

THE RELATIONSHIP BETWEEN PROFESSIONAL REFLECTION AND BURNOUT SYNDROME IN SECONDARY SCHOOL TEACHERS

^aMICHAL NOVOCKÝ, ^bRENÁTA OROSOVÁ

^a*Department of Pedagogy, Faculty of Education, Matej Bel University in Banská Bystrica, Ružová 13, 974 11 Banská Bystrica, Slovakia*

^b*Department of Education, Faculty of Arts, Pavol Jozef Šafárik University in Košice, Moyzesova 8, 040 59 Košice, Slovakia*
email: ^amichal.novocky@umb.sk, ^brenata.orosova@upjs.sk

Abstract: The presented study analyses the relationship between the frequency with which teachers reflect on their work and their burnout syndrome risk levels. The research sample consisted of 390 teachers working at secondary schools in Slovakia. Two types of scales were used to collect data. The first scale related to the frequency of professional reflection and its types which was created by the author. The second scale, authored by Maslach and Jackson (1986), aims to identify the burnout syndrome risk level in teachers. The Slovak translation was used (Petlák & Baranovská, 2016). To identify the construct validity of the scale mapping the frequency of professional reflection in teachers, exploratory factor analysis was used. To determine the construct validity of the burnout syndrome risk scale, confirmatory factor analysis was chosen. In dimensions pertaining to both instruments, Cronbach's alpha indicated a satisfying level of reliability (0.59 – 0.89 and 0.72 – 0.89 respectively). The assumed statistically significant relationship between teachers' professional reflection and the burnout syndrome risk level was disproved. However, a statistically significant positive correlation was proved between the frequency of meta-cognitive reflection and the dimension of emotional exhaustion and personal accomplishment, and between the frequency of critical, cognitive and practical reflection and the dimension of personal accomplishment. An indirect dependence was identified between the frequency of consulting reflection and the dimension of depersonalisation. In all cases, the dependences were weak.

Keywords: professional reflection, burnout syndrome, factor analysis, secondary school, teachers.

1 Professional reflection and the burnout syndrome

Teaching belongs among the helping professions affected by constant changes. Teachers' profession results are constantly compared against demanding standards, teachers have to actively develop their professional competencies, and face rapidly changing professional requirements expected by pupils as well as society. All this can result in significant emotional exhaustion, loss of interest in education-related events, and weak profession performance, which may ultimately lead to development of burnout syndrome (Maslach, 2015; Fontana, 2016).

Burnout syndrome represents the terminal stage of the process in which people performing an activity they love lose their enthusiasm and motivation over time (Freudenberger, 1974). And other experts, for example Preiss (2015) and Honzák (2018), describe the burnout syndrome similarly.

It may manifest in three areas: a) psychical – mental exhaustion and attenuation of overall activity; b) physical – overall exhaustion, digestion problems, headache, trouble sleeping, and increased risk of addiction; c) social – the teacher no longer cares about the way they are seen by other people, grows impassive and develops social apathy towards pupils, colleagues, and parents (Kebza & Šolcová, 2003; Salvagioni et al., 2017).

In the first stage of burnout syndrome, significant emotional exhaustion occurs followed by depersonalisation; the person loses attachments to other people, and eventually loses their professional identity. These factors cause the affected teacher's performance to decrease (Bianchi, Schonfeld & Laurent, 2015; Maslach & Leiter, 2016).

Chronic stress is a frequent cause of the burnout syndrome (Barutçu & Serinkan, 2013; Huget, 2015; Morovicová, 2016). It is caused mainly by work overload that significantly affects teachers' mental functioning. It is a result of a conflict between the interactional, cognitive and emotional aspects, possibilities, and requirements (Paulík, 2017).

Teachers face constant stress due to being forced to tackle problems that exceed their actual skills, and require an unreasonable volume of effort. The resulting frustration renders teachers unable to satisfy their own needs. By ignoring this

frustration, its effects are prolonged, possibly resulting in apathy and latent aggression – symptoms of depersonalisation. Conflicts also deserve attention. In their profession, teachers often face contradictory tendencies in which individual participants focus on different goals. The school practice may also bring negative emotions, fear, and anxiety, which is also very exhausting (Hagemann, 2012; Holeček, 2015).

The causes of burnout syndrome further include working conditions, i.e. high number of pupils in classrooms; dealing with difficult pupils, workplace relationships, and last but not least, the social prestige of teaching as a profession (Korczyński, 2014; Hrečiński, 2016).

On a daily basis, teachers need to expect communication difficulties, while being required to be empathetic towards pupils. They are the ones who carry great responsibility, while their own errors are pointed out immediately (Vercambre et al., 2009). If the stressful situations are not subsequently analysed by reflecting teacher's actual capacity within the reality of education, values are not reviewed, and the overload is ignored, the teacher may ultimately reach the stage of internal emptiness (Kalwass, 2008; Krivohlavý, 2012).

One of the tools for prevention of burnout syndrome is professional reflection (Javadi & Khatib, 2014; Ghazalbash & Afghari, 2015). Hrabal and Pavelková (2010) define professional reflection as a controlled evaluation-based activity, during which the teacher reflects on their pedagogic and didactic communication with pupils – it comprises multiple aspects of teaching with dynamic elements. This type of reflection is based on interpreting the records made during the lessons as well as the feedback obtained from the pupils, and the aim of this activity is to develop one's professional competencies.

However, it is necessary to add that professional reflection as a process requires an understanding of the context in which learning takes place as well as the related educational issues. It is absolutely necessary to realise that this activity is beneficial to the teacher's professional growth: they need to confront their past experience, teaching philosophy, and knowledge. The key component of professional reflection is to examine the causes of certain experience using relevant theory; i.e. to find out why certain things happened the way they did and not differently (Ryan & Ryan, 2015).

Korthagen (2011) studied the learning process and teachers' behaviour more explicitly in the context of professional reflection. He states that using a detailed analysis of the problematic educational situations and subconscious processes, the so called practical personal theories are generated. They have the nature of cognitive structures that adapt to changes through self-correction, thus developing further knowledge. Such cognitive structures protect us – teachers – by letting us respond in an automated way to things that are happening to us or to our pupils. This makes us sure that we responded appropriately in a situation and manage it successfully.

Professional reflection represents a platform for developing specialised skills in teachers, i.e. a tool that influences the school practice. It removes monotony as one of the main sources of mental load, which manifests as decreased activation and overall worsening of adaptability. Teachers falling into routine are at risk, as they stop paying proper attention to their own motivation, monitoring and review of their didactic procedures and educational influence (Petlák & Baranovská, 2016). If a teacher wants to perform quality teaching, they must reflect on it (Afshar & Farahani, 2015; Faghihi & Sarab, 2016; Tomengová et al., 2017) – reflection satisfies them and provides consolation. We agree with Kopřiva (2016) who states that burnout syndrome is always related to the question as to whether one's job is meaningful in any way. The experience of meaningfulness improves if the person is successful at least in some aspects.

Another source of mental overload is the state in which teachers realise the conflict between the demands and performance expected (Kačmárová & Kravcová, 2011; Clipa & Boghean, 2015). The protective function of professional reflection is important (Urdang, 2010; Cimermanová, 2013). It helps us find our limits. Knowing our own professional competencies and their extent allows us to determine what we can do in the given situation and prevents us from setting impossible goals for ourselves. It is necessary to develop a system in one's work and in critical situations, to accept compromise and adjust ideas to the reality.

Korthagen (2014) distinguishes between reflection focused on teachers' behaviour and deeper professional reflection (core reflection). In terms of the latter approach, professional reflection is a tool that helps build internal potential and personal strength in teachers, which can be further actualised and used to overcome obstacles (Korthagen, 2013; Evelein & Korthagen, 2015). It aims to determine the internal obstacles limiting the regulation of one's mental capital. These can be found on all levels of the respective onion model. These levels include the *environment* – school culture, pupils, classroom climate, teachers' actions, overcoming barriers; *competencies* – actions that teachers can in reality take; *self-confidence* – based on what can be actually achieved; *identity* – self-perception and professional tasks; *mission* – answering the question what inspires teachers and makes their work meaningful.

In psychotherapy, Bobek & Peniška (2008) compare reflection to a therapist presenting a mirror to their client.

Using conscious reflection, we develop our social maturity and learn to consider what is going on around us before taking actions. We learn to focus on understanding other people and resolving actual problems (Křivohlavý, 2009). Teachers therefore should have a developed skill of objective self-assessment, efficient methods of self-control, and be able to tolerate a range of approaches to problem-solving.

Akbari (2007) claims that professional reflection helps increase job satisfaction in teachers, improves interpersonal relationships, and supports the perceived image of their professionalism.

As pointed out by experts in reflective education (Kemmis, 2011; Rushton & Suter, 2012; Muchacka, Kaleta-Witusiak & Walasek-Jaros, 2013; Pollard et al., 2014; Kouteková & Furinová, 2015), the following benefits of professional reflection – as one of the situation-control strategies in teaching and teachers' responses – can be formulated. Using professional reflection, teachers:

- learn about themselves, the motives for their decisions, and educational actions – post hoc,
- can identify the problems in their teaching and didactic activities and determine whether they can solve them efficiently,
- become more perceptive towards the needs and interests of their pupils,
- employ discourse analysis to examine individual proposals and possibilities for self-improvement,
- can anticipate pupils' reactions in difficult educational situations. It can clarify what measures need to be taken to manage or prevent certain situations,
- are able to constantly re-adapt to changing performance requirements, which allows them to adjust their educational tools accordingly,
- creatively interpret educational situations by drawing from relevant pedagogic and psychological theories,
- adjust their professional and personality development goals, regulate requirements and compare them to the criteria of educational process quality,
- enhance satisfaction from their work by summarising in which areas they have already improved and which ones need improving, thus getting courage to tackle difficult situations.

Based on the theoretical starting points, 4 research questions were formulated:

Is there a statistically significant negative relationship between the frequency of professional reflection among the respondents and their burnout syndrome risk level?

Is there a statistically significant negative relationship between the frequency of the individual types of professional reflection among the respondents and their emotional exhaustion rate?

Is there a statistically significant positive relationship between the frequency of the individual types of professional reflection among the respondents and their personal accomplishment rate?

Is there a statistically significant negative relationship between the frequency of the individual types of professional reflection among the respondents and their depersonalisation rate?

2 Characteristics of the research sample

Available selection was used to form the research sample. This type of selection was determined by the researchers' actual possibilities. The research was performed at secondary schools in all regions of Slovakia. The survey was administered to the respondents online. The e-mail addresses pertaining to schools in the individual regions were collected from the *Institute of Information and Prognoses of Education* website. The rest of the e-mail addresses were collected independently as they had not yet been published (newly established or smaller schools in towns and villages), or had changed.

As for the online survey, Poliach and Fridrichová (2018) reviewed recent studies and identified qualitative differences between traditional and online surveys. Another significant problem is that the survey return rate is usually about 1%.

Data were collected from January to May 2018. The research sample consisted of 390 respondents. More details on the research sample can be found in Table 1, and Charts 1 and 2. The average length of the respondents' practice was 19.94 years (SD=10.28) and varied from 1.5 to 31+ years. The majority of respondents were female (n=331; 84.87%). In the research sample, 85.90% (n=335) respondents achieved qualification by completing teaching study programmes at universities. It was also tested as to whether the respondents in the sample were educated on reflective teaching in the last 8 years within continuous education; most respondents were not (n=287; 73.59%).

Table 1: The structure of the research sample in terms of respondents' sex and length of practice

Length of practice	Sex				Total	
	females		males			
	n	%	n	%	N	%
1.5–5 years	33	8.46	11	2.82	44	11.28
6–10 years	37	9.49	6	1.54	43	11.03
11–15 years	40	10.26	6	1.54	46	11.80
16–20 years	54	13.85	15	3.84	69	17.69
21–25 years	58	14.87	7	1.80	65	16.67
26–30 years	51	13.08	8	2.05	59	15.13
>31 years	58	14.87	6	1.54	64	16.41
Total	331	84.87	59	15.13	390	100.00

Chart 1: The structure of the research sample in terms of respondents' teaching qualifications

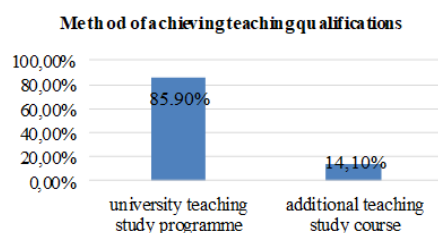
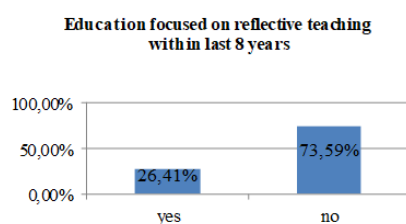


Chart 2: The structure of the research sample in terms of respondents' participation in a reflective teaching course over the last 8 years (continuous education)



3 Research methodology

To identify the frequency of professional reflection in secondary school teachers, the authors developed a new scale. The research instrument developed by Akbari, Behzadpoor, and Dadvand (2010) was used to create a framework of items. Their research summarises the elements pertaining to professional reflection among teachers as demonstrated in dimensions. In terms of clarity, the instrument was easily comprehensible, which was verified also in translation. In the Slovak environment, the *Reflexive Thinking Scale* by Nezvalová (2000) is often used, however, the statements are formulated too “academically”, which can be considered a weakness. There were also other reasons why the authors decided to develop a new scale.

Firstly, the scale developed by the authors focused on the frequency of professional reflection among teachers of English as a second language to pupils with other native languages. Our intention was to develop a scale that would map the frequency of the process among teachers regardless of the subjects they teach.

Another problem was represented by the social and cultural contexts of the reality in education. Iranian and Slovak teachers work in different social and educational environments, which determine the respective curricula. This aspect should not be underestimated (Majerčíková & Gavora, 2011). To reflect these facts in the creation of the scale, the *English language teaching reflection inventory* research instrument was approached critically with the aim to prevent forceful inclusion of items related to global problems (poverty, discrimination). Items related to the impact of the political developments on education and social justice were also deemed unnecessary. The items relevant for the Slovak teachers in the respective context were opted for (e.g. I think about the ways I can change the pupils' attitude to different types of substance and non-substance addiction).

Items in which the authors asked about multiple aspects at the same time represented the main difficulty. This deficiency was eliminated by taking appropriate methodological steps (e.g. *I think about the ways of promoting tolerance and democracy in my classroom and in the world in general.* – I think about the ways of promoting tolerance among the pupils.; *I talk to the pupils about their family background, interests, hobbies, and skills.* – I talk to the pupils about their interests.).

The question regarding whether items related to observing other teachers' lessons, workshop attendance, classroom research, and writing articles reflecting one's teaching experience was reconsidered. Ultimately, these items were left out of the instrument, as these activities do not represent a common part of teachers' work in Slovakia (e.g. observing lessons with the aim to learn efficient ways of teaching from colleagues, requesting the opportunity to observe such lessons by the interested teacher). Using similar items would not be compatible with the frequency scale – an adjustment was necessary to enhance the validity of the instrument. Degrees such as *never* – *rarely* – *sometimes* – *often* – *always* were specified in greater detail: *never* – *at least once per term* – *at least once every three/four months* – *at least once every two months* – *at least once a month* – *at least once every two weeks* – *always (2 and more times per week)*. Experts (in didactics and methodology) were consulted before this step was taken. Recommendations provided by teachers and their experience with survey-based research also proved very important. The frequency scales in their most common forms (*never* – *sometimes* – *often* – *always*) can be unclear (Švec, 1998). Before the research began, a pilot study was performed on a sample of 15 teachers (both instruments were examined).

The final scale consists of 23 items. To perform construct validation, exploratory factor analysis was selected. The Equamax rotation method proved the most suitable; it showed standard data variability in all factors (63.13%). Bartlett's sphericity test refutes the hypothesis that the correlation matrix represents a unit matrix ($0.000 < 0.001$). The Kaiser-Meyer-Olkin (KMO) Test for Sampling Adequacy (0.916) shows that factor analysis is a highly suitable method for analysing the collected data (see Table 2.) 5 factors were identified: meta-cognitive, critical, cognitive, consulting, and practical reflection. The minimum factor value per item to be included was 0.40. Cronbach's alpha value in the individual dimensions ranged from 0.59 to 0.89. Cronbach's alpha of the research instrument as a whole was 0.927.

The *meta-cognitive reflection* factor consisted of items related to the frequency with which teachers think about their own personalities, teaching concepts, and profession. Meta-cognition represents active monitoring and management of cognitive processes. It is necessary to take into account also the professional background in which teachers develop their teaching strategies. Meta-cognitive reflection includes not only the identification of motives for actions, but also experiencing – teachers are supposed to answer the questions related to the meaning of their work as well as the sources of their satisfaction. The components of this type of reflection are self-perception, self-assessment, and behaviour.

The *critical reflection* factor consisted of items related to the frequency with which teachers address social, value-related, and teaching aspects of their classroom work. Teachers try to improve aspects that determine the pupils' school life and help them develop their personalities in multiple ways by analysing the ethical principles and social context of teaching.

The *cognitive reflection* factor consisted of items related to the frequency with which teachers address their own professional development. Professional progress requires self-education that allows teachers to evaluate which of their professional competencies need to be developed primarily; in turn, this requires identification of teaching problems that should potentially be examined.

Table 2: Types of professional reflection (rotated factor loading matrix)

Items pertaining to individual factors	Factors					
	α	I	II	III	IV	V
(I) Meta-cognitive reflection	0.890					
I think about the meaning of my job.		0.762	0.093	0.107	0.274	0.106
I try to identify what exactly makes me feel satisfied about teaching.		0.742	0.240	0.086	0.311	0.119
I think about my strengths and weaknesses as a teacher.		0.732	0.304	0.131	0.234	0.172
I think about how to resolve conflicts that occur when I teach.		0.635	0.350	0.190	0.242	0.058
I think about the way my teaching studies (training) influences the way I perceive myself in my job.		0.583	0.138	0.380	0.053	0.337
I think about the way the teaching models I studied when I was a student influence me positively or negatively.		0.533	0.273	0.246	0.043	0.268
I think about my own teaching philosophy (ideas I draw from).		0.532	0.253	0.291	-0.008	0.311
I think about whether I can consider myself an example for my pupils.		0.531	0.330	0.230	0.164	0.128
(II) Critical reflection	0.872					
I think about how I can understand my pupils' values.		0.338	0.708	0.204	0.262	0.134
I think about how I can promote tolerance among the pupils.		0.350	0.690	0.125	0.259	0.134
I think about the ways I can change the pupils' attitude to different types of substance and non-substance addiction.		0.307	0.612	0.256	0.108	0.116
I talk to my pupils about their interests.		0.003	0.606	0.285	0.340	0.182
I think about the ways sex or social status influences the pupils' rate of success.		0.306	0.561	0.066	0.004	0.365
I ask my students whether they like the tasks/activities during lessons.		0.103	0.524	0.258	0.305	0.240
I talk to my pupils about their learning styles.		-0.007	0.504	0.384	0.258	0.341
I think about the social events that may affect my teaching.		0.366	0.492	0.268	0.004	0.266
(III) Cognitive reflection	0.763					
I read articles in magazines or on the Internet to be up to date with the current trends in my profession.		0.026	0.175	0.871	0.164	0.121
I read books/articles on increasing teaching efficiency.		0.091	0.097	0.847	0.202	0.117
I think about the events that occurred during my teaching as potential research topics.		0.226	0.070	0.554	0.003	0.378
(IV) Consulting reflection	0.716					
I talk about my teaching experience with my colleagues.		0.094	0.091	0.061	0.840	0.072
I consult my colleagues about how to manage different practical problems in teaching.		0.093	0.030	0.116	0.835	0.103
(V) Practical reflection	0.590					
I analyse the weak and strong points of my classes in writing.		0.036	0.043	0.145	0.104	0.797
I record various findings and inspiration from teaching in my portfolio.		0.026	0.097	0.104	0.149	0.759
variance %		16.99	14.86	11.91	9.75	9.63
accumulated variance %		16.99	31.84	43.75	53.50	63.13

The *consulting reflection* factor consisted of items related to the frequency with which teachers talk to their colleagues about their work to obtain advice and instructions, which can help them manage educational dilemmas. Information on good practice obtained from colleagues can help revise the deficiencies of one's own teaching concept.

The *practical reflection* factor consisted of items related to the frequency with which teachers examine their teaching in retrospection. It is a type of reflection that comes post-hoc and its goal is to understand particular teaching situations. Written evaluation of the events represents a tool to do so (e.g. teaching preparation) as well as the teacher's portfolio.

To identify the burnout syndrome risk level in secondary school teachers, the *Maslach Burnout Inventory Educators Survey* was used; its Slovak translation can be found in Petlák and Baranovská (2016). It is the most frequently used research instrument (Mareš, 2013), however the main reason for its use in this case was the fact that it examines the burnout syndrome risk level through three components: emotional exhaustion, depersonalisation, and personal accomplishment. Its internal structure is not random. The Maslach model (Maslach & Leiter, 2008; Maslach & Leiter, 2016) describes the burnout process in its three dimensions, which do not develop simultaneously. At first, emotional exhaustion occurs as a response to the excessive demands of the teacher's surroundings.

Exhaustion leads to depersonalisation manifested as a defence strategy with the aim to decrease the perceived load. However, a higher depersonalisation rate does not remove the symptoms of emotional exhaustion – quite on the contrary, it decreases the perceived personal accomplishment. Our second goal was to find out whether there was a relationship between the types of professional reflection and burnout syndrome components indicating that professional self-recognition and improvement can fulfil a protective function.

This represents one of the multitude of ways (others include combining high and low scores in individual dimensions or focusing only on the top scores in a selected dimension) (Doulougeri, Georganta & Montgomery, 2016) to evaluate the burnout syndrome risk level in the helping professions.

The scale consisted of 22 items. The respondents expressed how much they agree with the provided statements on the scale from 1 – disagree completely to 7 – agree completely. The frequency scale was adjusted to a Likert-type scale since its aim was to identify how the respondents generally felt about their job. This type of scale was also used in the Oldenburg Burnout Inventory which measures working and academic burnout (Demerouti et al., 2003). The scale adjustment did not disrupt the construct validity of the tool. Confirmatory factor analysis was used to verify the existence of the three aforementioned factors. The Varimax rotation method proved the most suitable; it showed

standard data variability in all factors (51.76%). Bartlett's sphericity test refutes the hypothesis that the correlation matrix represents a unit matrix ($0.000 < 0.001$). The KMO Test for Sampling Adequacy (0.867) shows that factor analysis is a highly suitable method for analysing the collected data (see Table 3.) The minimum factor value per item to be included was 0.40. The factor analysis was performed twice. After the first analysis, items with factor value > 0.40 in more than two factors simultaneously were excluded (My job makes me feel remote

and dissatisfied. I always have lots of energy. I feel fresh and encouraged when working with my pupils.).

The Cronbach alpha value in the individual dimensions ranged from 0.72 to 0.89. The Cronbach alpha of the research instrument as a whole was 0.845. Reverse coding was used on respondents' answers in the personal accomplishment dimension to calculate the Cronbach alpha value pertaining to the research instrument as a whole.

Table 3: Burnout syndrome components (rotated factor loading matrix)

Items pertaining to individual factors	Factors			
	α	I	II	III
(I) Emotional exhaustion	0.888			
At the end of the working day, I feel completely exhausted.		0.844	0.016	0.041
I feel burned out and exhausted from my work.		0.806	-0.106	0.223
All-day work with pupils is truly exhausting me.		0.758	0.023	0.093
When I wake up and think of my work problems, I feel tired.		0.753	-0.023	0.131
My job is draining me emotionally.		0.746	-0.092	0.009
I feel as if working so hard on my tasks exhausted me.		0.709	0.106	0.015
I feel as if I was running out of energy capacity.		0.633	-0.103	0.316
Working with pupils is very stressful for me.		0.622	-0.121	0.240
(II) Personal accomplishment	0.750			
I feel that I influence my pupils positively and make them feel positive.		-0.103	0.727	-0.083
During the years of my work I have been successful and did a lot of good.		0.012	0.713	-0.028
I am able to solve my pupils' problems very efficiently.		-0.002	0.694	-0.209
I can establish a relaxed atmosphere for my pupils.		-0.086	0.615	-0.134
I understand my pupils' feelings very well.		0.122	0.613	-0.077
I solve emotional problems at work peacefully and stoically.		-0.102	0.589	-0.066
(III) Depersonalisation	0.717			
Since I have started teaching, I have become less sensitive towards people.		0.085	-0.023	0.824
I am afraid my job makes me emotionally cold.		0.189	-0.016	0.798
Today, I no longer care that much about what is going on with my pupils.		0.130	-0.219	0.633
I feel that my pupils ascribe some of their problems to me.		0.087	-0.092	0.521
I feel that sometimes I handle pupils impersonally.		0.120	-0.241	0.514
variance %		23.55	14.70	13.52
accumulated variance %		23.55	38.25	51.76

Table 4: Inter-correlation between the dimensions of the professional reflection scale

Relationship between the types of professional reflection		meta-cognitive reflection	critical reflection	cognitive reflection	consulting reflection	practical reflection
meta-cognitive reflection	Spearman's Rho	1.000	0.736	0.494	0.339	0.353
	p-value	.	0.000*	0.000*	0.000*	0.000*
	N	390	390	390	390	390
critical reflection	Spearman's Rho	0.736	1.000	0.563	0.377	0.432
	p-value	0.000*	.	0.000*	0.000*	0.000*
	N	390	390	390	390	390
cognitive reflection	Spearman's Rho	0.494	0.563	1.000	0.267	0.380
	p-value	0.000*	0.000*	.	0.000*	0.000*
	N	390	390	390	390	390
consulting reflection	Spearman's Rho	0.339	0.377	0.267	1.000*	0.176
	p-value	0.000*	0.000*	0.000*	.	0.000*
	N	390	390	390	390	390
practical reflection	Spearman's Rho	0.353	0.432	0.380	0.176	1.000
	p-value	0.000*	0.000*	0.000*	0.000*	.
	N	390	390	390	390	390

Table 5: Inter-correlation between the dimensions of the burnout syndrome scale

Relationship between the burnout syndrome components		emotional exhaustion	personal accomplishment	depersonalisation
emotional exhaustion	Spearman's Rho	1.000	-0.167	0.278
	p-value	.	0.001*	0.000*
	N	390	390	390
personal accomplishment	Spearman's Rho	-0.167	1.000	-0.374
	p-value	0.001*	.	0.000*
	N	390	390	390
depersonalisation	Spearman's Rho	0.278	-0.374	1.000
	p-value	0.000*	0.000*	.
	N	390	390	390

Table 6: The relationship between the frequency of professional reflection among respondents and their burnout syndrome risk level

Relationship between professional reflection and burnout syndrome		burnout syndrome
professional reflection	Spearman's Rho	-0.077
	p-value	0.131
	N	390

Table 7: The relationship between the frequency of the individual types of professional reflection among respondents and their burnout syndrome risk level (burnout syndrome components)

Relationship between the types of professional reflection and burnout syndrome components		emotional exhaustion	personal accomplishment	depersonalisation
meta-cognitive reflection	Spearman's Rho	0.104	0.157	-0.010
	p-value	0.040*	0.002*	0.838
	N	390	390	390
critical reflection	Spearman's Rho	0.020	0.268	-0.033
	p-value	0.698	0.000*	0.512
	N	390	390	390
cognitive reflection	Spearman's Rho	-0.065	0.251	-0.008
	p-value	0.202	0.000*	0.872
	N	390	390	390
consulting reflection	Spearman's Rho	0.023	0.073	-0.139
	p-value	0.654	0.151	0.006*
	N	390	390	390
practical reflection	Spearman's Rho	-0.088	0.181	-0.071
	p-value	0.081	0.000*	0.161
	N	390	390	390

The statistical significance of correlations was verified at the significance level of 0.05. In terms of inductive statistics, the Spearman's correlation coefficient was used since the variables did not show a normal distribution ($p \leq 0.05$) – as verified by the Kolmogorov–Smirnov test.

As shown in Table 4, most correlations between the dimensions exceed the value of 0.35. The closest relationship was identified among the dimensions of meta-cognitive reflection, critical reflection, and cognitive reflection. The more frequently the respondents try to understand themselves, evaluate their teaching, and respect their actual potential, the more frequently they take into account their pupils' needs and society's requirements in the teaching content.

A close relationship was also identified between the dimensions of critical reflection and cognitive reflection, and practical reflection. The more frequently the respondents evaluate their teaching in order to remove the stereotype and justify their teaching strategies, the more frequently they adjust their mental networks toward the creation of a more complex teaching theory.

A strong direct dependency was identified between the dimensions of cognitive and practical reflection, between consulting and critical reflection, and between practical and meta-cognitive reflection. The weakest relationship was identified between the dimensions of consulting and practical reflection. It indicates that analysing one's teaching experience with colleagues does not result in more frequent post-hoc reflection.

Table 5 shows that in terms of the individual components of the burnout syndrome, the closest negative correlation can be found between the dimensions of depersonalisation and personal accomplishment. The more alienated and cynical the respondents feel, the more their job performance decreases. A weaker positive correlation was identified between the dimensions of emotional exhaustion and depersonalisation. The more emotionally aloof the respondents are, the more they distance themselves from the educational phenomena.

4 Research results

The results presented in Table 6 show that there is no statistically significant relationship between the frequency of professional reflection among teachers and their burnout syndrome risk level. Regardless of the professional reflection

frequency score, respondents did not show different burnout syndrome risk level scores.

Table 7 shows the indication of a statistically significant positive relationship between the frequency of meta-cognitive reflection, the dimensions of emotional exhaustion ($0.040 \leq 0.05$; $r_s=0.104$) and personal accomplishment ($0.002 \leq 0.05$; $r_s=0.157$). The higher the respondents' score in the dimension of meta-cognitive reflection, the higher their score in the dimensions of emotional exhaustion and personal accomplishment. It means that the more often they think about their teaching concept – e.g. what influences it, their weaknesses and strengths – the more the teachers may feel emotionally exhausted, and their joy of work decreases; on the other hand, the more they self-reflect and think about their profession, the more satisfied they may feel and tackle the related problems.

Table 7 also shows the indication of a statistically significant positive correlation between the frequency of critical reflection and the dimension of personal accomplishment ($0.000 \leq 0.05$; $r_s=0.268$). The higher the respondents' score in the dimension of critical reflection, the higher their score in the dimension of personal accomplishment. It means that the more teachers think about the social, value-related, and teaching aspects of their job, the more accomplished they can feel. This also applies to 1) the frequency of cognitive reflection (addressing one's professional development) and the dimension of personal accomplishment ($0.000 \leq 0.05$; $r_s=0.251$), and 2) the frequency of practical reflection (retrospection on teaching) and the dimension of personal accomplishment ($0.000 \leq 0.05$; $r_s=0.181$).

Moreover, Table 7 shows the indication of a statistically significant negative correlation between the frequency of consulting reflection and the dimension of depersonalisation ($0.006 \leq 0.05$; $r_s=-0.139$). The higher the respondents' score in the dimension of consulting reflection, the lower their score in the dimension of depersonalisation. It means that the more often they talk about teaching with their colleagues and analyse it together, the smaller the possibility that they will lose interest in their work and the related aspects.

5 Discussion

Systematic reflection of teaching situations is a precondition for teachers' professional development (Ghaye, 2011; Mathew et al., 2017). In relation to their job, teachers should perform multiple types of reflection based on which their pedagogic and didactic

activities can be evaluated in detail (Marzano et al., 2012; Zeichner & Liston, 2014).

The importance of professional reflection lies in the fact that it allows teachers to look at their teaching realistically, thus preventing burnout syndrome.

On one hand, teachers create problem-solving strategies focused on pupils, thus making their own job easier – they arrange their experience within a theoretical framework; on the other hand, it can help them realise how good they really are at their job, which influences pupils' performance as well as their own professional development (Qing, 2009; Noormohammadi, 2014).

The research questions were formulated based on the provided theoretical background. A statistically significant negative correlation between the frequency of professional reflection in teachers and their burnout syndrome risk level was not supported.

The construct validity of the tools measured using exploratory and confirmatory factor analyses showed that the respective theory was correct.

The reliability of both scales was very high, as verified by Cronbach's alpha. The values calculated for the individual scale dimensions confirmed that our measuring was reliable enough. A research instrument cannot be considered relatively valid if its reliability is low (Marko, 2016).

The Cronbach alpha pertaining to the adjusted Maslach Burnout Inventory – Educators Survey proved to be within the expected range of 0.71 – 0.90 (Mareš, 2013). The only critical point seems to be located in the dimension of practical reflection within the scale of professional reflection frequency; hereby, the Cronbach alpha equals to 0.59. It is acceptable, however below the minimum limit (0.70) at which it can be said that a dimension measures the given construct reliably. It would be desirable to increase the number of similar items related in terms of meaning within the given dimension to increase its reliability.

Another question is how teachers perceive professional reflection in terms of its performance: from the description of their teaching experience to their reconstruction. Based on experts' claims (Theodoulides & Jahn, 2013; Soják, 2017), the quality of professional reflection depends upon our experience with its performance and what inclination we possess in terms of self-evaluation. The respondents achieved the lowest scores in practical professional reflection although it should be an inseparable part of their job ($Me=2.50$) and in turn, initiate discourse reflection.

The question is whether we can speak of efficient professional reflection if teachers perform it without supervision or support from the school management. Most teachers (who at least partially care about their job) perform professional reflection intuitively. However, it is not clear whether it really helps them in professional and personal development (Kyriacou, 2012). Brestovanský (2019) also points out the discrepancy – although he agrees with the need to establish teacher communities with the aim to perform professional reflection based on mutual help and partner learning. Only consulting reflection indicates the potential to prevent depersonalisation in teachers – here a statistically significant negative correlation was identified among the respective dimensions.

The effort to develop teachers' expertise relates to their professional role-models and the influence of the professional community (Pišová et al., 2013; Janík et al., 2013). Teaching cannot be analysed without the interaction-based evaluation circle in which a person interprets and compares their own behaviour instead of being evaluated by others. Professional reflection brings desirable results if teachers systematically work with well-designed evaluation standards that determine the professional development goals and are shared by the whole collective.

This statement is supported by the fact that a statistically significant difference in the frequency of professional reflection was identified ($0.000 \leq 0.05$, Mann-Whitney U test=11256.500; $Me=5.17$; $Me=4.61$) and the frequency of meta-cognitive, critical, cognitive, and practical professional reflection ($0.024 \leq 0.05$, Mann-Whitney U test=12564.000, $Me=5.25$; $Me=4.88$; $0.001 \leq 0.05$, Mann-Whitney U test=11385.500; $Me=5.50$, $Me=4.88$; $0.000 \leq 0.05$, Mann-Whitney U test=9798.000; $Me=5.00$, $Me=3.67$; $0.000 \leq 0.05$, Mann-Whitney U test=11115.500; $Me=3.00$; $Me=2.00$). The research showed that having undergone reflection training over the last 8 years was of use. The respondents who attended a basic training focused on reflective teaching achieved higher scores in the dimension of personal accomplishment in comparison to those who did not attend it. In the burnout syndrome scale, these respondents achieved lower scores, which means that their burnout syndrome risk level is lower. The differences were statistically significant ($0.013 \leq 0.05$, Mann-Whitney U test=12352.500; $Me=5.33$; $Me=5.08$; $0.031 \leq 0.05$, Mann-Whitney U test=12666.500; $Me=2.68$; $Me=2.89$).

Most respondents in the research sample had long-term teaching experience. The Spearman's correlation coefficient showed that the longer the practice, the higher the score in the dimension of personal accomplishment ($0.000 \leq 0.05$; $r_s=0.211$) and lower score in the dimension of depersonalisation ($0.009 \leq 0.05$; $r_s=-0.133$). It can be stated that the length of practice did not represent a factor that would distort the research results. Weak dependencies were observed. The statistically significant correlation between the length of practice and realization of frequency of professional reflection types was not identified. The statistically significant correlation between the length of practice and total score in both scales was not identified. Statistically significant differences in the scores within the dimensions and scales were not identified between different sexes or teaching qualifications.

The low correlation between the two research instruments in the aforementioned aspects may be due to the fact that the burnout syndrome risk level scale was not homogeneous enough. The dimension of emotional exhaustion showed a positive correlation with the dimension of depersonalisation, however, the Spearman's correlation coefficient values provide only an indication of the fact. Similar findings related to the correlation between the dimensions of personal accomplishment and emotional exhaustion. Based on this, we decided to examine the correlation between the individual types of professional reflection and the dimensions describing the burnout syndrome.

The research shows that a weak direct dependency exists between the frequency of meta-cognitive reflection and the dimensions of emotional exhaustion and personal accomplishment. It is assumed that teachers who reflect on their professional background, i.e. studies, teaching models and philosophy can be unhappier as their original ideas on working with pupils may not match reality, and they had to adjust their expectations over time. Cantor (In Korthagen, 2011) state that after having adapted, we no longer tend to change our environment. We assimilate our experience according to the previous findings. However, adaptive metacognition helps teachers re-construct their teaching concepts (Lin et al., 2005), which may result in a change of their approach to pupils and the introduction of innovations. It can also enhance one's personal accomplishment.

A weak direct dependency was identified between the frequency of critical reflection and the dimension of personal accomplishment. Teachers who perform critical reflection are characterised by active interest in the teaching conditions, goals, consequences, teaching socialisation, and pupils' needs (Farrell, 2009; Shandomo, 2010). This type of reflection, usually accompanied by cognitive reflection can penetrate under the surface of the teaching processes, thus turning professional reflection into an integrative element (Timková, 2010; Farrell, 2018). Teachers' personal accomplishment is also enhanced by

independent self-development through updating their knowledge and performing strategic thinking (Petty, 2013).

A weak indirect dependency was identified between the frequency of consulting reflection and the dimension of depersonalisation. Only in this case, the research showed an indication that consulting reflection actually can help prevent depersonalisation as the highest-risk stage of the burnout syndrome. Simoncini et al. (2014) and Pollard et al. (2014) emphasize that a reflective teacher maintains a dialogue with their colleagues. Being able to ask suitable reflective questions and verbalise one's thinking and actions related to their teaching practice depends upon the stimuli within their teacher collective. Obst (2009) claims that the teacher's joy of teaching increases if they obtain feedback, as it drives them towards further teaching activities.

Javadi and Khatib's (2014) research confirmed an indirect linear dependency between the frequency of professional reflection in teachers and their burnout syndrome risk level. The demonstrated dependency strength was significantly higher ($r=0.80$) than in our case in the individual types of reflection that were examined in relation to the burnout syndrome components. Their research also showed that all three burnout syndrome components show statistically significant negative correlation with the frequency of professional reflection. It can be interpreted by the fact that their research sample consisted of teachers working at private language institutes in Iran, and as pointed out by research of Rezaeyan & Nikoopour (2013) and Ashraf, Aynaz & Yazdi (2016), reflective teaching in Iran takes place in a different context as it is supported by the Iranian culture itself, which probably prefers participative teacher learning.

It should be emphasized that if teachers face increasing problems that require their long-term attention and activity, their ability to perform professional reflection – as a suitable operative and feedback tool to increase the quality of their teaching activities – tends to decrease. Lorenzová (2016) describes the teachers' situation in the postmodern era as follows: they are required to be constantly re-adapting to the constantly changing indicators of their performance quality, which affect their professional competencies in both intensity and extension. The teacher is not only an expert in a specific academic subject, they are also required to help bring up pupils and take care of them (Tomková et al., 2012; Rovňanová, 2015).

It is necessary to explain how the respondents were included in the research sample. The available selection was chosen despite its limitations. Since there was no other form of motivation available to persuade the respondents to participate in the research other than writing to them (the point of the research was explained to them), teachers who were actually interested in the subject matter professionally might have been more likely eager to participate. This may have distorted the results to some extent. The available selection also poses certain difficulties related to generalisation. Although the research was performed across all Slovak regions, it would be misleading to claim that the connections between professional reflection and burnout syndrome confirmed do apply to the basic research file that would represent all secondary school teachers in Slovakia. Therefore, another measurement should be performed on a larger research sample and focus on teachers with specific academic subject specialisation, which would narrow the potential generalisation area.

Literature:

1. Afshar, S. H., Farahani, M.: Reflective Thinking and Reflective Teaching among Iranian EFL Teachers: Do Gender and Teaching Experience Make a Difference? *Procedia – Social and Behavioral Sciences* [online]. 2015, 192, 615–620 [cit. 2018-11-27]. ISSN 1877-0428. Retrieved from: <https://doi.org/10.1016/j.sbspro.2015.06.107>
2. Akbari, R., Behzadpoor, F., Dadvand, B.: Development of English language teaching reflection inventory. *System : An International Journal of Educational Technology and Applied*

- Linguistics* [online]. 2010, 38(2), 211–227 [cit. 2018-11-19]. ISSN 0346-251X. Retrieved from: <https://doi.org/10.1016/j.system.2010.03.003>
3. Akbari, R.: Reflections on Reflection: A Critical Appraisal of Reflective Practices in L2 Teacher Education. *System : An International Journal of Educational Technology and Applied Linguistics* [online]. 2007, 35(2), 192–207 [cit. 2018-11-20]. ISSN 0346-251X. Retrieved from: <https://doi.org/10.1016/j.system.2006.12.008>
4. Ashraf, H., Aynaz, S., Yazdi, T. M.: Reflective Teaching Practice in an EFL Context: A Qualitative Study. *International Journal of English Linguistics* [online]. 2016, 6(7), 48–58 [cit. 2019-01-10]. ISSN 1923-8703. Retrieved from: <http://dx.doi.org/10.5539/ijel.v6n7p48>
5. Barutcu, E., Serinkan, C.: Burnout Syndrome of Teachers: An Empirical Study in Denizli in Turkey. *Procedia – Social and Behavioral Sciences* [online]. 2013, 89, 318–322 [cit. 2018-10-12]. ISSN 1877-0428. Retrieved from: <https://doi.org/10.1016/j.sbspro.2013.08.853>
6. Bianchi, R., Schonfeld, S. I., Laurent, E.: Is it time to consider the “burnout syndrome” a distinct illness? *Frontiers in public health* [online]. 2015, 3, 158 [cit. 2019-01-02]. ISSN 2296-2565. Retrieved from: <https://doi.org/10.3389/fpubh.2015.00158>
7. Bobek, M., Peniška, P. *Práce s lidmi: Učebnice poradenství, koučování, terapie a socioterapie pro pomáhající profese*. Brno: NC Publishing, 2008. 288 p. ISBN 978-80-903858-2-5.
8. Brestovanský, M.: Didaktické reflektívne komunity: paradigma vzájomnej pomoci vs. paradigma posudzujúceho hodnotenia v rozvoji kvality vzdelávania. *Pedagogika.sk* [online]. 2019, 10(1), 27–46 [cit. 2018-02-05]. ISSN 1338-0982. Retrieved from: <http://www.casopispedagogika.sk/rocnik-10/cislo-1/studia-brestovansky.pdf>
9. Cimermanová, I.: Burnout as a tool for self-reflection. *International Journal of Education and Research* [online]. 2013, 1(10), 59–76 [cit. 2018-10-12]. ISSN 2201-6740. Retrieved from: <http://www.ijern.com/journal/October-2013/19.pdf>
10. Clipa, O., Boghean, A.: Stress factors and solutions for the phenomenon of burnout of preschool teachers. *Procedia – Social and Behavioral Sciences* [online]. 2015, 180, 907–915 [cit. 2018-10-30]. ISSN 1877-0428. Retrieved from: <https://doi.org/10.1016/j.sbspro.2015.02.241>
11. Demerouti, E. et al.: The convergent validity of two burnout instruments. *European Journal of Psychological Assessment* [online]. 2003, 19(1), 12–23 [cit. 2018-10-22]. ISSN 2151-2426. Retrieved from: <https://doi.org/10.1027/1015-5759.19.1.12>
12. Douglougeri, K., Georganta, K., Montgomery, A.: “Diagnosing” burnout among healthcare professionals: Can we find consensus?. *Cogent Medicine* [online]. 2016, 3(1), 1237605 [cit. 2019-01-02]. ISSN 2331-205X. Retrieved from: <http://dx.doi.org/10.1080/2331205X.2016.1237605>
13. Evelein, G. F., Korthagen, F. A. J.: *Practicing Core Reflection: Activities and Lessons for Teaching and Learning from Within*. New York, Abingdon: Routledge, 2015. 206 p. ISBN 978-0-415-81996-1.
14. Faghihi, G., Sarab, A. R. M.: Teachers as reflective practitioners: a survey on iranian english teachers' reflective practice. *Journal of Teaching Language Skills (JTLS)* [online]. 2016, 34(4), 57–86 [cit. 2018-11-30]. ISSN 2008-8191. Retrieved from: doi.org/10.22099/jtls.2016.3659
15. Farrell, C. S. T.: *Research on Reflective Practice in TESOL (ESL & Applied Linguistics Professional Series)*. New York, Abingdon: Routledge, 2018. 172 p. ISBN 978-1-138-63590-6.
16. Farrell, C. S. T.: Critical reflection in a TESL course: mapping conceptual change. *ELT Journal* [online]. 2009, 63(3), 221–229 [cit. 2018-11-21]. ISSN 1477-4526. Retrieved from: <https://doi.org/10.1093/elt/ccn058>
17. Fontana, D.: *Stres v práci a v životě. Jak ho pochopit a zvládat*. Praha: Portál, 2016. 184 p. ISBN 978-80-262-1033-7.
18. Freudenberg, J. H. Staff Burn-Out. *Journal of Social Issues* [online]. 1974, 30(1), 159–165 [cit. 2019-11-15]. ISSN 1540-4560. Retrieved from: <https://doi.org/10.1111/j.1540-4560.1974.tb00706.x>
19. Ghaye, T.: *Teaching and Learning through Reflective Practice. A Practical Guide for Positive Action*. 2nd ed. Abingdon, New York: Routledge, 2011. 224 p. ISBN 978-0-415-57095-4.

20. Ghazalbash, N., Afghari, A.: Relationship between Burnout and Reflective Teaching among EFL Teachers. *International Journal of Foreign Language Teaching & Research* [online]. 2015, 3(12), 41–51 [cit. 2018-10-02]. ISSN 2322-3900. Retrieved from: http://jfl.iaun.ac.ir/article_560102_012cbc10676ef1f0e6c57d8402f5b9fa.pdf
21. Hagemann, W.: *Syndrom vyhoření u učitelů. Příčiny, pomoc, terapie*. Ústí nad Labem: UJEP, 2012. 119 p. ISBN 978-80-741-4364-9.
22. Holeček, V.: *Psychologie v učitelské praxi*. Praha: Grada, 2015. 224 p. ISBN 978-80-247-3704-1.
23. Honzák, R.: *Jak žít a vyhnout se syndromu vyhoření*. 3rd ed. Praha: Vyšehrad, 2018. 240 p. ISBN 978-80-7601-004-8.
24. Hrabal, V., Pavelková, I.: *Jaký jsem učitel*. Praha: Portál, 2010. 240 p. ISBN 978-80-7367-755-8.
25. Hreciński, P.: *Wypalenie zawodowe nauczycieli*. Varšava: Difin, 2016. 227 p. ISBN 978-83-808-5084-2.
26. Huget, P.: Profilaktika syndromu wypalenia zawodowego nauczyciela. *Polonistyka. Innowacje* [online]. 2015, (2), 93–102 [cit. 2019-01-01]. ISSN 2450-6435. Retrieved from <https://doi.org/10.14746/pi.2015.1.2.7>
27. Janík, T. et al.: *Kvalita (ve) vzdělávání: obsahově zaměřený přístup ke zkoumání a zlepšování výuky*. Brno: Masarykova univerzita, 2013. 434 p. ISBN 978-80-210-6349-5.
28. Javadi, F., Khatib, M.: On the relationship between reflective teaching and teachers' burnout. *International Journal of Research Studies in Language Learning* [online]. 2014, 3(4), 85–96 [cit. 2018-10-11]. ISSN 2243-7762. Retrieved from: <https://doi.org/10.5861/ijrsl.2014.614>
29. Kačmárová, M., Kravcová, M.: Zdroje stresu a strategie zvládání v učitel'ské profesi. In: *Mezinárodní vědecká elektronická konference pre doktorandov, vedeckých pracovníkov a mladých vysokoškolských učiteľov* [CD]. Prešov: Prešovská univerzita, Fakulta humanitných a prírodných vied, 2011. pp. 215–224. ISBN 978-80-555-0482-7.
30. Kallwass, A.: *Das Burnout-Syndrom: Wir finden einen Weg*. München: Mvg Moderne Vlg. Ges., 2008. 189 p. ISBN 978-3-636-7244-3.
31. Kebza, V., Šolcová, I.: *Syndrom vyhoření (informace pro lékaře, psychology a další zájemce o teoretické zdroje, diagnostické a intervenční možnosti tohoto syndromu)*. 2nd exp. and compl. ed. Praha: Státní zdravotní ústav, 2003. 23 p. ISBN 80-7071-231-7.
32. Kemmis, S. A.: Self-Reflective Practitioner and a New Definition of Critical Participatory Action Research. In: *Rethinking Educational Practice Through Reflexive Inquiry. Essays in Honour of Susan Groundwater-Smith* [online]. Dordrecht, Heidelberg, London, New York: Springer, 2011 [cit. 2018-11-27]. pp. 11–29. ISBN 978-94-007-0805-1. Retrieved from: <https://doi.org/10.1007/978-94-007-0805-1>
33. Kopřiva, K.: *Lidský vztah jako součást profese*. 8th ed. Praha: Portál, 2016. 152 p. ISBN 978-80-262-1147-1.
34. Korczyński, S.: *Stres w pracy zawodowej nauczyciela*. Krakow: Impuls, 2014. 168 p. ISBN 978-83-7850-688-1.
35. Korthagen, F.: Making teacher education relevant for practise: The pedagogy of realistic teacher education. *Orbis scholae* [online]. 2011, 5(2), 31–50 [cit. 2019-01-15]. ISSN 2336-3177. Retrieved from <https://doi.org/10.14712/23363177.2018.99>
36. Korthagen, J. A. F.: Promoting Core Reflection in Teacher Education: Deepening Professional Growth. In: *International Teacher Education: Promising pedagogies (Part A) (Advances in Research on Teaching, Volume 22)* [online]. Bingley, UK: Emerald, 2014 [cit. 2018-11-21]. pp. 73–89. ISBN 978-1-78441-135-0. Retrieved from: <https://www.emeraldinsight.com/doi/book/10.1108/S1479-3687201422>
37. Korthagen, J. A. F.: The Core Reflection Approach. In: *Teaching and Learning from Within: A Core Reflection Approach to Quality and Inspiration in Education*. New York, Abingdon: Routledge, 2013. pp. 24–42. ISBN 978-0-415-52248-9.
38. Korthagen, J. A. F.: Vytváření programu realistického učitel'ského vzdělávání. In *Jak spojit praxi s teorií : didaktika realistického vzdělávání učitelů*. Brno: Paido, 2011. pp. 81–96. ISBN 978-80-7315-221.
39. Kouteková, M., Furinová, M.: *Sebareflexia a profesijné kompetencie učiteľa vo výchovno-vzdelávacom procese*. Banská Bystrica: Belianum, 2015. 136 p. ISBN 978-80-557-1068-6.
40. Krivohlavý, J.: *Horieť, ale nevyhorieť*. Bratislava: Karmelitánske nakladateľstvo, 2012. 216 p. ISBN 978-80-8135-003-0.
41. Krivohlavý, J.: *Psychologie moudrosti a dobrého života*. Praha: Grada, 2009. 144 p. ISBN 978-80-247-2362-4.
42. Kyriaciou, C.: *Klíčové dovednosti učitele. Cesty k lepšímu vyučování*. 4th ed. Praha: Portál, 2012. 164 p. ISBN 978-80-262-0052-9.
43. Lin, X. et al. Toward Teachers' Adaptive Metacognition. *Educational Psychologist* [online]. 2005, 40(4), 245–255 [cit. 2018-01-25]. ISSN 1532-6985. Retrieved from: https://doi.org/10.1207/s15326985ep4004_6
44. Lorenzová, J.: *Kontexty vzdělávání v postmoderní situaci*. Praha: Filozofická fakulta UK, 2016. 335 p. ISBN 978-80-7308-650-3.
45. Majerčíková, J., Gavora, P.: Vnímaná zdatnosť (self-efficacy) učiteľa spolupracovať s rodičmi: konštrukcia výskumného nástroja. *Pedagogika: časopis pro vědy o výchově a vzdělávání*. 2013, 62(2), 128–146. ISSN 0031-3815.
46. Mareš, J.: *Pedagogická psychologie*. Praha: Portál, 2013. 704 p. ISBN 978-80-262-0174-8.
47. Marko, M.: Využitie a zneužitie Cronbachovej alfy pri hodnotení psychodiagnostických nástrojov. *TESTFÓRUM: Časopis pro psychologickou diagnostiku* [online]. 2016, 5(7), 99–107 [cit. 2018-12-27]. ISSN 1805-9147. Retrieved from: <http://dx.doi.org/10.5817/TF2016-7-90>
48. Marzano, J. R. et al.: *Becoming a Reflective Teacher (Identifying Instructional Strengths and Weaknesses to Improve Teaching) (Classroom Strategies)*. Bloomington: Marzano Research Laboratory, 2012. 256 p. ISBN 978-0-9833512-3-8.
49. Maslach, C., Leiter, P. M.: Early predictors of job burnout and engagement. *Journal of Applied Psychology* [online]. 2008, 93(3), 498–512 [cit. 2018-10-19]. ISSN 1939-1854. Retrieved from: doi: 10.1037/0021-9010.93.3.498
50. Maslach, C., Leiter, P. M.: Understanding the burnout experience: recent research and its implications for psychiatry. *World Psychiatry: official journal of the World Psychiatric Association (WPA)* [online]. 2016, 15(2), 103–111 [cit. 2018-10-10]. ISSN 2051-5545. Retrieved from: <https://doi.org/10.1002/wps.20311>
51. Maslach, C.: *Burnout: The Cost of Caring*. 4th ed. Los Altos, CA: Malor Books, 2015. 276 p. ISBN 978-1-883536-35-0.
52. Mathew, P. et al.: Reflective practices: a means to teacher development. *Asia Pacific Journal of Contemporary Education and Communication Technology* [online]. 2017, 3(1), 126–131 [cit. 2019-02-22]. ISBN 978-0-9943656-82. Retrieved from: https://apiar.org.au/wp-content/uploads/2017/02/13_API_CECT_Feb_BRR798_EDU-126-131.pdf
53. Morovicsová, E.: Syndróm vyhoření a možnosti jeho prevencie. *Psychiatria pre prax* [online]. 2016, 17(4), 153–156 [cit. 2018-11-13]. ISSN 1339-4258. Retrieved from: http://www.psychiatriapreprax.sk/index.php?page=pdf_view&pdf_id=8303&magazine_id=2
54. Muchacka, B., Kaleta-Witusiak, M., Walasek-Jarosz, B.: *Autoreflexja i analiza pracy własnej* [online]. Kielce: Staropolska Szkoła Wyższa w Kielcach, 2013 [cit. 2018-10-21]. 244 p. ISBN 978-83-63981-10-5.
55. Nezvalová, D.: *Reflexe v pregraduální přípravě učitele*. Olomouc: PF UP, 2000. 72 p. ISBN 80-244-0208-4.
56. Noormohammadi, S.: Teacher Reflection and its Relation to Teacher Efficacy and Autonomy. *Procedia – Social and Behavioral Sciences* [online]. 2014, 98, 1380–1389 [cit. 2018-12-01]. ISSN 1877-0428. Retrieved from: doi: 10.1016/j.sbspro.2014.03.556
57. Obst, O.: Učitel ve výuce. In: *Školní didaktika*. 2nd ed. Praha: Portál, 2009. pp. 92–121. ISBN 978-80-7367-571-4.
58. Paulík, K.: *Psychologie lidské odolnosti*. 2nd rev. and complet. ed. Praha: Grada, 2017. 368 p. ISBN 978-80-247-5646-2.
59. Petlák, E., Baranovská, A.: *Stres v práci učiteľa a syndróm vyhoření*. Bratislava: Wolters Kluwer, 2016. 129 p. ISBN 978-80-8168-450-0.
60. Petty, G.: *Moderní vyučování*. 6th rev. ed. Praha: Portál, 2013. 568 p. ISBN 978-80-262-0367-4.

61. Pišová, M. et al.: *Učitel expert: jeho charakteristiky a determinanty profesního rozvoje (na pozadí výuky cizích jazyků)*. Brno: Masarykova univerzita, 2013. 233 p. ISBN 978-80-210-6681-6.
62. Políach, V., Fridrichová, P. Hodnotenie vybraných aspektov kurikulárnej reformy na gymnáziách v SR učiteľmi. *Orbis Scholae* [online]. 2018, 12(1), 113–134 [cit. 2018-12-20]. ISSN 2336-3177. Retrieved from: <https://doi.org/10.14712/23363177.2018.288>
63. Pollard, A. et al.: *Reflective Teaching in Schools*. 4th rev. ed. London, New York: Bloomsbury Academic, 2014. 576 p. ISBN 978-1-4411-3662-6.
64. Preiss, M.: *Jak zvládnout syndrom vyhoření. Najděte cestu zpátky k sobě*. Praha: Grada, 2015. 176 p. ISBN 978-80-247-5394-2.
65. Qing, X.: Reflective Teaching – an Effective Path for EFL Teacher's Professional Development. *Canadian Social Science* [online]. 2009, 5(2), 35–40 [cit. 2018-11-13]. ISSN 1923-6697. Retrieved from: <http://dx.doi.org/10.3968/j.css.1923669720090502.005>
66. Rezaeyan, M., Nikooper, J.: The relationship between reflectivity of foreign language teachers with Iranian students' achievement. *Journal of Language Sciences & Linguistics* [online]. 2013, 1(1), 9–20 [cit. 2018-01-11]. ISSN 2148-0672. Retrieved from: <https://docplayer.net/18639913-The-relationship-between-reflectivity-of-foreign-language-teachers-with-iranian-students-achievement.html>
67. Rovňanová, L.: *Profesijné kompetencie učiteľov*. Banská Bystrica: Belianum, 2015. 153 p. ISBN 978-80-557-0739-6.
68. Rushton, I., Suter, M.: *Reflective practice for teaching in lifelong learning*. New York: Open University Press, 2012. 120 p. ISBN 978-0-33-524401-0.
69. Ryan, E. M., Ryan, M. A.: Model for Reflection in the Pedagogic Field of Higher Education. In: *Teaching Reflective Learning in Higher Education. A Systematic Approach Using Pedagogic Patterns* [online]. Cham: Springer, 2015 [cit. 2018-11-17]. pp. 15–27. ISBN 978-3-319-09271-3. Retrieved from: <https://doi.org/10.1007/978-3-319-09271-3>
70. Salvagioni, J. A. D. et al.: Physical, psychological and occupational consequences of job burnout: A systematic review of prospective studies. *PLoS One* [online]. 2017, 12(10), e0185781 [cit. 2018-11-11]. ISSN 1932-6203. Retrieved from: <https://doi.org/10.1371/journal.pone.0185781>
71. Shandomo, M. H.: The Role of Critical Reflection in Teacher Education. *School-University Partnerships* [online]. 2010, 4(1), 101–113 [cit. 2018-11-14]. ISSN 1935-7125. Retrieved from: <https://files.eric.ed.gov/fulltext/EJ915885.pdf>
72. Simoncini, M. K., Lasen, M., Rocco, S.: Professional Dialogue, Reflective Practice and Teacher Research: Engaging Early Childhood Pre-Service Teachers in Collegial Dialogue about Curriculum Innovation. *The Australian Journal of Teacher Education* [online]. 2014, 39(1), 27–44 [cit. 2018-11-17]. ISSN 1835-517X. Retrieved from: <http://dx.doi.org/10.14221/ajte.2014v39n1.3>
73. Soják, P.: *Osobnostní a sociální rozvoj, aneb, Strom, mozaika a vzducholoď*. Praha: Grada, 2017. 205 p. ISBN 978-80-271-0342-3.
74. Švec, Š.: Metóda dotazníka v edukačnom výskume. In: *Metodológia vied o výchove. Kvantitatívno-scientistické a kvalitatívno-humanitné prístupy*. Bratislava: IRIS, 1998. pp. 125–161. ISBN 80-88778-73-5.
75. Theodoulides, L., Jahn, P.: *Reflexná metóda ako nástroj učenia sa v organizáciách*. Bratislava: IURA EDITION, 2013. 112 p. ISBN 978-80-8078-581-9.
76. Timková, B.: Akčný výskum ako špecifická profesijná aktivita učiteľa. In: *Pedagogická diagnostika a akčný výskum*. Bratislava: Univerzita Komenského, 2010. pp. 9–17. ISBN 80-223-2787-9.
77. Tomengová, A. et al.: *Pedagogické znalosti a profesionalita učiteľa*. Banská Bystrica: Belianum, 2017. 220 p. ISBN 978-80-557-1315-1.
78. Tomková, A. et al.: *Rámec profesních kvalit učitele. Hodnotící a sebehodnotící arch* [online]. Praha: Národní ústav pro vzdělávání, 2012 [cit. 2018-11-19]. 38 p. ISBN 978-80-87063-64-4. Retrieved from: http://www.nuov.cz/uploads/AE/ev_aluacni_nastroje/08_Ramec_profesnich_kvalit_ucitele.pdf
79. Urdang, E.: Awareness of self – a critical tool. *Social Work Education* [online]. 2010, 29(5), 523–538 [cit. 2018-11-30]. ISSN 1470-1227. Retrieved from: <https://doi.org/10.1080/02615470903164950>
80. Vercambre, N. M. et al.: Individual and contextual covariates of burnout: a cross-sectional nationwide study of French teachers. *BMC Public Health* [online]. 2009, 9, 333 [cit. 2019-01-02]. ISSN 1471-2458. Retrieved from: <https://doi.org/10.1186/1471-2458-9-333>
81. Zeichner, M. K., Liston, P. D.: *Reflective Teaching: An Introduction (Reflective Teaching and the Social Conditions of Schooling Series)*. 2nd ed. New York, Abingdon: Routledge, 2014. 144 p. ISBN 978-0-415-82661-7.

Primary Paper Section: A

Secondary Paper Section: AM