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SELF-ASSESSMENT OF METHODOLOGICAL COMPETENCE OF TEACHERS FOR SUCCESSFUL REFLEXIVE PRACTICE³

Summary: Modern tendencies in society bring many tasks and challenges in all social spheres, and so in the field of education, increasingly focusing on creating a "new profile" of modern teachers. Today's school requires a teacher who critically reflects on his/her own practice, who independently explores and uses these results for the purpose of his/her own improvement, improvement of his/her work and professional development. For a teacher to be a reflexive practitioner, it is necessary for him or her to possess methodological and statistical education, as well as a wider methodological culture. The paper analyses the attitudes of primary and secondary school teachers on the territory of South Serbia towards the importance of theoretical-methodological knowledge for the implementation of pedagogical research and development of their reflexive abilities.

Keywords: methodological education of teachers, methodological competence, reflexive practice, action research.

INTRODUCTION

The time in which we live today is characterized by great changes in all segments of people's lives. The emphasis is especially put on education that should last a lifetime, enabling an individual to continually improve and develop his/her own potential. These changes pose many challenges and difficulties to the modern world, so new solutions and innovations are constantly being sought. Education represents a significant field of changes. This applies to teachers, their willingness to constantly change, research, familiarization with the real educational situation. It is, therefore, necessary to have capable individuals who know how to skilfully combine knowledge, skills, attitudes, and values. One cannot become a competent teacher without continuous professional development, methodological education and focusing on reflexive practice (Boody, 2008; Chee Choy & San Oo, 2012; Kayapinar, 2013; Sellars, 2012; Rudd, 2007). For teachers to successfully conduct research aimed at improving their educational work, they must be familiar with basic methodological and statistical concepts. Methodological education of teachers can be seen not only in concrete knowledge

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in methodology and pedagogical statistics, but also in attitudes or valuations of other competencies necessary for successful educational work.

The subject of this paper is focused on the methodological education of teachers for reflexive practice. The need for this kind of education is considerable, for if a teacher is to be competent enough as a reflexive practitioner, he/she needs to be methodologically educated. Therefore, in the educational work with potential teachers, it is necessary to contribute to their development as future reflexive practitioners so that they become researchers of their own practice, actors and creators of their own development, to be autonomous in making important decisions, associates of professional groups who notice, define and solve a problem in practice.

METHODOLOGICAL EDUCATION OF TEACHERS FOR REFLEXIVE PRACTICE

In modern society, due to various changes, there is a certain transformation of teachers who increasingly gain the role of a critical reflexive practitioners, active researchers, and innovators of their practice striving for its improvement and advancement. The time of increasing changes puts before a teacher many demands to be met in order for him/her to become a true professor. They are no longer just "consumers" of knowledge that scientists demonstrate, nor are they just transporters of this knowledge, but they have become researchers of their own practice.

Reflexive practice should be the foundation of pedagogical changes, and this can occur only if it is academically, theoretically and practically based. Since practice is dynamic and open in its nature, it is extremely important for future teachers to systematically develop the skills needed for reflection that will allow them to reflect on the educational process, to critically analyse the strategy, and to create those that in a particular group and situation lead to progress. Reason (2006) points out that reflexive practice is a challenging, demanding and often attempted process that is most successful as a joint effort and in the right way enables the integration of theory and practice, thoughts and actions. Although this term is interpreted and understood in various ways, reflexive practice has been seen as a means by which practitioners can develop a high level of self-awareness of the nature and impact of their performance, self-awareness that creates opportunities for professional growth and development (Cunliffe, 2016; Hibbert et al., 2014; Gorli et al., 2015; Ripamonti et al., 2016; Pässilä et al., 2015).

For a reflexive practitioner, reflection in action is important, which can be defined as readiness for innovation and action in a new way, where action is the situation in which we are trying to solve a newly emerging problem (Cunliffe & Easterby-Smith, 2004; Leitch & Day 2000; Vaughan & Burnaford, 2016). Reflection opposes routine versus creativity, dictation of choice versus freedom of choice, unification versus pluralism, and rigidity versus reflexivity and openness (Jay & Johnson 2002; Rodgers 2002; Urzúa & Vásquez 2008). Navaneethan (2011) points out that reflexive teaching, in fact, means "looking at what you do in the classroom, thinking about why you did it, and considering whether it works - the process of self-observation and self-evaluation." It contributes to raising our own motives for which we work and contributes to accepting others' opinion as help and contribution, and not as a critique. When defining the notion of a reflexive practitioner, there is a danger of too narrow, but also too broad defining. Many authors (Burnaford, 2011; Farrell, 2004; Frankel et al., 2015; Saleh & Khin, 2011; Zeichner & Noffke, 2011) gives the following definition: Teacher as a reflexive

practitioner should be: a researcher of his/her own practice, an actor and a creator of his/her own development; to have the capacity for teamwork and to foster cooperation; to independently decide on own practice and its development; to, besides cognitive, possess intuitive abilities; to observe, define and solve the problem.

In order to be able to perform the research function well, he/she must develop and foster reflection, and this will not be possible without sufficient knowledge of the methodology of pedagogical study and research. The methodology of pedagogical study and research basically deals with studying and application of appropriate methods, procedures, techniques, or paths of scientific research, thus facilitating better use of the existing research experience, which does not exclude the understanding that the act of discovery cannot be standardized (Gojkov, Krulj & Kundacina, 2002, p. 144; Bandjur & Maksimovic, 2012; Maksimovic, 2012a; Maksimovic, 2012b; Maksimovic, 2011).

For many reasons, teacher practitioners need knowledge of the methodology of pedagogical study and research. A teacher should be able to assess when to apply certain research methods and procedures necessary for the solution of certain problems in the educational-practice. Knowledge in pedagogical methodology enables the teacher practitioner to understand the products of scientific creativity practically, helps him/her to see the sources of problems in a class, to explain them more easily and influence their course. Knowledge in methodology is important, as noted in the formation of a general-cultural profile. They greatly facilitate communication with scientists, help in the development of a culture of communication by means of written words, enable easier tracking of scientific achievements, and the like.

The issue of methodological education for the reflexive practice of teachers is one of the fundamental questions when it comes to good instruction and good education. The methodological education of teachers and its important issues have started to be more serious interests of experts only in the 90s of the 20th century, and some of our prominent pedagogues wrote about the research function of teachers, especially lower primary school teachers (Maksimovic, 2012a; Leitch & Day, 2000; Sellars, 2012). For a number of reasons and especially for professional development, teachers-practitioners require necessary methodological and statistical knowledge as well as methodological culture, a certain statistical culture which includes: knowledge of statistical vocabulary, understanding statistical terms, charts, parameters, symbols, reading statistical tables, finding limit values of statistical measures in statistical tables, knowledge and application of statistical computer packages, and the like.

The undeniable fact is that a teacher-researcher must possess theoretical pedagogical methodological knowledge, be able to research and strictly adhere to the rules imposed by scientific methodology, be educated in that sense, but also creative in order to be successful in the scientific-research activity of educational phenomena. That pedagogical statistics to contribute to the improvement of the methodology of pedagogy is confirmed by the testimonies of other authors who point out that by its numerical way of expression it enables a high degree of precision when researching pedagogical phenomena or sizes in the part of describing and interpreting the results obtained (Levin, 2012; Vandenberg, 2006).

Reflective practitioner education is a new methodological approach that is most often based on action research as one of the methods of research and improvement of the professional

preparation process (Kundacina i Bandjur, 2004; Hibbert et al., 2014). Kundacina and Bandjur (2004) consider that action research is the most efficient, the most immediate and most natural way of simultaneous change and improvement of educational practice, because in them they naturally check or analyze methods, forms, resources of a teacher's work or some other practically oriented educational- educational issues. The main feature of action research is their orientation and intentionality towards improving educational practice, identifying and solving problems by teachers themselves, and not professional researchers and expressive dialectics. Elliot (Elliott, 1991; 1993a; 1993b; 1993c; 1993d; 2007) argues that action-based research is a method that is not reduced to pre-planned steps, believing that what differs this type of research from other types is the intent of transforming current practice and methodological apparatus.

When we talk about types of action research, there are numerous divisions. Thus, with Lewin (1946), we find diagnostic, collaborative, empirical and experimental action research, and with Grundy, (1994) we have a classification to technical, practical and emancipatory research as three subtypes of action research classified by the role and relation of researchers and practitioners. Both technical and practical action research is close to the Schön (1987) notion of "reflection at work" as "hermeneutic activities of understanding and interpreting social situations with the intent to improve". The third type of emancipatory action research creates a community of research participants, i.e. critical self-reflexive actors who would work on the plan of changing the practice starting from individual to global levels.

Education of teachers for reflexive practice has to be aligned with the goals of education, being somewhat different from typical academic education. It involves managing knowledge. In that sense, there must be a move towards critical thinking, awareness of one's own beliefs, the development of intuitive and experienced knowledge and the critical use of theoretical knowledge. The type of knowledge needed by reflexive teachers should combine knowledge of problems and understanding of problems, personal attitude towards them, readiness to review and make a decision to act appropriately. At the same time, it is necessary for the teacher to know the skill of acting so that the appropriate change can be fully completed.

METHODOLOGY OF RESEARCH

This research was to determine the attitudes of primary and secondary school teachers in the territory of South Serbia about the methodological competencies to be possessed by all teachers dealing with an educational activity. It is necessary to get to this knowledge about teacher's evaluations of methodological competencies, as this would reinforce their awareness of the importance of methodological education and reflexive practice. Based on the goal set, six tasks were identified: 1) Examine the attitudes of teachers about the importance of theoretical-methodological knowledge for carrying out pedagogical research; 2) Examine if there are differences in the application of research in their work, depending on their years of service; 3) Examine how teachers process the data they have received in their research; 4) Examine the attitudes of teachers about the importance of action research in their in-service training and practice changing; 5) Examine whether teachers use the results of previously conducted research in their work, with the aim of improving educational practice; 6) Examine whether teachers use different in-service training programs that contribute to the development of their reflexive abilities. The hypotheses in the research are as follows: 1) It is assumed that teachers consider that theoretical-methodological knowledge is important for carrying out pedagogical research, regardless of the years of their service and the university

where they completed the studies; 2) It is assumed that there are no differences among teachers regarding the application of research in their work, that is, it is assumed that they conduct different types of research in order to improve educational practice, regardless of the years of their working experience; 3) It is assumed that teachers are familiar with the SPSS data processing program and use it in the processing of data obtained in their research; 4) It is assumed that teachers consider that action research is important for their professional development and change of practice; 5) It is assumed that teachers use the results of the conducted research to change and improve their educational work; 6) It is assumed that teachers use different in-service training programs as they believe that this is the way to contribute to the development of their reflexive abilities.

The research uses a descriptive method. Instrument scale of Likert type assessment MONRP (methodological education of teachers for reflexive practice) is specially designed for the purpose of this research.

The research sample includes 100 primary and secondary school teachers from Nis and the surrounding area. The sample has the characteristics of a deliberate choice of respondents. In 2017, four seminars were held, accredited by the Institute for the Advancement of Education (ZUOV). The title of the seminar was: Action research in the function of improving the quality of teaching and learning. After the program of professional development conducted by the authors of this paper, the respondents filled in the assessment scale instrument on which they examined their acquired methodological findings. The respondents are classified into 3 categories by the length of their service work (from 1 to 10, from 11 to 20, from 21 and more), which is shown in Table 1.

Table 1: The sample of teachers by variable: Years of service

Years of service	f	%
1 to 10	18	18%
11 to 20	43	43%
21 and more	39	39%
Total	100	100%

Table 1 shows that the structure of respondents according to years of service is as follows: of the total number of respondents, 18% has up to 10 years of service, 43% has 11-20 years of service and the remaining percentage of teachers (39%) works for more than 20 years. That is, the first category includes teachers from 1 to 10 years of service (n = 18), the second category includes teachers of 11 to 20 years of service (n = 43), and the third category covers teachers with over 21 years of service (n = 39).

RESULTS OF RESEARCH

With this research, we wanted to examine whether teachers recognize the importance of theoretical-methodological knowledge for carrying out pedagogical research, what attitudes they have in terms of methodological improvement, and whether they think that they are methodologically educated for performing reflexive practice. The overall goal of the program

was to improve the quality of educational work through the training of teachers for planning and conducting research. The specific objectives of the training program are defined through the importance of recognizing and correctly defining the problems teachers face in practice, as well as familiarizing participants with the approaches to analyzing and solving problems through pedagogical research. The goal of the program was to acquire and enhance the knowledge and skills necessary for planning, implementing, monitoring and evaluating the effects of the introduced changes. The results of the training have shown that teachers motivated for professional development can find out much more about the new one and that in the field of education they can always find numerous opportunities for improving their own practice. The data were processed using a frequencies and percentages and descriptive statistics that served to determine whether the frequencies obtained in the study deviated from those frequencies that we expect under a certain hypothesis, or to check the previously proposed research hypotheses.

The data were processed by frequencies and percentages and descriptive statistics

Table 2: Methodological-theoretical knowledge

	N	Completely disagree	Mainly disagree	Partly agree	Mainly agree	Completely agree	M	SD
I believe that the methodological training of teachers is necessary in order to successfully conduct pedagogical research	100	-	-	33%	53%	14%	3.81	0.66
Teachers' dealing with scientific research in the field of education requires theoretical-pedagogical and methodological competence	100	-	14%	19%	43%	24%	3.72	1.03
Methodological education and methodological culture of teachers are necessary to conduct pedagogical research	100	-	-	15%	54%	31%	3.78	0.66
Methodological competencies are important for understanding and applying the results of scientific work in practice	100	-	14%	12%	43%	31%	3.74	1.03

In the education of teachers, methodological education has a double significance: narrowly professional and general-cultural. Many authors (Christenson et al., 2002; Farrell, 2004; Jay & Johnson, 2002; Lustick, 2009) points out that general education and a broad, balanced personal development are essential components of any competence, even that emerging in very narrow professional specializations. General methodological education lies in the background of any research, so its presence in study programs is necessary as is the

development of teacher competencies both through education and after it in the course of work and in-service training.

Table 2 shows teachers' attitudes about the need for methodological theoretical knowledge for practical educational work are. Namely, we can conclude that 67% of teachers mostly or completely agree with the assertion that methodological training of teachers is necessary in order to successfully conduct pedagogical research, while the remaining 33% partially agrees with the same claim. Also, 67% of teachers mainly agree or completely agree that the teacher's theoretical and pedagogical and methodological competence is needed in order to deal with scientific research in the field of education, 19% partly agree, and the other 14% mostly disagree with the claim. Regarding the third claim, 85% of the respondents included in this survey consider that methodological education and methodological culture of teachers are necessary to conduct pedagogical research, while the remaining percentage of respondents (15%) partially agrees with the same claim. 74% of teachers mostly or completely agree with the fourth claim of this research, i.e. 74% of them believe that methodological competencies are important for understanding and applying the results of scientific work in practice.

Table 3: Research work of teachers

	N	Completely disagree	Mainly disagree	Partly agree	Mainly agree	Completely agree	M	SD
I am capable of independent or team planning and conducting of research in my educational practice	100	-	-	21%	67%	12%	3.92	0.86
At least twice a year I carry out some kind of research to change or upgrade my practice	100	-	17%	9%	56%	18%	3.62	1.026

Most authors (Burns, 2010; Coghlan & Brydon-Miller, 2014; Done, 2014; Levin & Greenwood, 2008; Wittmayer & Schöpke, 2014) believes that action research is a specific type of great importance for pedagogical theory and practice, despite the fact that there is insufficient affirmation and application in pedagogical science, where action research plays an essential role in active research activity leading to changes in the improvement of the entire educational process, pedagogical theory, and practice. Due to the innovative function, it has in the educational process, action research can also be considered a variant of developmental research.

When we allow for the attitudes of teachers on research work in educational practice, 73% of them think they are trained to conduct research independently or in a team, and 74% do this at least 2 times a year in order to change and improve educational work.

By calculating the t-test, we have come to the conclusion that there is no statistically significant difference when it comes to years of service of teachers. This confirmed the second

hypothesis of this study which reads: it is assumed that there are no differences among teachers regarding the application of research in their work, that is, it is assumed that they carry out different types of research in order to improve educational practice, regardless of the years of their work experience.

Table 4: Teachers' statistical literacy

	N	Completely disagree	Mainly disagree	Partly agree	Mainly agree	Completely agree	M	SD
I arrange and handle manually data I come across in the research because I do not know well computer programs for data processing	100	67%	26%	7%	-	-	4.14	0.77
I am not sufficiently familiar with statistical data processing so I leave this job to a pedagogue or psychologist	100	53%	23%	17%	7%	-	4.13	0.72
I know the SPSS program for computer data processing and use it when interpreting the results of the research	100	-	-	15%	54%	31%	4.20	0.73

Guilford (1968) points out that (...) statistics is an essential part of professional education and it is found in the basics of every research activity. Maksimovic (2012a) emphasize that every modern researcher knows that it is impossible to more fundamentally and scientifically study any problem in education without knowing the statistical-methodological practice of research, which confirms the necessity and importance of pedagogical statistics for scientific research work and successful engagement with the educational process.

In Table 4 we can see how teachers handle the data they obtain in their research, whether they are familiar with the SPSS data processing program and whether they use it when processing data obtained in their research and thereby check the third hypothesis: "It is assumed that teachers are familiar with the SPSS data processing program and use it in the processing of data obtained in their research". We see that 67% of them stated that they completely disagree with the claim that the data they receive in the research are arranged and handled manually, 26% of teachers mostly disagree with it, while the other 7% of teachers partly agree with the sixth claim. Such respondents' answers are positive because they lead us to the conclusion that teachers know computer programs for data processing. Also, we see that 53% of respondents are familiar with statistical data processing, but also that only 7% leave this job to a pedagogue or a psychologist. 85% of teachers stated they know the SPSS

program for computer data processing and use it when interpreting the results of the research, the remaining percentage (15%) only partially agrees with the eighth statement of this research, and no one denied this statement. From the above, we can conclude that teachers are familiar with the SPSS data processing program and use it in the processing of data obtained in their research so that this hypothesis can be considered confirmed.

Table 5: Significance of implementation of action research for changing educational practice

	N	Completely disagree	Mainly disagree	Partly agree	Mainly agree	Completely agree	M	SD
The application of action research is important for changing educational practice	100	-	-	13%	71%	16%	2.81	0.89
I think that the implementation of action research is significant in the professional development of teachers	100	-	5%	11%	71%	13%	3.02	0.91
Implementation of action research at school contributes to creating higher quality educational work in school	100	-	3%	15%	76%	6%	3.38	0.66

Action research is always motivated by the need to improve some work segments. Their performance implies that a teacher introduces a novelty into his work and at the same time monitors the effects of that change, compares the results of the work with the previous results (prior to the introduction of the change) and, on the basis of this, devises further steps in the work. The significant role of action research is reflected in enabling the rich experience to be shaped and shared, but also to use its own experience more systematically. In other words, this form of research is inextricably linked to the review of one's own practice (Brookfield, 1995).

In Table 5 we can see whether teachers recognize the importance of implementing action research for their professional development and changing practice and thereby check the fourth hypothesis of the study: "The assumption is that teachers believe that action research is important for their professional development and changing practices." By reviewing Table 5, we see that 87% of teachers mainly or completely agree with the claim that action research is important for changing educational practice, while 13% partially agrees with that claim. Also, we see that 84% of respondents realize the importance of implementing action research in the professional development of teachers, 11% partially agree with that, while 5% of teachers do not consider that the implementation of action research contributes to their professional development. Regarding the attitude of teachers about the fact that action research contributes to the creation of higher quality educational work in the school, we have obtained the following results: 82% of them mostly or completely agree with this claim, 15% in part, and 3% mostly disagree with it. From this, we can conclude that teachers recognize the importance

of implementing action research for their professional development and change of practice, and thus confirm the fourth hypothesis of this research.

Table 6: Application of research results

	N	Completely disagree	Mainly disagree	Partly agree	Mainly agree	Completely agree	M	SD
I keep up with and use the results of scientific research published in pedagogical journals and other pedagogical literature because in this way I can improve my work	100	-	-	9%	68%	23%	3.81	0.66
Research results can help me self-evaluate my work and improve my educational practice	100	-	-	-	78%	22%	3.72	1.03
It is important that the teacher, on the basis of previously published research, deliberately changes the conditions under which educational work takes place	100	-	-	12%	81%	7%	3.78	0.66

When considering the attitude of teachers about the significance of previously published research for changing and improving educational work, of the total number of respondents, 91% keeps up with and uses the results of scientific research published in pedagogical journals and other pedagogical literature, and 100% of respondents agree that research results could help in the self-assessment of work and improvement of educational practice. Also, in Table 6, we can see that 88% of respondents generally agree with the fact that it is very important that a teacher, on the basis of previously published research, deliberately changes the conditions under which educational work takes place.

Table 7: Teachers' readiness for improvement

	N	Completely disagree	Mainly disagree	Partly agree	Mainly agree	Completely agree	M	SD
I constantly follow programs for teacher training and I try to be the user of them at least 2 times a year	100	-	-	21%	62%	17%	0.28	0.99

I think that I am sufficiently educated and perform my job well, so I do not need additional education	100	37%	47%	16%	-	-	0.18	0.72
Permanent professional teacher training contributes to creating higher quality work at school	100	-	-	-	16%	84%	2.92	0.88

In order for a teacher to successfully pursue scientific-research work in the field of education, in addition to theoretical-pedagogical and methodological ability, teachers' creativity is also needed. Heitzmann (2008) notes that research practice implies not only theoretical-methodological knowledge but also practical knowledge that will enable the researcher to choose the appropriate methodological procedure in the research. Many of the weaknesses in improving the educational process are the result of insufficient methodological knowledge of teachers. This methodological knowledge required by each researcher is acquired during the education for teacher's call, so continuing teacher training is required. From the need to improve educational practice, particular attention is paid to the role of teachers in research work.

Table 7 shows teachers' attitudes about professional development and improvement of their reflexive abilities are. Namely, we can conclude that 100% of teachers mostly or completely agree that permanent professional development contributes to creating higher quality work in school. Also, we see that 84% of them stated that they mainly or completely disagree with the claim that they are educated enough and that they do their job well so that they do not need additional education. Such respondents' responses are positive because they lead us to the conclusion that teachers use different in-service training programs and see that they in that way they contribute to the development of their reflexive abilities. As for the first assertion, 79% of teachers stated that they continuously followed training programs and at least 2 times a year tried to attend the same.

From the given results in Table 6 and Table 7, we can conclude that the sixth hypothesis is: "It is assumed that teachers use various in-service training programs, as they consider that in that way they contribute to the development of their reflexive abilities" is confirmed by this research.

CONCLUSION

Introduction of the Methodology of Pedagogical Research course into the curriculum of the professional education of teachers has imposed the need to investigate its significance and it is, therefore, justifiable to ask: Is this study course in the opinion of graduated teachers justifiably introduced into instruction? Research on this problem was done by many authors (Leedy & Ormrod, 2005; Lodico et al., 2010; Levin & Greenwood 2008). These researches contributed to a more comprehensive analysis of the curriculum, methodological education and methodological culture of future teachers, with the aim of raising these components of

professional competence to a higher level. However, we think that this issue must be more comprehensively investigated in our region.

The methodological education of teachers is a long-term process in which, through learning, practical work and research activities, knowledge is completed and skills and abilities developed. The competencies of teachers are undoubtedly developing more rapidly, and statistical information as a part of professional competences becomes everyday life, which is a significant improvement compared to some past times when teachers were only lecturers. Based on theoretical considerations and research of attitudes of teachers-reflexive practitioners, we tried to determine their attitudes regarding the importance of methodological education for the improvement of educational practice and personal improvement. The aim of this research was to find out whether teachers, reflexive practitioners, conduct research in their educational work, consider it an important segment of their work, whether they recognize the importance of action research to improve and change their practice and how much they are ready for in-service training.

From the results obtained, it can be concluded that teachers are aware that methodological improvement is necessary in order to successfully conduct pedagogical research and that theoretical-pedagogical and methodological competence is necessary for the teachers to do scientific research in the field of education and thus confirm the first hypothesis of this research.

Namely, we can conclude that teachers are trained to conduct research independently or in a team and that most of them do so at least twice a year in order to change and improve educational work, thus confirming the second hypothesis of this research as well.

As for the statistical literacy of teachers, we obtained positive results, that is, teachers are familiar with the SPSS program for computer data processing and use it when interpreting the results of some research. When analysing the results of the research, we can see that none of the respondents denied this claim, which is a good sign that in the near future many teachers will use the SPSS program independently in the processing of data, that is, they will not leave this job to a pedagogue or a psychologist.

We can conclude that teachers recognize the importance of theoretical-methodological knowledge for the implementation of pedagogical research, that they are familiar with the SPSS data processing program and use the same in their educational work. Teachers also recognize the importance of action research to change educational practice, use the results of previous research and are ready for professional development, with the aim of improving educational work.

Teachers also recognize the importance of implementing action research for their professional development and changing practices, and we can also see their positive attitude when it comes to the readiness for professional development and improvement of their reflexive skills.

As a general conclusion of this research, on the basis of the obtained results, we can say that the teachers involved in the research consider that they possess necessary methodological knowledge they apply in practice, that they are mostly ready for improvement, understand the significance of reflection and encourage it in practice.

It is necessary to open up some other questions through a critical review of the presented research results. Although we have assumed positive hypotheses of the research, we should not neglect the possibility of the presence of socially desirable answers. As for the income sample of 100 respondents, the validity of the generalization of the conclusions from the random samples to the basic set remains unknown. The question arises as to how many teachers have had in their studies as a teaching subject Methodology of Pedagogical Research? Have they been educated for conducting a research by attending a seminar or through their education, or perhaps an informal form of education? Will the results be different if teacher education programs, syllabuses of the subjects they listened, topics of the attended seminars are reviewed? The research also leaves room to determine the difference in the self-assessment of the methodological competence of teachers who have completed teaching faculties and those who are not, then whether the difference is statistically significant in relation to the education cycle and years of service and many other independent variables. The research has opened numerous fields subject to both qualitative and quantitative research of the problem of methodological teacher education.

Positive results obtained by this research can be seen from the aspect of the success of the programs that the teachers have attended. In fact, the results of the research can not be generalized to the entire population of teachers. Each shift in the field of pedagogical research methodology is a good shift, however methodological, statistical and research knowledge, skills and competencies of teachers should be examined much more profoundly. Only further research on this topic could establish a real picture of teachers' methodological competence. If teachers conduct research, they process data, it would be worthwhile to examine which types of research are most commonly conducted, have insights into reports of their pedagogical and research work, ways of interpretation, and see how their methodological competence contributed to a successful educational practice. Only adequate arguments could question how much methodological competence is "real" and how "socially desirable" the teachers' response.

It could therefore be concluded that teachers' self-assessment of their methodological literacy could not be accepted with certainty because there are no reliable data on the actual state, which is a impulse for a new step in exploring the methodological competence of the precursor as a basis for the expected self-reflection.

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