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Self-Efficacy in the Pre-Gradual Training of Occupational Subject Teachers

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Abstract

The study presents a survey of perceived teacher self-efficacy on a sample of future and beginning Slovak secondary school teachers in two research approaches. The research aimed to find out the perceived professional proficiency of teacher students and future teachers in didactic readiness in the context of positive psychology. The obtained data from both groups were compared with foreign research results in this area.

Keywords: self-efficacy, perceived professional proficiency, teacher, portfolio

Introduction

The theory of self-efficacy is universal. It applies not only to teachers but to each of us, which means that the principles of building a person's proficiency are oriented not only to a specific profession but to each person's life in the context of character building. The quality of education is one of the important priorities of society. It is difficult to achieve without implementing innovative technologies, modern teaching aids, increasing the prestige of the teaching profession, identification, and dissemination of advanced pedagogical experience in the didactic context of educational practice.

Theoretical Analysis of the Research on Self-Efficacy

The presented theoretical background is based on the notion that self-efficacy is a product of social learning in the family and institutional education. The primary concept of this paper is based on Bandura's socio-cognitive theory (Bandura, 1997) and positive psychology (Freiberg & Lamb, 2019; Seligman, 2014).

The paper perceives the self-efficacy construct conceptually, as it is clarified based on the required qualities of a future teacher, connecting it with the principles of positive education. The presented concept is based on the idea of innovation in undergraduate teacher training following the needs of the future and competencies for life. It addresses issues of meaningfulness and well-being: (positive emotions, commitment to activities, positive interpersonal relationships, and successful performance), which form the personal basis of teachers' readiness. One of the separate streams of positive psychology is the so-called psychology of character strengths, which defines a new approach to thinking, perception of character, intelligence, judgment, and creativity. Following the mentioned notions and scientific theories of experts, this study examines the importance of self-efficacy in training vocational teachers and beginning teachers in practice.

It has not yet been possible to unambiguously define self-efficacy, and it is probably not even possible to do so, as the view of this construct is related to individual scientific approaches and philosophies. In order to clarify the issue in the educational context, the study concurs with the opinion of Brubacker and Cooper (2000). They distinguish the so-called "hard" concepts of identity, anchored in the notion of identity (primary identity in time between persons) and "soft" concepts of identity, which differ significantly from the original meaning of the term: identity varies according to time, place, and circumstances. Bandura (1997) clarified self-efficacy in the unity of professional perceived proficiency of future vocational teachers and beginning teachers in practice. He characterises the construct of personal self-efficacy as a belief in the individual's own ability to organise and perform a certain activity through which the set goal is achieved. The two main components are:

- personal efficacy (refers to the belief that an individual has the skills, knowledge and abilities to successfully take the steps necessary to achieve the desired result)
- expectations of the outcome (the belief that the behaviour or action will lead to the expected outcome).

Global research on teachers' self-efficacy (Delale-O'Connor et al., 2017) at various types and levels of schools has led to demonstrable findings that teachers

with high self-efficacy tend to be enthusiastic and optimistic and spend more time teaching in areas where they perceive high self-efficacy. They pay little attention to areas where they are unsure of it.

Wertheim and Leyser (2002) found that teachers with a high self-efficacy are more open to new methods and constructivist approaches, preferring discussion and group work over frontal teaching. The research of Czech authors Jakešová, Gavor, and Kaleda (2016) confirmed that teachers with a high degree of self-efficacy have less need to criticise students. Because of that, we believe that two priority areas (potentialities) are the basis for the success in the teaching profession:

- occupational, based on (professional and didactic) competence to explain the curriculum at a level corresponding to the abilities of students,
- personal, which stems from the belief that this activity will help achieve a concrete result: the „subject matter explained by me leads to its understanding by the students”

Attention should be drawn to a specific view of the teacher's readiness, the professional didactic. The personal, diverse, acquired experience obtained by the pedagogical interactions of the teacher with his students within the communication about the subject matter and acquired didactic skills with the content of vocational subjects are considered to be significant professional abilities of the teaching student. However, recent studies have increasingly revealed that knowledge is the result of the sum of a person's multiple abilities, along with emotions and experience (Gardner, 2008). In this area, the results of research from different countries on the psycho-educational level of readiness of future teachers showed an unexpectedly high level of self-efficacy. This state was attributed to the fact that the participating students had, so far, had little experience with practical teaching. They have not yet had daily experience with the workload that often plagues teachers in practice due to the diversity of work and school-related activities (Klassen & Chiu, 2010; Ross & Bruce, 2007).

From the perspective of solving the undergraduate training of future teachers in the European context, the focus (within the comparison) was put on the student portfolio in teacher training. Establishing a professional portfolio makes sense if its purpose for teachers and their work is justified. The teacher's portfolio has a variable function and form. The professional portfolio is given by the specialisation (language, artistic, technical, economic, etc.). It is a practical tool for evaluating future teachers in subjects focused on compulsory pedagogical practice and the general professional development of teachers (Dolinská et al., 2020). In other countries (Sweden, France, and China), it mainly serves as a basis for preparation, final work, and evaluation of the practical component (compulsory internship) in

the vocational training of teacher students. The study presents the results obtained by content analysis.

Research Methodology

The research design can be described as qualimetric, e.g., a combination of quantitative and qualitative research. The quantitative research aimed to determine the level of perceived professional competence from the point of view of preparing teachers of vocational subjects from three countries (Poland, Czech Republic, and Slovakia). A standardised OSTES questionnaire (Gavora & Majerčíková, 2012, according to Tschannen-Moran & Woolfolk-Hoy, 2001) was used in the quantitative approach, which has good scientometric indicators. Through individual items, we determined the level of perceived professional proficiency of students of teaching vocational subjects compared to the perceived professional proficiency of beginning teachers (up to 5 years of practice). The research group consisted of 453 respondents – future teachers (students of teacher training programmes) and beginning teachers. There were 261 students (58%) and 192 beginning teachers (42%). 108 documents of compulsory pedagogical practice of students in teaching vocational subjects were analysed and axially coded. The results obtained by the qualitative research approach (from the portfolios of teaching students) were subsequently compared with the questionnaire results.

The research on the perceived professional proficiency of future teachers and beginning teachers in practice up to 5 years in practice was carried out in several areas. One of them was to clarify the subjective beliefs of future teachers and teachers in practice to positively influence problem pupils. This phenomenon (problem pupil, not respecting the rules of the school, of the teacher, not preparing for class, interrupting, etc.) has become a growing problem in schools (Thornberg, 2010).

Our research aimed to assess the didactic success of future teachers of vocational subjects in practice and highlight the reflection of future teachers' attitudes toward the teaching profession in the context of devaluing performance.

Results

The concept of the teacher and his competencies is much broader because it includes both knowledge and level of pedagogical skills, personal qualities, and the way of acting and communicating. The findings obtained by applying a quantita-

tive analysis that beginning teachers have higher self-efficacy than students is not surprising but rather confirms the validity of the questionnaire scales (7.15 : 7.38 in favour of teachers in practice. The scale was 9-point with the plus characteristic ascending towards the number nine).

Table 1. Results of the t-test comparing the average number of points of the OSTES questionnaire in both groups (1st teachers in practice, 2nd students of teaching)

t-Test:		
	Variable 1	Variable 2
Mean	7.14559387	7.381510417
Variance	0.12271642	0.160027103
Observations	24	24
Hypothesized Mean	0	
df	45	
tStat	-2.173540273	
P(T<=t) one-tail	0.017520603	
t Critical one-tail	1.679427393	
P (T<=) two-tail	0.035041207	
t Critical two-tail	2.014103389	

Source: own processing

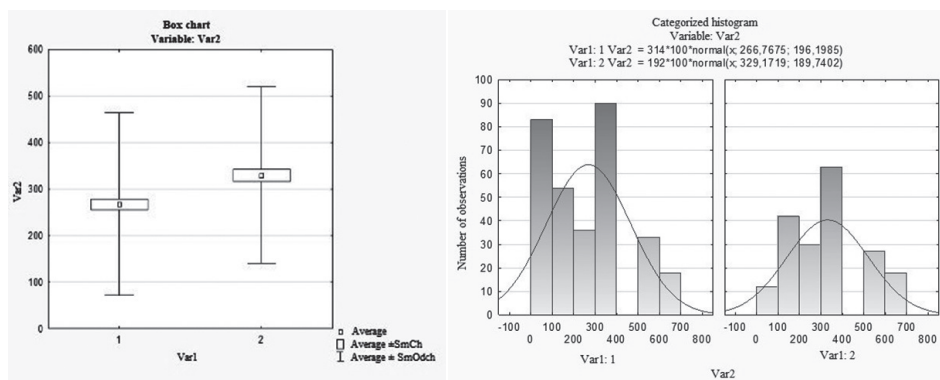


Figure 1. Box chart, a histogram for item 1, comparisons of the answers given by both groups of the Kruskal-Wallis test, Proficiency to influence discipline and values of stimulating trust in students and their parents. (Source: own processing SPSS).

Source: own processing

In the context of the surveyed research data, they also show box graphs for the individual items examined. By comparing the values of multiple tests on the proficiency of influencing pupils in the areas of discipline and the value of stimulating trust in pupils and their parents between the groups of future teachers and beginning teachers, there were two out of five items that exhibited differences (self-efficacy – working with a problem pupil; item, self-efficacy, eliminating the behaviour of the pupil interrupting the course of teaching). The authors Janka Bursová; Roubalova, Marie; Maturkanič, Patrik; Kondrla, Peter also write about the values.

Table 2. Multiple Kruskal-Wallis test, the results of the analysis of the answers of beginning, future teachers. Proficiency in the field of discipline and values stimulating trust in students and their parents

	Beginning teachers				
	(Efficacy to influence values, discipline and evoke trust in students and parents)				
	1	5	19	21	22
Future teachers	3.819	0.987	1.974	1.039	1.601
Probability (p)	0.001	0.309	0.043	0.285	0.104

Source: own processing

Legend: items (1,5,19,21,22): item 1. perceived proficiency – work with a problem student; item 5. perceived proficiency in leading the student to understand the teacher's instructions and rules; item 19. perceived proficiency to eliminate student behaviour that interrupts the course of teaching; item 21. perceived proficiency to cope with cheeky student behaviour; item 22. perceived proficiency to participate with the family in the successful well-being of the student.

Equivalences of both examined groups were found in the proficiency in understanding students (what we expect from them, action against cheeky students, and developing communication with the student's family). A problematic feature of beginning teachers is communication with students, which belongs to the so-called pedagogical social communication. This type of communication is important for achieving educational goals and maintaining an active and friendly classroom climate.

By analysing the portfolios of future teachers from pedagogical practice, results in examining the diagnostic competencies of future teachers (readiness to understand and lead the student) were obtained.

Table 3. Self-reflection on the communication intelligibility of the given instructions in class

Future teachers (5. year master's degree)	% women	% men
I consider myself very well prepared	74.00	69.00
I consider myself well prepared	23.00	28.00
I find myself very unprepared	3.00	3.00
I consider myself unprepared	0.00	0.00
I can't judge my readiness	0.00	0.00

Source: own processing

The communication level of the teaching process is undoubtedly connected with the didactic success of the teacher. In identifying the comprehensibility of the instructions given, it was noted that future teachers assess themselves to be prepared, manage instructions in teaching, and convey the curriculum and the tasks in a clear and intelligible manner. Both women and men, future teachers, agreed that they felt confident in instructing students. The difference in a more positive readiness self-assessment favoured male teachers.

A positive self-assessment of readiness was attributed to mastering quality preparation for teaching, where they assessed themselves as being highly prepared. Mastering the organisation, the process of the lesson and the consistent fulfilment of their instructions by students could be a positive incentive for their satisfied self-evaluation. There may be several reasons for the lower assessment of future teachers' communication skills readiness. As the teachers themselves stated in their opinions in the justification of failure, one of them is the lack of interest and poor communication training of the students themselves in general. Similar results were recorded by Gavora & Majerčíková (2012) in the communication competencies of teachers with the family, in which their little experience with students during teaching practice hindered their professional development.

Discussion

The self-efficacy results obtained by quantitative measurement in teachers are comparable with the results of foreign research (Slater & Main, 2020). In the case where the total score into groups was not differentiated, the measured arithmetic mean was comparable, as is the case in the research conducted by Cobanoglu & Capa-Aydin & Yildirim (2019) where they worked only with a sample of teacher

students (future teachers), the measured arithmetic mean was almost identical (7.26) to our result. The qualitative analysis highlighted the need for a special approach to shaping the professional competence of future teachers. Implementing the portfolio into compulsory professional practice is considered an effective and long-term beneficial innovation to pursue educational goals, considering the educational concept, curriculum, didactic methods, environment, needs, the level of students, etc.

Conclusions

The teacher's actions are, to some extent, determined by his role model, by the beliefs of his professional potential (abilities, skills, knowledge). In the context of complex results of perceived professional proficiency of teachers (evaluated by the questionnaire) and readiness of future teachers (examined by content analysis of documents, self-reflection), we can state comparable self-assessment of teachers in individually defined hypotheses, dimensions, and categories. Beginning teachers assess their perceived proficiency higher than that of future teachers within the framework of self-reflection on their completed compulsory pedagogical practice performance. We are aware that the presented results cannot be generalised. In the training of future Polish, Slovak, and Czech teachers of vocational subjects at universities and colleges, they form a significant and valuable knowledge for creating new approaches to their training.

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