SELF-EFFICACY OF STUDENTS – FUTURE TEACHERS IN THE COOPERATION WITH STUDENTS` PARENTS

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Study is the partial outcome of the research project VEGA no. 1/0098/17 called Individual Conception and Strategy of Education Within the Context of Teacher's Professional Development.

Abstract: The cooperation between family and school is an important activity that helps to create the relationship of parents to teachers and school. The preparation for this area of the teaching profession represents an inseparable element of the pregraduate preparation of future teachers. The article presents the research aimed at the examination of the self-efficacy of students – future teachers in their cooperation with pupils` families. The research also focuses on the evaluation of their competences and assumptions for this cooperation with families. We processed the research results through chosen statistical methods, and we found out that there are statistically significant differences in the self-efficacy of students – future teachers for the primary and secondary level of education in the area of cooperation with pupils`s families.

Keywords: self-efficacy, cooperation between school and family, Wilcoxon Rank Sum Test, Kruskal - Wallis test.

1 Introduction

Cooperation with pupils` families represents an indispensable part of teachers` work. Several authors (e.g. Polovina – Stanišić, 2007; Emmerová - Rabušicová, 2001; Frýdková, 2010; Čapek, 2013) think that, nowadays, this cooperation between family and school has been changing. The current schools start to be aware of the need for cooperation with other institutions (local authorities, civic associations, and mainly with pupils` families). They want to open their door and cooperate with the broad public closely. In order to form a modern and progressive school system, schools should be open to cooperation with pupils` parents and they should provide help and advice in the education of children. For this reason, it is desirable so that, within the pregraduate preparation, students – future teachers acquire competences necessary for the active cooperation with pupils` families with the perspective of their further personal development in the educational practice.

2 Self-efficacy of teachers (future teachers)

Teachers` abilities, assumptions, as well as their convictions about their qualities for this profession, determine all their activities. In general, this image people have about themselves, creates a conviction about their possibilities to carry on certain activities. This psychological process, denoted with the concept of self-efficacy, is closely connected with the American psychologist Bandura. The author understands this concept as part of the theory of social – cognitive learning, which emphasizes the role of conviction people have about themselves. According to this theory, thinking and acting of people are perceived as a result of a dynamic synergy between the personality, environment and behaviour of people (Bandura, 1997). Gavora (2008, p. 225) thinks that self-efficacy includes two concepts: 1. personal teaching efficacy (teachers believe in their abilities to influence the behaviour and learning of their pupils); 2. general teaching efficacy (the way how teachers evaluate their success in the teaching process). We can say that self-efficacy expresses the evaluation of teachers` possible qualities which determine their performance of the teaching profession. It is the personal belief that one is capable of performing appropriately and effectively to attain specific goals (Ormrod, 2006). It is the teachers` conviction and confidence in their competences, however, we do not talk about their real competences as such. (Majerčíková et al., 2012, p. 14). Furthermore, teachers' self-efficacy influences their teaching behaviour and their students' motivation and achievement (Skaalvik & Skaalvik, 2007). According to Gavora (2010), teachers` self-efficacy is a powerful self-regulatory characteristic feature that enables teachers to use their potentials.

The self-efficacy of future teachers is formed relatively early – already during their preparation for the teaching profession at university, and it develops at the beginning of their teaching practice. The teachers` competence to cooperate with parents of their pupils represents one area of teachers` self-efficacy.

3 The family-school partnership

The school-family relation is currently a topic of interest among parents, teachers, policymakers and all those involved in childhood education. It is the subject of several researches at the provincial, national and international levels as well. Cooperation between family and school represents an essential part of the teaching profession. School and teachers should develop, support and motivate pupils` parents to participate actively with school (Kurincová, 2001; Frýdková, 2010).

Many authors (Henderson & Mapp, 2002; Christenson - Sheridan, 2001; Rabušicová, 2004; Felcmanová, 2013; Pecháčková, 2014) confirm that good cooperation between family and school positively influences the results of children at school, and it also helps to achieve better effectiveness of education and formation. In this context, Vališová (2011, p.333) thinks that thanks to effective communication and cooperation with pupils` parents, the current modern and progressive school opens to the broad public, what improves the reputation of the school. Many research studies even point out at the fact that pupils are more satisfied and happier at school, and they achieve better study results thanks to this good relationship between family and school (Čapek, 2013, p. 16-17). Christenson (2001) also emphasizes well-functioning relationships between family and school and describes them as a safe „network" which supports learning and acquiring experience. At the same time, this good cooperation represents a form of prevention against failure at school.

Epstein's conceptual model of "overlapping spheres" (Epstein, 1987) explains the significance of cooperation between family and school. Epstein's theory of overlapping spheres of influence emphasizes the importance of schools, families and communities working together to meet children's needs. The theory includes internal and external structures. The external structure can be pushed together or pulled apart by factors such as the beliefs, experiences and practices of families, schools and communities and by the students' ages and grade levels.

According to the experience from last years, the partnership of family and school has been changing. In our region, before the year 1989, pupils` parents perceived school mainly as an institution where the professional guidance of teachers influenced the culture and education at school. Parents did not interfere in the school life and its management. Nor did the school require it from them. Průcha (2005, p. 420) describes this period, and he emphasizes that cooperation between family and school was based mainly on the authoritative approach of school to parents. Parents played a subordinate role in this relationship, and they were not allowed to interfere in the educational process. Currently, people prefer the opinion that pupils` parents should not be only passive observers of school activities, but they should support and cooperate with school. Majerčíková (2012, p.51) even mentions that teachers should behave to parents in such a way that parents feel as equal „players" together with teachers in their joint effort. The traditional model where „parents are clients" (receivers of services) has been changing into the model where „parents are partners" of school. In this context, Rabušicová (2001) uses the concept „parental

participation" that includes several levels: involvement of parents in the educational process at school, mutual communication and shared activities, as well as the level of education of parents.

Polovina and Stanišić (2007) focus on the complexity of the relationship between family and school, which derives from the fact that this cooperation is a confluence of many other complex phenomena and permanently interlinked processes. It includes: (a) internal academic variables (school attendance, tuition, learning process, academic performance, behaviour) and internal family variables (nourishment, emotions, development and growth, learning, knowledge, independence); (b) developmental processes of change and change of the environmental conditions. Despite the well-set rules of this cooperation and teachers` effort to involve parents in school life, there can occur situations with problematic communication. Several authors (Carter, Dyches, and Prater, 2012; Felcmanová et al., 2013) emphasize the requirement that teachers should have the possibility to participate in the schooling and learn how to develop competences necessary for the effective communication with parents. They should learn the ways supporting mutual communication so that they can use them in the educational reality.

It is indisputable that relationships between school and parents represent a significant part of school life. This cooperation has its justification and brings many positive aspects for pupils, parents, and teachers. Therefore, the orientation of this cooperation should reflect the needs of teachers and parents, and all activities should primarily take into consideration the interests of children.

4 Research of the self-efficacy of students to cooperate with pupils` families

4.1 The project of the research

All teachers possess specific competences, qualities, skills and abilities they acquired during their preparation for the teaching profession. Students of the pedagogical field of study develop these skills in their educational practice and, thanks to them, they should be able to cope with all the tasks and situations they will have to solve during their pedagogical practice. In general, activities of teachers are not related only to the teaching process, but also to the cooperation with pupils` parents. This area is not just a complement to the teachers` obligations. On the contrary, this cooperation with pupils` parents represents a significant activity which helps to create the relationship of parents to teachers and school.

Based on the above mentioned theoretical concepts, we aimed our research at the self-efficacy of students – future teachers to cooperate with pupils` parents. The objective of our research was to find out what self-efficacy students of teacher training programmes have in the area of this cooperation. We were interested in their ideas about themselves and their cooperative competences. We also wanted to find out how they evaluate their assumptions or possible qualities for the cooperation with pupils` families. For this reason, we set the following research *questions:*

- How do students (future teachers) evaluate their self-efficacy to cooperate with pupils` families?
- Do students feel adequately prepared for the area of cooperation with pupils` families?
- Are there any differences in the self-efficacy of students to cooperate with pupils` families related to their study programme?

The *research sample* consisted of 140 students of the first year of master study in Teaching Training programmes at Constantine the Philosopher University in Nitra. 86 students were students of lower and higher grade of secondary education (SSE) and 54 students prepared for primary education teaching (SPE). They answered a questionnaire by J.Majerčíková et al. (2012) called „Self-efficacy of teachers to cooperate with parents". The questionnaire contained 24 questions. Answers to all questions were in the scale 0-1-2-3-4-5, where 0 meant no skills and 5 represented excellent skills.

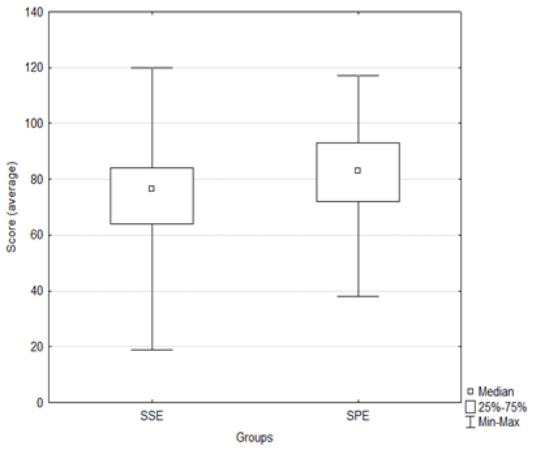
The questionnaire topics were related to five dimensions according to the given areas of cooperation between school and family. The results, obtained from the questionnaire, were processed through statistical methods: Wilcoxon Rank Sum Test, Kruskal - Wallis test.

4.2 The analysis of the research results

In our research, we mutually compared two groups of students – future teachers: students of the study programme Teacher Training of Academic Subjects, i.e. students of Secondary Education (SSE) and students of Teacher Training for Primary Education (SPE).

First, we calculated the so-called total score as a sum of points from all answers (points in the scale) for every student in both groups of students (SSE and SPE). Subsequently, we calculated the average values of the score for every group. Since the objective of our research was to compare and find out differences between these two groups of students (SSE and SPE), we compared both groups taking into account the obtained average values of the score. We used the non-parametric method in the programme Statistica. After entering the input data, we obtained the following results in the output set of the computer: the value of the testing criterion Z Wilcoxon Rank Sum Test (Z = 3,0009) and the value of p (p = 0,00269). We evaluated the test results using the p value. Since the calculated value of probability p that is smaller than 0,01, we can state that there are significant differences between students SSE and SPE according to the achieved total score in the self-efficacy to cooperate with pupils` families. We depicted the results in the picture no.1. From the achieved results and the picture no.1, it is evident that students of primary education (SPE) reached a higher score than students of secondary education (SSE). Consequently, the self-efficacy of SPE students to cooperate with pupils` families is higher than the self-efficacy of SSE students. It means that they feel to be better prepared to cooperate with pupils` parents.

Picture no.1 The average score values of SSE and SPE students



Since the Wilcoxon Rank Sum Test confirmed the statistical significance of differences between both groups of students (SSE and SPE) – future teachers of primary and secondary education in the total score of self-efficacy to cooperate with pupils` families, we wanted to find out in which dimensions these mentioned differences are the most evident. We set five dimensions based on the division of 24 questions in the questionnaire (Table no.1).

Table no. 1 Dimensions of self-efficacy to cooperate with pupils` families

	Dimension	Number of a question
A	Ability to inform parents about the child`s progress at school	1,8,13,19,24
B	Ability to explain the functioning of the school as an institution	5,12,14,15,20
C	Ability to advise parents about educational issues	2,6,9,21,22
D	Ability to be transparent to pupils` parents	3,11,16,23
E	Ability to persuade parents to cooperate with school	4,7,10,17,18

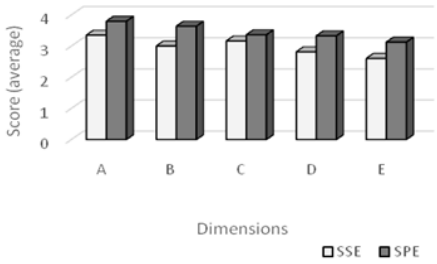
To verify the statistical significance of differences between the groups of SSE and SPE students in the achieved score in particular dimensions, we used the Wilcoxon Rank Sum Test as well. Through its processing in the programme Statistica we got the value of the testing criterion *Z* and the value of probability *p* for each dimension. We recorded the results in the following table (Table no.2).

Table no. 2 Results of Wilcoxon Rank Sum Test (students SSE and SPE)

Dimension	***Z***	*p*
A	-2,5287	0,0115*
B	-3,1460	0,0017*
C	-1,1231	0,2614
D	-2,9498	0,0032*
E	-3,3692	0,0008*

We marked values pointing at the statistically significant difference between the groups of SSE and SPE students with * in the Table no.2. There are statistically significant differences in four dimensions: A, B, D and E. In the dimension C, the differences between groups of SSE and SPE students in the self-efficacy to cooperate with pupils` parents are not statistically significant. We depicted the results in the picture no.2.

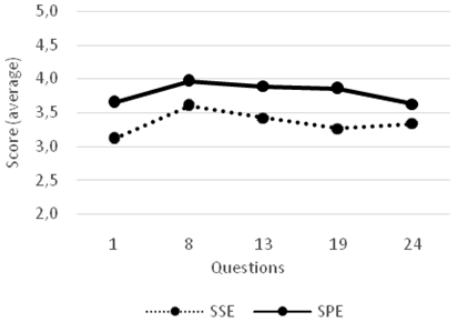
Picture no. 2 Average score values of SSE and SPE students in dimensions



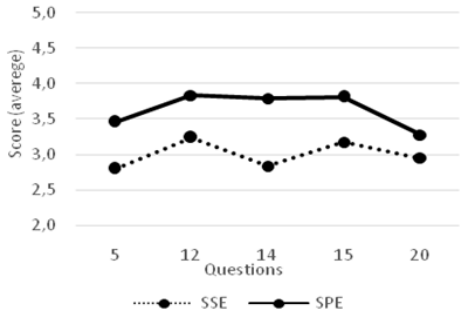
From the results and also from the picture no.2, it is evident that both groups of students evaluated their abilities to inform parents about their children as their most potent abilities (dimension A). However, SPE students rate their abilities higher than SSE students. The ability to advise pupils` parents about educational issues in their families (dimension C) represents the second most potent ability for students of primary education (SPE). In contrast, students of secondary education (SSE) think that this ability is their third evaluated ability. This dimension aims at the advising competence of teachers. The ability to explain the functioning of the school as an organisation (dimension B) finished on the third place by SSE students – future teachers of secondary education, whereas SPE students rated this dimension as their second most potent ability. This dimension focuses on examining the self-efficacy of students in explaining the work of the school and local authorities. It also clarifies the issues of school financing. Students of both study programmes rated the ability to be transparent to parents (dimension D) as the fourth one out of five examined dimensions in the cooperation between teachers and pupils` parents. This dimension centres on the ability of teachers to provide parents with information about the school reality, to motivate them to participate in school life and to show them all what is happening at school. The ability to persuade parents to support school (dimension E) finished on the last fifth place. In this dimension, we examined possible qualities of future teachers to persuade parents to support the school with their participation, as well as materially or financially. Where appropriate, they could apply their specific abilities related to their hobbies or professions.

We calculated and compared the average values of SSE and SPE students in these dimensions (pictures no. 3 - 7)

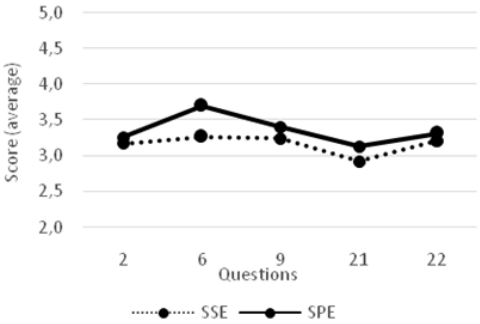
Picture no. 3 Average score of self-efficacy of SSE and SPE students in dimension A



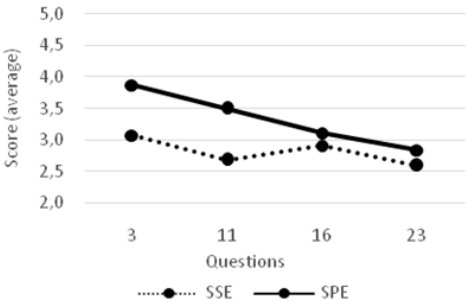
Picture no. 4 Average score of self-efficacy of SSE and SPE students in dimension B



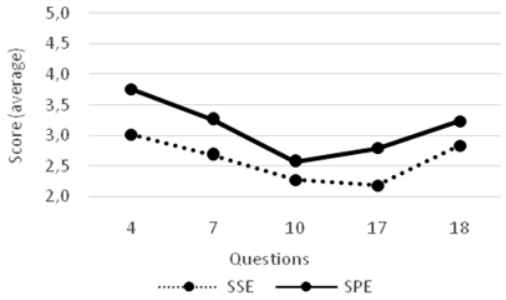
Picture no. 5 Average score of self-efficacy of SSE and SPE students in demension C



Picture no. 6 Average score of self-efficacy of SSE and SPE students in dimension D



Picture no. 7 Average score of self-efficacy of SSE and SPE students in dimension E

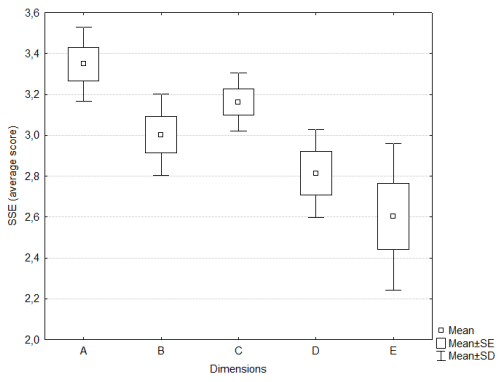


In the pictures no. 3 - 7 mentioned above, we can see that the average score values of SPE students were higher in all dimensions. Even in all 24 questionnaire questions, SPE students achieved higher average score when compared with SSE students. Based on these results, we can say that future teachers of primary level of education feel better prepared for the cooperation with parents because they evaluated their abilities and possible qualities to cooperate with pupils` parents higher than students of teacher training for secondary level of education.

We analysed the research results specifically for these groups of students – future teachers of primary and secondary level of education. Subsequently, we processed the obtained results in the statistical analysis of their self-efficacy in the given dimensions. We used the Kruskal - Wallis test for testing the statistical significance of differences between both groups in these dimensions. This test helped us to verify whether the average score values of SSE students in the given dimensions are statistically significantly different. We did the Kruskal – Wallis test in the programme Statistica as well. We obtained the following results for the group of students - future teachers of secondary education: the value of the testing criterion H=15,407 and the value p=0,004. Also, in this case, we evaluated the test results using the p value. Based on the test results, we can state that the difference between the questionnaire dimensions is statistically significant by SSE students. We depicted the given situation in the picture no.8.

The test confirmed that SSE students rated their abilities to cooperate with pupils` families in particular dimensions in a statistically significantly different way. The average score values in the given dimensions (picture no. 8) show that SSE students evaluated the ability to inform parents about the progress of their children at school as their most potent ability. The following ability is the ability to advise parents about educational issues. On the third place, finished the ability to explain the functioning of the school as an organisation. SSE students think that their weakest abilities are the ability to be transparent to pupils`s parents and the ability to persuade them to cooperate with school.

Picture no. 8 Average score values of SSE students in self-efficacy dimensions



We also examined which dimensions of self-efficacy of SSE students to cooperate with pupils` families are statistically significantly different. Using the Kruskal – Wallis test of multiple comparing in the programme Statistica, we obtained two tables in the output set: the first table records the Z – score and the other one records the related p – values. We only mention the table with values of probability p since we evaluate the test using the value p in this case as well (table no. 3).

Table no. 3 p – values of Kruskal – Wallis test of self-efficacy dimensions by SSE students

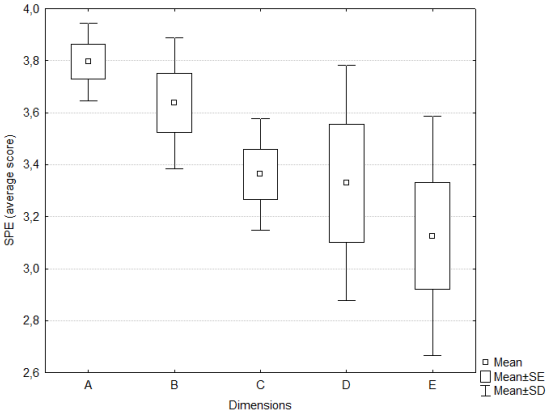
SSE	B	C	D	E
A	0,442	1,000	0,049*	0,006*
B		1,000	1,000	1,000
C			0,599	0,148
D				1,000

*values are statistically significant

In the table no.3 we can see statistically significant differences between the dimensions A and D, as well as A and E in the self-efficacy of students – future teachers of secondary education.

In analogically similar way, we examined whether the average values of students – future teachers of primary education (SPE) in the given dimensions of self-efficacy to cooperate with pupils` families are statistically significantly different.

Picture no.9 Average score values of SPE students in self-efficacy dimensions



Using the Kruskal – Wallis test, we obtained the following results: the value of the testing criterion H = 10,086 and the value p = 0,040. Since the calculated value of probability p is smaller than 0,05, we can say that the difference between self-efficacy dimensions is statistically significant by students – future teachers of primary education. We depicted the given situation in the picture no.9.

As in the group of SSE students, we also examined which self-efficacy dimensions to cooperate with pupils` families are statistically significantly different in the group of SPE students. Using the Kruskal – Wallis test, we calculated the following values of probability (Table no. 4).

Table no.4 p – values of Kruskal – Wallis test of self-efficacy dimensions by SPE students

SPE	B	C	D	E
A	1,000	0,336	0,606	0,045*
B		1,000	1,000	0,466
C			1,000	1,000
D				1,000

In the table no. 4, we can see statistically significant differences between the dimensions A and E in the self-efficacy of students – future teachers of primary education.

4 Discussion and conclusions

In the presented study, we aimed at the self-efficacy of students – future teachers to cooperate with pupils` families. All teachers should have abilities to motivate and lead pupils` parents to cooperation since the ability to communicate with pupils` parents and make a relationship with them belongs to the most challenging abilities in the teaching profession.

Based on our research findings, it is evident that future teachers of primary level of education feel better prepared for the cooperation with pupils` parents because they evaluated their abilities and possible qualities higher than students of Teacher Training for Secondary Education. They are more convinced about their adequate abilities to cooperate with pupils` parents. The reason can be the fact that students – future reachers of primary education have more experience from the direct teaching practice, they have better subsidised pedagogical practice (already at the bachelor level of study). Moreover, the study programme Teacher Training for Primary Education is parallelly aimed at the preparation to work in non-formal educational institutions where students can meet with pupils` parents and personally communicate with them. These findings point out at the fact that their preparation is more favourable for developing such competences which are necessary in order to communicate with pupils` parents.

However, based on the obtained data, we have to say that, in general, observed students (regardless their study programme) are not convinced about their abilities to cooperate with pupils` parents, they evaluate these abilities as insufficient. They do not believe they have adequate abilities to handle the cooperation with pupils` parents well. At the same time, we must emphasize that obtained data do not represent the real abilities which students – future teachers will apply in their future educational practice when cooperating with pupils` parents. We only deal with students` conviction and self-confidence to carry on this cooperation.

Our research sample did not have such parameters so that we could generalise the research findings. However, the obtained data represent a predictor of preparation of future teachers for the area of cooperation with pupils` parents. They lead us to reflections on strengthening their preparation for this type of cooperation. They emphasize the need for more thorough preparation of future teachers to cooperate with pupils` families.
The quality of teachers` competences at primary and secondary level of education is, undoubtedly, influenced by the pregraduate preparation at university. During this preparation, students – future teachers develop competences required for the cooperation with pupils` families through acquiring theoretical knowledge and practical abilities. From our study of specialised literature, as well as our experience from the educational practice it is evident that the pregraduate preparation of students of teacher training is still focused mainly on the teaching process, i.e. on didactic competences. Other competences, such as advising, communicative, and cooperative competences, do not receive such attention. For this reason, it is desirable to deal more intensively with the acquisition of competences necessary for the cooperation with pupils` families within the pregraduate preparation for the teaching profession.

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Primary Paper Section: A

Secondary Paper Section: AM