this would appear to be an important process for enabling an exploration of the competing outcomes desired by various stakeholders (Kramar 2012). This literature provides a key to differentiating sustainable HRM from SHRM.

Paradoxes can be represented as two or more contradictions which operate simultaneously. Ehnert (2011) developed a paradox framework for sustainable HRM which illustrates the key tensions between the efficient use of people and maintaining the human capabilities, the tensions between efficiency and substance rationality and relational rationality, and developments over time. This is a very useful framework; however, it is unable to deal with the issue of execution and implementation. This

framework is represented in several papers (Bowen and Ostroff 2004; Becker and Huselid 2006; Purcell and Hutchinson 2007; Stanton et al. 2010) using an SHRM approach have paid attention to the issue of execution and implementation of HRM policies. These studies are useful in identifying the reasons for inconsistent understandings of HRM within an organisation, the failure to implement formal policy and the experience of HRM practices.

The emphases on the interrelationship between HRM and financial organisational performance is at the heart of SHRM. It is not at the heart of sustainable HRM.

Ehnert's (2011) definition of sustainable HRM can be modified to take into account these broader outcomes and variety of processes. Sustainable HRM could be defined as the pattern of planned or emerging HR strategies and practices intended to enable the achievement of financial, social and ecological goals while simultaneously reproducing the HR base over a long term. It seeks to minimise the negative impacts on the natural environment and on people and communities and acknowledges the critical enabling role of CEOs, middle and line managers, HRM professionals and employees in providing messages which are distinctive, consistent and reflect consensus among decision-makers.

In order to understand the actual practice of HRM, the factors influencing implementation need to be explicitly represented in a model. The sustainable HRM literature highlights some significant aspects of organisational outcomes which challenge the SHRM view of outcomes. Human outcomes, either for the purpose of organisational survival or for their own sake, are a consistent theme of this literature. In addition, some of the literature explicitly raises the importance of HRM practices for ecological outcomes. The identification of these outcomes has implications for the metrics and indicators of HRM performance. As mentioned previously, the identification and therefore the measurement of negative outcomes, not just positive outcomes, would be an important component of sustainable HRM. In addition, these outcomes would include outcomes, within the organisation and outside the organisation.

SHRM developed in a dynamic turbulent context in which institutions such as trade unions were being challenged and the nature of work was changing with the creation of more part-time and service work. The globalisation of business fuelled competition between organisations and this fostered increasing concern on building shareholder value. It was argued that HRM practices could create this value and deliver results to the business through people (Ulrich 1997; Ulrich and Brockbank 2005).

#### 4 Conclusion

The results of a quantitative survey in Slovakia in 2017 provide a basis for identifying current concepts of people management, including applications of modern methods and techniques, and modern approaches relevant to the competitiveness of the human resources management system under conditions of digitization trends in the era of the industry 4.0.

The results confirm statistically significant dependence between the researched variables – the existence of the Human resource department and each of tested strategies – Company strategy, Human Resource Management strategy, Corporate social responsibility statement and Ethical codex. We confirmed the moderate association between the existence of Human resource department and Human Resource Management strategy and the existence of the Human resource department and Ethical codex.

Based on these analyses in correlation to Ulrich's HRM model these results bring us to the conclusion, that personnel departments of organizations in Slovakia are ready to contribute to the competitiveness of organizations through Strategic Business Partner roles methodically, value-fully and expertly, but they cannot make strategic position confirmed systemically.

Human resources specialists in Slovakia tend to concentrate more on the implementation of processes than on their outcome. This tendency needs to be changed by focusing on the results of their work, the efficiency and effectiveness they have achieved, and their meaning for the value-producing activity of the organization. The outcomes of sustainable HRM can be measured by evaluating organisational, social, individual and ecological outcomes. Measures would need to evaluate outcomes such as the quality of the employment relationship, the health and well-being of the workforce, productivity (organisational); the quality of relationships at work, organisation being an employer of choice and being recognised among a range of potential sources of labour (social); and job satisfaction, employee motivation and work-life balance (individual); use of resources, such as energy, paper, water use, production of green products and services and costs associated with work travel (ecological). The appropriate measures would need to be developed for an individual organisation and then cascaded down to all employees using HRM practices, such as role design, performance indicators and rewards. In this paper, we have given results of Strategic Human Resources Management research in Slovakia. Integrating Strategic Human Capital and Strategic Human Resources Management would help to increase our knowledge about human capital in general, not only in Slovakia. Strategic Human Capital focuses on human capital itself, Strategic Human Resources Management focuses on the HR system, without specifically studying the nature of human capital. Also, the process through which collective human capital emerges is typically not included in strategic Human Resources Management research, and the organizational context, which is important in Strategic Human Capital research, has received less consideration in studies of strategic Human Resources Management. Insights from strategic Human Resources Management can also help to overcome the limitations of Strategic Human Capital research. For example, the micro level view on human capital and multilevel approaches can help to strengthen Strategic Human Capital models. Taking the individual context into account by including psychological concepts such as motivation in relation to Strategic Human Capital can be helpful, as well as including psychological measurement rather than proxy-oriented measures (Boon et al., 2018).

### Limitations

Our study design also has some limitations that should be considered in the interpretation of our results. The sample selection was not random in the strictest sense because companies asked to cooperate were from a specific geographic area and industry and they self-selected themselves by agreeing to cooperate with us. Despite this, we think our research is of great value to research of Slovak Strategic Human Resources Management, managers and academics as it provides much information about the strategic management and shows a real image of their processes.

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### Primary Paper Section: A

### Secondary Paper Section: AE

# LIVING CONDITIONS AND INCOME INEQUALITY IN THE NUTS 2 REGIONS IN THE CZECH REPUBLIC AND THE SLOVAK REPUBLIC

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**Abstract:** Inequalities in the wealth of the population are part of every society's life. The unequal distribution of household incomes is considered to be one of the main causes of socio-economic disparities, not only from a social but also a territorial point of view. Household income disparities and their impact on economic growth are therefore a highly debated topic. We live in a modern society, whose living standards are constantly growing, however today we also meet groups of people who are still at risk of poverty, despite growing living standards. The main objective of the contribution is to analyze and evaluate the living conditions of the population in the regions NUTS 2 in the Czech and Slovak Republics in the interest of the design of measures to effectively reduce social inclusion poverty, or inclusion of marginalized population groups into society.

**Key words:** living conditions, income inequality, poverty, region

## Introduction

In 2004, the Czech Republic together with Slovakia became part of an important community of the European Union. However, this important step required a number of pre-accession measures. Today, the Czech Republic, together with the Slovak Republic, is part of an important community already in the second programming period 2014-2020, with the aim of "Supporting social inclusion, combating poverty and any discrimination". The European Union, with the support of the member states in the conflict against poverty, social exclusion and discrimination, seeks to strengthen the inclusive nature and cohesion of European society, in order to allow all citizens equal access to available resources and resources. Given the continuing poverty that currently affects up to 80 million community citizens, the European Union is also supporting this idea in its Europe 2020 strategy. As part of this strategy, the Czech Republic and Slovakia, as Member States, have set a national target of excluding up to 200,000 people from the risk of poverty. In view of the ever-increasing number of people at risk of poverty or social inclusion, measures must be taken not only to permanently reduce the unfavorable economic situation of the population but also to increase the quality of life and access to the opportunities offered by modern society (Pauhofová, 2016; Európa 2020).

## Objective and Methodology

The main objective of the contribution is to evaluate and compare the living conditions of the population in the Czech Republic and the Slovak Republic from the point of view of NUTS 2 regions. The contribution focuses in its essence on assessing socio-economic indicators in order to identify the causes that lead to the deepening of poverty and social inclusion of the population. The purpose of the contribution is to propose objective measures to reduce the number of people at risk of poverty and social inclusion, as well as measures aimed at removing socio-economic disparities between regions. The benefit of examining this issue is, above all, the need to point out the persistent differences in society with the need to find solutions to help vulnerable groups.

In addition to the main goal, we also set a number of partial goals that will contribute by:

- analyzing demographic and socio-economic factors affecting the level and quality of life of households in the individual regions of the Czech and Slovak Republics,

- processing statistical data for the need to perform calculations,
- processing of results and the identification of causes and problems related to the emergence of disparities,
- subjective evaluation of the obtained results and by designing effective measures for their solution.

In order to meet the main objective, together with its partial objectives, it was necessary to choose appropriate techniques and methodologies that include the application of statistical methods and techniques for efficient data processing and the interpretation of the obtained results.

The methodology of post-processing consists of the following steps:

- analysis of theoretical and empirical surveys, scientific articles and monographs focusing on the issues of social inclusion, poverty and living conditions of the population,
- analysis, acquisition and processing of statistical data and data from demography, labor market and social conditions,
- processing, analysis and evaluation of statistical indicators and results of mathematical and statistical methods such as:

### 1. Unemployment rate

$$u = \frac{U}{L} \cdot 100 \quad (1)$$

(U – Number of unemployed, L – Number of employed)

### 2. Total disposable income

$$yE, i = \frac{yH, i}{S_i} \quad (2)$$

(yH, i – Total Income, S<sub>i</sub> – Equivalent Income)

### 3. Risk of poverty rate

$$H(z) = \frac{q}{n} \cdot 100 \quad (3)$$

(q – Number of persons with income below the border 60%, n – Number of Inhabitants.)

### 4. Gini coefficient

$$G = \frac{1}{n} \left( n + 1 - 2 \frac{\sum_{i=1}^n (n+1-i)y_i}{\sum_{i=1}^n y_i} \right) \quad (4)$$

((n+1-i)y<sub>i</sub>) – Number of Inhabitants with degree of Income, y<sub>i</sub> – Average disposable Income)

### 5. Lorenz curve

$$L(p) = \frac{1}{E(X)} \int_0^{F^{-1}(p)} x f(x) dx \quad (5)$$

(f(x) – Income density/cost sharing, p – Cumulative Number of Individuals, - Corresponding Cumulative Value). E(X) = Average expected value of Incomes)

### 6. Scoring method

$$uLM = \frac{Us}{Umax} \quad (6)$$

(Us – Real value in row, Umax-Maximum value in row)

### 7. β convergence

$$\frac{1}{T} \log \left( \frac{y_{it_0+T}}{y_{it_0}} \right) = \alpha - \left( \frac{1-e^{-\beta T}}{T} \right) \log(y_{it_0}) + u_{it_0+T} \quad (7)$$

(α – Constant, t – Lower index (year), i – Lower index (Region), y<sub>it</sub> – (Income) in Reg. At the beg. of the year, y<sub>it+T</sub> – (Income) in Reg. at the end, u<sub>it</sub> – Variation)

- comparison of processed data with the application of graphical methods,
- recapitulation of the results obtained, suggestions and recommendations using the method of induction and deduction.

## 1 Living conditions and income inequality

Living conditions are among the main indicators of social group characters in society. Different approaches of social groups to wealth sources create inequalities. Inequality belongs to the socio-economic aspect that determines the way and quality of life of an individual or group, but also the position in society (Marger, 2011).

The term "living conditions" can also be understood as a set of factors and circumstances that directly affect the way and quality of life of the individual or group. From a theoretical point of view, however, several authors prefer the concept notion of "living standards" (Constanza, 2007).

Tuček (2003) defines the standard of living as the satisfaction rate of material and non-material needs, or the desire of the individual. These are a number of factors that relate to income levels, quality of employment, level of education, availability and quality of housing.

Recently, the concept of quality of life in social sciences has also been applied in relation to the question of living standards. The term quality of life characterizes the way of life, which is related to the qualitative aspect and the standard of satisfaction of the material and non-material needs of the people. Quality of life is the result of living standards, i.e. the interaction of health, social, economic, or environmental conditions related to human life (Kahneman, Krueger 2006).

One of the conditions determining the level of human quality of life is income. Income not only enables the satisfaction of needs, but also defines the very standing of a person in society. Income is a variable that indicates the total amount of household or individual income over a certain period of time (Constanza, 2007).

However, in professional papers (e.g. Gerbera 2012), it also refers to income criticism as an indicator of poverty and relies on known facts. For example, the current income does not capture all the resources available to the household (savings) or that it might have available (the ability to borrow). It does not say anything about how the household spends income, what consumption patterns it has, and possibly liabilities that affect them (debts). In addition, the currently measured low income may be a temporary, atypical situation that does not fundamentally occur in the standard of living. As Perry (2002) notes, the relationship between actual income and living standards is not straightforward. Hold generally is a well-known fact that the living standards of two households with the same income may (fundamentally) differ.

Income inequality has increased significantly since the late 1970s, but currently available evidence of inequality between assets is mixed (Saez, Zucman, 2016). Income inequality is due to differences in the economic activity of the society. For this reason, income inequality is understood as a different position in the level of money and wealth distribution. It pertains not only the individual, but also groups of individuals or regions (Charles – Coll, 2011).

The unequal distribution of wealth in society is also due to historical developments. Terms such as wealth or poverty have been used in antique and Roman culture. Already during this period, people defined their property and attributed value to material goods. These terms have begun to be applied by recognizing the differences in the developmental assumptions of the territory, but also the differences in education and the ability to use resources or diversity in the development of ethnic culture or the emergence of inventions (Brady, Burton, 2016).

Defining wealth is very demanding, and that is why there are several approaches to identifying it. Under material appreciation of wealth can be understood as the amount of money or tangible property; on the contrary, from the non-material point of view, it

is possible to define such as non-material or spiritual property (Barro, 2000).

Wealth, therefore, provides a form of social security, protection against a sudden decline in the standard of living, in case of loss of employment. Wealth represents a certain amount of resource accumulation, it differs not only between companies, but also within individual layers and regions (Barro, 2000).

On the contrary, poverty is defined as the lack of resources of an individual or a group. Poverty can be perceived as a socially constructed category and not as something that can be determined by an external observer, regardless of the conditions and values of society (Van den Bosch et al 1993). In this sense, poverty is considered a social problem. It is, however, known that poverty as a negative social phenomenon does not threaten all groups of the population equally. There are many social strata that are at risk of poverty much more than others. Among the most vulnerable layers are low-skilled labor, incomplete families, long-term unemployed, Roma ethnicity and others (Námešný a kol., 2012).

However, if poverty is considered a situation of absolute deprivation, the poverty line will usually be defined as being independent of the general style of life in society (Holtfreter, 2006).

Smith et al. (2010), define in relation to poverty also social inclusion as a process that provides opportunities and the necessary resources for those at risk of poverty in order to increase living standards and participate actively in economic, social and cultural life in society.

Increasing inequality can lead to rising relative poverty, which as Gerbry (2010) points out, one of the commonly-used indicators of living standards.

According to experts from the Social Situation Observatory (2009), the interest in income inequality also derives from the assumption that large inequalities can be reflected in the weakening of social cohesion, increased income inequality in the next generation or even weaker economic growth. This fact that societal differences in wealth distributions occur in individual population groups has prompted many scientists to reflect on the origins of their causes. One of the most popular indicators of measuring the inequality of wealth distribution in society is the Gini coefficient developed by Italian statistician and demographer Corrado Gini. Apart from the Italian demographer, however, also other scientists have been investigating income inequality. Among the most famous were the American economist Max O. Lorenz with his Lorenz curve, Henri Theil, but also many others (Veselovská, 2015).

## 2 Living conditions and income inequality in the Czech Republic and the Slovak Republic

The Czech Republic and the Slovak Republic have, in addition to their common history, very similar social conditions and development assumptions, but have since passed through great political and economic changes that have led to differences in the living standards and wealth of the population. Both countries are currently fighting the persistent socio-economic disparities between the regions. The living standards and income levels of the head regions is several times higher than in the other regions. The problem remains that the number of people at risk of poverty remains rising. For this reason, countries in their development strategies are also striving for their permanent reduction.



Table 1: Territorial breakdown of the Czech Republic and the Slovak Republic by NUTS 2

NUTS 2 REGIONS	
CZECH REPUBLIC	SLOVAK REPUBLIC
Praha	Bratislava
Střední Čechy	Západné Slovensko
Jihozápad	
Severozápad	Stredné Slovensko
Severovýchod	
Jihovýchod	Východné Slovensko
Střední Morava	
Moravskoslezsko	

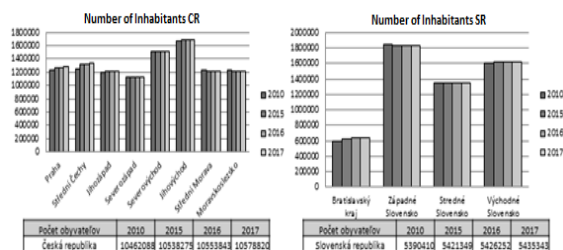
Source: Own processing based on EUROSTAT data

Table 1 shows the territorial - administrative breakdown of the Czech Republic and the Slovak Republic from the point of view of the administrative - administrative division NUTS 2. This breakdown is the basis for the definition of statistical territorial units. Under the conditions of the European Union, we distinguish a total of 5 levels of administrative-territorial division from NUTS 1 (state) to NUTS 5 (cities and municipalities).

Chart 1 demonstrates population growth in the Czech Republic and the Slovak Republic. Under the conditions of the Czech Republic, the number of inhabitants grew slightly during the monitored period. Among the most populous regions in the Czech Republic are the South-East and the Northeast.

In the conditions of Slovakia, as in the case of the Czech Republic, there was a slight increase in the population, with Western and Eastern Slovakia among the most populous regions.

Chart 1: Population development in the Czech Republic and the Slovak Republic

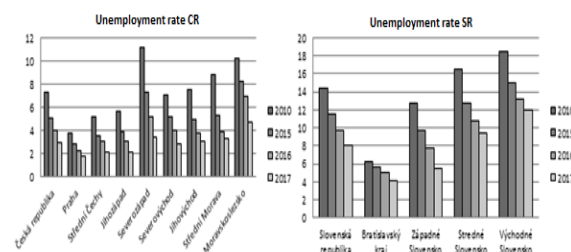


Source: Own processing based on EUROSTAT data

Chart 2 demonstrates the development of the unemployment rate in the NUTS 2 regions in the Czech Republic and the Slovak Republic. In the conditions of the Czech Republic, unemployment rates declined throughout the period under review in all NUTS 2 regions. The long-term lowest unemployment rate was identified in the Prague region of 2.9%, while the highest level of unemployment was identified in the Moravian-Silesian region of 4.7%.

In the Slovak Republic, the same trend was observed in the drop in the unemployment rate, but compared to the Czech Republic, Slovakia is significantly behind in unemployment. The unemployment rate in the regions of Slovakia is twice as high as in the case of the Czech Republic. The long-term lowest unemployment rate has been identified in the Bratislava region of 4.2%, on the contrary, East Slovakia is, despite the gradual decrease of the unemployment rate in the long-term at 12%.

Chart 2: Unemployment rate in the Czech Republic and the Slovak Republic in %



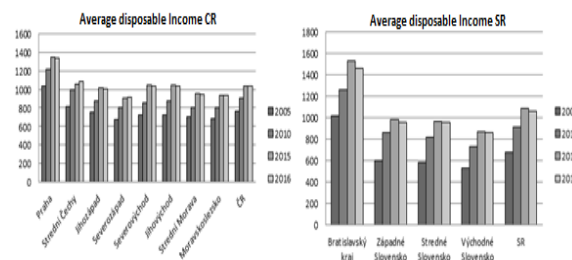
Source: Own processing based on EUROSTAT data

Chart 3 Total disposable income of households shows the development of household incomes in individual NUTS 2 regions.

The household income available in the Czech Republic had an increasing tendency over the monitored period, with a slight decrease at the end of the monitored period. The total disposable income in the Czech Republic currently stands at €1,000. The highest level of income was identified in the households of the Prague region of 1300 € on the other side the lowest level of income was identified in the Northwest region of 850 €

In the conditions of the Slovak Republic there was a slight increase in household income over the period under review. While at the beginning of the monitored period, the total disposable household income reached €700, reaching €1000 at the end of the monitored period. The highest income is achieved by the inhabitants of the region of Bratislava region and the lowest level of income achieved was identified in the region of Central Slovakia during the monitored period.

Chart 3: Total Disposable Income of Households in the Czech Republic and Slovakia in €

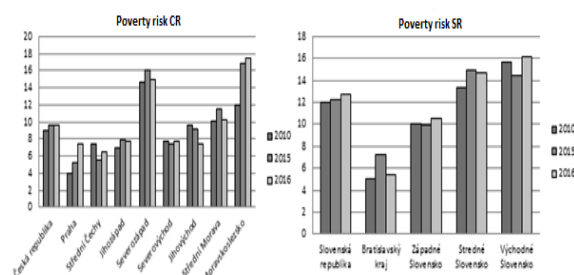


Source: Own processing based on EUROSTAT data

Chart 4 shows the development of the poverty rate of the population in the regions of the Czech and Slovak Republics. In the conditions of the Czech Republic, the rate of poverty increased, with the exception of the Southwest Region, the Southeast Region and the Central Moravia region, where the rate of poverty risk was decreasing. The highest share of the population at risk of poverty was recorded in the Northwest Region of 14.7% and in the Moravian-Silesian Region 17.8%, while the lowest share of the population threatened by poverty was recorded in the region of Central Bohemia 6.3% and in the region of Prague 7.6%.

In the Slovak Republic, the increase in the share of the population at risk of poverty was somewhat milder. In the Bratislava region, the lowest level of risk of poverty, along with a decreasing trend, was recorded during the monitored period. On the contrary, the highest share of the population at risk of poverty was identified in Slovakia in the region of Eastern Slovakia 16%.

Chart 4: Poverty risk in the Czech Republic and the Slovak Republic in eastern regions in %



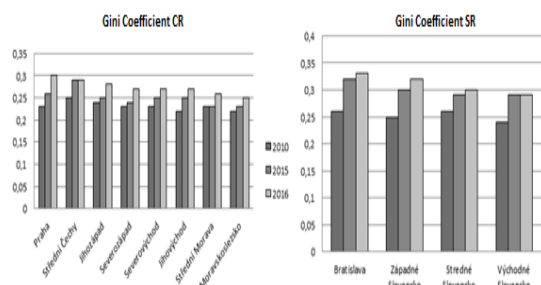
Source: Own processing based on EU SILC data

Chart 5 shows income inequality between NUTS 2 regions in the Czech Republic and the Slovak Republic. The income inequality is expressed in this case using the Gini coefficient. The Gini coefficient values are expressed in a range from 0 to 1, with the value 0 representing the absolute equality in incomes, while the value 1 represents the maximum differential in the income of the population.

When comparing the Czech Republic and the Slovak Republic as a whole, we identify the widening differences in household income. In the Czech Republic, the highest level of income differentiation was found in Prague, while the lowest differences in household income were identified in the Moravian-Silesian Region.

In the Slovak Republic, income differences are somewhat deeper. The highest income inequality was recorded in the Bratislava region during the monitored period, while the lowest level of income differentiation of households was identified in the Eastern Slovakia Region.

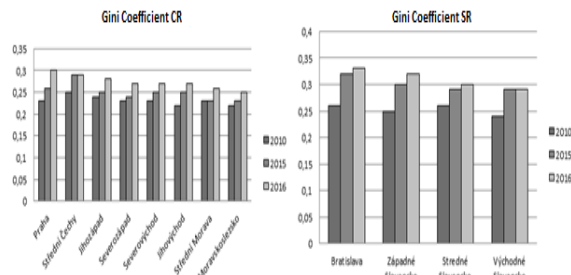
Chart 5: Gini coefficient - income inequality in the Czech and Slovak Republics



Source: Own processing based on EU SILC data

Chart 6 shows income inequality expressed through the Lorenz curve, with the horizontal axis capturing the cumulative shares of the population divided into intervals according to the equivalent income, and the vertical axis captures the cumulative share of their total wealth according to the cumulative sums of their equivalent disposable income. The situation regarding the distribution of wealth in the Czech and Slovak Republics is very similar. In the conditions of the Czech Republic, lower differences in household incomes were identified than in the Slovak Republic, which can also be noticed by the shape of the curves. While 40% of revenue in the Czech Republic is accounted for by 60% of households in the Slovak Republic, 40% of the income accounted for 65% of households. The income inequality is somewhat higher in the conditions of the Slovak Republic than in the Czech Republic.

Chart 6: Lorenz curve (income inequality in Czech Republic and Slovak Republic 2016)



Source: Own processing based on EU SILC data

Figure 1 shows the results of the scoring method, which was applied as an indirect method of measuring and comparing the economic level of the regions. In its applications, we have selected NUTS 2 regions as a comparison of spatial units, and we have identified a set of indicators to help us characterize their level of development. For our needs, we chose indicators of unemployment, average disposable income, and poverty risk. We have assigned the appropriate number of points in each region to the value of these indicators, and we chose the highest score in any of the regions as a basis for comparing each indicator. We then assigned 100 points to the highest value. At the same time, this value serves to compare with other evaluated regions and stands out as the basic variable. This value will, therefore, be compared with the values achieved for each indicator in the regions. By evaluating the level of the indicators in each region and adding the points of their evaluation we achieved an overall score, on the basis of which the regions can be further sorted, either in a simple order according to the total point value, or sort by certain categories according to the selected score points (Belajová, Fáziková, 2005).

Based on the 3 rated indicators (year 2016), a maximum of 300 points could be achieved. After evaluating and comparing the results, the region Praha with a total of 261 points were identified as economically the most developed region, the Central Bohemia region with 252 points gained second place and the Bratislava region with 247 points is on the third place. On the other hand, the regions of Slovakia were identified as the least economically developed regions, namely the Eastern Slovakia with a total of 104 points, the Central Slovakia region with a score of 120 points, and the three regions of the least economically developed regions, the Czech Moravian-Silesian Region with a score of 142.

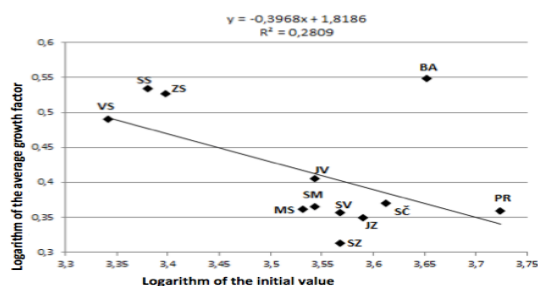
Figure 1: Pointing method for measuring and comparing the economic level of the regions



Source: Own processing

Chart 7 shows the result of a regression analysis that suggests that the regression function has a decreasing course. The confidence equation is as follows:  $y = -0,3968x + 1,8186$  at the determination coefficient  $R^2 = 0,2809$ .

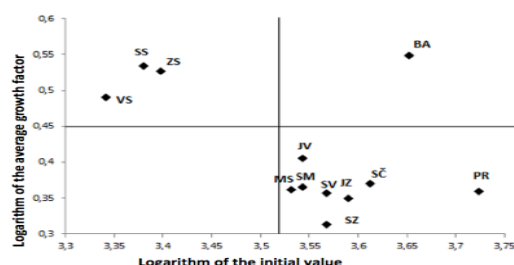
Chart 7: Average Growth Coefficient Logarithm



Source: Own processing

The overall conclusion of beta convergence is that in the monitored period of time, the twelve regions of the Czech and Slovak Republic tended towards convergence, as the regression line development was negative or the line has a decreasing slope. It can be said that the calculated value of the determination coefficient does not exceed the 50% threshold, which is the low level of demonstrativeness of the data being evaluated.

Chart 8: Correlation diagram



Source: Own processing

Chart no 8 is a convergence chart where the regions are divided into four quadrants. In the first quadrant there is the Region of Bratislava with an excessive initial value of income and an excessive growth rate. It tends to move away from of value from other regions. In the second quadrant there are the regions of Western Slovakia, Central Slovakia and Eastern Slovakia. In this section of the diagram, there are regions with below average beginning value of income and with above average growth rate of income. They tend to move into the space of the first quadrant. In the third quadrant there are regions with lower average initial value and with lower average growth rate of income. In our case, none of the regions surveyed is in the third quadrant. In the fourth quadrant all regions of the Czech Republic are located, which shows above average initial income values, but also a below-average growth rate. It can also be noted that income inequality between regions in the Czech Republic is lower in comparison with regions of the Slovak Republic.

## Conclusion

One of the current phenomena of society is the ever-increasing differences between the rich and the poor. Despite many efforts we still do not reduce social differences. These differences take on an increasingly broader territorial dimension. On the basis of analyzes of the data obtained, it is only possible to confirm the statements of scientists who fear that the society does not try to reduce differences to support equality, but the contrary. Of course, the society is moving forward, raising living standards, increasing income, declining unemployment, but the problem is that these conditions are not equally accessible for everyone across the regions. Particularly in the central regions, there is a rapid economic growth associated with job and income growth, while in peripheral and less developed regions, people have a shortage of job opportunities and they lose their income. There are several ways to reinforce efforts to eliminate income inequalities. Several experts in this field, therefore, recommend that they focus their efforts on:

- ensuring an effective system of taxation,
- ensuring a more equal access to education and improving learning outcomes,
- raising employment rates by motivating and accessing jobs with higher financial ratings,
- creating a global financial register to prevent wealthy people from hiding their wealth in tax havens.

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## ON THE DEFINITION OF THE NOTION OF NATIONAL IN SLAVIC OPERATIC PRODUCTION

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**Abstract:** The study explores evolution of national element in selected Slavic cultures – Russian, Polish, Czech – in their history with particular emphasis on the 19th century, and in Slovak case from the 19th to the first half of the 20th century. It outlines common features of national emancipation movements among the above nations, as well as their differences. Particular focus is given to the effect of the quest for national emancipation on the development of national operas in the given countries. The authors examine the features that might, in the given context, define the operatic production as national. Given its utterly specific evolution, Slovakia receives particular attention: socio-political circumstances delayed national emancipation, hence the tardy emergence of national opera. That brought thought-provoking aspects to the nascent Slovak national opera and European music drama production of the first half of the 20th century.

**Keywords:** Slavic, history, state, national, culture, production, *The Whirlpool*

## Introduction

In recent history operatic production evolved as one of major carriers, perhaps even agents of national element. The study explores the journey to national opera in four Slavic cultures: Slovak, Czech, Russian and Polish. Through the lens of transformation of national elements into the production of the supranational operatic genre one acquires better grasp of Slavic and Slovak contemporary history. The study explores the how and when of the articulation of national in operatic production by Russians, Poles, Czechs and Slovaks. The study also seeks an answer to whether at all the national aspect among these ethnic groups differed.

Particular focus is given to the evolution in Slovakia and/or the territory of Greater Hungary that corresponds with the present-day Slovakia. The paper examines the specific features that characterised the evolution in comparison with neighbouring Slavic cultures. Should the examination lend an affirmative answer, additional answer shall be offered as to the effect of the unique nature of evolution on operatic production. Opposite logic – the means by which operatic production created the national element in Slovakia shall also be addressed. The following a brief outline of national emancipation movements in the four Slavic countries and operatic production on their territory shall serve as the vantage point to the tasks set out above.

## 1 The emergence of modern nations and of national element in Slavic Europe

The development of nations within the context of emergence of national identity in Europe acquired major momentum in the 19th century. It experienced major leap forward at all levels of social and cultural life. Nation-state was conceived, national languages were codified, public interest in national principle became institutionalised, and national agenda was defined in politics. The evolution in Europe was continuous, including during the revolutions of 1848 – 1849 that affected the entire Europe. Unification of Germany and Italy was guided by the national concept. Slavic nations joined the process of national-liberation. In the quest for national identity they sought

confrontation within their own nation and as part of the struggle with their multinational monarchies. The principle of national federalism overlapped with that of the quest for national autonomy. In the 19th century Russians were the only Slavic nation that, also represented a state. Nonetheless, their journey to national realisation was no less unwieldy than that of the subjected nations. For Russia as a state, at the time of the advance of national emancipation and fulfilment, was no different from other monarchies in terms of political concept of preservation of state integrity. Russia was growing increasingly centralised and Russified, just as the Habsburg Monarchy was growing Germanised, or as Hungary was becoming Magyarised following the Austrian–Hungarian Compromise of 1867. The process, however, didn't ensue in the name of national emancipation of a given constitutional nation. Instead, it exploited the national principle to facilitate constitutional integration of multi-ethnic state. In most instances it didn't always aid the constitutional nations themselves in their emancipation. The historical process of national-liberation movement supports the point. For instance, Slovaks, Poles, Croats, Serbs, Ukrainians, Czechs, or Slovenes achieved the national principle in difficult circumstances of national subjection. Yet they developed all attributes of national symbolism, along with the content of cultural and political nation. It also brought along the evolution of the instinct of protection of own nation and the principle of respecting another nation. Though, in the long run, the latter might have been dented at times, or affected by supranational concepts of international politics. In terms of evolution of the national principle, centralisation of power based on constitutional nation not only suppressed national elements, but also its own national principle in the name of the more encompassing integration. That is also why the Russian nation as a national element kept and continues to evolve as hybrid product of the constitutional and national. Hence the perception of the national is different among the Russians than among other smaller Slavic nations. That is particularly manifested in the quest for their own identity and in the perception of integrity of another nation. It has been and remains vital for the evolution of nation whether the process occurs alongside the existence of its own state, or whether it preceded the foundation of such state (as in Central Europe within the multi-ethnic Habsburg Monarchy), and/or whether it follows the foundation of state (some of the so-called developing countries).

A number of definitions of nation highlight subjective factors of emergence (national consciousness or identification with nation that are essential for the emergence of nation), and objective factors (arrival of a large social group with its specific features and bonds that evolved through joint cultural and historical development). Evolution of nation is a long-term and open process. It may change in social interaction. Along with the rise of external (e.g. global) social communication it may acquire new shape or be transformed. That particularly applies to contemporary globalisation in economy, culture and communication.

Each movement for national emancipation endeavoured to raise social and cultural standards of its nation, to advocate codified language and implement cultural rights, to gradually achieve national sovereignty arising from the idea of nation state.<sup>1</sup> Individual national movements, however, often differed. Their nature was determined by political potential and ambitions, social background and ideology of leading figures, particularly by the interest in the issues related to culture, language and literature. Herder was the first to raise the nation above state. He deemed nation to be natural entity and state an artificial invention. Hence the states were to be subjected to national units. The leading Slavic representatives who attempted to resolve the issue of constitutional status of Slavs were Ján Kollár and Pavol Jozef Šafárik. It was largely due to them that the idea

<sup>1</sup> HROCH, M.: *European National Movements in the 19th Century* [Evropská národní hnutí v 19. století]. Prague: Svoboda, 1986.

of Slavic mutuality acquired comprehensive theoretical shape. Its ideal was anchored in cultural, literary and spiritual unity and unification of all Slavs. It emerged as defence against the threat of Hungarian and German assimilation of central European Slavs. Its adversaries named it pan-Slavism.<sup>2</sup> The key principle that affected ideological foundations of national-constitutional process among Slavs in Central Europe was Kollár's idea of special mission of Slavs, and new attitude to language as the fundamental value for the definition of nation, national spirit and culture.<sup>3</sup>

### 1.1 The Russians

The evolution of Russian nation was closely linked to that of the Russian state, though the former occurred much later. The specific feature of the early days of Russian state was the fact that its development underwent through two (and/or three) principal phases. The period of Kievan Rus territorially included the later Belarussian and Ukrainian national tradition. From the 13<sup>th</sup> century onwards, as a result of territorial and political disintegration, and the expansion of Mongols to Eastern Europe (the emergence of the Golden Horde and vassal dependence of most Russian principalities), Russian national tradition moved from its early phase to central part of Eastern Europe with Moscow becoming the new administrative and political centre. After it freed itself of the dependence, from the 15<sup>th</sup> century the Moscow Rus endeavoured to renew the former territorial integrity of Russian lands. Yet it lost its Ukrainian and Belarussian territories to the more powerful Lithuanian and later Polish-Lithuanian state. In the 18<sup>th</sup> century, Russia, by then an empire and European power, managed to acquire a substantial part of the territories of Polish-Lithuanian Belarus and Ukraine. Three divisions of Poland between Austrian, Prussian and Austrian monarchies also earned Russia extensive territories of the Polish State known as *Rzecz Pospolita*. That, in its constitutional form, was to disappear from the map of Europe for over a century. The developments thus brought into the multi-ethnic Russian Empire Poles and Ukrainians (apart from Galicia and Bukovina that were attached to the Habsburg Monarchy), Belarussians, and dozens other ethnic groups. The 19<sup>th</sup> century, epitomised by the rise of modern nations, thus found Slavic nations in two constitutional contexts: 1. subjection (Poles, Ukrainians, Belarussians), and 2. dominance (Russians). The evolution of Polish, Ukrainian and Belarussian nations in terms of culture and language, however, was far more dynamic than that of the Russian nation. The missing attribute of statehood was an incentive for the Ukrainians, Belarussians and Poles to proceed more vigorously in the quest for national identification and development of fundamental national symbolism. That was also facilitated, particularly in the first half of the 19<sup>th</sup> century, by the nationally passive Russian policy. It considered administrative, military and economic integration of the country to be a priority, whilst leaving the issues related to religious and cultural unification outside the central interest.<sup>4</sup> The critical principle was to stabilise the power and demand loyalty from the subjects.

Culture, language and religion of the non-Russian residents remained largely intact. Though the multi-ethnic Russian state, from the second half of 19<sup>th</sup> century, started to gradually nurture the principle of Russian nation state, the very evolution of Russian nation proved quite slow. Relative simplicity of Russian folk culture proved quite conducive of the development of Russian nation. A number of Russian writers, historians and members of young Russian intelligentsia attempted to overcome the status gap between folk culture and that of the élites in literature, music and fine art. From the late 18<sup>th</sup> century they

began to seek Russian identity not in the state or religion, but in Russian history, language and folk. Those were typical manifestations of the emerging modern national consciousness. It attempted to use ideology to bridge the gap between élites and ordinary folk.<sup>5</sup> The process of emergence of Russian language from spoken Russian enriched with numerous Slavic liturgical elements began in the 17<sup>th</sup> century to be completed by the end of the 18<sup>th</sup> and early 19<sup>th</sup> century. Major impulse to shape the Russian nation came from the works by Pushkin. Instead of in Russian language, Russian élites, communicated predominantly in French throughout the 19<sup>th</sup> century (French was preceded by German in the 18<sup>th</sup> century). This adds to the complexity of Russian national development. Russian Orthodox Church and its clergy didn't help the development of Russian national element, as the Church represented dynastic and imperial interests rather than national element. For instance, liturgical language used by the Church to communicate with wide strata of the largely illiterate population was that of Slavic liturgy. Its effect on church-goers was more old-fashioned and conservative rather than conducive of national self-awareness. In the first half of the 19<sup>th</sup> century the evolution of Russian nation drew philosophically and theoretically from S. S. Uvar. Subscribing to the thesis of unity between the tsar and ordinary folk, he delineated the path for intellectuals when contemplating modern nation in the sense of "official state ethnicity". Additional ideological groups in Russia included Slavophiles and "Westerners". The former concept of the Russian nation saw the folk rather than the Europeanised aristocracy to be the bearer of national unity. Ideas of Slavophiles were further advanced in the second half of the 19<sup>th</sup> century by new political ideology of modern Russian nationalism (Mikhail Katkov, Ivan Aksakov). It was to bring together the elements of the state (*Rossiysky*) and the people (*Russkiy*) within Russian national state. Analogously to the fate of the Slavophile concepts, theirs wasn't adopted by the ruling Russian circles. Nationalist concepts in Russia remained in between the realms of the struggle between the national-ethnic and nation-state principles.

### 1.2 The Poles

One of the main impulses of the Polish national movement was the theme of the reconstruction of the Polish state. Its former territory remained, throughout the 19<sup>th</sup> century, part of three powers: Russia, Austria and Prussia. Hence, individual parts of the former Polish state (*Rzecz Pospolita*) were dependent on the policy of the three states. Part of the Polish renaissance intelligentsia was in emigration (residing largely in France after the T. Kosciuszko uprising or that of 1830 – 1831). Voices of many Polish nationals were heard from abroad. Polish national movement was quite fragmented. Its core ideas echoed, with different intensity and content, from different corners of the divided Poland. The movement evolved along two essential lines: one group of nationals believed in armed struggle, whilst the other sought evolutionary path that entailed everyday development of national economy, culture, education, and raising political and national consciousness of constitutional sovereignty. The activity of Polish nationals was essentially underground. Its representatives included intelligentsia, Polish army officers and entrepreneurs. Adam Mickiewicz, one of the leading figures of the national movement, inspired with his patriotism, messianism and appeals to revolutionary deed also Slovak intelligentsia. Polish national liberation movement, particularly during the period of the uprisings in 1830 – 1831 and after its fierce suppression by the Russian tsarism, triggered severe crisis. It also created fissure in the Kollarian concept of Slavic mutuality. Whilst Kollár grew estranged from Mickiewicz, Slovak young, democratically minded generation kept celebrating and venerating him.<sup>6</sup> After the suppression of the revolt and the exile of majority of Polish nationally-minded politicians, intellectuals and army officers led by Adam

<sup>2</sup> ŠKVARNA, D.: 'Slovak Constitutional Visions and Attempts' [Slovenské štátoprávne predstavy a pokusy], in: *Historický časopis*, 38, 1990/4, p. 481.

<sup>3</sup> IVANTYŠNOVÁ, T.: *Slavic Nations and Nationalism. Ideas and Issues*. [Slovenské národy a nacionalizmus: úvahy a problémy]. In: *Ján Kollár and Slavic Mutuality. Genesis of Nationalism in Central Europe*. [Ján Kollár a slovanská vzájomnosť. Genéza nacionalizmu v strednej Európe. Kolektívna monografia. Ed. T. Ivantýšnová. Slavic Studies 4. Bratislava 2006, p.7.

<sup>4</sup> BECKER, S.: 'Contribution to Nationalist Ideology. Histories of Russia in the First Half of the Nineteenth Century', in: *Russian History* 13 (1986), pp 331 – 335.

<sup>5</sup> KAPPELER, A.: 'Notes on Shaping the Russian Nation' [Poznámky k formovaniu ruského národa], in: *Slovenské štúdie* 2/2004, p. 24.

<sup>6</sup> MATULA, V.: 'Slavic Mutuality – National Liberation Ideology in Slovak National Movement (1835 – 1849)' [Slovenská vzájomnosť – národnoslobodzovacia ideológia slovenského národného hnutia (1835 – 1849)], in: *Historický časopis*. VIII, 2–3. Bratislava: 1960, p. 252.



Czartorysky, the nature of the struggle for Polish renaissance changed. The context of exile gave rise to Polish Democratic Union. Its agenda included national liberation along with the liberation of Polish peasants from alien oppression. The endeavours of the Polish National Union culminated in 1846 in the Krakow Uprising, which was, along with its leader E. Dembowski, drowned in blood.<sup>7</sup> The Spring of Nations in 1848 – 1849 caught Poland deep in demonstrations and unrest. The events were fuelled by the idea of national unification and liberation of the peoples from feudal legacy of serfdom. Even after the revolutionary period, Polish lands were in dire straits of ethnic oppression by alien superpowers. Nonetheless, each revolutionary wave brought them ever closer to the longed-for national freedom and reconstruction of Polish statehood. That came to fruition after 1918 (for instance, Polish Uprising in 1863 – 1864, despite its being suppressed, forced the tsarist administration to legislate for agrarian reform that improved the status of Polish peasants). Unlike other Slavic nations, Polish national movement contained an element of political struggle for the reconstruction of the state, an endeavour that lost none of its vigour throughout the 19th century. The same period saw Polish emancipation strongly affect culture in all its manifestations. Influential representation of Polish emigrants in France, England and Belgium enabled Polish cultural progress to combine indigenous Polish elements, whilst absorbing a number of European cultural influences ranging from Classicism, through Romanticism, all the way to Positivism and Realism of the late 19th century.

### 1.3 The Czechs

Czech national movement (emancipation) evolved, similarly to its Slovak counterpart, on the territory of the Habsburg Monarchy. It dates from the last third of the 18th century until 1848. The leading force came from the Czech intelligentsia (scientists, artists, clergy, teachers, as well as many Czech entrepreneurs). They sought motives for the emancipation in ancient Czech history and Slavic mutuality. In the early stages, the interest among the nationals focused on refinement of Czech codified language and advancement of Czech science, technology and culture, along with extensive public education. As early as in 1774 the Royal Czech Academic Society (Královská česká společnost nauk) emerged. Czech publishing houses opened (Václav Matej Kramerius), as did Czech theatres (Josef Kajetán Tyl, The Nostic Theatre / Nosticovo divadlo), and Czech literature was on the rise. The leading figures in the Czech emancipation movement included Josef Dobrovský, Josef Jungmann, Karel Hynek Mácha, František Palacký, Božena Němcová, and Karel Jaromír Erben. Similarly to other Slavic nations, Czech national movement evolved through different stages of maturity. First, the agenda essentially involved defence of language and early signs of interest in science, theatre, literature and journalism. They sought vantage points for patriotism and inspiration in Classicism and Enlightenment. Political context emerged from the principles of resistance to the centralising tendencies on the part of the Monarchy. Second, in c. 1805 – 1830, in addition to the by then established national activities, the emancipation movement was marked by patriotic agitation and activation of the entire society. The third period, that of the so-called Palacký generation, brought the height of the emancipation movement.<sup>8</sup> By then it acquired nationwide nature both in terms of cultural progress, and definition of political agenda (for instance Austro-Slavism). During the revolution of 1848 the national movement had clearly defined its national and cultural endeavour and political vision of constitutional federation of the Monarchy. Additional political concepts of the Czech national movement included independence anchored in Czechoslovak foundations, and the political principle of the Crown of the Czech Lands.

<sup>7</sup> MATVEEV, G. F. – NENASHEVA, Z. S.: *The History of Southern and Western Slavs. Vol. I. Middle Ages and Modern Times* [Istoriya Yuzhnykh i Zapadnykh Slavyan. T. 1 Sredniye veka i Novoe vremya]. Moscow: Izd. Moskovskogo universiteta, 1998, p. 539.

<sup>8</sup> HLAVÁČKA, M.: 'Shaping Modern Czech Nation 1815 – 1914' [Formování moderního českého národa 1815 – 1914], in: *Historický obzor*, 2009, 20 (9/10), p. 195.

### 1.4 The Slovaks

Slovaks, not merely in comparison with the Magyars as a nation, but also with other nations within the Habsburg Monarchy, faced adverse ideological and political potential for their national emancipation. The handful of positive sources for the development of national ideology and political agenda included the tradition of the Great Moravian statehood, and the tradition of the autonomy of Slovak territory during the reign of Matthew Csák of Trenčín in the early 14th century, plus the period of the 16th and 17th centuries when Slovakia, along with Bratislava, created political centre and the core of the royal Greater Hungary. Slovak national movement evolved through several phases. The dawn was epitomised by the ideas of the Enlightenment and French Revolution as advocated in Greater Hungary by Hungarian Jacobines. In the late 18th century they contemplated the transformation of Hungary into federal republic as defined by ethnic borders. Slovakia (Slavonica) was to be one of the four national provinces. Their constitutional ideas considered natural ethnic principle. Though they proved unrealistic at the time, they preceded the first Slovak emancipation generation in terms of political philosophy. Its members advocated the principle of ethnic equality within Hungary. Yet they never crossed the limits of unitarian Hungarian state and patriotism. Whilst the Roman-Catholic group surrounding the priest Anton Bernolák derived national autonomy from the ancient nature of Slovaks and Slovak language (Anton Bernolák, Juraj Fándly, Ján Papánek, Jozef Ignác Bajza), Protestant nationalists (of the Evangelical Church of Augsburg Creed) contemplated the concept of Czechoslovak linguistic and national unity (Aleš Hrdlička, Bohuslav Tablic).

The second generation of Slovak nationalists was largely influenced by the philosophy and concepts advanced by Ján Kollár. Their national interest continued to favour defence of the language, literature, folk culture and the rise of national consciousness. The theme of Great Moravia resonated (for instance the poetic opus by Ján Hollý). Slavic dimension in the opus by Ján Kollár had major effect on the process of growing self-consciousness of the entire Slavic kin. Nonetheless, the accentuation of the influence of Slavic unity has also negative effect on the Slovaks. National emancipation process was weakened by the absence of identity among the Slovaks, particularly in terms of political philosophy and the ideas of own statehood.

Change came with the onset of the third generation of nationalists represented by the group surrounding linguist and politician Ľudovít Štúr. They tuned down the accent on the all-Slavic ties and focused on local, domestic issues faced by the Slovaks and Slovakia, and the development of social life. The group openly sided with Slovak national sovereignty and embarked on designing sovereign national ideology. That naturally led to the adoption of new codified language that arose directly from folk context.<sup>9</sup> The group saw the solution of the Slovak issue (within Greater Hungary) to be the only proper alternative. They thus signalled federalist tendencies. After the outbreak of the revolutions in the Spring of 1848, Slovaks had been able to present, for the first time ever, their demands for autonomy of Slovakia within Hungarian federation. Hence the manifestation of constitutional and political philosophy on the part of the Slovak emancipation movement. It left lasting imprint on national consciousness and future political designs of Slovaks that were to come to fruition in the following century.

### 1.5 Significance of national heritage trusts in national lives of the Slavs

Slavic national heritage trusts called *matitsa* played major role in national cultural life from the second half of the 19th century particularly within the multi-ethnic Habsburg monarchy. Slavs represented over sixty percent of the population in the Monarchy. Yet they didn't have their own cultural institutions

<sup>9</sup> ŠKVARNA, D.: *op. cit.*, p. 493.

and publishing houses that would publish literary works in their national languages, or organisations to support national edification and consciousness. A number of the Slavic *matitsas*<sup>10</sup> faced the challenge of developing literary language that was decisive for the creation of modern nations not merely as cultural, but also as political commonwealths increasingly claiming their rights. They promoted their national cultures and kept enhancing their Slavic mutuality. In principle, *matitsas* followed cultural objectives. They also aimed to promote economic development of the ethnic groups concerned by publishing instructional works on economy. Virtually all Slavic nations within the Monarchy had their *matitsas*. The first to emerge was the Serbian Matitsa srbska in 1826, to be followed, five years later, by its Czech counterpart, Matice česká. In 1842 the Croats founded their Matica ilirska. 1848 saw the opening of the Galician–Russian *matitsa* in Lviv. Moravian *matitsa* (Matica moravská) was founded in 1849. Dalmatian *matitsa* opened in Zadar in 1861.<sup>11</sup> Slovaks founded their Matica slovenská in 1863 with Slovenes following the suit a year later. Poles had three *matitsas*. On the territory of Austro–Hungary, Polish *matitsa* opened in Lviv in 1882. The territory of Silesia that was part of Prussia received Schools Matitsa for the Principality of Tešín in 1885. Finally, the Polish territory that was part of the Russian empire was given the Polish Schools Matitsa that opened in Warsaw in 1905. In 1909 Bulgarians living in the Ottoman Empire opened their Bulgarian Matitsa in Constantinople.

Some of the *matitsas* disintegrated once national liberty or sovereignty had been achieved. Yet a number of them have adapted to changing circumstances and remain in operation until today. They engage in a range of responsibilities, the key being the preservation and advancement of national culture, science and education.

The history of the Slovak Matitsa (Matica slovenská) evolved in three phases. The first period lasted from 1863, when the *matitsa* was founded, until its forced closure in 1875. The second period of 1919 – 1954 is one marked by the activity of local clubs as the *matitsa* engaged in wide range of scientific activities and in art, along with popularisation of both.<sup>12</sup> It was the art that proved influential, as it gave rise, under the auspices of *matitsa*, to amateur art bringing the culture of theatre, literature and music to most Slovak municipalities. From 1954 until today, Matica slovenská is a state-run scientific and culture institution.

The idea of *matitsa* was popular among Slovaks at home and abroad. After its forced closure in the city of Martin in 1875, Slovak expatriates founded Slovak Matitsa in America (Matica slovenská v Amerike) in Cleveland in 1893. The interwar period (1932 – 1940) saw Matica slovenská in Yugoslavia which then reopened there after 1990. The list of Slovak *matitsas* wouldn't be complete without the Slovak Matitsa Abroad (Zahraničná matica slovenská) that opened in Argentina in 1954 upon the initiative by exiled Slovak intellectuals who left Czechoslovakia largely after the Communist coup of February 1948.

For decades Slavic *Matitsas* remained the convenors of national life. They provided space to engage in cultural life. It was only natural that they become all too often a thorn in the eye of the ruling administration at times of oppression. It was also due to the activities of *matitsas* that Slavic peoples reached, by the end of the 20<sup>th</sup> century, the dawn of their national sovereignty. *Matitsas* made special input into the common culture of Europe. Their specific feature is that they belong at the same time to the East and the West, drawing strength from these sources of common heritage.

## 2 The birth of national opera in Russia

Russian music is an inseparable and instrumental part of Russian culture. Like other types of art, it reflects all phases of life of Russian society, as well as the evolution of Russian philosophy and aesthetics. The history of the Russian peoples and the idiosyncrasy of Russian nature and ordinary life are portrayed in multitude of forms and manifestations of music. By the same token, Russian music is a vital part of world culture. It cannot be perceived as detached from overall music philosophy or the flow of styles in European music context. Any marked success of Russian music carried its international significance. It is this very extent of international ties within the scope of this study – that of the high of Russian music – that became the defining feature of Russian national music. The very tie earned Russian global music recognition and made it one of the driving forces of European music.

Russian music is major part of Slavic culture, for it had long been closely related with the culture of the other Slavic nations as is manifested by intonation connected to the music of fellow Slavs. A number of Russian composers of the 17<sup>th</sup> century serve as the case. Their opuses contain Ukrainian and Belarussians intonations, or those arising from folk culture of Southern or Western Slavs. Mutual influences had major effect on shaping music language in Russian music which was determined by additional factors. Russian historian M. N. Tikhomirov remarked that the “history of the Slavs and that of Russia, when presented as detached from the history of orient, of Western Europe, that of Byzantine Empire and of the Mediterranean countries shall always come across as indistinct and somewhat random.”<sup>13</sup>

An examination of the evolution of national element in Russian music must explore the early days of the development of music in Russia as intertwined with social and historical developments. The end of the 14<sup>th</sup> century in Russia was marked by the victory of Russian troops led by Dmitri Donsky over the Tartar – Mongolian hordes. This gave rise to the myth of Russian invincibility. The events also served as an impulse to the rise of national consciousness and creative rise in art.<sup>14</sup> Differentiation from Belarussians and Ukrainian culture along with the quest for common national features in Russian art proved to be important as the art evolved from idiosyncratic manifestations of Russian language. The period is marked by specific intonation related to the development of folk culture. Drawing from two types of Russian heaving folk song (lyrical and historical), new type of Russian melos emerges, the idiosyncratic Russian bel canto. The foremost tradition of Russian art of music was shaped in line with the evolution of the Russian nation. Over the subsequent centuries, music drew from these sources and further developed the initial trends.

Given the scope of this study, focus shall now move a few centuries forward to shed light on the development of the national within the intentions of classical and Romantic art within the context of development of European music. From mid-17<sup>th</sup> to the early 10<sup>th</sup> century, Russian music experienced a number of milestones. In the late 14<sup>th</sup> century throughout the early decades of the 14<sup>th</sup> century new music philosophy emerges. It is epitomised by deviation from Byzantine orientation of the early period and an inclination to the West. The decades between 1730 and 1750 bring revival of ties of Russia to other countries. It became manifested in Italian influence on the one hand, on the other by the endeavour to enhance national element in music. Synergy of the two influences is illustrated in the opera *Cephalos and Prokris* (Tsefal i Prokris, 1755) by the Italian composer Francesco Domenico Araja (1709 – 1770)<sup>15</sup> to the libretto by Russian

<sup>10</sup> Transl. note: *matitsa* is a transliteration of the word *matice*; its Slavic etymology denotes mother.

<sup>11</sup> ELIÁŠ, M.: *National Heritage Trusts of Slavic Nations* [Matice slovanských národov]. Bratislava: T.R.I. Médium, 1996, p. 6.

<sup>12</sup> ELIÁŠ, M.: *op. cit.*, p. 62.

<sup>13</sup> See: TIKHOMIROV, M. N.: *Russian Culture in the 10<sup>th</sup> – 18<sup>th</sup> centuries* [Russkaya kultura X – XVIII vekov]. Moscow, 1968, pp 395 – 396, based on ORLOVOVA, Y. M.: *Chapters in History of Russian Music* [Kapitoly z dejin ruskej hudby]. Bratislava: OPUS, 1962, p. 8.

<sup>14</sup> This period is characterised by the effort to unify the fragmented feudal Russia led by the Moscow Principality.

<sup>15</sup> Francesco Domenico Araja as the representative of *opera seria* brought this type of opera through the opera *Forza dell'amore e dell' odio* to the imperial court in St.



author Alexander Petrovich Sumarokov (1717 – 1777). In the opera, as well as in music language of other compositions of the time, the tradition of metric models of foreign dances comes hand-in-hand with distinctly national tendencies of Russian chant<sup>16</sup> culture.<sup>17</sup> Between 1760 and 1770 national consciousness evidently evolves along with the expansion of international ties. Italian and later French culture play an important role in Russian culture. At the time Russian music produced new element – urban folk song. It synthesised the melody of peasant song with homophone – harmonic structure of West European music. Urban song came to serve as the intonation base for Russian operas of the end of 18<sup>th</sup> century. The last two decades of the 18<sup>th</sup> century were epitomised by the development of the first professional Russian national school of composing as represented by such figures as Vasily Alexeievich Pashkevich (c. 1749 – 1797), Yevstignei Ipatyevich Fomin (1761 – 1800)<sup>18</sup>, Maksym Sozontovich Berezovsky (1745 – 1777), Dmytro Stepanovich Bortniansky (1751 – 1825), and Ivan Yevstafievich Khandoshkin (1747 – 1804). Each brought into Russian music his own style of music language and left an imprint on the constitution of Russian professional music. The composers were also linked together by shared creative tendencies: drawing from Russian song whilst adopting the latest in European professional art. They endeavoured to master professional composing, methods and forms used elsewhere in Europe.

The entire 18<sup>th</sup> century has come to play major role in the overall evolution of Russian music. It brought a multifaceted adoption of different types and sources of national intonation, with Russian urban folk song playing major role. Through the works by international composers, Russia saw revival of Italian opera (first *seria*, later also *buffa*), later French opera comique, and the works by German and Czech composers. By the same token, music by non-Russian composers who were based on Russian imperial court was penetrated by intonation of the then popular Russian urban music. It was through their music that the Russian phenomenon gradually made it beyond Russia. This is illustrated by the work by Italian composer, organ player and conductor Catterino Cavos (1775 – 1840) who spent over forty years in St. Petersburg where he also died. He played major role in the development of Russian opera.<sup>19</sup> As conductor, Cavos brought to Russian audiences operatic works by Luigi Cherubini, Étienne Méhule, Carl Maria von Weber and others. Cavos was the first to try to use explicitly Russian features in Russian operatic production. The plots in his operas often draw from Russian history or tales. In 1815, preceding Mikhail Ivanovich Glinka by twenty years, Cavos presented the opera *Ivan Susanin*,<sup>20</sup> which is deemed to be the first Russian opera. The

plot is based on Russian historical facts.<sup>21</sup> Simple peasant becomes the lead character, and the music contains Russian folk melodies.<sup>22</sup>

Roots of Russian opera lay in musical plays as they contained ample songs popular at the time, opera (as is evidenced by the preserved librettos or fragments of oeuvres).<sup>23</sup> The best known and perhaps most popular play with folk instructive melodies was *The Miller Who Was A Wizard, Cheat and Matchmaker* (Melnik – koldum, obmanshchik i svat, Moscow, 1779) with music compiled by theatre violinist Mikhail Matvejevich Sokolovsky.<sup>24</sup> The period also saw the arrival of pieces with original music, though even that sometimes borrowed popular melodies.<sup>25</sup> Among the above composers, the most gifted proved to be Yevstigney Ipatyevich Fomin. He brought on stage luscious, utterly Russian play *The Coachmen at the Relay Station* (Yamshchiki na podstave, 1787), Italian opera *buffa* entitled *The Americans* (Amerikantsy, 1788) and duo-drama with closing ballet *Orpheus and Eurydice* (Orfei i Evridika, 1792). Early stages of Russian professional operatic art lay largely in the extraordinary oeuvre by Alexei Nikolajevich Verstovsky (1799 – 1862), particularly his operas *Vadim* (1832) and *Askold's Tomb* (Askoldova mogila, 1835).

It is curious that in shaping the national element in Russian opera of the 19<sup>th</sup> century critics at the time<sup>26</sup> tended to side-step the influence of the 18<sup>th</sup> century, particularly that of the Russian urban folk song. They saw it as breach to the ancient Russian peasant song traditions, subjecting the composers who used the intonations from urban folk song to harsh criticism. Nonetheless, one of the major Russian music theorists of the 20<sup>th</sup> century, Boris Vladimirovich Asafyev (1884 – 1949) pointed out wider context of the evolution of Russian national music and opera, accentuating multilateral influences on Mikhail Ivanovich Glinka and on shaping national opera in Russia. The ties of Russian music to Italian and French culture, the influence of Ukrainian and Russian folk songs, including urban folk song, and coexistence of different style trends were often discernible in opuses by a single composer.<sup>27</sup> Asafyev suggests that “Glinka captured the fundamental and substantial of what Russian music lived to in the 18<sup>th</sup> century: the inevitable integration of tunes of polyphonic song culture of ancient Russia into the progressive urban culture of West European instrumentalism.”<sup>28</sup> Historiography of the birth of Russian national opera thus has to take into account the laws of evolution of music in the 18<sup>th</sup> century as marked by the adoption of West European vocal and instrumental music. Inevitably, this was penetrated by the established and traditional customs of Russian vocal music with its logic of developing accompanying voice with its inimitable melismatic technique. It was the foundation on which Glinka built. His creative height, mature period opens with the opera *Ivan Susanin* (1836).<sup>29</sup> Glinka attached new meaning to folk

Petersburg. When he left Russian in 1762, other representatives of Italian music visited the court: Baldassare Galuppi (1706 – 1785), Tommaso Traetta (1727 – 1779), Giovanni Paisiello (1740 – 1816), Giuseppe Sarti (1729 – 1802), Domenico Cimarosa (1749 – 1801), and Vincent Martín y Soler (1754 – 1806). Italian came to dominate Russian opera for nearly five decades.

<sup>16</sup> Russian music in the second half of the 17<sup>th</sup> century is epitomised by two closely related genres: partesan singing (liturgical polyphonic singing) and chant (polyphonic singing) which directly touched upon the melody of folk song and dance). They are characterised by new expressions within melodic and harmonic language and new shaping principles. Despite the polyphonic expression, secondary harmonic vertical axis comes to the forefront, strict metric, intense constitution of major – minor tonality as the foundation of tonal philosophy. At the same time, they began to show typical secular element, concertante principle. Theatre forms, particularly school plays where music played an important role, were instrumental for the development of secular music in the 17<sup>th</sup> century.

<sup>17</sup> A number of music genres contain references to *canto* (oratoria, cantatas, symphonies, as well as opera), including the finale of Glinka's *Ivan Susanin* where the celebratory character of the *canto* is linked with the intonations of znamenny chant in the hymn celebrating the victory (*Epilogue. Allegro maestoso*).

<sup>18</sup> In an attempt to support local works, the Empress Catherine II sent two of her subjects, M. S. Bortniansky and M. S. Berezovsky to study in Italy. Berezovsky composed here *opera seria* entitled *Demofonte* (Leghorn, 1773), and two additional pieces. Bortniansky composed in Italy *opera Creonte* (Venice, 1776) and, on return to Russia, he composed for the imperial court two small *opéras comiques*: *Le faucon* (1786) and *Le fils rival* (1787).

<sup>19</sup> Catterino Cavos composed his first Russian operas in the first decades of the 19<sup>th</sup> century: *The Invisible Prince* (Knyaz-nevidimka, 1805), *Ilya Bogatyr* (1807), *Zephyr et Flore* (1808), *Ivan Susanin* (1815), and *Firebird* (Tsar-Ptitza, 1822). The main librettist of his operas was Alexander Shakhovskoy, director of Imperial Theatres.

<sup>20</sup> On 27 November 1836 Glinka premiered his opera *Ivan Susanin* (later renamed to *A Life for the Tsar*) at the Bolshoi Theatre in St. Petersburg, home theatre to C. Cavos. Cavos received the new opera with utter delight and conducted its première.

<sup>21</sup> Yet the librettist A. Shakhonskoy altered historical facts: Susanin doesn't die a hero; instead, he continues to wander across the country.

<sup>22</sup> Choral scenes composed in style to be later advanced by Glinka, Rimsky-Korsakov and Borodin are of import in this context. They reached the highlight in Mussorgsky – ground voices (bases) became the bearer of the main melodic line.

<sup>23</sup> That is how, for instance, only the libretto has been preserved from the single-act opera *Anyta* (Tsarskoye Selo, 1772); a fragment of the music text has been preserved from the opera *The Lover – Magician* (Lyubovnik-koldun, 1772), whose author is believed to be Josif Kerzelli, conductor of Moscow theatre. Those were mostly compilations and arrangements of popular songs in style of *English opera ballads* or French *vaudeville*.

<sup>24</sup> ABRAHAM, G.: *Brief History of Music* [Stručné dejiny hudby]. Bratislava: Hudobné centrum, 2003, p. 433.

<sup>25</sup> Such were the oeuvres *Rozana* and *Lyubim* (Rozana i Lyubim, Moscow, 1778) by Josif Kerzelli, *Misfortune from Owning a Coach* (Neshchastie ot karety, St. Petersburg, 1779) *Saint-Petersburg's Bazaar* (Sanktpeterburskoi gostinnyi dvor, 1782) and *The Miser* (Skupoi, 1782) by Vasily Alexeyevich Pashkevich. The empress Catherine II even wrote libretto to his opera *Fevei* (1786). The empress is known to have provided librettos to additional musicians as well.

<sup>26</sup> Including A. N. Serov (1820 – 1871), V. V. Stasov (1824 – 1906), V. F. Odoevsky (1804 – 1869) and G. A. Laroche (1845 – 1904).

<sup>27</sup> See ASAFYEV, B. V.: *Russian Music and the Early 20<sup>th</sup> Century* [Russkaya muzyka. XIX. i nachalo XX. veka]. Leningrad, 1968. And his other works. Based on ORLOVOVA, J. M.: *op. cit.*, 1962, pp. 109 – 113.

<sup>28</sup> Based on ORLOVOVA, Y. M.: *op. cit.*, 1962, p. 112.

<sup>29</sup> To compare, European music in this period saw emergence of the following operas: J. Meyerbeer *Les Huguenots* (1835), V. Bellini *Norma* (1831) and *I puritani* (1835), G. Donizetti *Lucia di Lamermoor* (1835). At the time of birth of his second fairy-tale opera, *Ruslan and Lyudmila* (1842) the following operas emerged: R. Wagner *Rienzi* (1841) and *The Flying Dutchman* (1841), G. Verdi *Nabucco* (1841).

nature of art and ethnicity in music, and introduced the principle of symphonic philosophy into all genres of music. Intonation inspiration sources include first of all the Russian peasant folk song, Ukrainian and Belarussian folk songs, znamenny chant (znamenny razpev) and chant (kant), urban folk song and romance, dance music of different kinds from the early 19<sup>th</sup> century on, and ultimately inspirations from Italian, French and German music. Glinka mastered the transformation of the wealth and diversity of inspirations to create a new meaningful synthesis. He is considered to be the founder of Russian national music whose legacy was further advanced by composers of the second half of 19<sup>th</sup> century, as particularly represented by The Mighty Handful.

### 3 Polish national opera

Given its size and cultural maturity, Poland has repeatedly played a major role in history of Europe. Its music achieved remarkable standard as early as during Renaissance and Baroque. The fate of more recent history, however, was cumbered by the presence of superpowers (Prussia and Russia) that gradually led to the demise of Polish independence.<sup>30</sup> The adverse social circumstances prevented Poland from making any significant mark on European music until the period of Romanticism. 19<sup>th</sup> century, however, brought the rise of nationalism. In the culturally mature, yet politically fragmented nations, it was opera to have become a powerful symbol of cultural unity. To many nations the production of own sovereign opera was among the priorities when proving their cultural maturity, independence and equal status. Adverse circumstances prevented development of symphonic forms in Polish music. Instead, traditions of national music had been retained. Only a few suppressed nations mastered to link national sentiment and romantic self-expressions as was the case of the Poles. They awaited every instant of relaxing censorship to fight with new enthusiasm for Polish oeuvres, language and artists in order to preserve national sentiment among the wide community.<sup>31</sup>

The first impulse for the emergence of Polish musical drama came only in the second half of the 18<sup>th</sup> century, when bourgeois society and national consciousness arose. The foundation of the first Polish National Theatre in Warsaw in 1765 sent out an impulse for the development of Polish opera. Its major boom coincides with the reign of Stanisław August Poniatowski.<sup>32</sup> It was the very period that saw the rise of more remarkable names who largely drew from French and Italian opera. Polish composer Maciej Kamieński (1734 – 1821), originally from present-day Slovakia, is the best known among them. His singspiel *Poverty Made Happy* (Nedza uszcześliwiona, 1778) to the lyrics by Wojciech Bogusławski earned him widespread success. In terms of art, his was less mature composition as he tried to accentuate Polish national character by using Polish language and melodies leaning on national song. The success of the opera inspired the emergence of other oeuvre of similar nature. Folk tune also characterises the opera *A Miracle of Love, or Krakowiaks and Gorals* (Cud Mniemany czyli Krakowiacy i Górale, 1794) by the native of Prague, Jan Stefani (1746 – 1829). The opera *A Miracle of Love, or Krakowiaks and Gorals* has seen several stagings.

Polish nobility was closely involved in shaping modern art, as is illustrated by Antoni Jerzy Radziwiłł (1755 – 1833) with his successful attempt to compose music to Goethe's *Faust*. Another nobleman who made a marked contribution to the development of Polish music was Michał Kleofas Ogiński (1765 – 1833). The core of his work contains a number of patriotic songs, dominated by the song, *Poland Has Not Perished Yet* (Jeszcze Polska nie zginęła) which has become the national anthem.<sup>33</sup>

Social changes on the break of the 18<sup>th</sup> and 19<sup>th</sup> centuries markedly changed the status of opera. Along with its then representative and entertaining role, opera acquired additional purposes – social, instructive and political. Operatic stage became the sole place where native tongue was used. Russian tsarist régime never attempted to destroy opera altogether and strip it of its national character (Russification was indeed contemplated), though the forms of censorship and terror were diverse and shrewd (such as the elimination of Polish singers and titles, preference given to international repertoire and interpreters, ban on featuring Polish singers at charity concerts outside opera, removal of funding and stipends, etc.). Virtually every struggle by Polish intendants, conductors and artist was one for the Polish peoples.<sup>34</sup>

The onset of Romanticism brought along the idea of opera as the supreme, synthetic art form. Members of local operatic audiences thus expected the first Polish operas seria to equal the European standard for music drama productions. The pressure exerted on operatic composers to seek deeper artistic ambitions was already palpable in the first half of 19<sup>th</sup> century through the activities of Józef Elsner and Karol Kurpiński.<sup>35</sup> Józef Elsner (1769 – 1854), native of Silesia, spent time in Brno and Lviv to permanently settle, in 1799 in Warsaw. Elsner composed nineteen operas (first German, later Polish), operettas and ballets. Within his extensive opus stands out particularly the opera *King Elbow-high* (Król Lokietek, 1818).<sup>36</sup> Karol Kurpiński (1785 – 1857) headed, for three decades, Warsaw opera, having composed for the house a number of nationally coloured operas. He also made his name as author of operettas and ballets. The most successful piece in his opus magnum is the opera *Zabobon* (1816) and *Castle on Czorsztyn* (Zamek na Czorsztynie, 1819).<sup>37</sup> Neither Elsner or Kurpiński shied away from composing for special occasions. Their academic and publishing activities helped rise aesthetic standards within the community of local composers and gradually shift focus on composing.

Following the failed November revolution, 1830 brought the closure of a number of Polish institutions, including the conservatoire founded by Elsner. Further deterioration of the situation significantly undermined artistic freedom of expression.<sup>38</sup> Artistic political correctness was constantly monitored by censorship. After the November revolution music life was virtually silenced for some twenty years.<sup>39</sup> During this period Polish intelligentsia incessantly tried to use art for social and political purposes in the struggle for preservation of national identity. Still, it wasn't until the late 1850s that artistic standards in original opera acquired new strength to rise.<sup>40</sup>

It was only the première of Moniuszko's *Halka* (to the libretto by Włodzimierz Wolski, 1858), to mark the breakthrough in the evolution of Polish music drama. During the reign of Tsar Nikolai, *Halka* didn't make it through censorship. Moniuszko revised the opera, adding a number of arias and extending the number of acts to four.<sup>41</sup> *Halka* carries a strong social charge. It tells the story of a girl from poor home, seduced and abandoned by young nobleman. Unable to bear her fate, she takes her life.<sup>42</sup> The plot is based on the bitter sense of conflict between nobility and serfs. The charm of Moniuszko's *Halka* laid in combination of Italian operatic type (melody, layout of scenes, melodrama) and extensive use of Polish music elements, particularly mazurka and polonaise rhythms, and harmonic details.<sup>43</sup> *Halka* also made it abroad. In Bohemia it was first staged as conducted by Bedřich Smetana in the Temporary Theatre (Prozatímní divadlo) in 1868. After the première of *Halka*, operatic houses in

<sup>34</sup> HRČKOVÁ, N.: *op. cit.*, pp 450 – 452.

<sup>35</sup> ZIEZIULA, G.: *Between Utilitarian and Autonomous: Polish Opera in the Second Half of the Nineteenth Century*. In: *De musica disserenda* III/1, 2007, p. 39.

<sup>36</sup> ŠAFAŘÍK, J.: *op. cit.*, p. 64.

<sup>37</sup> ČERNUŠÁK, G. *et al.*: *op. cit.*, p. 238.

<sup>38</sup> ZIEZIULA, G.: *op. cit.*, p. 39.

<sup>39</sup> HRČKOVÁ, N.: *op. cit.*, pp 450 – 452.

<sup>40</sup> ZIEZIULA, G.: *op. cit.*, p. 39.

<sup>41</sup> TVRDŇŮ, J. – HRČKOVÁ, N.: *History of Polish Music* [Dejiny polské hudby]. Bratislava: Slovenské pedagogické nakladatelstvo, 1967, pp 33, 35.

<sup>42</sup> ŠAFAŘÍK, J.: *op. cit.*, pp 264, 265.

<sup>43</sup> TVRDŇŮ, J. – HRČKOVÁ, N.: *op. cit.*, pp 33, 35.

<sup>30</sup> ŠAFAŘÍK, J.: *History of Music: 19<sup>th</sup> Century*. [Dejiny hudby: 19. storočie]. Vol. II. Věrovany: Nakladatelství Jan Piskiewicz, 2006, p. 63.

<sup>31</sup> HRČKOVÁ, N.: *History of Music V* [Dejiny hudby V]. Bratislava: Ikar, 2011, pp. 450 – 452.

<sup>32</sup> ČERNUŠÁK, G. *et al.*: *History of European Music* [Dějiny evropské hudby]. Prague: Panton, 1974, p. 237.

<sup>33</sup> ŠAFAŘÍK, J.: *History of Music: 19<sup>th</sup> Century* [Dejiny hudby: 19. storočie]. Vol. II. Věrovany: Nakladatelství Jan Piskiewicz, 2006, p. 64.

Warsaw and Lviv kept increasingly reaching for artistically challenging operas.

Another successful Moniuszko opera, was the comic piece *The Countess* (Hrabina, 1860) set in the context of nobility.<sup>44</sup> During the January uprising (1863), Moniuszko composed his third opera, *The Haunted manor* (Straszy dwór). It was also received to high acclaim on stage the opera house of the national Theatre in Prague in 1891. Despite its success, the opera was removed from the repertoire after the third performance. That set in motion incessant chain of repressions. Foremost Polish singers were removed from the opera house and Moniuszko was even forced to rewrite some parts of *Halka* that was kept on stage as replacement title in the event an Italian or other title couldn't be performed.<sup>45</sup>

Moniuszko's proved to be major contribution to the rise of artistic standards in Polish music. As he never emigrated from Poland, he had been able to respond to the needs and interests of Polish society. He created Polish song and opera. Operatic authors – composers, librettists and stage directors – haven't then yet paid much attention to operatic style and dramaturgy. In many a case, music thus slid to be simple accompaniment to the oeuvre. Moniuszko changed the situation, having developed music action and drama. National song and dance, particularly polonaise and mazurka, remained at the core of the oeuvres. Operas by Stanisław Moniuszko represent the cornerstone of Polish repertoire and also made their way abroad.

At the end of the 19th century (1898), Władysław Żeleński, member of the Moniuszko generation, tried to resurrect national opera. Yet his work wasn't to play the historical role that played Moniuszko's operas. Żeleński composed four operas: *Konrad Wallenrod* (Lviv, 1885), *Goplana* (Krakow, 1896), *Janek* (Lviv, 1900) that drew from the melody of Sub-Galician songs, and *Stara Baśń* (Lviv, 1907). All of his operas are epitomised by romantic elements, folk stories and songs.<sup>46</sup> The last of the Moniuszko generation was Roman Statkowski (1860 – 1925), author of two operas: *Philaenis* to the libretto by Hermann Erler and *Maria* to the libretto by Antoni Malczewski. In both oeuvres Statkowski used some Wagnerian elements.

Despite the major effort on the part of Polish operatic composers, at the end of the 19th century, Warsaw, Lviv or Poznań were several decades behind European repertoire. At the time, Polish opera failed to produce oeuvres comparable to those of Russian or Czech origin.<sup>47</sup> Nonetheless, the tradition that strove to preserve Polish music, hence also the nation, did prove of import and brought worthwhile impulses.

#### 4 The nascence of Czech national opera

Czech singspiel and operatic culture arose from two fundamental pillars. The first was the extensive local folk music and theatre tradition. The second pillar embodied the ties to European production. The influence of Mozart on Czech culture context since Classicism is well known. It hasn't lost its currency until these days. In the 18th century the major figure in music drama was Jiří Benda (1722 – 1795), author of fourteen singspiels inspired by German Singspiel and melodrama. He was soon joined by Josef Mysliveček (1737 – 1781), whose twenty-one operas tend to lean more towards Italian examples. In addition to the two composers, the Czech Lands, known during Classicism as the conservatoire of Europe, gave birth to a range of authors who were less affected by Classicistic models.

The beginning of the 19<sup>th</sup> century brought change in these trends as doors started to open particularly for Prague-based audiences to the latest international works. This was in part due to Carl Maria von Weber, who briefly served at the time as kapellmeister in Prague. He brought there Beethoven's *Fidelio* (1814) or Spohr's *Faust* (1816). The creative impulses from

abroad naturally joined forces with Czech national emancipation. The endeavour bore fruit in the first attempts at original Czech musical drama that set out to equal its European counterparts. František Škroup (1801 – 1862) composed singspiel *The Tinker* (Dráteník, 1826), which was still quite filled with German, French and Italian influences. For when Škroup “embarked on composing *The Tinker*, he had no precursor or role model in Czech music.”<sup>48</sup> His other operas, *Oldřich and Božena* (Oldřich a Božena, 1826) or *Libuše's Marriage* (Libušin sňatek, 1835) didn't bring any breakthrough. Neither did František Bedřich Kott's operas *Žižka's Oak* (Žižkův dub, 1841) or the piece by Škroup's brother Jan Nepomuk Škroup (1811 – 1892) *The Swedes in Prague* (Švédové v Praze). Any marked rise in original Czech operatic works wasn't prevented merely by the inexistence of relevant Czech examples, but particularly the pressure from German culture on theatre administration to present German works. For instance, the reputed Estates theatre (Stavovské divadlo) considered Czech singspiel performances were seen as lower folk entertainment and were “merely side discipline of German operation.”<sup>49</sup>

There was indeed some discrepancy between local tradition and higher ideals of Romanticism: “Romanticism was, in the Czech lands, linked throughout with German Romanticism. Here, unlike in such countries as Germany or England, it lacked sufficient ground in local philosophical context. The first Romantic aesthetic views related to the idea of national emancipation and all-Slavic idea were defined on the eve of the 1848 revolution.”<sup>50</sup> In such context the natural musicality of Czech authors tended to focus on song and choral works fitting the atmosphere of Romanticism. Drama theatre came largely from the widespread works for amateur companies that were no short of plays with songs. The fate of national operatic culture, the emergence of emancipated Czech music drama production had to wait until the notion of national was more accurately defined. That, however, could only emerge from the major developments within the society and the arrival of outstanding creative artists.

Bedřich Smetana (1824 – 1884) proved to be the first of the kind to bring into the history of Czech operatic production the long-expected breakthrough. His personal and artistic growth were determined by many fortunate circumstances, particularly the opportunity to study in an inspiring context (namely under the tutelage of Josef Proksch who introduced Smetana to the finest examples of music of the time), societal dynamics of the revolutionary year of 1848, as well as the sabbatical in Göteborg (1856 – 1861), where the young artist matured. Additional factors include his extensive contact with orchestral practice and his personal relations with whole range of outstanding figures of the era. Exceptional talent, combined with inherent ability to dramatically develop music material naturally arose in Smetana an ambition to become operatic composer. His first operatic piece, *The Brandenburgers in Bohemia* (Braniboři v Čechách, 1866) already signalled his composing maturity. Nonetheless, the piece also drew appeal with the choice of theme that “won the opera almost revolutionary reception. It was largely due to [...] the libretto exploring national theme. The author, Karel Sabina, was one of the leaders of the 1848 revolution.”<sup>51</sup> Despite such focus of Smetana's operatic debut, a number of critics accused the young composer of excessive style affinity to Wagner.

Smetana offered an answer in *The Bartered Bride* (Prodaná nevěsta, 1866), an opera again composed to the libretto by Karel Sabina who developed a simple folk story. *The Bartered Bride* is an authentic piece (it contains only a single quotation of a well-known Czech dance) that synthesises the fruit of European Romantic production with local folk inspirations. Smetana “was

<sup>44</sup> ŠAFARÍK, J.: *op. cit.*, p. 264.

<sup>45</sup> HRČKOVÁ, N.: *op. cit.*, pp 450 – 452.

<sup>46</sup> TVRDOŇ, J. – HRČKOVÁ, N.: *op. cit.*, pp 38, 40.

<sup>47</sup> ŠAFARÍK, J.: *op. cit.*, pp 264 – 266.

<sup>48</sup> ŠÍP, L.: *Czech Opera and Its Authors* [Česká opera a její tvůrci]. Prague: Supraphon, 1983, s. 15.

<sup>49</sup> ČERNUŠÁK, G. et al.: *op. cit.*, p. 279.

<sup>50</sup> ČERNÝ, J. et al.: *Music in Czech History* [Hudba v českých dějinách]. Prague: Editio Supraphon, 1989, p. 332.

<sup>51</sup> EÖSZE, L.: *The Ways of Opera* [Cesty opery]. Bratislava: Štátné hudobné vydavateľstvo 1964, p. 464.

able to avoid the pathos of grand opera, as well as simplistic frivolity of ordinary farce.”<sup>52</sup> Another dimension that Smetana mastered, was the balanced and fresh relationship between lyrical and comic scenes.

The historical operatic fresco *Dalibor* (1868) demonstrates Smetana's effort to use music flow of prosody of the Czech language, something that was vital for the emancipation of the Czech within global context of opera. Smetana worked thoroughly with distinctive motives. Yet, unlike Wagner, he developed them extensively and varied them along with the development of the plot, situations, characters and their relationships.

By 1872 Smetana presented yet another grand historical fresco, the opera *Libuša*. Though in both cases he reached for major themes in the history of the Czechs, which he developed into fine orchestral and vocal piece, the dramatic plot seemed to have been stuck in both oeuvres. They resemble instead generous epical platforms that miss some attributes of authentic music drama composition.

The paradox in Smetana's work lays in that after he grew deaf in 1874, he composed four fresh operas set in folk context: *The Two Widows* (Dve vdovy, 1874), *The Kiss* (Hubička, 1876), *The Secret* (Tajemství, 1878) and *The Devil's Wall* (Čertova stěna, 1882). These, as “his final works, are characterised by classical maturity. Lyrically tuned, simple folk-like and fresh, *The Kiss* – to refer to Hanslick – was a soothing balm for the nerves of the audience exhausted by Wagner's music drama. [...] In a number of respects, *The Kiss* represents the height of the great master's dramatic art.”<sup>53</sup>

Interestingly, though Smetana first intended to articulate new Czech national opera against the background of great themes from Czech national history, he fared better when working with simple images from ordinary life.

One could arguably ask where does, after all, lay Smetana's contribution, given that such works are well-known in a whole range of folk plays, such as those written in style of German singspiel. It is largely the brilliant music language that brings together the grasp of international production with marked individual inventiveness. Moreover, Smetana made his mark as an outstanding music dramatist able to develop the storyline hand-in-hand with the flow of music. The two thus shape each other in surprisingly effective music drama result. Ultimately, Smetana managed to give his operatic stories (particularly those set in the simple folk context) an imprint of existential authenticity and deep ethical message. Smetana, when developing the national element, seemed to have fared better in the field that built upon the tradition of comic opera. That might be also attributed to the nature of Czech audiences. The very simple themes from folk context enabled Smetana to advance the national element in his works. They also stirred him away from the inspirations that affected at the time the monumental stories of, say, German mythology.

Antonín Dvořák (1841 – 1904) was the second composer who substantially influenced the development of Czech national opera. Similarly to Smetana, Dvořák was also given musical schooling in the Czech context that offered, in the 19th century, a range of inspiring impulses. Along with his engagements as violist and organist, he was also a tutor. As composer he made his debut with the first series of *Slavonic Dances* (1878) that opened door for him on international stages. Indeed, his oeuvre is universal with his finest works being part of European repertoire.

“Dvořák's art, similarly to Smetana's, represents a particular Classical – Romantic synthesis. His own extensive fund, firmly anchored in folk music, is manifested by fresh melody, elemental rhythm, clear harmony, smooth horizontal flow of

music language, and rich sound. Dvořák's artistic growth was influenced by Beethoven and particularly Schubert, later by Liszt and Wagner, as well as by Smetana and Brahms. They provided fertile ground for Dvořák's authenticity. His attempt at Slavic touch often gave his music special tint [...]”<sup>54</sup>

In terms of international reception, Dvořák, author of nine symphonies, numerous concertos, concert preludes, programme compositions or chamber pieces, did surpass Smetana. His extensive operatic opus, upon which he embarked, as he explained “not because of being hungry for fame, but because I consider opera to be the most beneficial work for the nation,”<sup>55</sup> naturally shows signs of phenomenal mastery of composition. That, however, doesn't always coincide with matching perfection in terms of the relationship between music and storyline. From among his operas (*Alfred* – 1870, *King and Charcoal Burner* / Král a uhlíř – 1871, *The Stubborn Lovers* / Tvrdé palice – 1874, *Vanda* – 1875, *The Cunning Peasant* / Šelma sedlák – 1877, *Dimitri* – 1882, *The Jacobin* / Jakobín – 1888, *The Devil and Kate* / Čert a Káča – 1899, *Rusalka* – 1900, *Armida* – 1903) it is no doubt *Rusalka* to stand out. The piece, to the libretto by Jaroslav Kvapil, existentially reaches beyond the fairy-tale world to raise a question about human existence. This approach proved to be an excellent opportunity to exploit Dvořák's eruptive creative mind. Given the universal nature of the theme, *Rusalka* speaks to audiences worldwide.

Zdeněk Fibich (1850 – 1900) as major composer complements the opuses by Smetana and Dvořák within the context of the strive for the articulation of Czech national opera. His operas *Bukovín* (1871), *Blaník* (1877), *The Bride of Messina* (Nevěsta mesinská, 1883), *The Tempest* (Bouře, 1894), *Hedy* (1896), *Šárka* (1897) and *The Fall of Arkun* (Pád Arkuna, 1898) represent yet another major input to the evolution of Czech national opera.

The above portrait focused on authors who stood at the birth of Czech opera. Instead of offering a comprehensive summary or comparing their works and qualities, the analysis examined national criterion in their operatic works. That enabled spontaneous public consensus in adopting their operatic works as national. Therefore, when speaking of Smetana's *The Bartered Bride* as a universally accepted national opera of the Czechs, the reality isn't directly related to the quality – better or poorer – of the piece. The national criterion, as outlined in the opening parts of this study, is heterogeneous one. An assessment thus lays far from the evaluation of music and dramatic qualities of the oeuvres concerned.

## 5 Operatic production in Slovakia from early days to the emergence of Slovak national opera (1778 – 1948)

“The beginnings of opera in Slovakia are linked to the cultural development in Bratislava that was strongly affected by Vienna [...]. It is likely that Bratislava became acquainted with opera before 1740. Yet what can be considered to be an invasion of Italian opera only dates to the arrival of the outstanding operatic company of Pietro Mingotti in 1840s [...]”<sup>56</sup> Historical documents also speak of productions by operatic companies in the environs of Bratislava. Since 1871 there are reports about operatic performances in the city of Košice in Eastern Slovakia. Operatic performances, however, were exclusively related to international authors.

Late 18<sup>th</sup> century brought new oeuvres created on the territory of present-day Slovakia. Polish operatic composer Maciej Kamiński (1734 – 1821), who was born in Western Slovakia, composed the opera *Misery Made Happy* (Nędza uszcześliwiona) that premièred in Warsaw in 1778. As suggested

<sup>54</sup> ČERNUŠÁK, G. et al.: op. cit., p. 289.

<sup>55</sup> ŠÍP, L.: op. cit., p. 70.

<sup>56</sup> CESNAKOVÁ-MICHALCOVÁ, M.: Theatre in Slovakia in The Period of Feudalism (12 – 18<sup>th</sup> Centuries) [Divadlo na Slovensku v období feudalizmu (12. – 18. storočie)]. In: *Chapters in History of Slovak Theatre. From Ancient Times to Realism* [Kapitoly z dejín slovenského divadla. Od najstarších čias po realizmus]. Bratislava: Vydavateľstvo Slovenskej akadémie vied, 1967, p. 143.

<sup>52</sup> EÖSZE, L.: Ibid..

<sup>53</sup> EÖSZE, L.: op. cit., p. 466.

earlier in this study, it is deemed to be the first Polish opera. Kamiński composed an additional six operatic pieces, of which four to Polish and two to German librettos. Polish music theorist Zdzisław Jachimecki characterises Kamiński's music language as follows: "The motives ... create language that is common to the entire Europe of the time, a language without too a specific vocabulary. In the generally used dialect one only exceptionally finds an individual means of expression."<sup>57</sup>

Another opera that deserves particular mention is *Count Pikkó and Jutka Perzsi* (Pikkó Hertzeg és Jutka Perzsi, 1793) by Józef Chudý (1751/3 – 1813), whose surname is Slavic or perhaps even Slovak. The piece is considered to be the first Hungarian opera. The opera *The Escape of Béla* (Béla futása) by Józef Ružička (born c. 1775) that premiered in Buda, was also written in Hungarian.

Even though the above authors came from Slovakia (whilst there is no certainty about their Slovak origin), it is not enough a reason to consider their works to be Slovak. The factors for the argument also include the fact that the oeuvres were written in other language than Slovak. Furthermore, their composition style was universal, whilst essentially referring to Italian and possibly Austrian inspirations. Even the hints at Hungarian folk culture in Józef Ružička don't support any Slovak ambition for his appropriation.

19th century brought to Slovakia extensive amateur activities in culture. They largely focused on drama theatre of all kinds and standards, and on plays with songs. "Romanticism of the 19th century that set in motion, virtually all across Europe, the emergence of national operatic schools. In Slovakia political and social conditions weren't conducive for the production of original operatic productions. The territory of Slovakia – at the time called Upper Hungary – lacked institutions that would have facilitated development of the supreme of musical drama genres. Though members of Slovak intelligentsia did contemplate the creation of Slovak national opera (such as Ján Kollár) [...] or at least they thought of using folk elements in authored works (Svetozár Hurban Vajanský) [...], there weren't authors competent enough to create a concrete artistic artefact, and institutions to present it to public."<sup>58</sup>

In the 19th century, two recognised Slovak authors composed operatic pieces. Alexander Kapp (1820 – 1876) composed school opera *The Sons of Jacob* (Jakubovi synovia) to the Hungarian libretto based on the *Book of Genesis*. The piece fails to show any signs of major creative distinction. The delay in the emergence of operatic production in Slovakia is also illustrated by the fact that the above late Classicistic opus premiered in 1867, when Verdi composed his grand romantic historical fresco *Don Carlos*, and Wagner's portfolio already contained *Tristan and Isolde*,<sup>59</sup> an oeuvre that signalled the transformation of Romanticism to modern music drama. Hence, Slovakia was nearly two style periods behind.

Ján Levoslav Bella (1843 – 1936) was another 19th-century Slovak operatic composer. Perhaps inspired by Smetana's *Libuša*, he started composing, in the second half of the 1870s, the opera *Jaroslav and Laura* to the Czech text by Václav Pok Poděbradský. Yet Bella's language did not meet the criteria of musical drama composition. He thus stopped the endeavour after having completed the first few scenes. Slovak music theorist Ernest Zavorský writes about Bella's fragment: "the composition is de facto a lyrically elevated aria rather than a dramatic scene. Nothing happens. [...]. The core of the composition doesn't lay as much in vocal performance, but in the orchestra instead."<sup>60</sup> Different fate awaited another Bella's oeuvre, the opera *Wieland*

*the Blacksmith* (Kováč Wieland, 1890), which he composed based on German master by Oskar Schlemm (*Drei Damen*). The German text and the theme that draws from ancient Nordic tales signalled Germanising style of the piece. Indeed, Bella's music language does approach Wagner's composition style. The libretto is too complex and the storyline incomprehensible. Some scenes are unnecessarily lengthy and cover multitude of issues, whilst the storyline on stage is quite modest, virtually none [...]. The characteristic of roles is not thoroughly refined, what also applies to the lead character."<sup>61</sup> Though the opera does contain some rather successful dramatic scenes and offers humanistic message, when it comes to its aspiration to be the national opera, these pros cannot outweigh the cons. The same applies to the Alexander Kapp opera *The Sons of Jacob*. The opera in the style of Vienna Classicism written in Hungarian, or the other one, *Wieland the Blacksmith*, in Wagnerian style with Germanic theme and in German, can hardly be identified with Slovak national element.

The adoption and legitimization of national element in the nascent Slovak national opera was (at least in part) four-fold through the use of 1. national language that evidently arose from the traditions of Slovak national music (meaning folk music, as older authored works were inexistent), 2. theme linked to Slovak national history, 3. language of libretto, and 4. national institution to present the oeuvre. Alas, none of the criteria applied to the above oeuvres. At the end of the 19th century, fellow Slavic cultures – Czech and Russian – enjoyed extensive national production and identified evident features of their national opera. Meanwhile, Slovak operatic culture wasn't de facto even in the cradle yet. The development of national element in opera proved increasingly difficult. The issue arose about how to construct the national within the context of foreign musical drama genre, and where to find stepping stones along the quest. An additional dilemma was the possibility of traditional Slovak national culture with its rustic roots to be in fundamental conflict with the artificial nature of opera. In just a few decades the Czech culture, when articulating its own operatic production, was able to rely on a more extensive tradition of older theatre opus and staging practice linked, to part, to traditional music (for instance plays with songs originating from rural and urban context, performances by comedians, extensive puppetry tradition, etc.). Moreover, it had at its disposal more extensive network of ties with current European production. A question thus arose whether the synthesis of Slovak folk element with the principles of operatic theatre might prove fundamentally unattainable. The quest for the answers went on to the subsequent century.

An attempt by Slovak composer Friso Kafenda (1883 – 1963) to create a new operatic piece *Vilín* to the libretto by Slovak author Svetozár Hurban Vajanský failed at the outset: Vajanský died before having completed the libretto. It is unclear what result arose from yet another attempt, that by the Slovak US-based physician Miloslav Francisci (1854 – 1926) to create Slovak romantic opera entitled *Rhea Silvia*, as no related material has been preserved.

The opening of the opera house within the Slovak national Theatre in 1920 proved to be a milestone in the history of Slovak operatic practice. In 1926 it hosted the premiere of Bella's *Wieland the Blacksmith*, moreover with Slovak libretto as translated by a major literary figure, Vladimír Roy. That, however, did not change the Wagnerian non-Slovak nature of the piece.

Another operatic attempt in the 20th century was *Detvan* (1926, premiered at the Opera of the Slovak National Theatre in 1928) by the Slovak composer Viliam Figuš-Bystrý (1875 – 1937). The piece is based on the epic lyrical poem by one of the major figures in Slovak literature Slovak, Andrej Sládkovič. Libretto was written by yet another foremost Slovak author, Emil Boleslav Lukáč. Figuš-Bystrý aimed to create piece that would prove, in nature, genuinely national. When composing he relied

<sup>57</sup> JACHIMECKI, Z.: *Polish Music in Historic Development* [Muzyka polska w rozwoju historycznym]. Vol. I, part II. Krakow: 1951, p. 58.

<sup>58</sup> VAJDA, I.: *Slovak Opera. Operatic Works by Contemporary Slovak Composers and Their Predecessors* [Slovenská opera. Operná tvorba súčasných slovenských skladateľov a ich predchodcov]. Bratislava: Opus, 1988, p. 16.

<sup>59</sup> VAJDA, I.: *op. cit.*, p. 19.

<sup>60</sup> ZAVARSKÝ, E.: *Ján Levoslav Bella. Life and Work* [Ján Levoslav Bella. Život a dielo]. Bratislava: Vydavateľstvo Slovenskej akadémie vied, 1955, p. 209.

<sup>61</sup> VAJDA, I.: *Ibid.*

on quotations from nine Slovak folk songs. The potential for the piece to be Slovak laid – to a point – in the choice of Slovak theme, Slovak language and in the attempt to quote Slovak folk music. Yet if *Detvan* ends up being deemed to be an attempt, it is because its musical drama qualities do not meet stricter criteria: “Figuš-Bystrý, lyricist by nature, didn’t manage to master the technique of what makes a piece feature-length. He arranged individual fragments utterly mechanically in hope that the simple sum results in a grand form. It ended up creating a conglomerate of rather disparate elements without inner thread.”<sup>62</sup> Figuš-Bystrý could have leaned on the harmony of ancient modes, such as Lydian or Mixolydian scales, that are characteristic for the Slovak region of Detva where *Detvan* is set. Yet he did not grasp even this opportunity.”<sup>63</sup>

In addition to *Detvan*, 1920s saw the emergence of additional oeuvres: *The Arrival of Slovaks / Goldilocks* (Príchod Slovákov / Zlatulienka, 1925) by Jozef Grešák (1907 – 1987) and *Radúz and Mahuliena* (Radúz a Mahuliena, 1926) by František Dostalík (1896 – 1944). The fragments of his opera *Herod and Herodias* (Herodes a Herodias, 1927), have never been found, similarly to the score to the opera *Mal’ka* (1934) by Ján Fischer-Kvetoň (1896 – 1963). On the contrary, the score has been preserved from the later opera *The Lad / Jánošík* (Junák / Jánošík, 1938) by Ferdinand Steller-Šteliar (1897 – 1982). These operas either haven’t been preserved or failed to meet the basic criteria for operatic composition.

It is characteristic for the oeuvres of the period that, though they have already been emancipated as Slovak (librettos in Slovak, attempts to quote folk songs), they weren’t of adequate quality. This applies to the highly productive composer Jozef Rosinský (1897 – 1973). He composed the singspiel *The Comedians of Romania* (Rumunskí komedianti, 1927 or 1926) and operas *Mataj* (1931, premiered in the Slovak National Theatre – hereafter referred to as the SND – in 1933), *Matthew of Trenčín* / (Matúš Trenčiansky, 1934, premiered in the SND in 1936), *The Death of Love* (Smrť lásky, 1936 – 1937 or 1938), *Čalmak* (1938, premiered in the SND in 1940), *Lambert* (1937 or 1940), *Palmyra / By The Rivers of Babylon* (Palmíra / Pri vodách Babylónie, 1939 – 1941 or 1938), *The Exile* (Exulant, 1938 – 1939 or 1942) and others. “Rosinský’s operas contain a number of remarkable passages /arias, ensembles, choral scenes, dance and/or choral-dance sections) with primarily lyrical or dance character. Rosinský lacked a sense for drama, as is demonstrated by his choice of themes and approach to libretto. The lack inner drama, desired literary-dramatic standard and greater originality. His is largely an eclectic neoromantic stream [...]”<sup>64</sup>

Ján Móry (1897 – 1978) composed three musical dramas for children and youth: *Buckelpeter* (*Hrbatý Petriček*) (1926, performed by professional and semi-professional companies in the Slovak region of Spiš), a play with songs *The Madonna of Levoča* (Levočská Madona presented in 1935 on Brno radio) and *Goldilocks* (Zlatovláska, 1943, never performed).

Major contributors to the attempt at late constitution of Slovak national opera include the representative of Slovak music Modern Alexander Moyzes (1906 – 1984) and Ladislav Holoubek (1913 – 1994). Moyzes’ radio opera (and/or oratorio-cantata) *Svätopluk* (duration less than an hour, also performed on Bratislava radio and at the SND opera in 1935) was inspired by the eponymous epic by one of Slovakia’s foremost literary figures Ján Hollý. “In his oeuvre Moyzes managed to confidently link the storyline of the opera and the resultant vocal parts with the demands for logical formal construction of symphonic piece. He thus proved his dramatic abilities, though the extent of the composition didn’t allow for their further development. Given the historical theme of the piece, we see in

Moyzes ... archaizing tendencies, particularly in terms of tonality, which he resolves by new means. His archaizing is closely linked to the intention to create a Slovak historical opera, along with the deepening of national character of music,”<sup>65</sup> says about the piece Slovak composer and music theorist Ladislav Burlas. Another music theorist, Igor Vajda adds: “In terms of music language, *Svätopluk* represents Moyzesian style that builds upon the fruit of Impressionism and Expressionism particularly in harmony, melody and orchestration. Meanwhile, the rhythmic aspect and form are rather Classicistic (and/or neo-Classicistic). Overall oratorical concept was probably inspired by comparable works by Stravinsky from his neo-Classicist period (*Oedipus Rex / Oidipus Rex*, *The Psalm Symphony / Žalmová symfónia*). This demonstrates Moyzes’ ability to promptly respond to the developments in the world of music, namely one of the then modern developmental trend in European music, though not by mechanical adoption, as he undeniably remained faithful to himself.”<sup>66</sup> Yet Vajda instantly adds that despite the definite positive aspects of the oeuvre, the radio or concert stage form of *Svätopluk* couldn’t fully fill the space earmarked for Slovak national opera as stage musical drama.

Among the works by Ladislav Holoubek, composer and long-term conductor at the SND Opera, three of his finest deserve a mention. Opera *Stella* emerged in three phases: in 1937 – 1938, 1948 – 1949, and in 1954 – 1955. Since only the last of the three versions has been preserved, being written after 1949 (when Slovak national opera was already articulated), it shall not be subject to further analysis herein.

From among all opuses mentioned in this part, Holoubek’s *Dawn* (Svitane, 1940, premiered at the SND in 1941) approaches most closely the ideal of modern musical drama, the libretto of which is linked to Slovak theme, whilst the music also draws from Slovak traditional sources. Holoubek was drawn by the poem *Herodes* by Svetozár Hurban-Vajanský that bears wholly dramatic theme: deportations of Slovak victims in the final years of Habsburg Monarchy to the lower regions of Greater Hungary in order to convert them to Magyar culture and language. The libretto by Jarko Elen-Kaiser is, except for a few scenes, concentrated with fine knowledge of musical drama composition. Holoubek was positively inspired by Czech neo-Romanticists, namely Smetana and Foerster. He skilfully quotes motives and themes from Slovak and Czech folk songs. The opera “stands out with exemplary declamation of sung word.”<sup>67</sup> “The inclination to music form of the so-called absolute music, folk colours and ballade-like elements make the *Dawn* the precursor of *The Whirlpool*”<sup>68</sup>, though the music language of the opera doesn’t cross the limits of major – minor tonality and functional harmony.”<sup>69</sup> Another notable Holoubek piece is the opera for children *Longing* (Túžba, 1944). As a title designated for child audiences, this opus shall not be considered among broader attempts at the national opera.

The development of Slovak operatic production has been significantly influenced by the composer and outstanding music theorist Jozef Kresánek (1913 – 1986) with his opera *The Gold of Kremnica* (Kremnické zlato, 1945). The oeuvre bears a number of fresh transformations and imitations of Slovak, largely dance folk intonations.<sup>70</sup> Alas, its musical drama construction didn’t prove a success.

Rudolf Macudziňský (1907 – 1986) also deserves a mention for his artistic endeavour. His opera *Monte Christo* (1949) demonstrates his maturity as composer able to draw inspiration from a range of sources. It comes across through the neo-Romantic language of the opera, along with a number of

<sup>62</sup> VAJDA, I.: *op. cit.*, p. 25.

<sup>63</sup> KRESÁNEK, J.: ‘Evolution of Music Life and the Struggle for Modern Positioning of Slovak Music in the Independent State’ [Rozvoj hudobného života a zápas o modernú orientáciu slovenskej hudby v samostatnom štáte]. In: *History of Slovak Music* [Dejiny slovenskej hudby]. Bratislava: Vydavateľstvo Slovenskej akadémie vied, 1957, p. 388.

<sup>64</sup> VAJDA, I.: *op. cit.*, p. 29.

<sup>65</sup> BURLAS, L.: *Alexander Moyzes*. Bratislava: Slovenské vydavateľstvo krásnej literatúry, 1956, p. 145.

<sup>66</sup> VAJDA, I.: *op. cit.*, p. 31.

<sup>67</sup> BUKOVINSKÁ, J.: *An Artistic Portrait of the Composer and Artist-Laureate Ladislav Holoubek* [Umelecký profil dirigenta a skladateľa zaslúžilého umelca Ladislava Holoubka]. Master’s thesis at the Department of Music Theory, Bratislava: Faculty of Music, Academy of Performing Arts, 1982, p. 63.

<sup>68</sup> That was destined to become the Slovak national opera; note by P. Smolík.

<sup>69</sup> VAJDA, I.: *op. cit.*, p. 34.

<sup>70</sup> VAJDA, I.: *op. cit.*, p. 34.

quotations of fellow composers. Though it cannot be deemed an eclectic piece, the opera doesn't show sign of marked musical drama synthesis.

### 6 National element in Russian, Polish, Czech and Slovak operatic production: preliminary summary

The above text characterised the evolution of the national element in selected Slavic countries with the focus on the 19th century and its influence on the national operatic production in the countries in focus. Even though social and political circumstances in Russia, Poland, the Czech Lands and Slovakia differed, the genesis of their national element is marked by a number of shared moments.

First and foremost, national element emerged everywhere. It was connected to the wider European context where new circumstances developed in mutual interaction of territorial redefinition of states and socio-cultural classification of modern nations.

Second, the four cultures in focus essentially experienced nationalist movement through the same means: principally associations, clubs, *matitsa* activities etc.. Hence, the driving forces emerged largely from the grassroot level along with the natural maturing of national consciousness.

Third, in all four nations, national trends gradually surfaced in competition with other interests. They were internal – the pressure on constitutional arrangement competing with national criteria, and external – the pressure from other state and/or national cultures eliminating that of the nation in question.

Four, all aforementioned nations struggled with the challenge of how to link national mentality embodied in traditional folk culture with the global and supranational nature of operatic genre. In practice it meant coming to terms especially with the specifics of Italian, German and French influence.

The differences in the evolution of national element were determined by the state of affairs in each particular nation. Russians represented a powerful and in principle autonomous state unit. The Poles, despite their size and deep historical roots, lived under the administration of Austria, Russia and Prussia. The Czechs, though a relatively small culture, enjoyed relative independence. That, however, was altogether absent for the Slovaks.

These circumstances were reflected in culture were examined here through the lens of development of national operatic cultures. The principal criterion for the evolution of these cultures was their opportunity to be confronted, over long time, with the widest possible range of international influences. When thus comparing the development in, for instance. Between the Czech Lands and Slovakia some enormous differences become instantly apparent. When it comes to music and theatre culture, the Czechs were more open to Europe since the 18th century. From the early 19th century they enjoyed major influx of international influences. That was closely related to the degree of liberty, hence to the criterion of power. The extent of liberty determined the degree of national emancipation. Without its theatres, namely the Estates Theatre (est. 1783), the Temporary Theatre (est.1862) and the National Theatre (est.1881), Prague would have no platform to stage international music drama works. The city would have thus found itself in a situation similar to Slovakia with its limited opportunities. The extent of state and national liberty thus determines the degree of cultural potential and its effect on wider positive confrontation with international context. It was this particular confrontation that rose awareness of the vital role it plays in cultural progress of a nation.

Slovakia was hardly accepted in Greater Hungary as a cultured minority. It had fatal effect on the development of Slovak operatic production in comparison with the Czech Lands. Before the Czech national movement was able to rise in the 19th century, the fusion of international and local elements occurred

quite naturally, and Czech national opera emerged. Slovakia had to go through the long operatic history up to 1948 without being able to convincingly present any oeuvre to be considered, on the basis of national emancipation and music drama criteria, representative of national element in opera. In 1948, in terms of creating national opera, Slovakia lagged a century behind the Russians, Poles or Czechs. At the time it still stood at the very starting point. The breakthrough came in 1949 when Slovaks were at last given their national opera.

### 7 The Whirlpool – late fruit of Slovak national movement

In 1949, Slovak composer Eugen Suchoň presented his opera *The Whirlpool* (Krútiava). "Slovaks were catching up on what they had missed. It doesn't mean, however, that they would have experienced the same cultural development as had been the case for other, more, bigger nations throughout the 19th century. Though the [Slovak] National Theatre was named after its Prague-based counterpart, the circumstances surrounding its foundation and further evolution were altogether different. Slovak operatic production, too, had to build upon different foundations than those upon which the Czech national opera emerged a century earlier. Eugen Suchoň, thirty-three-year-old composer and tutor at the conservatoire in Bratislava, was well aware of the situation when, in 1941, he started to work with the librettist Štefan Hoza on his first opera *The Whirlpool*. He was also aware that he would only win Slovak audiences, if he didn't drop his artistic standards and ambitions, and managed to bring together inspiration arising from folk song with modern methods of composing. He also realised that his theme had to draw from the life of ordinary Slovak folk, if the piece were to comment on serious and everlasting issues of human existence."<sup>71</sup>

Suchoň and Honza reached for a story which, though set in folk context, bears moral legacy that reaches beyond the set framework. *The Whirlpool* is a crime story: on a hill behind a village, villagers find the body of Ján Štelina. He left behind his beloved Katrena who soon marries Ondrej Zimoň. She is pregnant. The father of the deceased, Štelina senior, hopes that the child is his son's. The old man grows suspicious that it was Zimoň who murdered his son in order to win over Katrena. Štelina decides to prove this. Yet, driven by conscience, Zimoň confesses to the crime. Though it turns out that the child's father is Zimoň, Štelina accepts the child as his in a highly cathartic (though no 'cheap') gesture. After all, the child's father is to spend long time in jail.

The theme – had it inspired an opera that would have emerged in Slovakia a few decades earlier – would carry every potential to come across as trite. Nonetheless, Suchoň together with Hoza did their best to avoid the risk. First, they set the storyline that takes place between the two lead characters into confrontation with choral scenes. Chorus doesn't come across simplistically as village folk, but it also serves the role of narrator. Suchoň employs an approach which evokes the ancient principle in Antique drama (where chorus is the narrator and often the tribune of the evolving events). He thus gains quasi-epical distance from the utterly dramatic story. The distance enables him to highlight the plasticity of the piece. As dramatist, he thus also gained two additional bonuses. First, he hinted at the epical principle that moves the piece towards progressive means of expression as used in some European drama of the time. Second, in terms of the role of the chorus as dramatic character, the folk (the bearer of traditional moral values within Christian world) becomes the carrier of moral categorical imperative. That means a definite dramatic and content accent carried by legible formal means of the quasi-Antique chorus.<sup>72</sup> In addition to the dramatic

<sup>71</sup> ZVARA, V.: *The Whirlpool Fifty Years On* [Krútiava po päťdesiatich rokoch]. *The Whirlpool*, Bulletin of the Opera of Slovak National Theatre. Bratislava: SND, 1999, pp 8-9.

<sup>72</sup> The authors decided to enhance the epical frame of the piece with drama characters of the Poet and Double, the Poet's alter-ego. Their acts are placed in between individual operatic scenes. The two characters then contemplate the most fundamental issues of human existence. The storyline is so captivating that such frame seems to pose a barrier to it and doesn't help the oeuvre. After all, it is also something that most producers realised who removed the characters of the Poet and Double from the story.

methods that make *The Whirlpool* a live and fresh modern piece of the time, the oeuvre benefits from natural contemporary language spared of artificially-sounding archaisms.

Suchoň's philosophy of music language deserves special mention, as explained by the music theorist Igor Vajda: "In terms of the use of composing methods, the music form of *The Whirlpool* presents an original synthesis of earlier evolution of European music (with the exception of the Vienna school and its followers) and the understanding of principles of opera. Suchoň inimitably linked romantic inspiration and passion with classical structure, including the pre-Romantic styles, particularly Impressionism on one hand, with polyphonic work of the height of Baroque on the other hand. Together with the modal elements of the older Slovak folk song (tetrachordal and kvintachordal), he transformed them into signature music language."<sup>73</sup> Vajda adds: "Musicians and dramatists are drawn to *The Whirlpool* largely by its original solution of the eternal dualism of music and drama in operatic form. History of music has only a handful of exceptional authors who managed to bring together the two components into an ideally balanced whole. *The Whirlpool* is among them. Suchoň implemented the idea of structuring musical drama as scheme in the so-called absolute music form. Probably inspired by R. Strauss, F. Busoni and A. Berg, he decided to assign the entire piece the foundation of a sonata in a wider sense, without falling into the Procrustean trap of adapting drama to music."<sup>74</sup>

An additional strong point in Suchoň's music language is his use of declamation. The music theorist Markéta Štefková compares it to Janáček's *Jenůfa*: "From among Janáček's oeuvres it is *Jenůfa* that seems to be the closest to the poetics of *The Whirlpool*. It is illustrated, inter alia, by the accent attached to the natural declamation determined by the monumental mental state of characters."<sup>75</sup> Štefková, however, also points out that the two oeuvres are related, in a sense by "the use of quasi-folk material, dominance of the vocal element or the proximity of some dramaturgical moments."<sup>76</sup>

A range of earlier Slovak operatic pieces did quote folk songs and dances. The method was the consequence of the vain attempts to create Slovak national opera. As long as Suchoň intended, in mid-20th century, to compete with mature European music drama, he couldn't satisfy himself with folk quotations only. He opted for a more stimulating and reliable method: to compose *The Whirlpool* he defined harmonic melodic material on the threshold of freely understood tonality and modality. It were the very modal methods, his own and those used in Slovak folk culture to give *The Whirlpool*, quite naturally, its folk character. Suchoň was then able to proceed composing – within the limits of the material – utterly freely and creatively in the original sense.

The première of *The Whirlpool* in 1949 in the Opera of the Slovak National Theatre, and shortly afterwards in Prague, brought an apparent breakthrough in the history of Slovak operatic production. Slovakia was at last given its national opera, as most critics realised instantly at the first première and others soon followed the suit.

Communist censorship in Czechoslovakia curiously affected the fate of *The Whirlpool*. As the libretto contains references to Christian culture, the censorship forced the author to change the passages. It even achieved change in the storyline, demanding to remove the cathartic (Christian) moment of the selfless act of Štelina's forgiveness and his adoption of the murderer's child. The authorities established that the child was the offspring of the

murdered Štelina Jr., an extramarital offspring. That suited the anti-Christian attitude of the Communist régime, wishing to thus violate the original version. It took years for some producers to gather the courage to return to the original version.

"The circumstances under which *The Whirlpool* made it gradually abroad, to the East and West, were quite curious. Along with the performances in Leipzig, Tbilisi, Budapest or Moscow, it was the presentation of the oeuvre on the other side of the Iron Curtain that made a major contribution to the promotion of Slovak art. Naturally, circumstances in the East and West were diametrically different. The East practiced strict doctrine of Socialist Realism dictating the Zhdanovian theses of partisanship, class and folk identity. Through the lens of such ideological scheme, the universally comprehensible themes arising from the context of simple folk seemed acceptable, even desirable. In this sense, there is some continuity in operatic production with traditional forms of Romantic opera. Given the inability of analytical reflection on the part of the wardens of ideological values of Communism, *The Whirlpool*, after the revisions, was deemed to be the exemplary opus of Socialist Realism. As such, it features on a number of stages across Eastern Bloc.

In the West, the situation was fundamentally different after 1950. Articulation of national cultures was largely deemed to be a relic. Music trends emerged that were to help the way out of the difficult situation in which music culture found itself in the first half of the 20<sup>th</sup> century. The crisis of tonal system and exhaustion of traditional tonal music that was past its zenith, plus the agony in late Romanticism and verismo called for a solution. Authors sought it in structural and expressional means of serialism, multiseriism, punctualism, aleatory, or alternative electroacoustic music. Against the background of these trends, *The Whirlpool* might have come across as somewhat lifeless anachronism. Yet, an increasing number of Western intendants of operatic houses were captured by the score and decided to stage the piece. The reception of the productions of *The Whirlpool* was often more positive than were the general and theoretical deliberations about the inclusion of the piece into the context of European works. The irrefutable music quality and music dramatic credibility largely overshadowed formal objections."<sup>77</sup>

## Conclusion

Even if this study were to define the notion of the national in Slavic and Slovak operatic production, it would fail at that, for such category is a notion related to a range of social, political, historical, cultural, religious and – in this particular case – artistic aspects. As such it can rather be outlined, or mapped, rather than precisely characterised. The opening of the study does that as it peeks into Russian, Polish, Czech, and Slovak history. Subsequent parts explore more closely the effect of universal developments of the national element as applied to specific operatic production in the cultures in focus, and vice versa. The material summarised the findings in a context that isn't often addressed. It also presented the special story of Slovak national opera. Its shape was long sought to be eventually articulated in Eugen Suchoň's *The Whirlpool*. At this point, the study differentiated the perception of national opera as a reference point in the quest for national identity in music drama production, and of national opera as a specific genre that came closest to the above reference point.

*The Whirlpool* emerged later than national operas in other Slavic countries. Hence it had to reconcile with altogether different circumstances. On the one hand, it faced anachronic expectations by the culturally astute public, hoping the Slovaks would at last receive an oeuvre that would seal their national identity. On the other hand, the new opus, unlike the 19<sup>th</sup>-century works composed by Slovakia's neighbours, it had to come to terms

<sup>73</sup> VAJDA, I.: *op. cit.*, p. 41.

<sup>74</sup> VAJDA, I.: *op. cit.*, p. 45.

<sup>75</sup> ŠTEFKOVÁ, M.: The Foundation of Music Language in Suchoň's *The Whirlpool* [Podstava hudobnej reči Suchoňovej Krútiavky]. In: *Volume from the International Music Studies Conference Creative Legacy of Eugen Suchoň Within the Context of Place, Era, Development and the Oeuvre of His Agesmates* [Zborník z muzikologickej konferencie s medzinárodnou účasťou Tvorivý odkaz Eugena Suchoňa v kontexte miesta, doby, vývoja a diela vrstovníkov]. Bratislava: Katedra hudobnej vedy Filozofickej fakulty Univerzity Komenského, 2009, p. 241.

<sup>76</sup> ŠTEFKOVÁ, M.: *Ibid.*

<sup>77</sup> SMOLÍK, P.: Circumstances Surrounding the Emergence and the Fate of an Oeuvre. *The Whirlpool* [Okolnosti vzniku a osudy diela]. *The Whirlpool*, Bulletin of Opera of Slovak National Theatre. Bratislava: SND, 1999, pp 28-29.



with the challenges of modern music theatre as articulated in the second half of the 20th century.

In the apparent deadlock, Suchoň came across as composer who was remarkably learned (responding to the need to build upon what was already in place), unusually creative (the inevitability to create something new and authentic), and as an inventive strategist. In *The Whirlpool* he creatively merged the very best in earlier and more contemporary European music, with music material that was, at the core, of folk nature, however, without quotations. Suchoň mastered a functioning dramatic whole with resonances of modern theatre methods. He left eternal ethical legacy that identifies Slavic national element with the Christian one which is legitimate in respect to Slovak history and tradition.

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#### Primary Paper Section: A

#### Secondary Paper Section: AL

## EXPANSIVENESS/ RESTRICTIVENESS OF MONETARY AND FISCAL POLICY IN THE CZECH REPUBLIC AND HUNGARY - COMPARATIVE ANALYSIS

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**Abstract:** Economic authorities (central bank and government), conducting the monetary and fiscal policy, affect the economy as well as each other. In pursuit of its goal, which is the desired level of inflation (the inflation target), the central bank applies appropriate monetary policy strategies with varying degrees of expansiveness/ restrictiveness measured by the interest rate. In turn, the government striving to achieve the goal which is the desired economic growth also uses strategies with a different degree of expansiveness and restrictiveness measured by the level of the budget deficit in relation to GDP. The decisions of economic authorities regarding the expansiveness or restrictiveness of policies are also influenced by many factors that the central bank and the government have no influence on, such as financial crises, supply shocks and others. The purpose of the article is to show the importance of the monetary and fiscal policy options in the economies of the Czech Republic and Hungary. It also stressed the context of monetary and fiscal game in relation to the direction (restrictiveness or expansiveness) of both policies. The study covered the years 2001-2017. To achieve the article's objective the following research methods were used: presentation of statistical data and statistical research methods. As a result, it was noticed that the character of monetary and fiscal policy plays a significant role in the economies under study. The originality of the analysis carried out in this article is to emphasize the importance of proper conduct of monetary and fiscal policy and their significance in economic processes in the countries studied.

**Keywords:** monetary policy, fiscal policy, expansiveness, restrictiveness, economy.

### 1 Introduction

Directions of monetary and fiscal policies – restrictive and expansionary – were discussed by A. Blinder<sup>1</sup> and later by H. Bennett and N. Loayza<sup>2</sup> in the context of monetary-fiscal game, in the result of which independent decisions of economic authorities may lead to Nash equilibrium. In contrast, according to the latest models this is the fiscal policy that influences a level of prices and an inflation path regardless of monetary policy.<sup>3</sup> The last financial crisis resulted in changes in conducting monetary and fiscal policy, namely it induced to affirm unconventional activities of economic authorities and thereby changes in combination of policy mix.<sup>4</sup>

From the perspective of the monetary and fiscal game, inflation and economic growth are the lowest in an environment characterized by a combination of extremely restrictive monetary and fiscal policies. A monetary policy that is becoming more and more expansionary (successive cuts in interest rates) increases inflation and the rate of GDP growth. On the other hand, an increasingly expansionary fiscal policy (expanding the budget deficit) pushes up inflation and the rate of GDP growth. The highest rates of inflation and GDP growth are observed in countries where the economic authorities have chosen extremely expansionary monetary and fiscal policies. Woroniecka-Leciejewicz noted that the restrictiveness of a monetary policy depends on the government's fiscal policy. To prevent inflation from rising too high, the central bank tightens up monetary policy as the government makes its fiscal policy more expansionary. On the other hand, the central bank's monetary policy has influence on how restrictive or expansionary policy will be pursued by the fiscal authorities. An increasingly restrictive monetary policy leads to a more expansionary fiscal policy, because the higher interest rate the environment requires,

the more pro-growth fiscal policy to boost economic growth is, which usually increases the budget deficit.<sup>5</sup> Hence the purpose of the article is to show the importance of the monetary and fiscal policy options in the economies of the Czech Republic and Hungary.

### 2 Analysis of restrictiveness and expansiveness of monetary and fiscal policy in Czech Republic

The presented study was based on the method used by Czyżewski and Kulyk<sup>6</sup> as well as by other authors and inter alia by B. Kopeć.<sup>7</sup> The area of studies concerns variations of different options of economic policy (divided into monetary and fiscal policy) between 2001-2017 in the Czech Republic and Hungary. As an instrument of monetary policy (conducted by the central bank) the study used a nominal long-term interest rate whereas as an instrument of fiscal policy (conducted by the government) the deficit of the General Government sector in relation to GDP was applied. For monetary policy a standardized ratio of long-term interest rate was calculated and for fiscal policy a standardized ratio of the GG deficit in relation to GDP. In order to determine standardized ratios an arithmetic mean and standard deviations for both, an interest rate and a budget deficit were calculated. It was assumed that the business cycle lasts 3 years. While setting a direction of economic policy the resultant of options used in monetary and fiscal policy was applied.

Table 1 presents the results concerning the direction of fiscal policy in the Czech Republic between 2001-2017. It can be observed that between 2001-2003 the General Government (GG) deficit considerably exceeded the size of deficit recommended by the EU i.e. 3% of GDP (the Maastricht Treaty). It was in 2004 that the GG deficit in the Czech Republic fell below 3%, which could be connected with the government restrictive fiscal policy conducted between 2002-2004 as well as the excessive deficit procedure imposed on the Czech Republic in 2004 and abolished only in 2008. Restrictive fiscal policy was still used in the Czech Republic in the subsequent years until 2007, which was reflected in a low GG deficit. Between 2008-2010 there was a shift in the direction of fiscal policy from the restrictive to expansionary one, which could result from a weaker economic situation connected with the global financial crisis (2008-2009). Hence, between 2009-2010 much higher GG deficit ratios are observed, which amounted to -5.5% of GDP in 2009 and to -4.2% of GDP in 2010. Growth of the GG deficit was also a reason for imposing excessive deficit procedure on the Czech Republic in 2009 (as stipulated in art.126 of the Treaty on the Functioning of the European Union<sup>8</sup> and in the Protocol No 12 to this Treaty<sup>9</sup>). The excessive deficit procedure was abolished in 2014.<sup>10</sup>

Table 1. Direction of fiscal policy in the Czech Republic between 2002-2016

Year	GG budget deficit in [%]	Annual relative change in deficit	Standardized ratio of change in deficit	Fiscal policy in specific years	Restrictiveness/ Expansiveness of fiscal policy
2001	-5.5				
2002	-6.4	0,163636	0,113595		
2003	-6,9	0,078125	0,027564	-0,18867	restrictive

<sup>5</sup> WORONIECKA – LECIEJEWICZ I.: Problem wyboru policy mix w grze fiskalno – monetarnej z zastosowaniem funkcji logistycznej, „Studia i Materiały Informatyki Stosowanej”, t. 4, No. 8, 2013, 29 – 39 pp.

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2004	-2,4	-0,65217	-0,70717		
2005	-3	0,25	0,200483		
2006	-2,2	-0,26667	-0,31932	-0,28528	restrictive
2007	-0,7	-0,68182	-0,73699		
2008	-2	1,857143	1,817384		
2009	-5,5	1,75	1,70959	1,07938	expansionary
2010	-4,2	-0,23636	-0,28883		
2011	-2,7	-0,35714	-0,41035		
2012	-3,9	0,444444	0,396108	-0,25393	restrictive
2013	-1,2	-0,69231	-0,74755		
2014	-2,1	0,75	0,703519		
2015	-0,6	-0,71429	-0,76966	-0,76567	restrictive
2016	0,7	-2,16667	-2,23086		
2017	1,6	1,285714	1,242486		

Source: Own study based on the [Eurostat] data

In turn, between 2011-2016 the government of the Czech Republic conducted a restrictive fiscal policy, which was reflected in lower ratios of the GG deficit, except the year 2012 when the GG deficit slightly exceeded the deficit criterion from Maastricht and between 2016-2017 when even some budget surplus was noted.

Table 2 presents the results concerning the direction of monetary policy in the Czech Republic between 2001-2017. In the period between 2002-2004 and between 2011-2016 the central bank in the Czech Republic conducted expansionary monetary policy, which definitely results from stability of prices in the long term. Yet, between 2005-2010 the central bank decided to implement restrictive monetary policy, which can be justified in the discussed period – the financial crisis that was a reason for fluctuations in financial markets. It influenced the condition of public finance<sup>11</sup> and also adversely affected stability of prices in the economy.

Table 2. Direction of monetary policy in the Czech Republic between 2002-2016

Year	Long-term nominal interest rate [%]	Annual relative change in long-term interest rate	Standardised ratio of change in interest rate	Monetary policy in specific years	Restrictiveness/Expansioniveness of monetary policy
2001	6,31				
2002	4,88	-0,22662	-0,45504		
2003	4,12	-0,15574	-0,27569	-0,06084	expansionary
2004	4,82	0,169903	0,548219		
2005	3,54	-0,26556	-0,55356		
2006	3,8	0,073446	0,304172	0,06729	restrictive
2007	4,3	0,131579	0,451254		
2008	4,63	0,076744	0,312516		
2009	4,84	0,045356	0,233101	0,054039	restrictive
2010	3,88	-0,19835	-0,3835		
2011	3,71	-0,04381	0,007488		
2012	2,78	-0,25067	-0,51589	-0,33328	expansionary
2013	2,11	-0,24101	-0,49143		
2014	1,58	-0,25118	-0,51718		
2015	0,58	-0,63291	-1,483	-0,84539	expansionary
2016	0,43	-0,25862	-0,536		
2017	0,98	1,27907	3,354545		

Source: Own study based on the [Eurostat] data

Based on standardised ratios of fiscal and monetary policy table 3 presents differences between these policies and thereby indicates an option of economic policy in the Czech Republic. A negative value of difference suggests the expansionary economic policy and a positive value suggests the restrictive one.

Table 3. Direction of economic policy in the Czech Republic between 2002-2016

Years	Fiscal policy	Monetary policy	Economic policy	Expansioniveness/restrictiveness of economic policy
2002-2004	-0,18867	-0,06084	0,12783	restrictive
2005-2007	-0,28528	0,06729	0,35257	restrictive
2008-2010	1,07938	0,054039	-1,025341	expansionary
2011-2013	-0,25393	-0,33328	-0,07935	expansionary
2014-2016	-0,76567	-0,84539	-0,07972	expansionary

Source: Own study based on the Eurostat data

The economic policy in the Czech Republic as a whole was restrictive in the period between 2002-2007. In turn,

expansionary economic policy was conducted from the very beginning of global financial crisis (2008-2009), during the imposed excessive deficit procedure (2004-2008 and 2009-2014) until 2016 i.e. during the period of low interest rates. It must be also emphasized that in some periods the policies cancelled each other, which means that when one of them was of restrictive nature, the other one showed expansioniveness.

### 3 Analysis of restrictiveness and expansioniveness of monetary and fiscal policy in Hungary

Table 4 presents the results concerning the direction of fiscal policy in Hungary between 2001-2017. In the period between 2002-2004 the Hungarian government conducted expansionary fiscal policy with the GG deficit ratios exceeding considerably the reference value from Maastricht i.e. 3% of GDP. In 2004, soon after Hungarian accession to the European Union, the European Commission decided to impose an excessive deficit procedure on the country<sup>12</sup> (GG deficit in 2004 amounted to -6,5% of GDP and was growing in the subsequent years to the level of -9,3% in 2006). Hence, from 2005 the government conducted the restrictive fiscal policy up to 2016, which resulted in a significant decrease of deficit that between 2015-2017 did not exceed 2% of GDP. The excessive deficit procedure was abolished in 2013<sup>13</sup> in response to considerable improvement of the condition of public finance.

Table 4. Direction of fiscal policy in Hungary between 2002-2016

Year	GG budget deficit in [%]	Annual relative change in deficit	Standardised ratio of change in deficit	Fiscal policy in specific years	Restrictiveness/Expansioniveness of fiscal policy
2001	-4	-	-		
2002	-8,8	1,2	3,074239		
2003	-7,1	-0,19318	-0,55891	0,746609	expansionary
2004	-6,5	-0,08451	-0,2755		
2005	-7,8	0,2	0,466435		
2006	-9,3	0,192308	0,446374	-0,11603	restrictive
2007	-5	-0,46237	-1,26089		
2008	-3,7	-0,26	-0,73316		
2009	-4,5	0,216216	0,508723	-0,09319	restrictive
2010	-4,5	0	-0,05513		
2011	-5,4	0,2	0,466435		
2012	-2,4	-0,55556	-1,50391	-0,29176	restrictive
2013	-2,6	0,083333	0,162191		
2014	-2,6	0	-0,05513		
2015	-1,9	-0,26923	-0,75723	-0,38066	restrictive
2016	-1,7	-0,10526	-0,32963		
2017	-2	0,176471	0,405074		

Source: Own study based on the [Eurostat] data

Table 5 presents the results concerning the direction of monetary policy in Hungary in the period between 2001-2017. The central bank in Hungary conducted a restrictive monetary policy between 2002-2004, which is confirmed by relatively high (compared to interest rates in the analysed period) long-term interest rates. In the subsequent three years these interest rates fell slightly while determining a shift in the direction of monetary policy to the expansionary one. Next, during the global financial crisis (2008-2009) long-term interest rates increased again under the conditions of restrictive monetary policy. It was only in the period from 2011 to 2016 that the monetary policy in Hungary was of expansionary nature with long-term interest rate of 3,14% in 2016. In turn, in 2017 that interest rate fell to the level of 2,96%.

Table 5. Direction of monetary policy in Hungary between 2002-2016

Year	Long-term nominal interest rate [%]	Annual relative change in long-term interest rate	Standardised ratio of change in interest rate	Monetary policy in specific years	Restrictiveness/Expansioniveness of monetary policy
2001	7,95				
2002	7,09	-0,10818	-0,40103		
2003	6,82	-0,03808	0,067223	0,44325596	restrictive

<sup>12</sup> SZYMAŃSKA A.: Procedury ..., op. cit.

<sup>13</sup> Ibidem.

<sup>11</sup> GRABIA T.: Sytuacja gospodarcza w krajach Grupy Wyszehradzkiej Analiza porównawcza, „Gospodarka w Praktyce i Teorii”, Poland, Vol. 2(35), 2014, 35-47 pp.

2004	8,19	0,20088	1,66358		
2005	6,6	-0,19414	-0,9753		
2006	7,12	0,078788	0,847958	-0,0540858	expansionary
2007	6,74	-0,05337	-0,03491		
2008	8,24	0,222552	1,808358		
2009	9,12	0,106796	1,03064	0,60574937	restrictive
2010	7,28	-0,20175	-1,02617		
2011	7,63	0,048077	0,642797		
2012	7,89	0,034076	0,549265	-0,0514317	expansionary
2013	5,92	-0,24968	-1,34636		
2014	4,81	-0,1875	-0,93095		
2015	3,43	-0,2869	-1,595	-0,9230451	expansionary
2016	3,14	-0,08455	-0,24319		
2017	2,96	-0,05732	-0,06133		

Source: Own study based on the [Eurostat] data

Based on standardised ratios of fiscal and monetary policy table 6 presents calculated differences between these policies and thereby indicates an option of economic policy in Hungary. A negative value of difference suggests the expansionary economic policy and a positive value suggests the restrictive one.

Table 6. Direction of economic policy in Hungary between 2002-2016

Years	Fiscal policy	Monetary policy	Economic policy	Expansiveness/restrictiveness of economic policy
2002-2004	0,746609	0,44325596	-0,30335304	expansionary
2005-2007	-0,11603	-0,0540858	0,0619442	restrictive
2008-2010	-0,09319	0,60574937	0,69893937	restrictive
2011-2013	-0,29176	-0,0514317	0,2403283	restrictive
2014-2016	-0,38066	-0,9230451	-0,542385	expansionary

Source: Own study based on the [Eurostat] data

It can be observed that the expansionary economic policy in Hungary was conducted at the beginning of the analysed period i.e. between 2002-2004 and at the end of that period i.e. between 2014-2016. In turn, starting from 2005 up to 2013 (including the last financial crisis) the restrictive policy was the prevailing option. Similarly, like in case of the economic policy in the Czech Republic it must be noted that also in Hungary in some periods these policies cancelled each other, which means that when one of them was of restrictive nature, the other one showed expansiveness.

#### 4 Conclusions

Comparing directions of fiscal policy in the Czech Republic and in Hungary between 2001-2017 it can be observed that in both countries the policies were of restrictive nature, except the period between 2008-2010 in the Czech Republic (due to financial crisis) and in Hungary between 2002-2004 (before the accession to the European Union) when fiscal policies in the analyzed countries were expansionary. What influenced restrictiveness of fiscal policy both, in Hungary and the Czech Republic were high GG deficit ratios (in Hungary in the analysed period the GG deficit ratios were relatively higher compared to the Czech Republic) as well as excessive deficit procedures imposed by the European Commission. In turn, directions of monetary policy in the Czech Republic and Hungary between 2002-2007 were opposite i.e. in case of expansionary monetary policy in the Czech Republic between 2002-2004, the policy of central bank in Hungary was restrictive and contrary, between 2005-2007 monetary policy in the Czech Republic was restrictive, whereas in Hungary it was of expansionary nature. It was only between 2008-2016 that monetary policies in Hungary and the Czech Republic were conducted in the same direction i.e. between 2008-2010 they were restrictive (the period of financial crisis) and between 2011-2016 – in both compared countries monetary policies were expansionary (the period of economic growth stimulation) – but long-term interest rates in the analyzed period were relatively higher in Hungary than in the Czech Republic. While comparing the character of economic policy in both countries it can be observed that between 2005-2007 the economic policy in Hungary and the Czech Republic showed restrictiveness whereas between 2014-2016 – expansiveness (the period of falling interest rates). Summing up, it must be emphasized that the option of monetary and fiscal policy is of crucial importance for key variables in the economies of the Czech Republic and

Hungary. Therefore, proper implementation of monetary and fiscal policy is an important element in economic processes in the analyzed countries.

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## GDPR IN LABOUR RELATIONS - WITH OR WITHOUT THE CONSENT OF THE EMPLOYEE?

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The scientific contribution was developed as part of the VEGA research project entitled "Aspects of Using the SoLoMo Marketing Concept to Raise Eco-Innovation Awareness", no. 1/0708/18, 2018-2020 and project FPPV- 02-2018.

**Abstract:** The presented scientific article focuses on the new legal framework for the protection of personal data, which brings fundamental changes also in the field of implementation of labour relations. The question is most up to date with regard to the obligation to implement changes to the practice of businesses and organizations. The creative team strives, not only on the basis of their own professional experience in application practice but also on the results of qualitative research, to show that employers - small and medium-sized enterprises have not managed to move on to new legislation. They continue to pursue employment relationships in accordance with the original privacy policy which may result in the imposition of a sanction by the control authorities and at the same time violating the right of employees to protect their privacy and personal data in the course of their work for the employer.

**Keywords:** employer, employee, personal data, GDPR, enterprise

### 1 Introduction

The new legal framework for the protection of personal data, established by the Regulation of the European Parliament and of the Council no. 2016/679 of 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, repealing Directive No. 95/46 / EC (hereinafter referred to as the "General Data Protection Regulation") and in the Slovak Republic by the new Act no. 18/2018 on the protection of personal data and on the amendment of certain laws (hereinafter referred to as the "new law on the protection of personal data"), many small and medium-sized employers who should be managed by them are, unfortunately, still a relatively large unknown, namely even several months after its entry into force (Bencsik, 2018; Kho, 2018; Pauhofová & Stehlíková, 2018; Hitka et al., 2018). Given the nature of the general data protection regulation in question and its universal approach to the protection of personal data in the Member States of the European Union, we have similar application problems not only in the Slovak Republic, the Czech Republic but also in other European countries (due to the multinational composition of the authors' team, the problem in question was analyzed in the Slovak as well as in the Czech Republic).

The situation is all the more serious because insufficient knowledge of the new legal framework is dominant in the field of employment relationships, where not only small and medium-sized enterprises but also large employers often fail to take into account the legal principles underlying the General Data Protection Regulation in the implementation of the content of employment law (Círníček et al., 2018; Glova et al., 2018; Mészáros, 2018). Legal disputes arising from the wrongful legal process of employers arise, in particular, in the field of acquiring employee consent in the event of an employment relationship contrary to Art. 6 section (1) letter (b) of the General Data Protection Regulation, the content of employment contracts of employees in relation to the disclosure of their birth registration number, the publication of employee photographs for the purposes of the employer's internal systems or for marketing purposes, or the attendance of employees through biometric facilities. Due to the relatively wide complexity of the problems associated with the practical application of the General Data Protection Directive to corporate practice, we have focused on the issue of getting employees' consent to the employee's "secure" employment. Although the General Data Protection Regulation provides a specific legal basis for the lawfulness of

the processing of personal data of employees, 6 and later described employers' progress shows signs of inconsistency with applicable legislation. It potentially exposes employers to the danger of imposing a sanction on the part of the relevant state authorities - the Office for Personal Data Protection.

### 2 Objective, material and methodology

The main objective of the presented scientific article is to assess the compliance of legal and regulatory requirements with the new legislation on the protection of personal data in the application practice by small and medium-sized enterprises including the legal interpretation of the most frequent recurring misconduct in this area. Therefore, the authors' interest is the transnational context of the relevant legislation defined in particular by the General Data Protection Regulation and at the same time the theoretical and legal grounds, which should be the determinant of the behaviour of the affected persons - employers in the implementation of labour relations in the Slovak and Czech Republics. The partial objective was to identify the criteria and the possibilities for the application of the new legal framework for the protection of personal data, with an impact on the direction of the company's personnel management in the need to implement the relevant changes required by the new legal framework determined in particular by the general regulation on the protection of personal data. Primary data was obtained as part of the scientific project of the VEGA project no. 1/0708/18: "The Aspects of Using the SoLoMo Marketing Concept to Raise Eco-Innovation Awareness". We have obtained secondary data from partly domestic but especially foreign scientific literary sources. In designing the article it was necessary to focus the underlying material from primary and secondary sources. Due to the nature of the problem studied we have chosen a combined methodological approach based on the use of selected qualitative and logic-recognition methods. When processing the article, we have applied critical qualitative analysis of legal status, logic-recognition methods such as induction, deduction, analysis and synthesis. Based on quantitative methodologies we have applied descriptive statistics to assess the results obtained by primary research. The sample comprised 512 entities of different organizational and legal forms from different economic sectors with priority being given to small and medium-sized enterprises which accounted for 99% of the surveyed statistical set. Selection of subjects was carried out by stratified selection. The composition of the surveyed statistical set was 48% of the Czech Republic and 52% of the Slovak Republic. However in view of the territorial scope of the General Data Protection Regulation we examined the examined population as a whole without taking into account their nationality, given the transnational nature of the small and medium-sized enterprises and the universality of the obligations imposed on the protection of personal data resulting from the uniform legislation.

### 3 In general on the legal basis of personal data processing

In order for the employer to process the personal data of the employees in a lawful way, he must have so-called legal authorization, respectively. the relevant legal basis (Lazányi Fulop, 2017; Mura et. al, 2017; Cseh Papp et al, 2018, Wachter 2018). Each purpose of processing must have its legal basis unless the original purpose is compatible with the other purpose of the processing. The employer is authorized to process the personal data of the persons concerned because the employee agrees with it, or if it is allowed by other law-defined fact. The General Data Protection Act profoundly determines and changes the range of legal bases of processing compared to the original legislation.

According to Art. 6 of the General Data Protection Act and Section 13 of the new Personal Data Protection Act, the employer may process the personal data of the employees on the basis of at least one of the following legal bases:

- a) employee consent;
- b) processing for performance of the contract;
- c) the processing required under a special regulation or an international treaty;
- d) processing necessary to protect the life, health or property of employees, or other individual;
- e) the processing necessary for the performance of a task carried out in the public interest or in the application of official authority entrusted to the employer;
- f) processing necessary for the purpose of a legitimate interest.

For the most usable in industrial relations we consider the legal bases referred to in point (a) to (c) and f).

In addition to the provisions of Art. 6 of the General Data Protection Regulation and with reference to § 13 of the new Act on the Protection of Personal Data, the provisions of Section 78 of the Slovak New Data Protection Act express further specific legal bases for the processing of personal data of employees. Employers are authorized to process personal data without the consent of the employee even if the processing of personal data is necessary

- a) for academic, artistic or literary purposes;
- b) for the purpose of informing the public by means of mass media and if the personal data are processed by the employer resulting from the subject of the activity;
- c) for the purpose of archiving, for scientific purposes, for the purpose of historical research or for statistical purposes when accepting adequate guarantees for the rights and freedoms of the employee (so-called privileged purposes);

For these purposes, the employer may not process the personal data of the person concerned without his/her consent, if the processing of personal data violates the employee's right to protection of his / her personality or the right to privacy, or such processing of personal data without the employee's consent excludes a special regulation or international treaty of the Slovak Republic (Hitka et al., 2017).

For the purpose of implementing labour relations, a correct assessment of the subject matter of the matter and which constitutes the content of a particular employment relationship is considered to be the key parameter for determining the appropriate legal basis. On the basis of its correct identification, the employers should then be able to distinguish whether or not they need to obtain the consent of an employee at that time or may process his personal data without his consent on the basis of another legal basis, 6 of the General Data Protection Regulation (Valentova et al., 2018; Jeřábek, 2016).

### 3.1 Employee approval

The employer is authorized to process the personal data of the person concerned if the employee has given his consent to the processing of his or her personal data for at least one particular purpose. The consent will then apply to all processing activities carried out for the same purpose, or related and close to one another. The consent may also be given for a number of expressly stated purposes, but in such a way that the employee may independently demonstrate his or her free will for each of the individual purposes stated in the agreement. The General Data Protection Regulation introduces new requirements specifying the content and formal terms of consent. It is a unilateral manifestation of the will of an employee to be freely given, informed, concrete, unambiguous and distinct from other statements (Goddard, 2017; Orlova et al., 2018).

Particular mention is made of the freedom of consent in employment relations, where the disparity between the contracting parties threatens a truly free expression of consent on the part of the employee. Consent incorporated into an employment contract indicates the employee's inability to refuse to grant consent. It is ideal to formulate the consent to the processing of personal data on a separate document in addition to a contract of employment (Merrel, 2018; Lindqvist, 2018;

Hsu, 2018; Krajňáková & Vojtovič, 2017) with the assurance that refusal or revocation of consent will not be penalized in any way by the employer. If the employer agrees with the processing of personal data, he / she decides to enter into a contract of employment, at least do so in a separate article / provision of the employment contract. Consent to the processing of personal data should be clearly and distinctly distinguished from other facts (parts of the document) in order to prevent the person concerned from overseeing it in any available form. From the point of view of the formulation, attention needs to be drawn to ensuring that consent is expressed in a clear, easily understandable and easily accessible form.

The employer must be in a good position and at any time to prove that the employee has consented to the processing of his or her personal data. It is necessary to remember this when choosing a form of consent and to retain (or archive) the obtained consent for the entire processing of personal data. Failure to prove the existence of the employee's consent to a situation where the employer requires him to process personal data in the sense of the law may be considered a violation of the applicable law, with the assumption that the personal data will not be processed in the absence of a legal basis. The legal framework does not specify the form of consent explicitly, it is for the employer to choose what he / she chooses (written form confirmed by hand signature or guaranteed electronic signature, simple electronic form in the form of an email, telephone recording, oral approval expressed at a personal meeting, etc.). Silence, pre-marked boxes or employee inactivity are not considered as consent because they are not based on the active approach of an employee expressing consent to the processing of personal data. The consent can also be considered as a procedure if the job applicant sends a CV asking for a job offer if the employee sends / publishes his / her own photo on the intranet network used by the employer etc.

The fundamental problem of "economic" nature with regard to the possibility of imposing a sanction on the part of the competent state supervisory authorities lies in the aforementioned "secure" recruitment of employees' approvals. The general premise used by employers in application practice in the custody of the protection of personal data is based on the fact that the consent of the employee "sanctify" any handling of his or her personal data. The prevailing employers' practice is to enter specific articles expressing such approval into working contracts / agreements, sometimes general, sometimes more specific. For example - *"By signing this agreement, the Employee expressly agrees to the use of his / her personal data in accordance with the General Data Protection Regulation and Act No. 18/2018 Labour act on the Protection of Personal Data and on Amendments to Certain Acts for the Purposes and Obligations of Labour Relations Established by the Employment Contract and for the Purposes of the Employee and Employer to Comply with the Insurance pursuant to Act no. 580/1994 Coll. on health insurance as amended, Act no. 461/2003 Coll. on Social Insurance as amended and Act no. 595/2003 Coll. on Income Tax, as amended."* The problem of any processing of personal data of employees is solved by the fact that the person concerned agrees with the processing operation.

In this respect, the crucial question arises whether the consent of the employee may break the principle of minimizing data within the meaning of Art. (5) of the General Data Protection Regulation that *the processing of personal data is limited to the extent necessary for the purposes for which personal data are processed*. The processing of a specific personal data of an employee must be necessary to achieve the purpose of the processing on any legal basis of processing, even with the consent. By combining two legal bases of processing of personal data, employers are in violation of the legal regime for the processing of personal data. The processing of personal data on the basis of the employee's consent. If another legal basis for the processing of personal data is to be used, they are also exposed to confusing situations where the employee will seek legal protection which the general data protection regulation confers on the processing of personal data on the basis of consent

(Valentová, et al., 2016), in particular the right to appeal at any time. Please note that withdrawal of consent may not always be an obligation for an employer to dispose of personal information, as the consent was given for certain purposes. After withdrawal of consent the employer is obliged to cease processing of personal data for the purpose for which the consent was granted and subsequently revoked. Similarly, if the employer has used his consent to cases where the processing of personal data proves a different legal reason (in particular lawful processing); this does not mean withdrawal of consent (i.e. an act that was not necessary for processing) the operator's obligation to stop processing or liquidation of processed personal data.

### 3.2 Processing for performance of the contract or required under a special regulation or an international agreement

An alternative to obtaining the employee's consent for the processing of personal data of employees in employment relationships is the legal basis within the meaning of Art. 6 section (1) letter (b) of the General Data Protection Regulation for the processing of personal data of employees for the purposes of performance of the contract or the processing of personal data of an employee is necessary under a special regulation or an international agreement.

The employer is authorized to process personal data without the consent of the employee if the processing is necessary for the performance of the contract (in this case the employment contract) to which the employee is a party or for the implementation of the pre-contractual measure at the request of the employee. An employee is a contracting party, an initiator of the contract or a participant in pre-contractual relationships within the meaning of Section 41 of the Labour Code. The purpose of the processing of personal data is in this case the subject of a contract of employment within the meaning of §1 section 2 of the Labour Code in the performance of the dependent work of employees for wages or remuneration by the employer.

The employer is authorized to process the personal data of the employee if the processing of his or her personal data is necessary according to a special regulation (at least with legal force) or an international agreement binding on the Slovak Republic. In the processing of personal data under a special regulation, of an international agreement, the employer processes personal data about the employees without their consent (that is to say, it is authorized and empowered directly by a special regulation or an international treaty). When processing personal data on the basis of this legal basis, the employer is bound by the obligation to process personal data only in the scope and manner prescribed by this special regulation or international treaty. The employer is therefore entitled to process only personal data that are directly defined by a specific regulation or an international agreement (a list of personal data) or personal data that are necessary to achieve a specific law or international treaty of purpose (personal data scope). E.g. Art. 11 of the Labour Code (personal data related to the qualification and professional experience of the employee and data that may be significant in terms of the work that the employee is to perform, is performing or performed).

A particular legal regulation is relatively frequent, if not the most common legal basis for the processing of personal data of employees. The entitlement and the conditions for the processing of personal data in labour relations are governed by special laws, primarily the Labour Code, which also defines the scope or list of personal data that can be processed in the labour relations by way of adjustments to labour relations. The Labour Code, for the purposes of employment relations, constitutes a special regulation in the sense of Art. 6 section (1) letter (b) of the General Data Protection Regulation and Section 13 c) of the new Personal Data Protection Act, which entitles the employer to work with personal data, for purposes connected with the employment relationship.

The special case of the legal basis for the processing of personal data under the law is for employers expressed in the provisions of Section 78 3 of the new Act on the Protection of Personal Data. According to the cited provision, *"the operator who is the employer of the person concerned (employee) is entitled to provide his or her personal data or to disclose personal data in the scope of title, name, surname, job title, job title, function, employee's personal number or employee's employee number, the place of work, the telephone number, the fax number, the e-mail address of the workplace and the employer's identification data, if necessary in connection with the performance of the duties, duties or duties of the person concerned. The provision of personal data or the disclosure of personal data must not interfere with the seriousness, dignity and security of the person concerned."* For the processing of personal data of an employee stated in § 79 section 3 of the new Act on Personal Data Protection the employer does not need the consent of the employee because the legal basis of the processing is directly the law on the protection of personal data. A prerequisite for the lawful processing of the employee's personal data is that the employer will keep the stated purpose; in case the provision or disclosure of personal data is necessary in connection with the performance of the work, service or function of the person concerned (Valentova, 2018).

### 4 The processing of personal data during the duration of the employment relationship and the most frequent mistakes of employers

The processing of personal data in employment relationships is already in the pre-employment phase. In accordance with Section 41 of the Labour Code, pre-contractual relationships whose purpose is to collect a summary of information (including personal data) about potential employees to facilitate the employer's decision-making process. At this stage, employers have a fundamental difficulty in distinguishing between the above-mentioned use of the legal basis of employee consent and whether it is necessary to obtain or use the other legal bases mentioned above.

In the context of pre-contractual relationships, it is therefore necessary to differentiate between individual types of personal data and consequently depending on such categorization to choose the corresponding legal basis. Incorrect judgment may lead to the sanction in question. The processing of data in pre-contractual relationships can thus take place

- on the basis of the consent of the person concerned, 6 section (1) letter (a) of the General Data Protection Regulation and Section 13 (1) letter a) of the new Personal Data Protection Act (personal data entered in the delivered biography) are processed on the basis of the consent of the job seeker;
- the processing of personal data is necessary for the performance of the contract to which the person concerned is a party or for the implementation of a pre-contractual measure at the request of the person concerned, 6 section (1) letter (b) of the General Data Protection Regulation and Section 13 (1) letter b) of the new Personal Data Protection Act (on this legal basis processing of personal data in the course of a job interview or a selection procedure);
- the processing of personal data is necessary to fulfil the statutory obligation of the operator under a special regulation or international treaty, which the Slovak Republic is bound under Art. 6 section (1) letter c) of the General Data Protection Regulation and § 13 section (1) letter c) of the new Personal Data Protection Act (this is the processing of all personal data that an employer needs to report an employee to the Social Insurance Company, the Health Insurance Company, for the purpose of keeping the payroll, etc.).

At the same time, the employer does not need to obtain the employee's consent to the processing of personal data as the employer as an operator processes the personal data of the employee for performance of the contract. It is therefore not



necessary for the employee to give the employer explicit and unconditional consent to the processing of his personal data for the purpose of processing the accounting documents and keeping the employer's accounts, keeping records of the employer's employees (past and present) and other operational purposes of the employer. Thus the length of time that an employee's personal data should be processed for the above purposes should generally correspond to the time at which the employer is required to keep personal data or to archive certain personal data in accordance with applicable law. After fulfilling the purpose of processing the employee's personal data, the employer is obliged to liquidate this data without delay. Despite the legal approach outlined above, however, employers in the vast majority (in terms of quoted qualitative research results) in their employment contracts or other types of employment contracts obtain employee approvals with the processing of personal data for the stated purposes.

With the conclusion of a contract of employment or one of the agreements on work done outside the employment relationship a common processing operation in the form of copying or scanning of the official documents of the employee exists (civil card, driving license, education document, health insurance card, birth certificate of employee's child, employee's marriage certificate, etc.). According to the original legal status, according to § 15 section 6 of the old Personal Data Protection Act *to obtain personal data necessary to achieve the purpose of processing by copying, scanning or otherwise recording the official documents on the information carrier only if the person concerned agrees in writing or the special law expressly allows without the consent of the person concerned. This is not the case when it comes to collecting personal data for the purpose of recording it from an official document by automated means of processing and obtaining personal data for the purpose of concluding a labour or similar relationship.* The copying and scanning of employees' documents was expressly permitted for employment purposes without the consent of the employee or without the existence of explicit legislation in a separate law, provided that such copying / scanning was necessary for the purpose of concluding a labour or similar relationship. However, the General Data Protection Act and the new Personal Data Protection Act explicitly do not deal with the situation of copying / scanning of official documents of employees for the purpose of concluding an employment relationship or similar relationship and do not provide a specific legal basis for the processing operation concerned. This means that employers need to draw attention to other legal titles that will require them to copy / scan employee's official documents, whether for the purpose of concluding employment relationships or wider for other employment purposes. Without the consent of the employee, it will be possible to copy / scan the official documents of the employee if a separate regulation (Article 6 (1) letter (c) of the General Data Protection Regulation and Article 13 (1) letter (c) of the new Personal Data Protection Act), or if the employer has a demonstrable legitimate interest (Article 6 (1) letter (f) of the General Data Protection Regulation and Section 13 (1) letter (f) of the new Act on the Protection of Personal Data) (Žul'ová et al., 2018; Kubeš et al., 2018).

For example, according to Act no. 595/2003 Coll. on Income Tax, as amended, is the employer for the purpose of proving the entitlement, detection, verification and control of the correct procedure for demonstrating the right to deduction of the tax base, the employment bonus and the tax bonus for the purposes of protection and retention of the rights of the taxpayer, employer and tax administrator authorized to process the personal data of the persons concerned and is authorized for this purpose without the consent of the person concerned to obtain personal data by copying, scanning or otherwise recording official documents to the extent necessary to achieve the purpose of the processing. In practice, the provision cited empowers the employer to copy the child's birth certificate for the sole purpose of demonstrating the employee's right to claim the tax bonus and the marriage record of the employee for the purpose of applying the non-taxable portion of the taxable amount to the spouse. In addition with the obligation to allow copying, scanning or other

recording of a citizen's card, the employee should count on completing supplementary pension savings under Act No. 650/2004 Coll. on supplementary retirement savings and on amendments and supplements to certain laws as amended. Similarly cited Article 11 of the Labour Code in connection with § 41 section 2 allows the employer to copy the documents proving the employee's education required for the performance of the agreed work, we believe that, if it were professional drivers, a copy of the driving license would also be lawful. As regards the legal basis under Art. 6 section (1) letter (f) of the General Data Protection Regulation and Section 13 (1) f) of the new Act on the Protection of Personal Data, j. processing on the basis of a legitimate interest of the operator, which empowers the employer to make copies of such documents which he is obliged to have at his disposal for example for the possible inspection of a competent state authority.

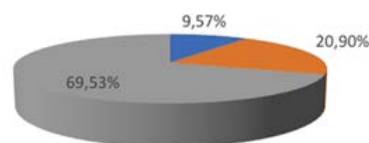
Since the General Data Protection Act and the new Personal Data Protection Act have been in force the legal bases for such processing operations have changed fundamentally with regard to the copying of official employee documents. The new data protection law provides for other legal bases for copying / scanning of official documents of the employee, but like the previous one, forces the employer to thoroughly re-evaluate whether the copying / scanning of official documents is really necessary and whether or not to obtain a personal data that they do not need for the intended purpose at all. If the demonstration of relevant fact can also be achieved by other means that interfere less with the privacy of the employee, the employer has to use this other means and not to copy / skip the official document of the employee (Žul'ová et al, 2018).

Similarly, as already indicated by their own application experience, employers, or even the result of qualitative research, simply did not manage to move to new legislation in the area of labour relations. With regard to individual companies, this was mainly the reason for underestimating the situation when they considered that the new legal regulation would not fundamentally reflect their internal processes and that it did not request any significant changes in the internal documents. Due to a lack of understanding of the content of the new legal regulation they did not make any or all of the minor changes. Secondary reason was the high cost of the presented changes when companies that offered advice in these areas at high prices appeared on the market which made this service even becoming unavailable to small and medium businesses, although they knew they should implement it and in-house capacities do not realize it.

Table no. 1 Numbers of the surveyed population by category of one variable

	Absolute abundance	Relative abundance
Fulfilled the conditions	49	9,57%
Partially fulfilled the conditions	107	20,90%
Did not meet the conditions	356	69,53%

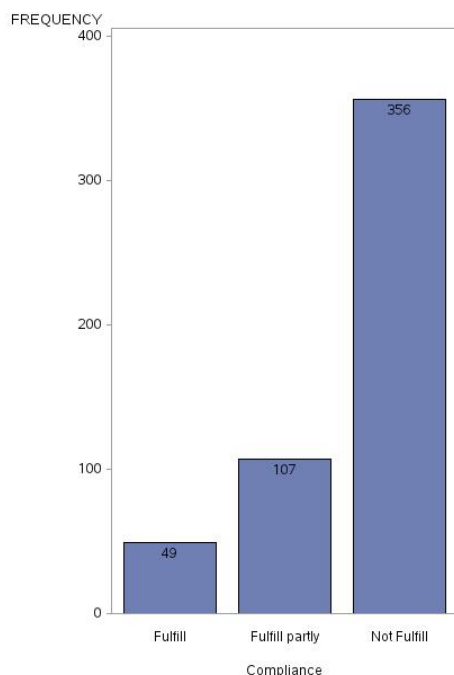
Figure 1 Percentage representation of relative frequencies from the frequency table (meeting the requirements of the General Data Protection Regulation)



Source: own processing based on data



Figure 2 Graphical representation of the absolute frequency table frequency (meeting the requirements of the General Data Protection Regulation)



Source: own processing in statistical program

## 5 Conclusion

Taking into account the new legal framework in the field of personal data protection in application practice in the implementation of individual and collective labour relations requires a thorough assessment of all relevant contexts, in particular in relation to their procedural law (Wolters, 2017). The new terms of dealing with the employee's birth number or photograph, the issue of whistleblowing or employee monitoring and, in particular, the legal context of obtaining employee approvals, depending on the type of processed personal data through various telecommunication and audio-visual means represent a major cause for a new relationship between the subjects of labour relations.

In view of the fact that all changes had to be made by employers at the time of the general data protection regulation, i.e. on 25 May 2018, we must consider the reported results as alarming with a fundamental threat not only to the personal management of employers but also to the damage caused by the sanctions imposed by the control authorities. By the way, the results of qualitative research are also confirmed by the authors' own application practice which provides legal advice to the above-mentioned employers who have become part of qualitative research. Small and medium-sized enterprises have simply neglected the whole area of preparation for change of legal regime for various subjective or objective reasons, which is currently negatively reflected in the implementation of labour relations (we already record the first filing of employees to the supervisory authorities with applications for the review of employers' progress).

In this respect, employers can only recommend an urgent need to align their own procedural law procedures with excessive legislation and the general data protection regulation.

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**Primary Paper Section: A**

**Secondary Paper Section: AG**

# CORRELATION ANALYSIS AND HIERARCHICAL CLUSTER ANALYSIS OF PERCEIVED PARENTS' CONTROL AND BIG FIVE PERSONALITY TRAITS OF ADOLESCENTS

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This paper is published within the frame of the project Vega 1/0122/17 Risk behavior and attachment of the adolescents aged from 10 to 15.

**Abstract:** The paper deals with the parental control and their influence on the personality dimensions of the adolescent. The aim of the research is to identify correlations between mother's and father's control and personality dimensions of their children (adolescents), and to found clusters of these variables. Personality dimensions were examined using the Big Five model, specifically the NEO FFI questionnaire. The control was examined using a DZSVR questionnaire. On a sample of 346 adolescents, a strong correlation was found between parents' control and all Big Five personality dimensions of adolescents. The personality dimensions extraversion, openness, agreeableness and conscientiousness were in a positive correlation with parents' control while neuroticism was in negative correlation with the control. A hierarchical cluster analysis extracts three groups of personality profiles based on their parents low, high and a discrepant coercive control.

**Keywords:** adolescence, Big Five, control, NEO-FFI, parenting styles, parents, personality dimensions, personality traits upbringing

## 1 Introduction

The influence of the family environment on personality development is often a topic of discussions in psychological, pedagogical and biological sciences. The most common problem is the identification of the impact of external and internal factors on the personality development. As some researchers have shown (Johnson, A. M. et al., 2008), internal determinants are important factors in the personality development and its characteristics, but the prevalence of internal factors is being questioned due to the fact that children tend to copy the behavior of their parents. The family is one the most important external factor in personality development. A way of reflection between parent-and-child relationships is parenting, and these are complex activities that include many specific attitudes and behavior in every single action that the parent does impact the child's personality in a way or another (Savitha, K. & Venkatachalam, J., 2016). Parents influence their child's behavior through the use of general parenting styles, the larger context in which these parenting practices are expressed creating the emotional climate within which practices can be accepted or rejected by the child (Sleddens, E. F. et al., 2014). As has been shown in various analyses (for example K. Savitha & J. Venkatachalam, 2016; M. E. Maddahi et al., 2012; P. Prinzie et al., 2009), a negative control, strictness, and lack of emotionality in the family form a trait of neuroticism and poorly develops agreeableness and openness to experience. While supportive parenting styles and emotionality rich family environment support development of these personality dimensions, and individuals are more emotionally stable. Nevertheless, some researches challenge these facts and point to the positive influence of control on the development of personality traits (Čáp, J., 1996; Gillernová, I., 2004). Based on these assertions, we will try to confirm the assumptions and identify the association between the parental control and personality dimensions using the Big Five construct.

### 1.1 Theoretical and empirical background: defining the basic concepts and analyzing empirical evidences

The concept of personality is defined in many ways. However, most often, the personality is defined as a person with all the social, psychological and biological features that include the psychic processes, conditions and properties of a person. Every person is unique in his/her interests, opinions, thoughts or qualities. The notion of a personality includes the needs of person, drives, interests, talents, values, character and temperament. All these elements form the personality. Its component is also the primary and secondary characteristics of

the personality. These primary ones are the qualities that are innate and based on the naturalness of each person, for example temperament. The secondary characteristics of a personality are those that one acquires during life, such as personality traits (Říčan, P., 2010).

Personality development and its improvement over the life is the result of various influences and education, and it is also conditioned by inherited attributes. The process of personality shaping starts before the birth of child, but the most intense is in the period of adolescence. Improvement and personality development continues throughout life, but this progress is considerably smaller compared to childhood and adolescence. There are a lot of factors that determine the personality development and have influence on this process, but the most significant are hereditary one, altogether with the society and family environment, also mentioned as internal and external determinants (Tomšík, R., Čerešník, M., 2017).

According to I. Šnýdrová (2008) the family is one of the most important factors, which influences the formation and maturation of the personality. Parents and other members of the family become the target of observation and unintentional imitation from the lowest age of the child. As stated by I. Šnýdrová (2008), the personality shaping directly reflects the quality of the family. Lack of childcare and educational patterns shapes adverse personality traits. Parentally neglected are mainly the children of uncultivated parents, but also paradoxically children in families with a high socio-economic status, where parents do not have time for their children, where the child is unwelcome or in the background as a number of other parental values. These and other disorders of the family atmosphere misinterpret the development of the personality of the child, because children take and consolidate mainly unfavorable patterns of behavior (Šnýdrová, I., 2008; In: Tomšík, R., & Čerešník, M., 2017).

The individual in the family environment gains first views of life and the world, shaping the basic characters of the personality because a considerable part of lives are spent in a family environment. The roots of raising problems can be found in several aspects of parenting caused by parenting styles (perfectionism, parental indifference, unilateralism, inadequacy of parenting tools, inappropriate parenting practices for the age of the child, inappropriate parenting practices to the child's abilities, overworking neglect and strict monitoring (Šturák, P., 2005)).

Parenting styles can be defined as a combination of parental control and parental responsiveness (Baumrind, D., 1991; Maccoby, E. E., & Martin, J. A., 1983). A combination of a range of these two components can be identified by four classic parenting styles or clusters of child rearing practices (Čáp, J., 1996; Čáp, J., & Boschek, P. 1994; Maccoby, E. E., & Martin, J. A., 1983): The authoritarian parenting style is characterized by a high level of control and demands of the child, but coupled with a low level of nurturing and emotional connections. These parents often use severe disciplinary tactics whenever children deviate from their standards; an authoritative parent is highly supportive and closely monitors and sets rules. The authoritative parenting style is represented by a high level of control and demands, yet providing nurturing and open communication. The discipline usually involves the use of reason and power, but not to the extent that the child's independence is severely restricted; a permissive-indulgent parenting style is characterized by a high level of nurturing and warmth, but with a low level of control and demands. This parenting style involves high levels of acceptance, with parents rarely exerting control over their children's behavior and not closely monitoring their activities; an uninvolved parent sets few rules, does not monitor, and offers little active support. The permissive-neglectful parenting style is identified by a low control and low responsiveness. Parents

fulfill the child's basic needs, but they are emotionally and physically withdrawn from their child's life.

However, the parental control can be differentiated with a behavioral control and coercive control (Sleddens, E. F., et al., 2014; see Figure 1). The behavioral control could be regarded as parents supervising and managing their child's activities, providing clear expectations for their behavior, and using disciplinary approaches in a non-intrusive manner. Parents scoring high on a behavioral control provide adequate levels of control, they are not too strict or over-controlling, but rather allow their child to have enough space to develop independence and autonomy. When the coercive control as parents, it is characterized by pressure, intrusion, domination, and discouragement of child's independence and individuality. The sub-constructs of this parenting construct are "authoritarian control" (parents who tend to enforce rules harshly, expect their child to accept their judgments, values, and goals without questioning, and attempt to control their child's emotions at all times; Baumrind, D., 1991), "physical punishment" (using corporal punishment as a way of disciplining the child), and "a psychological control" (parental behaviors are intrusive and manipulative of children's thoughts, feelings, attachments to their parents (Barber, B. K., 2002). The psychological control intrudes into the psychological and emotional development of the child through the use of parenting practices such as guilt and anxiety induction, love withdrawal, constraining verbal expressions, and personal attacks on a child (Barber, B. K., 1996).

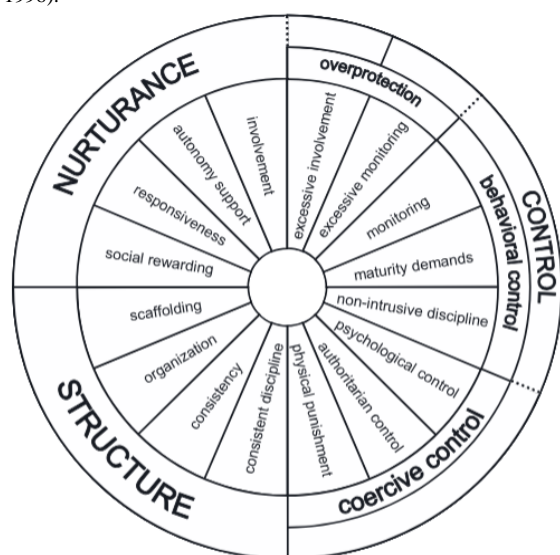


Figure 1: Comprehensive general parenting model (Sleddens, E. F., et al., 2014).

However, both the coercive control and behavioral control are very important components of parenting and they influence the development of the personality of a child. The correlation between the parenting styles and the personality dimensions of the individual has been addressed in the research field by, for example, K. Savitha & J. Venkatachalam (2016), M. E. Maddahi et al. (2012), P. Prinzie et al. (2009) and I. Loudová and J. Lašek (2015). Researches have revealed some patterns and evidence that there are significant relationships between these variables. However, this is only handful research that deals with the relationships between parenting styles and child's personality. Most studies focus on the relationship between the parents' personality and their parenting style (e.g. S. H. Lasoya et al. (1997), R. M. Huver et al. (2010), E. F. Sleddens et al. (2014), G. Kochanska, N. Aksan, K. E. Nichols (2003), C. L. Smith et al. (2007). Also, the inconsistency of the results may be due to research sample setting or due to socio-cultural background or gender (Gillernová, I., 2004). In early childhood, parents' gender stereotypes may be associated with gendered parenting (Friedman, C. K., Leaper, C., & Bigler, R. S., 2007). J. J.

Endendijk et al. (2017) found out that fathers with more stereotypical gender attitudes used more physical control (typically seen as appropriate for boys) over sons rather than daughters, and this pattern predicted stereotypically greater aggression in sons than in daughters. However, I. Gillernová (2004) claims, based on the research on adolescents (age 11 – 18,  $n = 2178$ ), that girls perceive parental practices more strict and controlled.

Furthermore, the following problem arises when comparing the results of the research, since the same research methods for mapping parenting styles were not used. Nevertheless, we have tried to compare the findings of the studies. The most common model of parenting methods was detected when using the Support, Behavioral control and Coercive control (often referred to as Positive control and Negative control), and Negative affect variables – support and control as elements of the integrative parenting style and negative, a strict control and lack of emotionality as elements of authoritative parenting style (Tomšik, R., Čerešník, M., 2017). The study of P. Prinzie et al. (2004) on a research sample of  $N = 599$  elementary school children found out that all of Big Five personality traits correlate with the control. Specifically, extraversion, openness, agreeableness and conscientiousness correlated negatively, while personality dimension neuroticism correlated with the control positively. However, the correlation coefficients do not exceed the level of  $r = .14$ . Some researchers did not find a statistically significant correlation with all of Big Five personality traits. For example, K. Savitha & J. Venkatachalam (2016) found out, on a research sample of  $N = 185$  students, that personality traits such as neuroticism and openness to experience correlate with mother's ( $r = .218$ , respectively  $r = .248$ ) and only the personality trait neuroticism correlates with father's control ( $r = .156$ ). While M. E. Maddahi & M. Samadzadeh (2010; In Savitha, K., & Venkatachalam, J., 2016) showed that three personality traits, namely agreeableness, extraversion and openness have a positive relationship with authoritarian and permissive parenting styles and have a negative relationship with the authoritative parenting style, and the conscientiousness personality trait has a positive relationship with authoritative and authoritarian parenting styles and a negative relationship with the permissiveness parenting style. This brings us to the conclusion that the correlation between the specific practices of parents, respectively their control, may vary depending on other factors. However, based on previous empirical evidences (e.g.: Friedman, C. K., Leaper, C., & Bigler, R. S., 2007; Endendijk, J. J. et al., 2017; Tomšik, R., Čerešník, M., 2017), we predict negative correlation between parental control and personality trait neuroticism, and positive correlation between the parental control and personality traits extraversion, conscientiousness, openness and agreeableness. As has been pointed out in few studies (e.g.: Gillernová, I., 2004), it can also be expected that there will be gender differences in the personality dimensions of adolescents based on perceived control of their parents.

## 2 Research sample

The research sample consists of university students from Slovak universities in the following regions: Nitra, Bratislava, Banská Bystrica, Prešov, Trenčín, Trnava, and Žilina. In total, 347 students of the first year of bachelor studies were involved in the research. According to the approximation of D. W. Morgan and R. V. Krejcie (1970; In: Tomšik, R., 2016, 2017), at least 346 respondents must be included in the set, with a percentage distribution corresponding to the size of the basic set in each region. This criterion is fulfilled. A research sample consists of 115 male and 216 female respondents (16 uncategorized), with an average age of  $M = 21.5$  years. During the research 500 questionnaires were distributed, which means that the return of the questionnaires was 69.39%. All cases with missing data were excluded.

The whole research tool consists of two full questionnaires for the measurement of research variables and one questionnaire for the detection of demographic information of participants. Participants submitted questionnaires with their consent for data

processing. All the questionnaires were anonymous. The data were collected by the psychologists at the Slovak universities. The participants were given 45 minutes to complete the questionnaires. The data were collected during September and November 2017. In May 2017, the data were processed and analyzed.

## 2.2 Methods

Standardized research tools were chosen for the valid results of the study, in which internal consistency and reliability are not disrupted. The standardized questionnaire DZSVR (Questionnaire for Detecting Parenting Styles in Family, originally in Slovak: Dotazník na zisťovanie štýlov výchovy v rodine hereinafter DZSVR) for measurement parents' control and for measurement personality traits the standardized NEO FFI Personality Inventory were chosen.

J. Čáp and P. Boschek (1994) are the authors of the DZSVR questionnaire. In this questionnaire, adolescents denounce the behavior of their parents, mother and father in particular, in the most common situations. From the beginning of the seventies, the questionnaire was gradually modified on the basis of the results in various studies. In its current form, the questionnaires consist of 40 items, ten for each of the four parenting components. The questionnaire contains a positive and negative component of the relationship between parents and adolescent, a component of requirements and freedom that corresponds to parental attitudes (based on Schludermann's and Schaefer's CRPBI questionnaire): positive, hostile, directive and autonomous. The items are administered separately for the mother and father and the answers are recorded on the three-point scale (yes, partially, no). By combining the individual components of education, it is possible to identify the emotional relationship of parents with the adolescent, educational styles in the family and then the overall parenting styles. For the purpose of this research, only a component of control was analyzed, which is defined as a degree of supervision of the fulfillment in the requirements (Gillernová, I. et al., 2011).

NEO Five Factor (NEO-FFI) is a personality inventory that examines a person's Big Five personality traits (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism). The authors of the NEO-FFI questionnaire are R. R. McCrae and P. T. Costa (Slovak version by I. Ruisel and P. Halama, 2007). Cronbach's alpha of questionnaire is  $\alpha = 0.87$  (Hřebíčková, M., 2004). The questionnaire consists of 60 items (Likert type), twelve for each personality dimension:

- Openness to experience: (inventive/curious vs. consistent/cautious). Openness reflects the degree of intellectual curiosity ( $\alpha = .81$ );
- Conscientiousness: (efficient/organized vs. easy-going/careless). A tendency to be organized and dependable, show self-discipline, act dutifully, aim for achievement, and prefer the planned rather than spontaneous behavior ( $\alpha = .78$ );

- Extraversion: (outgoing/energetic vs. solitary/reserved). Energy, positive emotions, surgency, assertiveness, sociability and the tendency to seek stimulation in the company of others, and talkativeness ( $\alpha = .68$ );
- Agreeableness: (friendly/compassionate vs. challenging/detached). A tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others ( $\alpha = .74$ );
- Neuroticism: (sensitive/nervous vs. secure/confident). The tendency to experience unpleasant emotions easily, such as anger, anxiety, depression, and vulnerability ( $\alpha = .84$ ).

## 2.3 Statistical analyses

The statistical analyses were conducted in the following order: descriptive statistics, correlations between the variables, internal consistencies of each subscale and normality of data distribution using Skewness, Kurtosis, Kolmogorov-Smirnov KS test with Lilliefors correction. Skewness and kurtosis of the majority of variables were given within -1 to 1 and the Kolmogorov-Smirnov test indicates that the variables do fulfill the criteria of normality. Based on these results, parametric tests for further statistical analyses were chosen. An exploratory Hierarchical cluster analysis using Ward's method was conducted, and based on reading the dendrogram, agglomeration schedule and the logical results obtained, a solution was selected. To perform exploratory hierarchical cluster analysis and crating graph for individual clusters, data was transformed into Z score. All analyses were performed using SPSS v.21.0.

## 3 Results

Table 1 presents the descriptive statistics of each research variable and correlation between research variables. Observing only the average score, we find that the adolescents have reached the highest average score in the personality dimension conscientiousness ( $M = 31.59$ ). Approximately one-and-a-half points below were scaled personality dimensions extraversion ( $M = 29.74$ ) and agreeableness ( $M = 29.72$ ). The lowest average scores were achieved in personality dimension openness ( $M = 27.75$ ) and neuroticism ( $M = 22.81$ ). Compared to the standards presented by I. Ruisel and P. Halama (2007) in the handbook, we do not notice significant differences compared to the scores that were measured on our sample. For the age group of individuals aged 15-24, the authors report the following average scores for individual personality dimensions: neuroticism  $M = 21.87$ ; extraversion  $M = 30.05$ ; openness  $M = 29.45$ ; agreeableness  $M = 29.69$  and conscientiousness  $M = 29.45$ . Control of both parents observed similar average score (father  $M = 19.88$ , mother  $M = 19.53$ ; MIN = 10, MAX = 30). Significant correlations have been found among all personality dimensions and control of both parents. The personality dimensions such as extraversion, openness, agreeableness and conscientiousness were in negative correlation with parental control while neuroticism was in positive correlation with parental control.

Tab. 1: Correlation between Big Five personality traits and parental control and descriptive statistics.

	1	2	3	4	5	6	7
Control (father)	1						
Control (mother)	.718**	1					
Neuroticism	-.101*	-.188**	1				
Extraversion	.231**	.296**	-.428**	1			
Openness to experience	.148**	.191**	-.101*	.188**	1		
Agreeableness	.432**	.495**	-.173**	.394**	.166**	1	
Conscientiousness	.200**	.304**	-.215**	.336**	.212**	.395**	1
N	347	347	347	347	347	347	347
M	19.88	19.53	22.81	29.74	27.75	29.72	31.59
SD	7.12	7.85	7.891	6.623	5.917	6.395	6.740

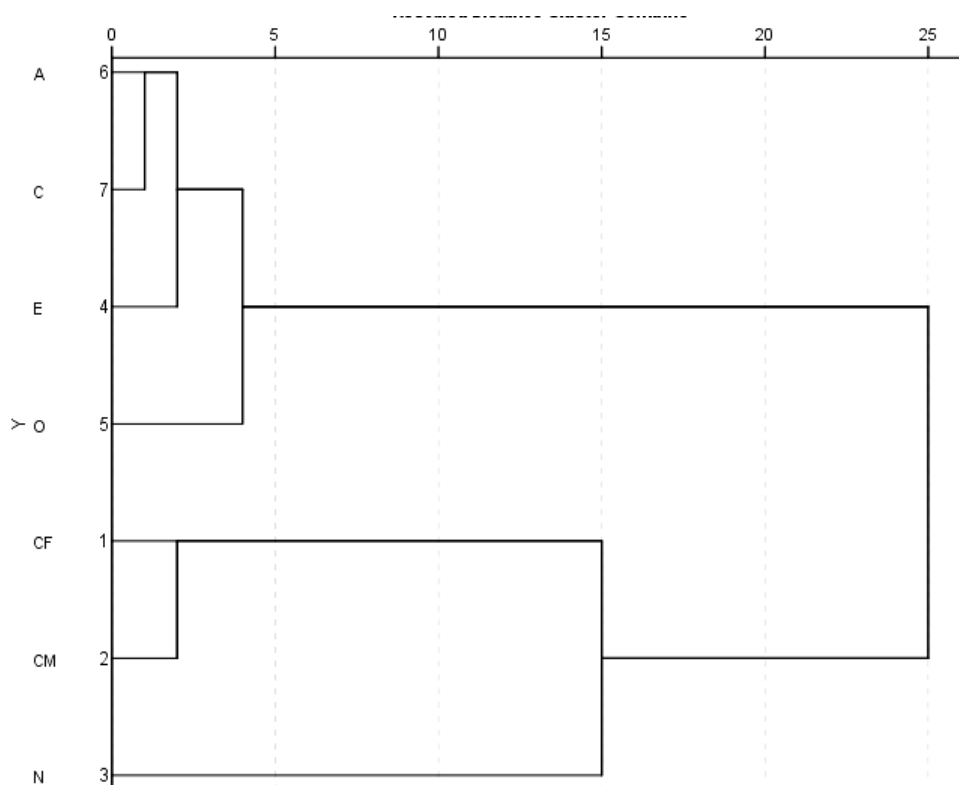
Note.: N – Number; M – Mean; SD – Standard deviation; \*\*. Correlation is significant at the 0.01 level (2-tailed); \*. Correlation is significant at the 0.05 level (2-tailed).

In an exploratory analysis the Ward's method was used since it is a hierarchical procedure that minimizes the distance between

subjects within the cluster (it reduces the variance within the group) and avoids forming "long chaining" (Aldenderfer, M. S.

et al., 1984). The Euclidean distance was used as a similarity measure. The dendrogram and agglomeration schedule suggested

four clusters as the most convenient.



Graph 1: Dendrogram using Ward Linkage (Rescaled Distance Cluster Combine). Variables are on the vertical axis and appear with the following abbreviations: A = Agreeableness; C = Conscientiousness; E = Extraversion; O = Openness to experience; CF = Control (father); CM = Control (mother); N = Neuroticism.

Cluster 1: The first profile was called the “High control profile” (n = 127, 37%) and include students that were raised up by both parents with high degree of control. These students generally achieved high Z scores in all personality dimensions, significantly below the level 0. Only a personality dimension neuroticism achieved a low Z score (Z = -.32).

Cluster 2: The second profile was called the “Discrepant control profile: low father's control” (n = 67, 19%) and included students that were raised up by a different degree of control: fathers Z = -.27; mothers Z = .16. These students generally achieved low/moderate Z scores in personality dimensions, while the personality dimension neuroticism achieved high score (Z = .32).

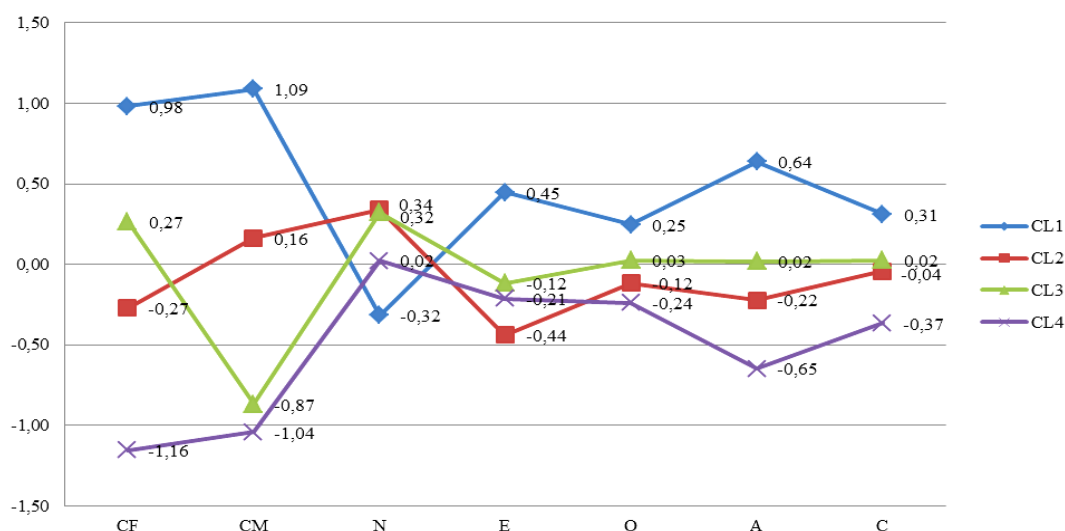
Cluster 3: The third profile was called the “Discrepant control profile: low mother's control” (n = 48, 14%) and included students that were raised up by a different degree of control: fathers Z = .27; mothers Z = -.87. These students generally achieved moderate Z scores in personality dimensions. Only personality dimension neuroticism was scored high (Z = 0.32).

Cluster 4: The last profile was called the “Low control profile” (n = 104, 30%) and it included students that were raised up by both parents with low degree of control (father Z = -1.16; mother Z = -1.04). These students achieve low Z scores in all personality dimensions, except neuroticism (Z = .02), which was scored moderate.

Tab. 3: Mean (M), standard deviation (SD) of the Z scores for the extracted clusters.

	Cluster 1 (n = 127, 37%)		Cluster 2 (n = 67, 19%)		Cluster 3 (n = 48, 14%)		Cluster 4 (n = 104, 30%)	
	High control		Discrepant profile: low father's control		Discrepant control: low mother's control		Low control	
	M	SD	M	SD	M	SD	M	SD
Control (father)	.98	.398	-.27	.739	.27	.520	-1.16	.242
Control (mother)	1.09	.255	.16	.610	-.87	.363	-1.04	.211
Neuroticism	-.32	1.133	.34	1.003	.32	.715	.02	.807
Extraversion	.45	1.000	-.44	1.090	-.12	.877	-.21	.764
Openness	.25	1.086	-.12	1.179	.03	.808	-.24	.757
Agreeableness	.64	.858	-.22	.908	.02	1.022	-.65	.698
Conscientiousness	.31	1.117	-.04	1.234	.02	.783	-.37	.555

Note.: N – Number; SD – Standard deviation.



Graph 2: Personality dimensions profiles of adolescents based on their parents' control during their upbringing. Z scores are on the vertical axis, on the horizontal axis subscales with the following abbreviations appear: CF = Control (father); CM = Control (mother); N = Neuroticism; E = Extraversion; O = Openness to experience; A = Agreeableness; C = Conscientiousness; CL1 = Cluster 1: High control profile; CL2 = Cluster 2: Discrepant profile: low father's control; CL3 = Discrepant profile: low mother's control; CL4 = Low control profile.

### 3.1 Gender differences

Table 3 shows the outcomes of the comparative analysis. The results of t-test test show the statistical significance level among research groups in all research variables. Male students reach a higher average score in the variable and neuroticism ( $t = 2.504$ ;  $p < .013$ ). While female students reach a higher average score in

fathers control ( $t = 11.570$ ;  $p < .001$ ), mothers control ( $t = 17.443$ ;  $p < .001$ ) and personality dimensions extraversion ( $t = 4.113$ ;  $p < .001$ ), openness ( $t = 3.019$ ;  $p < .013$ ), agreeableness ( $t = 9.042$ ;  $p < .013$ ) and conscientiousness ( $t = 5.429$ ;  $p < .013$ ).

Tab. 3: Gender comparison of control and the Big Five personality dimensions among adolescents.

Variables	Gender	N	M	SD	SEM	df	t	p
Control (father)	Female	216	22.88	6.265	.426	329	11.570	<.001
	Male	115	14.83	5.528	.516			
Control (mother)	Female	216	23.81	6.444	.438	329	17.443	<.001
	Male	115	12.35	3.900	.364			
Neuroticism	Female	216	22.00	8.772	.597	329	2.504	<.013
	Male	115	24.30	6.010	.560			
Extraversion	Female	216	30.94	7.303	.497	329	4.113	<.001
	Male	115	27.84	4.744	.442			
Openness	Female	216	28.59	6.649	.452	329	3.019	<.001
	Male	115	26.53	4.206	.392			
Agreeableness	Female	216	31.97	6.385	.434	329	9.042	<.001
	Male	115	25.96	4.358	.406			
Conscientiousness	Female	216	33.13	7.521	.512	329	5.429	<.001
	Male	115	29.00	4.316	.403			

Note.: N – Number; M – Mean; SD – Standard deviation; SEM – Standard error of mean.

As well as in the previous Hierarchical cluster analysis, the Ward's method and Euclidean distance were used. To perform an exploratory Hierarchical cluster analysis and crating graph for individual clusters, data were transformed into the Z score. The dendrogram and agglomeration schedule suggested four clusters as the most convenient ones for female adolescents, and three clusters for male adolescents. A hierarchical cluster analysis in the examined research groups extracted different profiles based on control and neuroticism (Graph 2 and 3):

Cluster 1 (Females): The first profile was called the “High control profile: high neuroticism” ( $n = 54$ , 25%) and it includes students that were raised up by both parents with a high degree of control. These students achieved a low Z score in personality dimension conscientiousness ( $Z = -.47$ ) and high average Z score in personality dimension neuroticism ( $Z = 0.56$ ). Remaining personality dimensions achieved moderate average Z scores.

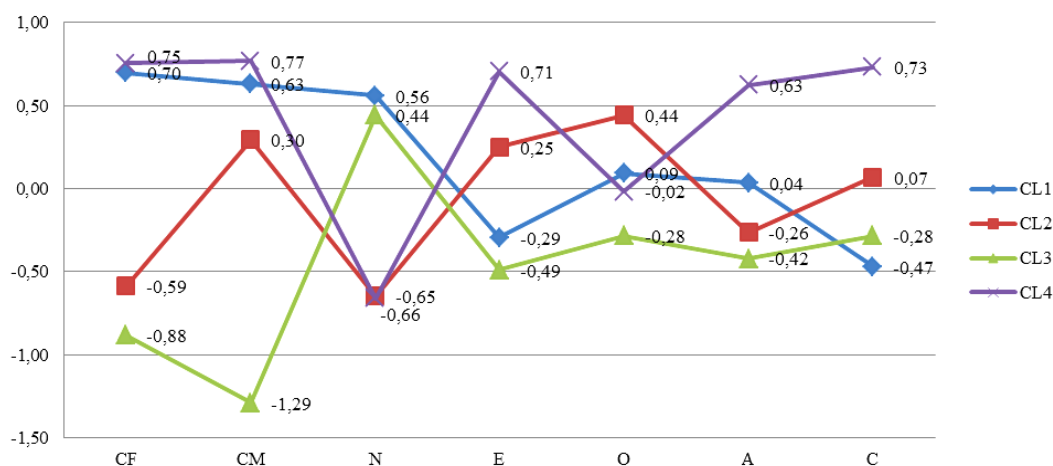
Cluster 2 (Females): The second profile was called the “Discrepant control profile” ( $n = 35$ , 16%) and included students that were raised up by parents with a different degree of control:

fathers  $Z = -.59$ ; mothers  $Z = .30$ . These students achieved low Z score in personality dimension neuroticism ( $Z = -.65$ ) and high Z score in personality dimension openness ( $Z = 0.44$ ). Remaining personality dimensions achieved moderate Z scores.

Cluster 3 (Females): Third profile was called the “Low control profile” ( $n = 69$ , 32%) and included students that were raised up by both parents with a low degree of control (father  $Z = -.88$ ; mother  $Z = -1.29$ ). These students achieve low Z scores in all personality dimensions, while the personality dimension neuroticism achieved was scored high ( $Z = .44$ ).

Cluster 4 (Females): The fourth profile was called the “High control profile: low neuroticism” ( $n = 58$ , 27%) and it included students that were raised up by both parents with a high degree of control (father  $Z = -.70$ ; mother  $Z = -.63$ ). These students generally achieved high/moderate Z scores in all personality dimensions, except the personality dimension neuroticism which was scored low ( $Z = -.66$ ).





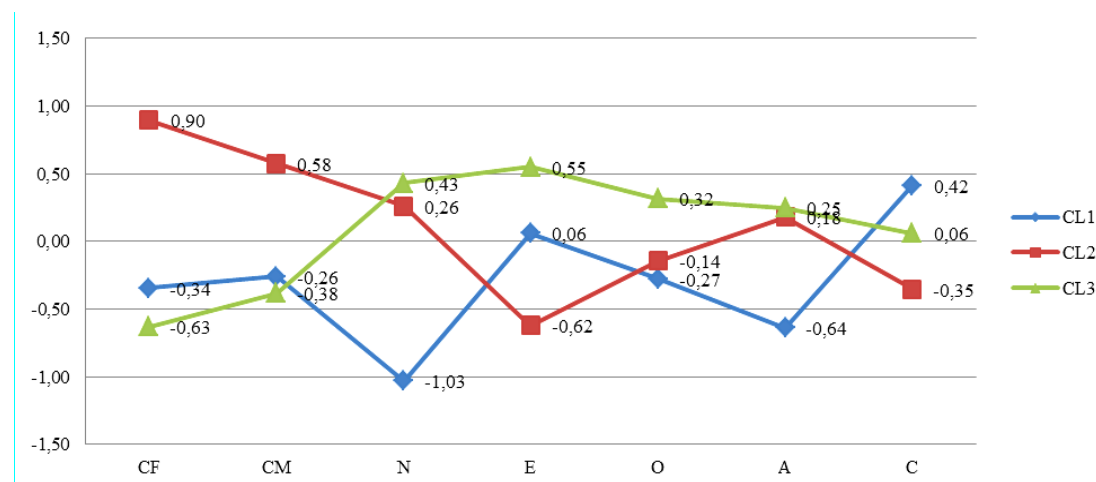
Graph 3: Personality dimensions profiles of adolescents (females) based on their parents' control during upbringing. Z scores are on the vertical axis on the horizontal axis appear subscales with the following abbreviations: CF = Control (father); CM = Control (mother); N = Neuroticism; E = Extraversion; O = Openness to experience; A = Agreeableness; C = Conscientiousness; CL1 = Cluster 1: High control profile: high neuroticism; CL2 = Cluster: Discrepant profile; CL3 = Cluster 3: Low control profile; CL4 = Cluster 4: High control profile: low neuroticism.

Cluster 1 (Males): The first profile was called the "Moderate control profile" (n = 42, 37%) and it included students that were raised up by both parents with a moderate degree of control (father Z = -.34; mother Z = -.26). These groups of students achieved low Z scores in personality dimensions neuroticism (Z = -1.03) and agreeableness (Z = -.64), and high Z score in personality dimension conscientiousness (Z = .42). Remaining personality dimensions achieved moderate Z scores.

Cluster 2 (Males): The second profile was called the "High control profile" (n = 29, 25%) and that were raised up by both

parents with a high degree of control (father Z = .90; mother Z = .88). These groups of students achieved low Z score in personality dimension extraversion (Z = -.62), while remaining personality dimensions were scored moderate.

Cluster 3 (Males): The third profile was called the "Low control profile" (n = 44, 38%) and it included students that were raised up by both parents with a low degree of control (father Z = -.63; mother Z = -.38). These students have generally achieved high/moderate Z scores in all personality dimensions, including neuroticism.



Graph 4: Personality dimension profiles of adolescents (males) based on their parents' control during upbringing. Z scores are on the vertical axis on the horizontal axis the subscales with the following abbreviations appear: CF = Control (father); CM = Control (mother); N = Neuroticism; E = Extraversion; O = Openness to experience; A = Agreeableness; C = Conscientiousness; CL1 = Cluster 1: Moderate control profile; CL2 = Cluster 2: High control profile; CL3 = Cluster 3: Low control profile.

#### 4 Discussion and conclusion

The present study was guided by two general propositions. First of all, and at the same time, consistent with P. Prinzie et al. (2009) we proposed that parent control can have a "negative" impact on a personality of adolescent – higher neuroticism and lower openness, extraversion, agreeableness and conscientiousness. Secondly, based on empirical evidences of Čáp, J., & Boschek (1994), we expected that parent control can have opposite impact on adolescent personality – lower neuroticism and higher openness, extraversion, agreeableness and conscientiousness. On the basis of the research findings, the argument of the Čáp, J., & Boschek (1994) is more adequate.

Control and supervision increase personality dimensions such as openness, extraversion, agreeableness and conscientiousness and decrease neuroticism.

As Čáp, J., & Boschek (1994) claim that not knowing the rules and commandments of the family environment increase neuroticism. These children do not know what the effect of their actions will be, so they often live in a stressful environment. While a parenting style with precise rules and control creates an environment that allows a more progressive development of extraversion, agreeableness or conscientiousness. Looking at the results globally, a cluster analysis confirms these assumptions: students who have been raised up with a high degree of control



achieved low neuroticism and an average or a high degree of extraversion, agreeableness, openness and conscientiousness; while students who have been raised up with a low degree of control, or their parents used significantly different degree of control, achieved high neuroticism and mostly a low degree of extraversion, agreeableness, openness and conscientiousness. However, between these two groups we may also find differences: the students who have been raised up with a low degree of control achieved, in majority of variables, lower average scores compared to the students that have been raised up with discrepant control. This leads us to the conclusion that even a small degree of control may affect the positive development of personality dimensions. It is also important to note that all research groups were represented similarly in the research sample: High control profile  $n = 127$ , Low control profile  $n = 104$ , Discrepant profile  $n = 115$ . However, this can be caused by the Ward's method.

In the assessment of differences between female and male adolescents the following differences were identified: as I. Gillernová (2004) claims, based on research on adolescents, women perceive parental practices more strict and controlling. But also, they reach higher extraversion, agreeableness, openness and conscientiousness, and lower neuroticism. It should be noted that this fact is not only caused by parenting styles or control. Personality dimension development also depends on perception, cognitive or non-cognitive characteristics, genotype, environment, etc. However, the women profiles are different compared to the profiles of the whole research sample: as mentioned above, the low control is characterized by high neuroticism and generally low extraversion, agreeableness, openness and conscientiousness; in this situation women raised up with discrepant control achieved low neuroticism and generally moderate or a high level of remaining personality dimension, however mothers' control in this case is significantly higher compared to the whole research sample, which brings us to generally positive results for this case. Interesting differences can be seen in two high-control profiles: a profile with low neuroticism is characterized with high extraversion, agreeableness and conscientiousness, while the profile with high neuroticism is characterized with average or low extraversion, agreeableness, openness and

conscientiousness. This confirms the impact of other factors on the development of personality, but also the fact that the personality dimensions can work as a construct. High neuroticism could be caused by other components of upbringing (emotional relationship, siblings), inheritance, or the environment, which also influence the development of other personality dimensions. Different situation appeared when assessing men, which partially confirms the claims of P. Prinzie et al. (2009) and can be perceived as an opposite to the previously mentioned results. The men who were raised up with a high and low control received a high score of neuroticism, however, the high control profile is characterized with generally low level of remaining personality traits, while a low control profile is characterized with generally high/moderate level of remaining personality traits, which is inconsistent with the results of the females and of the whole research sample. This may be in relation with the emotional maturity of men, non-cognitive characteristics, and the generally stronger need to be self-sufficient, where strong control can cause neuroticism and may limit the development of other personality dimensions. It is also important to note that most of the women were raised up with a high control, and most of the men were raised up with a low and moderate control.

Few limitations of this study must be taken into account along with the interpretation of findings. First, defining the construct of control is general, the current literature sources distinguish many types and categories of parental control (behavioral, corrective, psychological etc.), which the selected research tool in this study does not allow to measure. Secondly, the analysis does not capture the entire complex of parenting components (requirements, freedom, emotional relationship, etc.). Therefore, there is the lack of important links with other variables that complete components of control and family environment in general. There is a need to further investigate how the structure of certain parenting style influences the child development. Limitations notwithstanding, the results of this investigation underscore the importance of control in parenting and point to significant gender differences in the impact of control on personality development.

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**Primary Paper Section: A**

**Secondary Paper Section: AN, AM, AO**

# THE MANIFESTATIONS OF SELF-DISCLOSURE ON SOCIAL MEDIA AND THEIR RELATION TO SELF-ESTEEM AND THE FEELING OF LONELINESS AMONG YOUNG PEOPLE

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**Abstract:** The study focuses on the issue of self-disclosure behavior of Facebook users in relation to their self-esteem and the subjective feeling of loneliness. Exploratory research has been conducted on a sample of 132 participants (64 men, 68 women), using quantitative methods. In particular, UCLA Loneliness Scale (Russell, Peplau, Ferguson, 1978) and RSES (The Rosenberg self-esteem scale, 1965) were used to identify subjective perceived feelings of loneliness and self-esteem. To assess the level of self-disclosure among Facebook users, original method was created by authors. The results indicate the relationships between the investigated constructs, a positive correlation between feelings of loneliness and self-disclosure was identified.

**Keywords:** Loneliness. Self-esteem. Self-disclosure. Facebook.

## 1 Introduction

Self-disclosure in interpersonal interactions, in the sense of sharing personal thoughts, feelings, and experiences, is considered to be an important tool for creating good relationships. At present, quality relationships are emerging not only in the real world but also in the cybernetic world. While the phenomenon of self-disclosure in real relationships is nowadays a well-explored problem, self-disclosure on social networks has so far attracted relatively little research attention.

### 1.1 Self-disclosure in relation to self-esteem

Self-disclosure is the act of revealing personal information to others. In general, self-disclosure occurs mainly in intimate relationships, but may also be affected by other variables such as personality characteristics or situational factors (Allen et al., 2001).

There are two general levels of self-disclosure. Width includes the number of topics published, while the depth points to how much intimate and profound self-disclosure is. Although in the original definition, Derlega et al. (1993) emphasize the verbal component of self-disclosure, in his later work (2008, 2013) he also emphasizes the importance of the non-verbal part of uncovering feelings and opinions, for example by voice and gestures, and in some cases even the clothing we wear. This view is incredibly important for exploring self-disclosure on social networks, where non-verbal stimuli such as pictures and photos play a key role, while stimuli such as voice tone or communication mimics are missing.

Self-disclosure is an integral part of creating and maintaining intimacy in social relationships. As confirmed by Derlega and Berg (2013), close relationships and self-disclosure are mutually transforming and constantly affecting each other. Self-disclosure is strongly associated with trust, sharing very intimate information depends on the assessment of whether the information is in good hands and that is why we can feel psychologically close to someone who shares something personal with us.

The same approach can be expected on social networks where the likelihood of sharing personal information depends on the level of trust in an online friend and, moreover, in an internet service provider. In Sheldon's research (2009), it was found that the more social network users were confident about the behavior of their communication partners, the more they trusted them and subsequently opened up to them. Furthermore, self-disclosure also plays a key role in forming of social assessment as well as self-evaluation of the individual.

Self-esteem is usually considered to be a mental representation of the emotional relationship to oneself, i.e. the concept of one's own social, moral and performance competencies (Blatný, Plhákova, 2003) and is a very important determinant of self-disclosure. Subsequently, self-disclosure is largely influenced by the self-esteem of the individual (Sahlstein, Allen, 2002). Because people with high self-esteem believe that they have very good communication skills, there are fewer constraints in providing personal information about themselves than among people with low self-esteem (Betz, Schifano, 2000). People with high self-esteem are more sure about their abilities, and therefore are more willing to reveal personal information than people with low self-esteem (Schimmel et al., 2001).

A person with a low degree of self-esteem cannot reveal himself to such an extent as a person with a high degree of self-esteem, because self-exposing brings too much risk. When people reveal their private thoughts and feelings, they become vulnerable to humiliation and they actually threaten their self-esteem (Baxter, Braithwaite, 2008). By presenting carefully selected information, however, it is possible to create the desired impression of one's person (Derlega, Berg, 2013). In other words, a suitable method of self-disclosure can be used as a self-presentation tool. Verbal mediated information, as well as attitudes and nonverbal behaviors such as appearance, gestures, or activity, are part of making the impression. Some degree of manipulation with the impression is obvious, especially the need to create a desirable image on social networks (Gibbs, Ellison and Heino, 2006). Thus, self-disclosure allows satisfying of the sense of belonging as well as the need to validate oneself through social feedback (Blumer, 2010).

### 1.2 Feelings of loneliness, activity on Facebook and self-disclosure

Loneliness is often defined as a painful, unpleasant or even anxious desire for another person or person (Kozjak, 2005). But there are many characteristics of loneliness. Based on an analysis of the main characteristics, Pinquart and Sörensen (2001) conclude that there are two types of definitions of the loneliness. The first type is the definition emphasizing the suffering, due to the lack of contacts, as the main characteristic of feeling loneliness. Woodward and Queen (1988) define solitude as feelings of loneliness and disconnection or estrangement from positive people, things or places. In addition, Sorkin, Rook, and Lu (2002) report that loneliness is an unpleasant emotional state that occurs when one feels misunderstood, rejected or estranged, and lacks social activity, society, and emotional intimacy.

By the socio-cognitive approach, loneliness is characterized as a discrepancy between what interpersonal relationships individuals do have and what relationships they would like to have. This approach also takes into account the possibility that the individual does not feel alone despite the relatively low frequency of social contact and also that someone can feel lonely despite the high degree of social inclusion (Pinquart, Sörensen, 2001).

With more than a billion users and growing popularity, Facebook is becoming another way to initiate and maintain interpersonal relationships. Several studies (Sheldon, 2009; 2013) have confirmed that maintaining relationships and social interaction are the primary motivation for using Facebook. In order for Facebook users to interact, they must be revealed.

At present, there are two hypotheses explaining the link between excessive internet use and feelings of loneliness. According to the first hypothesis, the internet causes feelings of loneliness. Experts (e.g. Kraut et al, 2002) who support this hypothesis claim that the time spent online can distort real relationships. The internet isolates individuals and discards their sense of belonging to the real world. The second hypothesis claims that lonely individuals are more likely to use the internet due to

online social networks that are more accessible than the real ones and due to the changed online communication pattern (Morahan-Martin, Schumacher, 2000). Probably, there is a reciprocal relationship between loneliness and self-disclosure. People who are unwilling to reveal personal information about themselves and who receive less personal information about others may regard their relationships as less satisfactory and thus are more prone to feel lonely. On the other hand, loneliness and social anxiety can prevent effective communication and thus prevent self-disclosure as well (Bonetti et al, 2010).

### 1.3 The aim of the current study

The aim of the research is to verify the existence of relationships between selected factors (subjectively perceived feeling of loneliness, self-esteem) and the degree of tendency to be exposed on social networks. Another goal of the work is to reveal motives that lead users to manifest certain level of self-disclosure on Facebook.

## 2 Method

### 2.1 Participants

An occasional selection of participants was used to create the research sample. The sample size is 132 participants, with a sample of 64 men and 68 women. The basic criteria for participation in the research were age between 18 and 35 and at least occasional Facebook usage.

### 2.2 Methods

1. UCLA Loneliness Scale (Russell, Peplau, Ferguson, 1978): 20 item scale to measure the subjectively experienced feeling of loneliness of the individual, as well as feelings of social isolation. The score reached in the UCLA questionnaire was distributed into three categories. Participants who scored between 0 and 20 points were not identified as lonely, the score ranging from 21 to 39 indicated an average rate of loneliness, and as very lonely, we rated the scorers ranging from 40 to 60 points.
2. RSES (The Rosenberg Self-Esteem Scale) was created by sociologist M. Rosenberg in 1965, currently, it is one of the most widely used self-esteem scales. RSES has been compiled as a one-dimensional scale aimed at measuring the overall level of global relationship to oneself. The gross score achieved in RSES was divided into three categories. Participants who achieved scores ranging from 10 to 20 points had low self-esteem, a score ranging from 21 to 30 suggested average self-esteem, and those who scored between 31 and 40 points are perceived as participants with a high level of self-esteem.
3. Self-disclosure on Facebook: an authorial questionnaire aimed at detecting the extent and frequency of Facebook usage and performing individual activities. It also contains two questions aimed at identifying what constitutes the core of most conversations on a given social network and what is the most common reason for spending time on Facebook. In the last part of the questionnaire, the participants comment on the content of posts and statuses posted on their walls. The sum of the contributions from all the categories the participants themselves put in the questionnaire was divided into three levels. Participants who have added 0 to 15 posts in the last month have been rated as uncovering. Contributions in the range of 16 to 30 were considered to be the average and therefore the average level of self-disclosure. The participants with a high level of self-disclosure added 31 or more posts during the last month.

## 3 Results

### 3.1 Descriptive characteristics

The research was attended by a total of 132 participants. Using the UCLA, we found that 49.2% of all participants did not experience feelings of loneliness, 28.8% of the participants were

slightly alone, and 22% of all participants felt strong feelings of loneliness.

When describing the characteristics of the self-esteem variable, we found that low self-esteem had 17.4% of the sample. Average self-esteem has 53.8% of the sample, and high self-esteem exhibits 28.8% of the participants.

The last of the basic variables examined is the self-disclosure of individuals on Facebook. Most participants are not revealing at all or only minimally (56.8% of the sample). The average rate of self-disclosure was found in 7.6% of our sample. A high rate of self-disclosure is reported by 35.6% of participants. 33.3% of our research sample is permanently online on Facebook. 53.0% of participants are logged several times a day. Every day, 6.1% of participants sign up. 4.5% of the sample is online 3-4 times a week, and only 3% of our sample is logged 1-2 times a week. Most participants spend on Facebook actively less than 2 hours (39.4%). 2 to 3 hours spend on Facebook actively 25% of participants. Option 4 to 6 hours marked 18.2% of the sample and 17.4% of the participants spent on Facebook actively for 6 hours or more.

Important is the reason for spending time on Facebook. Most participants (39.4%) are trying to keep in touch with their friends and acquaintances. The second most common answer was the effort to escape the boredom, which was voted by 30.3% of the participants. 7.6% spend their time on Facebook mainly because they want to meet new people there. The ability to talk to people about things they cannot talk to personally considers 17.4% of the time to be the most important reason for spending time on Facebook.

### 3.2 Relationships between self-disclosure, loneliness, and self-esteem

We used a polychoric and polyserial correlation to determine the relationships between the examined variables (self-disclosure rate, self-esteem, feelings of loneliness). We also used Bonferroni's correction to avoid the first-order error.

Results suggest that there is a relationship between self-disclosure on Facebook and loneliness. A moderately strong, statistically significant positive relationship between loneliness and the length of time spent on the social network Facebook [ $r_{\text{poly}} = 0.426$ ,  $p < 0.0005$ ] was identified. We also found a moderate, statistically significant negative relationship between loneliness and the posting of own videos [ $r_{\text{poly}} = -0.438$ ,  $p < 0.0005$ ]. Further, we have identified a moderately strong, statistically significant positive relationship between loneliness and the posting of family content [ $r_{\text{polys}} = 0.449$ ,  $p < 0.0005$ ] and a moderately strong, statistically significant positive relationship between loneliness and posting of gossip [ $r_{\text{polys}} = 0.414$ ,  $p < 0.0005$ ]. Above mentioned results are supported with using Mann-Whitney U test as well. We found the difference with a large effect [ $U = 447$ ,  $Z = -4.70$ ,  $p < 0.01$ ,  $r = 0.48$ ]. Lonely participants ( $M_{\text{rank}} = 64.6$ ) are likely to reveal more on Facebook than participants with lower loneliness rate ( $M_{\text{rank}} = 39.9$ ).

Relationships between self-disclosure and self-esteem are not supported by any correlation identified. But, when using Mann-Whitney's nonparametric test, we identified a statistically significant difference with a small effect [ $U = 273.5$ ,  $Z = -2.73$ ,  $p < 0.01$ ,  $r = 0.35$ ] between the group with low self-esteem ( $M_{\text{rank}} = 38.1$ ) and high self-esteem ( $M_{\text{rank}} = 26.7$ ) in the self-disclosure on the Facebook. Participants with low self-esteem are more self-revealing than participants with high self-esteem.

## 4 Discussion

The aim of the research was to verify the existence of relationships between selected factors (subjectively perceived feeling of loneliness, self-esteem) and the degree of tendency to be exposed on social networks (self-disclosure). Above mentioned relationships were supported by results.

Bonetti (2010) claims that the causal relationship between loneliness and self-disclosure is probably reciprocal. People who are unwilling to reveal personal information about themselves before others and who receive little personal information about others may regard their relationships as less satisfactory and are therefore more prone to be lonely. On the other hand, loneliness and social anxiety may prevent effective communication and thus prevent self-disclosure. Our results, however, suggest that the higher loneliness participants feel, the higher tendency to self-disclosure on Facebook they present. Thus, we could support the claim of Sanders and his team (2000). According to them, the use of the internet isolates individuals from the real world and deprives them of their sense of belonging and of the relationship with the real world. Thus, loneliness can become a byproduct of over-use of the internet because the time spent by online users often invest in online relationships that are artificial and weak and do so at the expense of real relationships. But there is also another view of the relationship between feelings of loneliness and the use of the internet. This view, based on the work of Morahan-Martin and Schumacher (2000), is based on the tendency of lonely individuals to use the internet more likely, due to online social networks that are for them more realistic than the real world. The internet provides lonely people with an ideal environment for communication with others. Online anonymity and lack of physical presence enable users to control social interactions. They can choose not only to whom and when to communicate but also have more time to compose messages. For some lonely individuals, this can lead to increased internet usage. According to Schimmel et al. (2001), people with high self-esteem are more sure about their abilities, and thus are more willing to reveal personal information in comparison to people with low self-esteem. Statistical analysis of data supports the existence of differences in self-disclosure on Facebook among respondents with high and low self-esteem.

However, Schimmel's claim (2001) is contrary to ours, as the data analysis revealed exactly the opposite relationships. Participants with low self-esteem are more exposed than participants with high self-esteem. Based on a more thorough analysis of behavior on Facebook, we can assume that participants with average and high self-esteem have stronger boundaries in what posts they are willing to add and which they consider not to appropriate for Facebook. They do not want to make Facebook a "window" into their lives and add only posts that they consider to be "harmless" (photos of trips, actions, plans for the future, posts containing success, ...).

The research was conducted with the aim to explore self-disclosure on Facebook in relation to the feeling of loneliness and self-esteem. Despite meeting the set research objectives, we would formulate some research suggestion in this area. Mainly, the research sample is rather small and that is why results are not considered as having strong potential for any generalization. For the future research, we would suggest to enlarge the research sample and take some important socio-demographic variables (e.g. gender, ...) into account.

Last, but not least, using quantitative methods for exploring behavior on the Facebook, and, especially motives for particular activities, seems not bring enough detailed results. We find desirable to include a qualitative approach, that could provide more rich data and help to understand individual experience and motives of behavior. However, the research focused on identifying young people's motivation to self-disclosure in online space or on exploring the context of self-disclosure and selected variables (feelings of loneliness, self-esteem) can provide inspirational findings that clarify communications phenomena in the 21st century that have retrospective effect on social relationships and self-esteem of the individual.

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#### Primary Paper Section: A

#### Secondary Paper Section: AN

# UNDERSTANDING OF GHOSTING IN RE-EDUCATION OF HUMAN RESOURCES IN AN ORGANIZATION

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GaPU 46/2018 - Understanding of ghosting in re-education of human resources in an organization

In Slovakia, there has been very little attention and research devoted to the issue of ghosting. The aim of the article is to enrich the relatively unknown ghosting issue and to propose a methodology for its assessment and prediction. The GiG methodology consists of 12 items that create a Global Indicator of Ghosting. The paper presents a verification of the methodology applied to identify gender differences. Attention is given to the inclusion of ghosting in the process of human resources re-education.

Keywords: ghosting, communication, company, behaviour

## 1 Introduction

In today's society, the issue of ghosting is moving forward and assumes a new dimension. In many cases it is associated with self-confidence, frustration, social irritability, emotional stability and, at the same time, it has the potential to penetrate into cognitive deformations in both the personal and working life of an individual (Frankovský, Birknerová, Zbihlejšová, 2015, Birknerová and Baranová, 2011). Ghosting can be considered ending any communication with someone you often met, spoke, wrote messages, or sent e-mail, on the ground that a person who lost interest in a contact (ghoster) left the victim of ghosting in a silent struggle with his/her own thoughts and without explanation (Koessler, 2018, Freedman, et al., 2018, UrbanDictionary, 2013, Vagaš, Škerháková, 2018). Simply said, ghosting is when someone who was in (regular) contact with you (like friend or colleague) suddenly unexpectedly interrupts contact with you without any explanation. The term ghosting, that was originally used in the dating world describing a situation "when a person abruptly cuts off all communication with a potential suitor with no previous warning or notice", penetrated into the workplace and causes problems to HR professionals (Sim Esmen, 2018).

Theoretical backgrounds and practical researches in the field of ghosting have found their representation in social relationships between men and women, while they have anchored and neglected working relationships in organizations (Esmen, 2018, Pilita, 2018, Freedman et al., 2018). Thus, the ghosting can be considered a social trend that is familiar to everyone, and is associated with people-to-people communication (Hill, 2018). Eileen (2018) highlights changes in post-conflict behavior at the workplace, where the actors have the problem to continue communicating within the work process. Building good relationships and communication between employees is one of the main pillars of the company. Understanding the phenomenon of ghosting among employees will help us to clarify the reasons for different behavior in the organization.

### 1.1 The beginnings of ghosting

At current forms of communication, the perception of ghosting as a problematic phenomenon in society has begun when people have mutually acquainted. At the slightest hint of mismatch or lack of communication of one of the parties, communication was interrupted without warning or explanation. (LeFebvre, 2017). Characteristics or descriptions of ghosting were recorded only in non-academic sources, i.e. they were not based on any scientific research or analysis.

Koessler (2018), based on her analyzes on surveys on ghosting in relationships, formulated one of the first definitions of ghosting (supported by the dissertation data):

„Ghosting is a strategy used to end a relationship with a partner with whom romantic interest once existed by ceasing to contact or respond to the recipient either suddenly or gradually in lieu of the disengager providing a verbal indication that they are no longer interested” (Koessler, 2018, p. 25).

Her research is probably the first extensive exploration of the ghosting issue. On a sample of 332 respondents, it was found that 60% of respondents were direct participants of ghosting and up to 70% of respondents had experience with ghosting in past relationships.

Koessler (2018) and Freedman et al. (2018) concluded that the length of the relationship between people affects the level of ghosting among concerned persons. The essence of ghosting explicitly imparts a certain sense of insecurity and ignorance among people, and therefore the ability to build good relationships between employees at the workplace can be distorted as well as social relationships between people. Based on this, we assume that employees who have a serious problem with relationships in the social environment may also have communication deficiencies.

The ease with which ghosting can modify into various forms is enormous. The initial ghosting survey revealed that of 554 respondents, 25.3% of respondents said that they were ghosted, and 21.7% said that some of their past relationships had the features of ghosting. Such a negative behavior tends to increase the likelihood of ignoring the possible consequences that could be devastating for sensitive people (Freedman et al., 2018).

Based on the above, we can conclude that ghosting is generally considered a negative phenomenon in an organization because it is closely related to people (human resources). We believe that it can cause significant damage to human capital (that is considered to be an important element of competitive advantage of each organization) in many areas of the organization. One of the potential solutions of ghosting in the organization is reeducation of human resources.

In large corporations, "whole organization is formed as a big team and its members cooperate and interact together in compiling perspectives, objectives and ways to achieve it, so they may act better when confronting threats and risks and will perform faster than competitor organization in using opportunities" (Asgar, 2013, p. 2825). However, a lot of conversations involve "bad news", while these conversations are often "dreaded, poorly executed, or avoided altogether". It is necessary to find ways to make them less difficult and more productive (Bradley and Campbell, 2014, p. 443).

Odine (2015) points to communication problems in organization and argues that for a success of a company is necessary its employees to have the information and to make an environment with two-way communication. Open and regular disagreements between managers and subordinates, such as open conflict or rejected appraisals are the evidence of the communication problems in organization. Some communication problems are "a direct result of ineffective communication techniques, which include poor listening skills, use of inappropriate medium, poor message conceptualization, and general lack of trust (Odine, 2015, p. 1616).

Problematic communication occurs at all levels of company's management. It should be emphasized that the frequent occurrence of communication problems at the workplace can demoralize employees and also cause an increased incidence of such negative phenomena as ghosting.

In relation to the development and support of human resources - in terms of abilities and communication skills, Utrilla and Torraleja (2013) propose training and mentoring procedures that help organizations grow. Authors, on a sample of 630

companies, identified the relationship between mentoring and performance in family businesses through the method of structural equations. Based on this survey, we can say that family businesses have an acceptable atmosphere to achieve higher performance, which - in our opinion - eliminates the occurrence of ghosting in the workplace and which increases the tendency of employees to work faster and more efficiently.

Hannah (2004) – in her case study – has attempted to prove that coaching can improve employee relationships and their competences in measuring business standards. By using the NVQ (National Vocational Qualifications) assessment that which serves to recognize the skills and knowledge of a person, she has demonstrated that coaching practices have a significant impact on the development of employees in the organization. Applying the NVQ model has increased not only the work performance of employees but also their acceptance of changes in the workplace and also strengthened the original mental models of employees. The correct introduction of coaching at the workplace has resulted in the reinforcement of motivation and the overall personality of the staff, from which we conclude that other negative behavioral influences have been eliminated.

## 2 Methodology

Ghosting in the work environment is a very negative phenomenon. Neither in Slovakia nor in the world, we do not yet record research on this issue - in terms of the organizational context. There are only a few articles that use ghosting in connection with the process of recruitment respectively with the process of applying for employment. Based on the available theory, we have created a global indicator of (employees') tendency to ghosting. The GIG methodology includes 12 self-assessment items that have been rated on a 6-point scale: 1 - definitely no, 2 - no, 3 - rather not, 4 - rather yes, 5 - yes, 6 - definitely yes. This methodology - based on a Global Indicator of Ghosting - makes it possible to predict ghosting. The aim was to create a methodology that could be applied in the work environment. This methodology can also be applied in the process of recruiting employees. Our research - using the above methodology - reveals a certain degree of general tendency towards ghosting, i.e. a tendency to interrupt communication and/or the tendency to ignore or avoid people. As with other social aspects that affect organizational performance and efficiency, it is essential to predict this phenomenon. This methodology is also potentially usable in deciding on human resource re-education, which could be a tool to eliminate the occurrence of ghosting.

## 3 Research Sample and Results

202 respondents were surveyed, 92 (45.5%) men and 110 (54.5%) women. The average age of respondents was 31.22 years (Std. 9.107 years). The minimum age of respondents was 18 years and a maximum was 61 years. Structure of respondents: 44 (21.8%) managers and 158 (78.2%) general staff. The data were obtained by the questionnaire method and subsequently were processed in IBM SPSS. Ghosting was assessed using the own GIG (Global Indicator of Ghosting) methodology.

- Hypothesis H1: we assume the existence of an internal factor structure of the proposed methodology.
- Hypothesis H2: we assume the existence of gender differences in the Global Indicator of Ghosting.

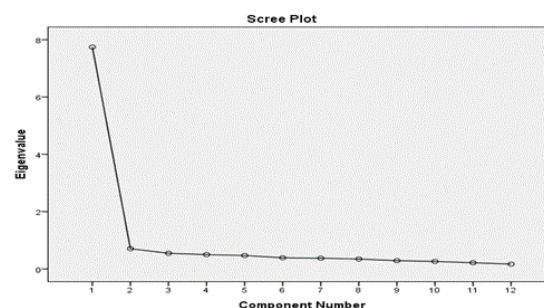
In our research, our attention was focused on verifying the GIG methodology. Factor analysis of the main components with Varimax rotation was applied to specify the internal factor structure. Based on the Kaiser-Meyer-Olkin Measurement of Sampling Adequacy score - 0.949 and Bartlett's Test of Sphericity - 1817.501 (sig. .000), factor 1 was extracted by factor analysis. The existence of a factor is confirmed by Scree Plot and a Factor Analysis Table. The extracted factor, which we named Global Indicator of Ghosting, explains the 64.52% of variance. The intrinsic consistency of the factor was verified by Cronbach's Alpha (,949). The internal consistency of the items

loading extracted factor is at an excellent level. The average value: Median (3.54) was used to assess the Global Indicator of Ghosting.

Table 1 Principal Component Analysis with Varimax Rotation

Items	Global Indicator of Ghosting
1. By ignoring the person I avoid the unpleasant communication.	,766
2. Instead of telling someone some unpleasant information, I'd rather stop communicating and responding.	,796
3. In the social interaction I refuse someone without explanation.	,794
4. Instead of explaining the real reasons, I prefer not to respond to the person.	,829
5. It is typical for me to interrupt communication with someone for a long time and not to reply to him/her.	,797
6. Instead of explaining that I do not have time, I'd rather not answer that person	,842
7. If I do not want to answer, I ignore any communication.	,817
8. It happens to me, that first of all I am interested in someone/something, but later I stop responding.	,863
9. It happens to me, that I first show an interest in the offer in an advertisement, but later I do not respond.	,834
10. I do not respond to some messages, even when I'm contacted multiple times.	,813
11. Sometimes, I interrupt any kind of communication with someone.	,735
12. I answer to some messages after a long time.	,744

(Source: own calculation in SPSS 20)



Graph 1 Screen plot of extracted factors

(Source: own calculation in SPSS 20)

Given the results of Skewness (-,185, Std. ,171) and Kurtosis (-1,403, Std. ,341), the nonparametric Mann-Whitney U Test is applied to identify gender differences.

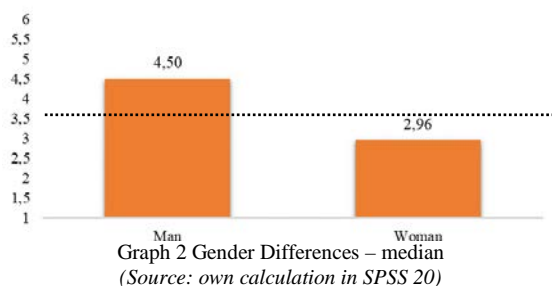
Table 2 Gender differences by using Mann-Whitney U

Gender	N	Mean Rank	Median	Mann-Whitney U	Sig. (2-tailed)
Global Indicator Of Ghosting	Man	92	120,95	4,50	,000
	Woman	110	85,23	2,96	

(Source: own calculation in SPSS 20)

The results (Table 2) pointed out that men (median 4.5) achieved a higher average score on the factor Global Indicator of Ghosting than women (median 2.96). Median for Global Indicator of Ghosting is 3.54. Apart from the statistically significant gender differences, women are below average and men above average.





Higher scores of GIG represents a greater tendency toward ghosting behavior. These results need to be taken into account in the actual re-education of human resources with respect to the aim of prediction and elimination of ghosting in the working environment. Eunson (2012) states that women tend to engage in conversations that enable an understanding as well as empathy. In general, we consider women to be more emotional and relationship-oriented. This is one of the reasons why men have a higher tendency to ghosting. Often they do not care about the working relationships and the opinions of others and therefore tend to ignore a person or interrupt communication with a person. Ghosting in the work environment does not only have a long-term character. This phenomenon also entails minor changes in behavior towards specific colleagues at work such as: physical avoidance at work, brief communication, changed or different communication styles, unwillingness to communicate or even complete interruption of communication. The results of gender differences show that men should be given considerable attention in the context of the issue examined. Men are more often than women in management positions. Even minimal behavioral changes that are typical for ghosting can cause extensive communication problems which can affect business processes in the enterprise.

Ghosting is a problem of socio-communication character. In the survey, 49 respondents (24.3%) indicated that they prefer digital communication and 153 respondents (75.7%) prefer personal communication. The selection of the communication channel can affect the occurrence of ghosting, but it should be noted that ghosting occurs in both digital and personal communications in the social and working environment. However, the result of our study can be considered positive. A favorable working climate as well as the creation of good working relationships can only be done through personal communication.

Out of a total of 202 respondents, 130 (64.4%) respondents said that they participated in development and education activities within their organization and 72 (35.6%) did not undertake any educational and development activity. Most of the respondents participated in teambuilding (40.6%) and coaching (30.3%) as well as in various developmental and educational activities focused on presentation skills. An important finding is that none of these activities were focused on the issue of ghosting. Moreover, employees never heard of this issue even though they encountered it in the work environment. There is no known scientific research on ghosting in Slovakia yet to be supported by data. However, we recommend ghosting to be included in the process of re-education of human resources as a kind of remedy or prevent against inadequate and negative behaviors in organizations.

In view of the results, the H1 hypothesis was confirmed on the existence of an internal factor structure as well as on the hypothesis H2 on the existence of gender differences in the Global Indicator of Ghosting.

#### 4 Discussion and Summary

By verifying the newly created GIG methodology, which consists of 12 self-assessment items designed to detect the presence of interrupting communication, ignoring people, and

avoiding people, we have confirmed the occurrence of ghosting among employees in the organization. We can consider ghosting as a negative behavior of employees in the company. Scree Plot as well as the Factor Analysis Table confirm the existence of one factor named Global Indicator of Ghosting. Loadings of individual items are at a good level. Regarding the Global Indicator of Ghosting, the results of the Man-Whitney test showed higher scores of men (median 4.50) than of women (median 2.96). In general, women are considered to be more emotional and socially oriented. Emotional stability is a personality feature that divides people into strongly emotionally stable, less emotionally stable or emotionally unstable ones, while it is intricately related to the individual's occupational life (Bhagat, Simbak, Haque, 2015) and thus it can influence the way of communication in the enterprise and the social learning of relationships between employees. Since men have achieved higher scores in our research, they are likely to have a greater tendency towards behavior that is typical of ghosting. We recommend using the methodology in the behavior prediction phase to select appropriate re-education activity that would mediate or eliminate ghosting in the work environment.

Ghosting is a socio-communication problem, which is confirmed by our research, that was aimed at human factor within the organization. Without communication in workplace, nothing would be accomplished, i.e. "instructions could not be given, equipment and supplies could not be ordered, progress could not be measured, and products and services could not be delivered to customers". However, in organizations (even though the communication is "so fundamental, so learnable, and so crucial") there are a lot of communication problems, for example some managers' verbal instructions sound like commands from a general; although these messages are understandable, precise and clear, they are not well received and not embraced by employees (Conrad, 2014, p. 105). Poor communication among employees causes most of the workplace problems. The occurrence of ghosting can be influenced by the choice of a communication channel. Odine (2015) points the recognition of situations that are caused by problematic communication. The fact is that some communication problems are the result of the inadequate capabilities of employees. By reinforcing communication and communication channels between employees through various communication techniques, we can stimulate and strengthen those communication factors that lean towards ghosting. The correct implementation of communication techniques into the employees' communication process damaged (affected) by ghosting would help to improve, strengthen and develop socio-communication relationships at the workplace, thus preventing and avoiding further communication barriers (Jones, et al., 2004).

Research also shows that 64.4% of the surveyed employees have completed organizational educational and training activities, and 35.6% did not participate in such activities. 40.6% of them participated in teambuilding, 30.3% in coaching and only a small percentage of employees participated in mentoring. Education and training activities should be available and mandatory for all employees. They are one of the most valuable parts of business management. The training process can be successful only if the employees are motivated enough and encouraged to use their knowledge and skills in the right way (Zahra, et.al., 2014, Ampomah, 2016). The fact is that none of these developmental educational activities directly address the issue of ghosting, although co-operative integration of mentoring and coaching could improve mental models of employees who are damaged by ghosting. By applying the NQV (National Vocational Qualifications) assessment process that was tested in practice, we could achieve synergy of staff personalities, empower employees' motivation, efficiency, flexibility, learning ability. We believe that by introducing NQV it would be possible to eliminate other negative effects of ghosting.

In Slovakia, we are one of the first authors to identify and verify (backed up by data) the issue of ghosting among employees in the company. By verifying the Global Indicator of Ghosting (GIG), we have come to the conclusion that examined modern



phenomenon of ghosting can easily infiltrate among employees, transform and modify into different forms in the organization. It has the potential to cause damage to a human factor that can bring a wave of negativism that affects not only employees but also the organization (enterprise) as a whole. We believe that through re-education of employees, strengthening emotional stability, improving healthy communication, co-operation of mentoring and coaching (with the application of the NQV assessment process) we could partially eliminate the employees' behavior typical of ghosts.

Peagram (2018) provides some steps to avoid ghosting. In modified form, we have selected recommendations that should also be used in the re-education process. To eliminate ghosting we recommend the following:

- Respond to emails and respond to colleagues' requests. Be professional and use phrases such as: "Thank you", "I'll do it as soon as possible", etc. Keep your promises, be honest and courteous.
- Get as much information as possible. When you are ready, you will have a better chance to respond to the situation.
- Do not hide from problems and colleagues at work. Ask for help from a professional who can advise you.
- Improve communication channels in your organization. Propose time rules, e.g. all employees must respond to emails within 48 hours.
- Explain the importance of communication. Bring in your colleagues ghosting issue.

Create a favorable working climate. Maintain good relationships and support re-education of employees.

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#### Primary Paper Section: A

#### Secondary Paper Section: AH

## READING THE PROFESSIONAL TEXTS IN FOREIGN LANGUAGES – KEY SKILL FOR DOCTORAL STUDENTS AT TECHNICAL UNIVERSITIES

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Name of the Grant: Developing the Reading Competency and Teaching Technical Foreign Languages at Technical Universities

**Abstract:** Nowadays doctoral students at technical universities in Slovakia need to master the language skill of reading comprehension in order to be able to read professional texts in foreign languages, especially in English. Consequently they can receive the latest information concerning their study and research from foreign experts and specialists. The submitted paper deals with reading comprehension as the key skill for the doctoral students and it brings results of the pilot questionnaire survey, carried out on the sample of 30 doctoral students from the Technical University in Zvolen, Slovakia.

**Keywords:** reading comprehension, technical universities, doctoral students, foreign languages, questionnaire survey.

### 1 Introduction

Today the necessity of mastering English language is more than clear in European countries, as well as all over the world. This need is closely related to the fact that English has become a sort of *lingua franca* in today's society, and it is a basic tool for communication in the sphere of work, studies, travelling, entertainment etc.

In the Slovak Republic, the graduates from technical universities need to master foreign languages at a high level to improve once their position at the labour market. During their university studies, they choose predominantly English as their first foreign language (it is partially due to their personal preference for this language, due to the fact that they clearly see its importance as the world language, as well as due to the Slovak legislation imposing English as an obligatory first foreign language for the students of the primary and secondary schools). Technical universities students study general, but mainly professional foreign languages, i.e. foreign languages used in the sphere of science, research or work. The ability to master professional languages opens many possibilities for them already during their studies and definitely after the graduation, when they start searching for a good and interesting work position.

At the Technical University in Zvolen, professional foreign languages are taught by the teachers from the Institute of Foreign Languages. Three professional languages are available to be selected from by the students of the University: English, German and French. If interested, the students may attend the courses of Chinese language, too, but they are focused on acquisition of general Chinese only.

The majority of the students select English, for the reasons that we have already mentioned above, but a lot of them understand the advantage of mastering more than just one language (especially the professional ones) for their future career. The students study professional languages related closely to their study specialisation during the specialised seminars. However, especially during the postgraduate studies (doctoral studies), they use professional foreign languages also within the study of other subjects, where they benefit from foreign literature and complement their knowledge with current information from foreign experts.

According to the surveys we did (Veverková, 2013; Veverková, Balážová, 2014), we may sum up that the higher year of studies the students are in, the more they read professional texts in foreign languages. The aim of this paper is to present the results of the pilot questionnaire survey focused on doctoral students and their relationship to reading professional texts in foreign languages (Do they read this type of texts? Which foreign

languages are preferred? How much time do they spend reading? Are the professional texts in foreign language necessary for the students or not? etc.). We consider professional texts in foreign languages to be an important source of the up-to-date and valuable information that can be used by the students in their work and scientific research. The pilot questionnaire survey was conducted on the sample of 30 doctoral students at the Technical University in Zvolen.

### 2 Reading comprehension – a key skill for doctoral students

In this chapter, we would like to explain in more detail why we consider reading to be essential skill for the doctoral students. According to Grabe (1991, p. 375), reading is probably the most important skill for foreign language learners in academic contexts because they must acquire a lot of knowledge which they are supposed to take advantage of and use in their career. Reading is the ability to understand the text, to get meaning from the written, as well as unwritten (reading between the lines), to acquire important information from the text and to benefit in some way from it. As one of four basic language skills, learners of English deal with it from the beginning of the process of studying English and they develop it gradually all over their life.

Grabe (1991, pp. 378-379) defines fluent reading as:

- rapid (a reader needs to maintain the flow of information at a sufficient rate to make connections and inferences vital to comprehension);
- purposeful (a reader has a purpose for reading);
- interactive (a reader makes use of information from his/her background knowledge as well as information from the text);
- comprehending (a reader expects to understand what he/she is reading);
- flexible (a reader employs a range of strategies to read efficiently);
- gradually developing (a reader does not become fluent immediately after a reading development course. Fluent reading is the product of long-term effort and gradual improvement).

Reading is also the foundation of language education, whether it is mother tongue or foreign language (Krashen, 2004, p. 1). Krashen (2004, p. 17) proposes that "more reading results in better reading comprehension, writing style, vocabulary, spelling, and grammatical development". The ability of reading well in the first language is helpful for the second language acquisition, too (Krashen, 2004, p. 148).

In simple terms reading comprehension is an active and complex process, during which a reader tries to understand a written text. If the readers want to be successful in reading and to read efficiently, they must master the language at the needed level, as well as different skills and strategies necessary for the process. Grabe (1991, p. 379) focuses on the complexity of the whole process of reading and presents 6 general component skills and knowledge areas:

- Automatic recognition skills;
- Vocabulary and structural knowledge;
- Formal discourse structure knowledge;
- Content / world background knowledge;
- Synthesis and evaluation skills / strategies;
- Metacognitive knowledge and skills monitoring.

According to him (Grabe, 1991, pp. 378-379) the efficient reader uses the following strategies when reading: adjusting the reading speed, skimming ahead, considering titles, headings, pictures and text structure information, anticipating information to come, etc. Hosenfeld (1977) agrees when declaring that the efficient reader, in the process of reading, focuses on the meaning of the

text as a whole, anticipates the content, does not pay attention to minor information and so on.

Other experts on reading comprehension Dudley-Evans and St. John (1998, pp. 96-98) consider the following skills important and needed to be mastered by efficient and successful reader of the text in foreign language:

- selecting what is relevant for the current purpose;
- using all the features of the text such as headings, layout, typeface;
- skimming for content and meaning;
- scanning for specifics;
- identifying organisational patterns;
- understanding relations within a sentence and between sentences;
- using cohesive and discourse markers;
- predicting, inferring and guessing;
- identifying main ideas, supporting ideas and examples;
- processing and evaluating the information during reading;
- transferring or using the information while or after reading.

Both authors consider the skills of skimming and scanning useful at first stages of reading, when the reader decides whether to read the text or which part of it. If he/she decides to read it, the reader reads carefully, extracts meaning and considers the author's attitude (Dudley-Evans, St. John, 1998, p. 98).

Reading is surely a very important language skill which opens the possibilities for subsequent education and studies. It must be supported and developed in foreign languages to the same degree as it is in the mother tongue. If the students want to become efficient and fluent readers, the acquisition of the above-mentioned reading skills and strategies will be definitely useful.

### 3 Results of the pilot questionnaire survey

The questionnaire was proposed to and filled in by a group of 30 doctoral students from the following faculties of the Technical University in Zvolen, Slovakia:

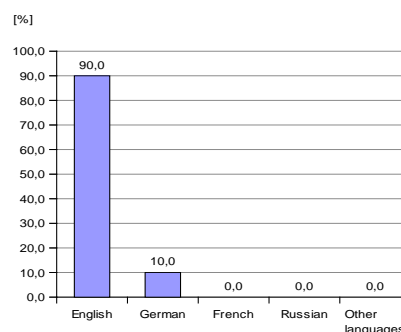
- Faculty of Forestry (15 students, i.e. 50% of the respondents);
- Faculty of Wood Sciences and Technology (10 students, i.e. 33.3% of the respondents);
- Faculty of Ecology and Environmental Sciences (5 students, i.e. 16.7% of the respondents).

From all the addressed doctoral students, 50% were women. The usual length of doctoral studies at the Technical University in Zvolen is from 3 to 5 years (it depends on the form of doctoral studies). From our respondents, 10 of them were in the first year of their doctoral studies (33.3% of the total number), 6 of them were in the second year of the studies (20% of the total number), 12 were in the third year (40% of the total number), one student was in the fourth year and another one in the fifth year of their studies.

The first question of the questionnaire *"Do you read professional texts in foreign languages?"* was answered unequivocally positively: all the respondents answered *"Yes"* (100%). This answer was expected, as far as the need of studying materials in foreign languages is taken for granted at this degree of university studies.

The second question dealt with the choice of the foreign language the students read the texts in: *"In which foreign language do you read professional texts?"* The students could choose from the following options:

- a) English
- b) German
- c) French
- d) Russian
- e) Other: ... (please, specify)

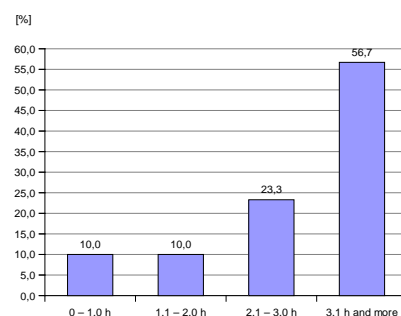


Graph 1: Preference of foreign languages by doctoral students.

As we can see on the graph, the answers were limited to two languages: 90% of the respondents (27 students) read English professional texts and 10% (3 students) prefer German professional texts. We believe that this result is related to the position of English as a communication tool among the scientists all over the world. Therefore, English is preferred also by Slovak doctoral students and their supervisors.

The third question was focused on the amount of time the students spend reading the professional English/German texts: *"How much time (on average) do you spend reading professional texts in foreign languages weekly?"* We proposed the following possibilities to be chosen from:

- a) 0 – 1.0 h
- b) 1.1 – 2.0 h
- c) 2.1 – 3.0 h
- d) 3.1 h and more

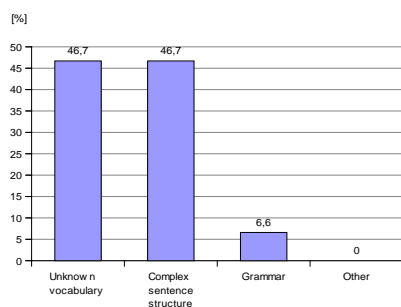


Graph 2: Amount of time spent weekly on reading professional texts in foreign languages by the students.

The majority of the respondents (17 students, i.e. 56.7%) spend 3.1 and more hours reading professional texts in English or German. More than 2 hours, but less than 3 hours are spent weekly on reading in case of 7 students (23.3%). Just a minority of the students (10% of them, i.e. 3 students) read more than 1 hour, but less than 2 hours. The same number (10%) stands for the students who read less than one hour a week.

Our intention was also to find out what the biggest problem or difficulty is when reading professional texts in foreign languages. To the fourth question *"What is the biggest problem when reading the professional texts in foreign language?"* we proposed the following answers:

- a) unknown vocabulary
- b) complex sentence structure
- c) grammar
- d) other: ... (please, specify)

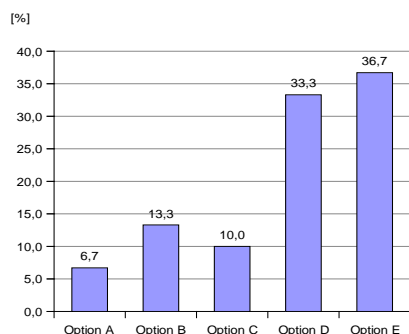


Graph 3: Occurred problems while reading professional texts in foreign languages.

From the results we can see that the students' problems reside mainly in lexical and syntactical fields. Unknown vocabulary, as the biggest barrier to reading, was marked by 14 students (i.e. 46.7% of the respondents). The same number (14 students – 46.7% of the respondents) chose complex sentence structure as the most serious difficulty in the process of reading. Finally, only 2 students (i.e. 6.6%) considered grammar a problem.

"To which extent do you need to search for and read professional texts in foreign languages during your doctoral studies? (e.g. when writing your doctoral thesis, preparing for the exams etc.)" was the fifth question in our questionnaire. The respondents could choose one of these options:

- Professional texts in foreign languages are only of peripheral importance for me (I read them rarely, only from time to time).
- I sometimes read professional texts in foreign languages; I read Slovak professional texts predominantly.
- I read professional texts in Slovak and in foreign languages to the same degree.
- I read more professional texts in foreign languages than the Slovak ones.
- I read only or most predominantly professional texts in foreign languages; I read only minimally the Slovak texts.



Graph 4: The answers to the question "To which extent do you need to search for and read professional texts in foreign languages during your doctoral studies?"

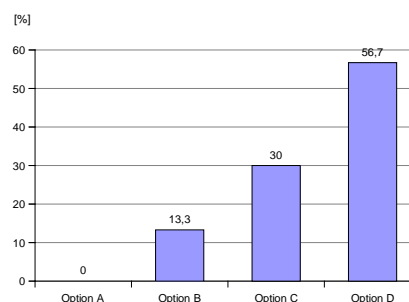
The most frequent answer of the respondents was the option E: *I read only or most predominantly professional texts in foreign languages; I read only minimally the Slovak texts* (the option was chosen by 36.7% of respondents, i.e. 11 students). The second most often selected option was D (*I read more professional texts in foreign languages than the Slovak ones*), which was chosen by 10 students (33.3% of the respondents). We can sum up that professional texts in foreign languages are preferred to the Slovak ones and used by altogether 70% of doctoral students from the research sample. This proves their importance and necessity and highlights the need for mastering the skill of reading comprehension.

10% of the students (3 of them) read professional texts in Slovak and in foreign languages to the same degree. Slovak texts are preferred to the texts in foreign languages by 13.3% of the

respondents and only 2 students (i.e. 6.7%) read professional texts in foreign languages only peripherally.

The last question was related to the previous one: "*Are there enough sources of information in Slovak language concerning your research topic or do you have to search for necessary information in the professional literature written in foreign languages?*" Our aim was to find out if there are enough sources – professional or specialised literature (professional texts, papers, books, other sources of information etc.) in Slovak language concerning the students' research topic. The respondents could mark one of these options to express their opinion:

- Yes, there are enough sources of information and I do not need to study or look for professional literature in foreign languages.
- Yes, there are enough sources of information, but I like to add some information from the professional literature in foreign languages.
- No, there are not enough sources of information, I have to look for information partially in professional literature in foreign languages.
- No, there are not enough sources of information, I have to look for information to a large extent in professional literature in foreign languages.



Graph 5: The answers to the question "Are there enough sources of information in Slovak language concerning your research topic or do you have to search for necessary information in the professional literature written in foreign languages?"

The respondents' selection of the answers proved that doctoral students are aware of the necessity of mastering foreign languages because they are a tool to gain new and useful information in the sphere of science and research. More than half of them (17 respondents, i.e. 56.7%) chose the option D to answer this question, admitting that when doing their research, they rely mainly on literature written in foreign languages. 30% of the respondents chose the option C, which again supports the statement that professional literature in foreign language is a common part of the doctoral students' work. Only 13.3% of the students find enough information for their work in Slovak sources, but they still find English or German professional literature as relevant. None of the students chose the option A. Following these findings, we can conclude that the doctoral students from our sample benefit from mastering foreign professional languages and consequently they are able to gain important information for their scientific and research work from foreign literature.

#### 4 Conclusion

Doctoral students usually read the professional texts in foreign languages in order to improve their language skills and to get current information related to the sphere of their interest. Being an efficient reader is closely related to mastering the foreign language at a high level, as well as mastering reading skills and strategies. The results of the pilot questionnaire survey showed that doctoral students at the Technical University in Zvolen consider professional texts in foreign languages an inseparable

part of their studies and they very often preferred them to the Slovak ones. More than half of the respondents spend at least 3 hours a week reading the English / German professional texts. Unknown vocabulary and difficult sentence structure present the biggest problem for the students. Nevertheless, the professional literature written in foreign languages remains the important source of knowledge and therefore reading comprehension deserves full attention of the foreign languages teachers.

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**Primary Paper Section: A****Secondary Paper Section: AM**

## IMPACT OF BREXIT ON THE MIGRATION IN THE UK

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**Abstract:** The study evaluates the impact of Brexit on the migration in the UK and determines economic implications of immigration now that UK has decided to leave the EU. Based on the available statistical data we calculate gains and losses connected with the immigration of labor force and also with the influx of asylum seekers. As a result, we present a model calculation that covers GDP created by immigrants, expenses and revenues to the state budget stemming from the economic activity of migrants, as well as taking into account the expenses necessary to provide for asylum seekers. This model allows us to evaluate the gains and losses for the UK's economy; the findings which in turn could improve the effectiveness of the receiving country's migration policy.

**Keywords:** immigration, labor force, GDP, losses and gains

### Introduction

As the integration processes within the EU deepened, so did the concerns of the old member states regarding protecting their labor market. When 8 new member states joined EU in 2004 (in the so-called Eastern enlargement), some member states placed temporary restrictions on the access of the citizens from the new member states to their labor markets. However, United Kingdom, Ireland and Sweden did not implement any such restrictions, choosing to implement a liberal migration policy instead. Economic growth, rising wages and positive macroeconomic development created incentives for migration of labor force to UK. The trends in the migration to the UK in the past decade follow along the lines of the migration theory based on the pull and push factors with only slight departures, which can be reasonably explained by the natural societal development (Massey, et al., 1993; Adepouju, et al., 2010; Kazlauskienė, Rinkevicius, 2006; Jančíková, 2014; Krajnakova, et al., 2018).

The main goal of this study is to evaluate the impact of Brexit on the migration to the UK and also to determine economic implications of immigration after UK adopted a decision to leave the EU. To do so, we have analyzed the trends on the UK's labor market – employment, unemployment, wages, number of available job vacancies, number of immigrants, etc. We have calculated GDP created by immigrants, its share on the overall GDP, expenses and revenues to the state budget stemming from the economic activity of immigrants, as well as taking into account the expenses necessary to provide for asylum seekers. The statistical data necessary for these calculations were obtained from The Migration Observatory at the University of Oxford, Office for National Statistics GB, ILO 2016 and World Bank. Finally, we have calculated economic losses and gains stemming from the migration of labor force from EU member states.

### 1 Migration and UK labor market

UK labor market follows the trends in the global economy. In 2009, as a result of the economic crisis, the employment rate fell from 72.6 % from the previous year to 70.9 %. The falling trend continued until 2011, when the global economic crisis went through its second phase. Following years brought moderate recovery with the employment rate exceeding its pre-crisis level in 2017, when it reached 75 %. Year 2018 so far marks historically high employment, with almost 32.5 million people

being employed. Immigrants account for 8.5 % of all employed people in the UK, with this share constantly growing in the past years regardless of economy's fluctuations. Unemployment rate in the UK started to grow already in 2008, and its growth culminated in 2011, when it reached 8.3 %. Since then it was steadily falling, and in 2016 it fell to 4.8 %. The positive trend continues in 2018, with UK government reporting historically lowest unemployment rate of 4.1 %.

Another indicator that we used to illustrate the situation on the UK labor market is the number of job vacancies. In 2008, before the full onset of economic crisis, there were 702 thousand job vacancies in the country. In the next year, this number fell by 257 thousand, and in the following years it grew only moderately. A more robust growth started in 2013, and in 2015 and 2016 the number of job vacancies stabilized around 750 thousand, all while the economic production and employment continued to grow even as Brexit became a reality. The number of available job positions continued to grow in 2017 and in August 2018 it reached 815 thousand (Table 1).

A more detailed analysis of the data regarding the employment among 14 – 64-year-old shows that while the employment of British nationals remains high, it is still lower by roughly 6% than the employment among the European immigrants, including the EU member states from the eastern enlargement and also from Bulgaria and Romania, which joined the EU in 2007. Low employment can however be observed among non-European immigrants; in general, it is lower than the national average by 12 %.

Retirees, disabled, chronically ill and primary caretakers of family members constitute for the most “passive” group on the UK labor market. When taking the migrant status into consideration, the most “passive” on the UK labor market are non-European immigrants (22 %), followed by domestic population (16 %). Afghanistan, Syria, Pakistan and Iraq are predominantly Muslim countries with a low rate of literacy. School attendance is mandatory by law, nevertheless, customs and traditions combined with social (and oftentimes also military) unrest, outdated education systems, and a chronic lack of teachers cause that the illiteracy especially among women remains on a high level (80 % in Afghanistan, 20 % in Iraq and Syria). Employment rate among women in these countries is only around 15 %, with most of them working in a household, thus not having a paid position. Immigrants often bring this way of life to their new host country with them. Cultural factors and traditions can also explain relatively low involvement among the older generation, whose lifestyle is more likely to be shaped by the notions of societal hierarchy and social class.

An important characteristic adding to the picture of the UK labor market is the age structure of employed population. The labor market reflects the trend of ageing population, with people aged 45-49 and 50-54 being the most numerous groups with 13.16 %. The second biggest group consists of people aged 25-29 (11.36 %). The age structure of employed immigrants is considerably more favorable – 30-34 year-olds are the most numerous group (22.45 %) followed by 35-39 year-olds (17.92 %) and 25-29 year-olds (16.95 %).

This also suggests that immigrants belonging to these two age groups arrived to the country after finishing their education and vocational training, and thus the UK gained qualified labor force without costs. The Statistics office published an analysis which compared the skillset of British nationals and immigrants. (The Migration, 2017). It concluded that the qualifications of immigrants are considerably higher when compared to British nationals occupying the same job position. It is also necessary to

Table 1 Trends on the UK labor market in 2007 - 2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Employment (in mil.)	29.4	29.6	29.2	29.2	29.4	29.7	30.1	30.8	31.3	31.7	32.06
Employment rate	72.7	72.6	70.9	70.4	70.3	71	71.6	72.9	73.7	74.4	75
Unemployment (in mil.)	-	1.86	2.49	2.5	2.64	2.51	2.39	1.96	1.71	1.62	1.47
Unemployment rate (in %)	5.2	6	7.9	7.9	8.3	7.8	7.4	6	5.2	4.8	4.4
Number of job vacancies (thousand)	638	702	445	460	490	465	500	600	749	755	774
Average wages (USD/week)	420	440	419	440	450	458	460	469	480	489	503

Source: Office, 2017; The Migration, 2017.

note that human productivity culminates around 30-33 years of age, and, as we have stated earlier, it is precisely this age group of immigrants that constitutes for the largest part of employed immigrants in the UK.

## 2 Impact of asylum seekers in the UK on public finances

The European refugee crisis (also known as a migrant crisis), which reached its worst point in 2015, had a relatively small impact on the UK, especially when compared with some other EU countries. In 2012, 28,900 people sought asylum in the UK. Even though this number rose to 40,400 in 2015, this increase is incomparable with the influx of asylum seekers that we could observe in Germany, Hungary, Sweden, or Italy.

Asylants in the UK are faced with a myriad of obstructions and a difficult and lengthy process of integration into the UK labor market, which allows for 12 month waiting period for work permit; this being the longest waiting period in the EU. Starting one's own business or to gain a self-employed status is even more difficult. At the same time, there is only a limited list of jobs that asylants can apply for; jobs that often require qualifications and skillset that asylants are lacking. Because of these and also other measures, a successful integration into the UK labor market is almost impossible for a majority of asylum seekers.

A long period of being prevented from entering the labor market is troubling especially when taking into account the psychological effects of prolonged unemployment. A person loses working habits after 12-month long unemployment, thus making it even more difficult for them to find an employment afterwards. A long term lack of activity also negatively impacts social skills, especially in case of older people. According to the German Federal Ministry for Labor and Social Affairs, refugees that are not yet 35 years old have relatively good prospects for requalification, however, those aged 40 and older struggle.

One of the most prominent factors for a successful integration is speaking the language of the host country. A sufficient knowledge of English language is crucial when entering the UK labor market. However, yearly language courses in the UK cost £1,600. While it is possible for asylants to delay the payment, the owed amount still has to be paid within the first 6 months after entering into an employment. The cost of these courses, while not prohibitive as such, adds to the financial pressure put on asylants, who face a multitude of other obstacles and difficulties when trying to integrate into the host country.

Wages are another factor to be considered. The minimum wage in the UK is set differently for different age groups. As of April 2017, employees aged 25 and older should earn at least £7.50/hour, however, a lower minimum wage applies to younger demographics – £7.05/hour for age group 21-24, £5.60/hour for age group 18-20, and £4.05/hour for employees under 18 years of age. Even though the average wage in the UK is at the level of £11.30/hour and thus considerably higher than the minimum wage, the minimum wage is the top level that most of working asylants achieve; their wages growing only minimally even after ten years in employment.

In the UK, asylum seekers are provided with free accommodation (a flat, a house, a hostel room, or even only a single bed) with breakfast, with the exception of London and

Southeast England, where accommodation is not provided. Asylum seekers are offered accommodation in the less populated and less developed areas of the UK, and they cannot refuse offered option. Healthcare is covered by the free National Health Service and includes doctor's visits, hospital stays, free prescriptions for medicine, free dental care, eye tests, and contribution for prescription glasses. Education is free in the public sector schools and school attendance is mandatory for children aged 5-17, regardless of their asylum status. At school, children receive free school lunches.

In 2015, UK pledged to welcome 20,000 Syrian refugees before 2020, however, it seems probable that UK will not fulfill this commitment as up to this point it resettled less than 2,000 refugees. The government appointed £8,520/year per person to cover the costs for accommodation, interpreters, transportation and other services connected with the life of a refugee during the process of applying for an asylum. The financial support is planned to continue for the whole duration of five years, gradually decreasing year by year to £5,000 in the second year, £3,700 in the third year, £2,500 in the fourth year, and £1,000 in the fifth year. The education for children aged 5-18 is subsidized with £4,500 per person (£2,250 per children aged 3-4). While seemingly generous, according to expert estimates, these benefits cover only 70-80 % of overall costs (How much, 2017).

In 2017, more than 26 547 refugees applied for an asylum in the UK. According to the state of the current funding rules for Syrian refugees, this number of asylum applicants could potentially cost British government 226.18 million pounds in the first year, 132.74 million in the second year, 98.22 million in the third year, 66.37 million in the fourth year, and 26.55 million in the fifth year. Altogether, 26 500 asylants could cost British government more than 600 million pounds over the duration of five years. If we also add the additional funding for child education for 2399 children, who in 2017 arrived in the country unaccompanied, and also for 2944 children aged 5-17 with mandatory school attendance, the costs rise by more than 24.04 million pounds per year. Considering that asylum seekers are not allowed to enter the UK labor market before the asylum process is finished, their integration process is very demanding for public finances.

## 3 Results and discussion

Based on statistical data, more than 3.5 million immigrants were contributing to the British GDP in the beginning of 2018. In 2007, UK GDP amounted to 3,063 billion USD. After the onset of the global economic crisis it diminished significantly and the falling trend continued until 2011, when it started to grow again until 2014. This positive trend stopped in 2015 and 2015, probable causes being the worsening migration crisis in Europe and Brexit referendum results. Considering that the employment continued to grow even when GDP did not, one can assume that labor productivity decreased during the past few years. This could be explained by a combination of three factors: a growing share of GDP created by immigrants, decreasing number of immigrants from EU and increasing number of immigrants from the third countries often working on a low skilled job positions and thus producing smaller value added.

Table 2 Selected macroeconomic indicators and labor market indicators in the UK in 2007-2017

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
GDP (billion USD)	3063	2875	2367	2430	2609	2646	2720	2999	2861	2619	2622
Chain index GDP	x	0.9386	0.8233	1.0266	1.0737	1.0142	1.0278	1.1028	0.9540	0.9154	1.0011
Basis index GDP	x	x	0.8233	0.8452	0.9075	0.9203	0.9459	1.0431	0.9951	0.9110	0.9120
Per capita GDP (USD)	40892	40317	38281	38710	38988	39226	39709	40621	41184	41603	39720
GDP per person employed (USD)	104262	97037	81184	83139	88814	89100	90514	97513	91452	82551	81784

Source: Office, 2017; World Bank, 2018.

Through a correlation analysis of time series covering the period 2000 - 2017 for both indicators of economy's performance (GDP) and the number of working migrants we determined a strong correlation (0.711095) at a significance level of 0.05. Subsequently, we have conducted a regression analysis in order to verify the assumption that the higher number of working immigrants contributes to the increase in the economy's performance (GDP). While doing so, we worked with the premise that the more skilled and qualified working positions create more added value. The number of working migrants serves as an independent variable and GDP as a dependent one.

Regression function takes the form  $y = 1244.459 + 0.096610 \cdot x$ , meaning that if the number of working migrants were zero GDP would be 1.244 billion USD (Intercept value –  $b_0$ ), and the increase of the number of working immigrants by 1 would lead to an increase in GDP by 96 610 USD (value X variable 1). P-value, which expresses the significance, is 0.001072 < 0.05 for intercept and 0.000938 for regression coefficient, therefore confirming the statistical significance of both the intercept and the regression coefficient. The values of 95% confidence interval for  $b_0$  and  $b_1$  suggest that adding one working immigrant to the UK's labor market with 95 % probability leads to the UK's GDP increase by 45 985 USD – 147 236 USD.

Table 3 Regression analysis

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1244.459	312.5293	3.981896	0.001072	581.926791	1906.992	581.9268	1906.992
X Variable 1	0.096610	23.88097	4.045509	0.000938	45.9853003	147.2361	45.9853	147.2361

Source: Author's own calculations

Multiple R (correlation coefficient) being equal to 0.711095 suggests that there is a strong positive correlation between the number of immigrants and GDP. The value of coefficient of determination (R Square) means that our model explains 50.57 % of the dependent variable – GDP, the rest being a residual (unexplained) variance.

Table 4 Correlation coefficient, coefficient of determination

Regression Statistics	
Multiple R	0.711095
R Square	0.505656
Adjusted R Square	0.47476
Standard Error	316.8669
Observations	18

Source: Author's own calculations

Table 5 ANOVA

	df	SS	MS	F	Significance F
Regression	1	1643236.6	1643237	16.36615	0.000938
Residual	16	1606473.9	100404.6		
Total	17	3249710.5			

Source: Author's own calculations

Table 5 contains the values of explained (regression) variance, residual (unexplained) variance and total variance. SS is sum of squares, df degrees of freedom, and MS is mean square. F-test is used to evaluate the analysis of the total deviation. Since significance  $F < \alpha$  (0.000938), the null hypothesis is rejected. Based on the F-test results, the model is statistically significant and was selected correctly.

A more detailed statistical data show that 7 %, i.e. almost 2.2 million immigrants living in the UK came from other EU member state. More than 860 thousand of them has a highly qualified job position or they arrived to the country with financial capital for research and development (Kazlauskienė, Rinkevičius, 2006; Daugėlienė, 2007; Kordos, Krajnakova, 2018). The biggest share of immigrants from the EU work in expert and technical jobs (45 %) and as part of the management (11%). When looking into the occupations of immigrants from the new EU member states, the biggest share (20 %) works in engineering, 13 % of them works in expert and technical jobs, followed by qualified sales positions (15 %). (Divinský, 2007; Rosenow, 2009; Schaeffer, 2010; Krajnaková, Strunz, 2014; Srovnalíkova, Karbach, 2016). That means that, contrary to the often publicized belief, immigrants from the EU do not occupy mostly low-skilled jobs, which are uninteresting for domestic workers.

It is true that almost one third of immigrants from the EU work in lower-skilled jobs, however, those are mostly perceived as a stepping stone and immigrants often choose then after entering the country to improve their language skills and subsequently find other employment, one with a better salary or better work conditions or one connected with a higher social status.

According to the UK statistical data on migration, the Brexit referendum was followed by decrease in immigration from EU14 and stagnation of immigration from EU8 (Czech Republic, Estonia, Hungary, Slovakia, Slovenia, Poland, Lithuania and Latvia). Considering the fact that in 2017 74 % of immigrants from the above mentioned countries came to UK to work and that the employment rate among the EU immigrants was more than 80 %, one can state that with a growing number of unoccupied job positions UK labor market is dependent on labor activity of immigrants. Our correlation and regression analysis came to the same conclusion. Table 6 demonstrates the decrease in immigration in 2016, which could very well be connected with the uncertainty following the referendum. Even though immigration picked up the pace again in 2017, this increase was accompanied by a growth in emigration as well, suggesting that Brexit led to increased remigration of EU citizens, especially from the EU8 countries.



Table 6 Net migration in UK 2007 - 2017

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Immigration</b>	574	590	567	591	566	498	526	632	631	588	644
<b>Emigration</b>	341	427	368	339	351	321	317	319	299	339	360
<b>Net migration</b>	+233	+163	+199	+252	+215	+177	+209	+313	+332	+249	+284

Source: The Migration, 2017.

Immigrants coming from EU14 usually work on either qualified or highly qualified positions, which require higher expert education. Then leaving the country would mean a considerable loss of added value which they produce through their work. Immigrants from EU8 countries, even though usually well educated, occupy in most cases position requiring somewhat lower, but to a certain extent still vocational, qualifications. The results of our analyses suggest that Brexit's impact in the migration and the economic development of the country will be a negative one, with Britain losing part of its economic potential, especially during the period of global economic expansion. Nevertheless, an adequate evaluation of changed migration flows' impact will only be possible in the next few years.

#### 4 Conclusion

Our analysis suggests that migration as such has in general a positive impact on British economy, especially in case of immigrants from the other EU member states (both new and old ones). Immigrants from EU member states often work in high qualified positions that bring higher added value, and their salaries are above national average. At the same time, such immigrants constitute an advantage in the global economy. Immigrants working other technical and manufacturing jobs are also beneficial for the economy. If 3.4 million of immigrants employed in the UK left the country and returned home, the daily life in the UK would struggle to continue to go on without a hitch. Sectors that would be affected especially hard include hospitality and food industry, services, social care, healthcare, etc. The asylum policy implemented in the UK also leaves a room for improvement. UK should accordingly adjust its migration policy in order to maximize the gains and minimize the losses stemming from the migration.

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