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PROFESSIONAL COMPETENCIES OF FUTURE PEDAGOGUES[4]

Summary: The worldwide expansion of higher education introduced the problem of quality of knowledge that graduate students possess, as well as question whether they are competent to fulfill the requirements of their future profession. Education and training for professional work, in our educational system, is realized in various ways: through lectures, exercise classes, seminar paper writing, research projects, consultative work and practice in educational methodology. These are only some of the key themes concerning university education of pedagogues-to-be that should be considered if we are to train them to perform a high-quality educational work. The purpose of this research is to construct an evaluation scale that will examine the importance of competencies the future pedagogues are acquiring during studying. It is constructed on the basis of different classifications of competencies of a pedagogue. The research has shown that the students highly value professional knowledge that is necessary for a high-quality educational work, and that they are familiar with the area of work and the requirements of their future profession. They also acknowledge the importance of acquisition of competencies in scientific and professional research. All of the statistical parameters give quite encouraging and affirmative data, since the purpose of university education, after all, is to train the future pedagogues for high-quality educational work and to develop their personalities so that they can manage a variety of situations. Particular significance of this paper resides in the fact that the research performed was conceptualized in such a manner as to emphasize the analysis of the pedagogy studies program from the students' point of view. Timely information regarding the profession's requirements and encouraging interest in research of educational practice can encourage further development of young pedagogues' professional competencies as well.

***Key words*:** pedagogy, students, pedagogues, university education, competencies

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Introduction

Nowadays, graduate schools are expected to educate students to live and work inside knowledge society organizations, the essential values of which are applicability of knowledge, active attitude towards professional development and lifelong education (Andrews & Higson, 2011: 411-422; Zelloth, 2009; Person & Rosenbaum, 2005: 412-429). For these reasons, graduate school is given a role of an institution that produces knowledge which can be used in everyday life and professional work, with the goal to improve and adjust the existing education system, as well as to improve personal and professional development of future pedagogues (Kamenarac i Lucija, 2010: 216-228).

The job of a pedagogue as a counselor in educational institutions includes a wide array of tasks, such as participation in planning of the school's curriculum, supervising the realization of educational process, tracking and evaluation of activities, collaboration and work with students, parents and teachers, as well as research and improvement of the educational practice. He is supposed to work individually, and as a part of professional body of experts and institutions that operate both inside and outside of a school, Therefore, incentives to abandon traditional models of education (lifetime diploma), that is, to abandon the formal framework of education, and to find new educational models, all come from the field of practical educational work (MatoviC, 2000: 606-615; Savovic i Jevtic, 2000: 23-40). All of them indicate that education should imply acquisition of permanent competencies, relying on creativity, innovations, and personality autonomy.

The most important traits that influence one's fulfillment in personal and social life, are at the same time the guiding principles in competency development, and they are: autonomy, tolerance, readiness to participate, openness, and flexibility (Gojkov, 2013; 2004; Djurisic-Bojanovic, 2007: 211-224). Professional competencies acquired by students during their higher education represent the main factor of productivity, competitiveness, and the quality of future work. In this work, we will address the competency as a pedagogical category and a competent pedagogue as a person with developed personality that sets society in motion.

Competency-based approach in education of pedagogues

Competency-based approach in higher education was developed in America during 1960's as a response to expressed need for curriculum reformation, particularly in the teacher education area. This demand for reform generally originated from the needs of society, but it was the result of the new education policy and the influence of official state institutions as well. Higher education was demanded to become more relevant, and its results tangible and distinct. This initiative slowly spread through America's education system, only to gain in importance in the rest of the world twenty years later (Burke, 2005). This approach was widely supported because it offered a clearer picture of educational outcomes; it became more predictive and more efficient when properly used. Nevertheless, it brought a significant contribution to the area of the individualized learning. With goals made clearer, the better motivation was achieved and the focus on the achievements of students themselves was accomplished (Houston & Howsam, 1972).

Basic risks that came with competency-based approach included the excessive differentiation of specific competencies and possible loss of insight into the whole. The basic argument that critics advanced was that a competent person had general type characteristics and

capabilities which were more than just a bunch of individual applicable skills. Moreover, they argued that this approach would result in the bureaucratization of higher education, and allow for external control at the expense of quality of education. At higher level, it represents a complex process which requires first acquisition of conceptual knowledge, and then connecting that knowledge with practical experience (Burke, 2005; Bowden & Masters, 1993). These arguments are mainly built on the fact that competency-based approach in education had originated from a positivist perspective which emphasized the technical aspects of a job. Its goal at the beginning had been to clearly define competencies required for performing job tasks, and to closely connect the education with professional training.

However, humanistic orientation links the term competency to the societal and intellectual aspects of the job in question. It emphasizes the needs of a person as an individual as well as his aspiration towards self-development and self-realization. From the point of view of humanistic orientation, competencies are considered as qualities possessed by successful and accomplished people in a particular job.

That was how generic competencies were created, and they encompassed both personal characteristics and social skills necessary for professional and competent work (Burke, 2005; Stankovic, 2010; Chappell et al., 2000). Also, the nature of the approach itself carried the idea that society was dynamic and its perspective developmental, so it led to the development of competency-based approach, which didn't tend to become a final and sole model, and whose initial flaws were overcome to a large degree. From the standpoint of modern science, this approach doesn't threaten to impoverish school curriculums or make them less demanding in terms of amount of knowledge, but provides them with another quality. By investing into operationalization of knowledge, it makes them firmer and more stable. Unlike knowledge-oriented approaches, this approach understands knowledge in a much wider and more comprehensive manner.

In a light of professional pedagogue education, it means that the focus is not only on possessing particular pedagogical knowledge and skills, but also on the development of personal characteristics and professional skills necessary for establishing, building and improving relationships with students, their parents, and colleagues as well. During the process of university education, pedagogues get prepared to participate in educational institutions' curriculum planning, organizing educational and other activities, as well as performing analytical researches as a means to improve educational practice. All of these require adequate knowledge, professional skills, and personal potentials as well.

Educational implications of modern system of education point to the rising complexity of the role of pedagogue (as a professional counselor) in kindergartens and schools. Function and significance of the research undertaken by the pedagogues is evaluated against its success to connect scientific research and the process of evaluation, assumptions and possibilities to develop collaborative relationships in a school, and its potential to enhance the role of a practitioner in the research process (Hebib, Matovic, 2012: 67-82). That is the reason the university education of pedagogues must be adjusted to the requirements and challenges of modern society and its education system, which implies the competency-based approach. Ever since the past several years, the number of applications always overcomes the enrollment rate at pedagogy departments. Such situation imposes the need to check the quality of the selection of applicants (Matovic, 2010: 62-72), because the university education of pedagogues-to-be, prepares them to participate in educational institutions curriculum

planning, to organize educational and other activities, as well as to perform analyses and researches with the aim to improve educational practice, which requires them to possess adequate knowledge, professional skills, but personal potentials as well.

One of the pre-requirements for good affirmation of a pedagogue is a high-quality preparation for the profession, development of general and professional knowledge, gaining experience. Only a pedagogue who possesses certain competencies in various aspects of pedagogical work, a pedagogue who critically deliberates about himself or herself and his or her pedagogical work, improves the quality of work, and creates a stimulating environment in a school, can be satisfied and expected to advance in his/her profession.

Young people are expected to develop higher order intellectual skills, to be well trained in planning techniques and to be able to predict the consequences that their decisions and actions might bring, as well as to develop altruism, empathy, mutual understanding and communication, leadership, management and cooperation skills. Pedagogue's professional competencies imply high-quality professional qualifications, ability to effectively link educational theory and practice, where pedagogue assumes the role of a creator (Kopas-VukasinoviC i MaksimoviC, 2011: 688-702; 2010: 587-602; Trnavac, 1996; Juric, 1977) as well as readiness for change, and flexible use of knowledge and creativity, which are considered to be the most important personal competencies in modern circumstances. Knowledge, creativity, ability to take initiative, and readiness to change are the keys to the development of both organizations and individuals (Gojkov, 2013; Djurisic-Bojanovic, 2007: 211-224). Adapting the educational system to the strategy of society development also requires the reform of curricula so that it provides functional, computer and technological literacy, stimulates creativity, and develops critical thinking and appropriate individual skills. Moreover, practice has shown that the requirements of future profession represent a proper indicator of the skills young professionals should develop.

Defining of educational outcomes in terms of competencies means breaking with a long-term tradition in education which defined its goals in terms of specific knowledge that should be acquired. According to the European Commission report from 2003, including research in higher education curriculums contributes to the development of competencies which are important for many areas of professional work, not only for the work on scientific research (*Commission of the European Communities, 2003*). The competencies required for knowledge economy are, according to the report mentioned above, closely related to scientific research competencies. The role of research institution, which has always been assigned to universities, gained new meanings now. Apart from its main function of producing new knowledge, research assumes an educational role at universities. The mission of the university based on the concept of *education and research* is being transformed towards the concept of *education through research*. It means removing obstacles which one may encounter on the way towards social advancement and personal development (Djurisic-Bojanovic, 2007: 211-224).

Competencies, unlike knowledge, cannot be learned from textbooks and this approach implies that the rules of self-development and self-realization can be found in an individual as well as in his environment (Jermakov, 2011). Taking this description into account, as well as a far less complicated but equally substantial description given by Suzic (2013) who claims that competency represents the capability to act properly on the spot, we can conclude that competency-based approach is, hence, more pedagogically demanding. For the sake of easier

and more efficient operationalization, Stanicic (2003) divides the competencies of pedagogues into personal competencies which encompass general behavior and response; professional competencies which include professional knowledge required for creating a vision; developmental competencies which help the process of improvement; action competencies which imply efficient work in practice; and social competencies which influence interpersonal relationships. Analyzing professional competencies, several authors (Jermakov, 2011; Zizak, 1997: 1-10) agree that they include three elements: professional knowledge, professional skills and individual's personal potentials. Essentially similar, albeit terminologically different division, is made by Jermakov (2011), who distinguishes three levels of competencies. The first level is key or general cultural level, which includes competencies that go beyond the scope of education and have meta-object as well as social-cultural significance (this level of competencies is analogous to the individual's personal potentials stated in the division above). Then, the second level, or general education level, is the one which refers to all subjects present in some area of education, and it is analogous to the professional knowledge, while the third or subject-private level refers to special competencies that form within certain subjects and this level represents the professional skills.

Considering the stated views and definitions we can say that the professional competencies of a pedagogue ask for general and specific pedagogical knowledge which must be systematized and scientifically based; skills which allow for competent work, encompassing methodological, evaluation and research skills, and usage of modern teaching resources, information and communication technologies; and finally, personality traits which are necessary for establishing, building and improving relationships with students, their parents, and other colleagues, as well as successful bearing with other responsibilities of the pedagogue's profession.

Current educational system prepares young people for the 21st century life, for professional and life-style work. That is the reason why pedagogy is wholly committed to the futurology of education. If children are to acquire knowledge they will need in future, university has to find out what that knowledge is, what skills and capabilities their profession will require. SuziC (2005) states 28 competencies of the 21st century which are the basis for understanding the personal potentials of every modern man, and especially for the construction of the modern pedagogue model. As the scope of our research is not wide enough to deal with each competency individually, we paid particular attention to the following competencies: comprehension capability, metacognitive, critical and creative thinking, emotional awareness, self-control and adaptability, interpersonal skills and action competencies, such as conscientiousness, responsibility, persistence and the ability to take initiative.

The methodological scope of the research

The subject of this research is the opinion of students from pedagogy departments on professional competencies needed for their future profession. The purpose of this research is to determine the students' opinions on the efficiency of the pedagogy curriculum in developing their professional competencies.

Descriptive method was used for the research. PCP instrument (Professional competencies of future pedagogues) was created particularly for the needs of this research. The values of KMO and Bartlett tests show that factor analysis is justified, and that instrument created for the needs of research is valid. In order to check whether a data set is suitable for factor analysis

Kaiser-Meyer-Olkin (KMO) test should be higher than 0,3, and the value of Bartlett test should be significant, that is, its value needs to be 0,05 or less.

Chart 1: *KMO and Bartlett test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.792
Bartlett's Test of Sphericity	Approx. Chi-Square	1643.111
	df	406
	Sig.	.000

Since the value of KMO test amounts to 0,792, and since Bartlett's test shows that the value is statistically significant, that is, it amounts to p= 0,00, we can confirm that the factor analysis is justified (Chart 1).

Based on the goal set, there are two tasks: 1) to distinguish factors which describe the students' reflection on professional competencies from the KPGO scale; 2) to examine whether there is a statistically significant difference between the answers given by the students of the second, third, fourth or master year of those who study pedagogy. Hypotheses are the following: 1) it is assumed that the distinguished factors will be oriented towards pedagogues' professional knowledge, scientific research skills, and competencies necessary for the profession; 2) it is assumed that there is a statistically significant difference between answers given by the students of different years.

A deliberate sample is the one where a researcher deliberately chooses the sample, individuals, groups, variables etc., which will, according to his estimation, contribute most to the research (Kozuh i Maksimovic, 2012). The deliberate sample is the one willingly chosen because there are convincing data suggesting that it is very representative of the whole population (Gilford, 1968). Therefore, our research sample includes 122 students of the second, third and fourth years of undergraduate studies, as well as the students of master studies of the Pedagogy Department of The Faculty of Philosophy in Nis, during the 2013/2014 school year.

The variable of the year of study is operationalized as to show us the different opinions of the students on the professional competencies they acquired studying up to that point. Therefore, the students' reflection on self-evaluation of the personal potentials, scientific research skills, knowledge, and competencies required for the implementation of pedagogical research which are quite necessary for the world of science they shall venture into, are taken into consideration. The first year was not included into the research sample since the first-year students are only at the beginning of education process, and they have yet to acquire knowledge and competencies by studying various pedagogical disciplines. That is the reason why such selection of the research sample was taken, based on the subject set, tasks, and research hypotheses. The research included 45 students of the second year, 20 students of the third year, 43 students of the fourth year and 14 master students of pedagogy. The structure of respondents organized according to their year of study is presented in Chart 2.

Chart 2: Respondents' structure according to their year of study

Year of study	f	%	Valid %	Cumulative %
Second	45	36,9	36,9	36,9
Third	20	16,4	16,4	53,3
Fourth	43	35,2	35,2	88,5
Master	14	11,5	11,5	100,0
Total	122	100,0	100,0	

The analysis of the research results

By the Kaiser's criterion of the process of distinguishing factors, we rely only on the components in which the characteristic root value amounts to 1 or more. In Chart 3, it can be clearly seen that there are 8 factors which have the characteristic root which amounts to 1 or more. These 8 components explain in total 66, 93% of the variance.

Chart 3: The factor analysis of the PCP scale – Pedagogues' professional competencies

	Characteristic root	Variance %	Cumulative %	Characteristic root	Variance%	Cumulative %
Personal potentials	7.367	25.404	25.404	6.286	1.677	21.677
Scientific research skills	3.769	12.998	38.402	3.157	10.885	32.562
Professional knowledge	2.144	7.394	45.797	2.386	8.227	40.788
Pedagogues' area of work	1.683	5.804	51.601	2.119	7.307	48.095
Counselling work and practice	1.170	4.035	55.636	1.550	5.345	53.440
The role of pedagogues	1.152	3.973	59.610	1.376	4.746	58.186
Necessary competencies	1.098	3.785	63.394	1.315	4.535	62.721
Knowledge	1.026	3.539	66.934	1.222	4.213	66.934

The factors were extracted using the factor analysis with varimax rotation, and the characteristic-root-above-1 criterion was used for getting the factors. The data acquired by the procedure of factor analysis show that the instrument created for the needs of this research has approving metrical characteristics. The percentage of acquired variance is high and amounts to 66, 93, which exceeds the expectations of instruments created for the needs of a research performed in social and humanistic sciences.

Factor saturation of each factor is represented in the matrix (Chart 4). The value picked as the criterion of minimum saturation of the items is 0, 44. All other saturations are mainly above

this value as can be seen. All of the 29 items are retained, divided into 8 factors, and are named in accordance with the content they include.

Chart 4: The Factor Rotation Structure Matrix

Rotated Component Matrix[a] Components								
	Personal potentials	Scientific research skills	Professional knowledge	Pedagogues' area of work	Counselling work and practice	The role of pedagogues	Necessary competitions	Knowledge
1	**.881**	.054	.107	.054	.028	-.035	-.074	-.034
2	**.853**	.104	.021	.026	-.019	.072	-.165	-.038
3	**.826**	-.007	.044	.037	-.070	-.126	.057	.078
4	**.758**	-.026	-.057	-.165	.081	.332	.053	.047
5	**.713**	.134	.222	.116	.175	-.070	-.331	-.057
6	**.690**	.102	.110	.074	.217	-.328	.058	.142
7	**.687**	-.072	.095	.307	.027	.160	.081	.220
8	**.677**	-.073	.136	.269	-.181	.199	-.264	.018
9	**.658**	.249	.200	-.027	-.215	.180	.106	-.121
10	**.655**	-.061	.067	.030	.479	.157	.113	.140
11	**.603**	-.206	.191	.263	-.017	.326	-.144	.138
12	.064	**.813**	.126	.129	-.159	.024	.162	-.101
13	.018	**.742**	.163	.003	.114	.041	-.151	.037
14	-.014	**.710**	.070	.189	.204	.008	.185	.075
15	.082	**.627**	.154	.040	.242	-.142	-.119	-.019
16	-.044	**.494**	-.132	.113	.134	.426	-.312	.313
17	.003	**.481**	.221	.395	.479	-.238	.040	.113
18	.150	.054	**.740**	-.034	.005	.116	-.056	.095
19	.126	.206	**.739**	-.106	.040	.019	-.113	.111
20	.118	.380	**.691**	.007	-.232	-.050	.120	-.045
21	.148	-.020	**.607**	.402	.279	.155	.153	-.263
22	-.053	.151	.053	**.733**	.204	.092	-.043	.026
23	.323	.052	-.070	**.674**	-.027	-.077	.056	.288
24	.208	.286	-.138	**.577**	.042	.140	.108	-.245
25	.166	.214	-.053	.284	**.613**	.312	.159	.086
26	-.066	.246	-.036	.038	**.440**	-.064	-.002	-.194
27	.253	-.065	.290	.125	.052	**.678**	.157	-.022
28	-.179	.027	-.024	.083	.111	.083	**.847**	.096
29	.148	.039	.083	.062	-.049	.018	.094	**.816**

The first factor refers to *personal potentials* and includes 11 items used to examine the students' reflection on professional competencies required for their future profession (the pedagogy studies encourage the development of the consciousness of personal cognition and the ability to evaluate one's own work, and also the development of critical thinking, flexible and creative thinking, the consciousness of personal and other people's emotions, self-confidence and self-control, adaptability and openness towards new ideas, they also encourage group work and cooperation training, the development of positive non-violent communication, tolerance and democratic values, conscientiousness and responsibility, persistence and the ability to take initiative). It is expected from young people to develop higher order intellectual skills, to train themselves to plan in advance and to predict the consequences that their decisions and actions might bring, but to improve their emotional competencies as well, such as altruism, empathy, mutual understanding and communication as well as leadership, management and cooperation skills. Knowledge, creativity, the ability to take initiative and the readiness for changes are the keys to the development, survival and success of organizations, as well as of individuals (Gojkov, 2013; Djurisic-Bojanovic, 2007). The results show that the students highly value all "personal potency" items that future pedagogues should possess.

The second factor refers to *scientific research skills* and includes 6 items (the acquisition of the theory knowledge necessary for high-quality pedagogical work, the application of research methods and techniques, theorizing and applying theories in practice, intellectual work techniques: literature studying and the using of scientific sources, knowing of scientific report writing structure, being qualified to use teaching aids and technology). Concerned with professional competencies, several authors (Jermakov, 2011; Zizak, 1997) agree that they include three elements: professional knowledge, professional skills and individual's personal potentials. The point is that the students' responses regarding the "scientific research skills" factor include the 3 elements discussed by the authors mentioned.

The third factor refers to *professional knowledge* and it includes 4 items (the necessity of the structured knowledge of every area, software support as the integral part of education, the readiness for permanent education, and innovations in teaching). It includes all the relevant knowledge that strengthens and supports the professional skills (Zizak, 1997). The results show that students highly value the professional knowledge acquired during their studies.

The fourth factor refers to *pedagogues' area of work* and it includes 3 items (being informed about pedagogues' area of work, being informed about the profession's requirements, being trained for high-quality pedagogical work in all areas). University education prepares the students of pedagogy for the profession of counselors in educational institutions. It requires systematic and complementary work of all the people included in the realization of teaching activities, so these young pedagogues need to acquire knowledge and experience, and develop appropriate professional competencies. Pedagogy students must be oriented towards pedagogy practice research in all areas of work in order to be able to improve them. This information bears special significance because it is highly valued from the pedagogy students' perspective.

The fifth factor refers to *counseling work and practice* and it includes 2 items (knowing the general characteristics of pedagogical counseling work, and being trained to perform researches on educational practice). The results of the research show that the students of pedagogy, during their university education, primarily want to qualify for a high-quality

counseling work, and in that way become able to work effectively in an educational institution and help children, young people or adults with whom they cooperate.

The sixth factor refers to *the role of pedagogues* in competency acquisition process and it includes 1 item (understanding the role of a pedagogue and the importance of the acquisition of competencies required for counseling work in education). The pedagogy students highly value pedagogues' professional competencies, which mainly refer to the possession of particular pedagogical knowledge and skills, but also to personal characteristics necessary for establishing, building and improving of relationships with all the individuals concerned with educational process.

The seventh factor refers to *necessary competencies* and it includes one item (the development of competencies necessary for performing their future professions). The students find professional knowledge, professional skills and individual's personal potentials important.

The eighth factor refers to *pedagogical knowledge* and it includes 1 item (the acquisition of knowledge necessary for the development and refinement of new learning models). Students are taught to analyze the possibilities, characteristics and specificities of model application in researches they perform (Matovic, 2000). We can also attach all the characteristics of the obtained factors to the factors' explanation – pedagogical knowledge. Future pedagogues must keep acquiring knowledge, skills and competencies necessary for them to provide a high-quality work inside their profession, and they have to remain oriented towards improving their knowledge.

Pedagogy is wholly oriented towards the future of education. If students acquire knowledge which they will need in future, the university has to perceive that knowledge, and those skills and abilities that future life will require (Suzic, 2005). The factor analysis of the obtained results shows that the students are aware of the importance of the professional competencies for their future profession, and of the fact that curriculums are designed as to encourage the development of those competencies.

Determination of statistical significance by the means of F test based on the obtained ANOVA factors

We came up with interesting findings by analyzing the students' opinions regarding their personal potentials, scientific research skills, professional knowledge, and school counselor's area of work, counseling work and practice, the role of pedagogues in competency acquisition process, competencies necessary for work, and knowledge related to educational theory.

Chart 5: Determination of statistical significance by the means of F test based on the obtained ANOVA factors

		Sum of Squares	df	Mean Square	F	Sig.
Personal potentials	Between Groups	91.134	3	30.378	.845	.472
	Within Groups	4242.210	118	35.951		
	Total	4333.344	121			

Scientific research skills	Between Groups	541.288	3	180.429	15.549	**.000**
	Within Groups	1369.236	118	11.604		
	Total	1910.525	121			
Professional knowledge	Between Groups	22.259	3	7.420	1.479	.224
	Within Groups	591.840	118	5.016		
	Total	614.098	121			
Pedagogues' area of work	Between Groups	14.709	3	4.903	1.203	.312
	Within Groups	480.996	118	4.076		
	Total	495.705	121			
Counselling work and practice	Between Groups	94.816	3	31.605	1.972	.122
	Within Groups	1891.151	118	16.027		
	Total	1985.967	121			
The role of pedagogues	Between Groups	.069	3	.023	.043	.988
	Within Groups	62.554	118	.530		
	Total	62.623	121			
Necessary competencies	Between Groups	68.827	3	22.942	1.009	.391
	Within Groups	2683.378	118	22.740		
	Total	2752.205	121			
Knowledge	Between Groups	14.745	3	4.915	.504	.680
	Within Groups	1151.386	118	9.758		
	Total	1166.131	121			

By comparing arithmetical means by the means of F test between the students of second, third, fourth year and master pedagogy students we have come to a statistically significant difference concerning the second factor referring to *scientific research skills* (p=0,00) reflected in: the acquisition of theoretical knowledge required for high-quality pedagogical work, the application of research methods and techniques, theorizing and applying theories in practice, intellectual work techniques: literature studying and using of scientific sources, knowing of scientific report writing structure, being qualified to use teaching aids and technology. The students' responses were uniform. No significant statistical difference was discovered during the examination of the students' responses regarding the rest of the factors, and it was concerned with their perception of the significance of personal potentials for scientific research, professional knowledge, and the role of a pedagogue inside the work of research, as well as the importance of necessary competencies, counseling work and practice.

The function and significance of researches that is carried out by pedagogues is seen from the point of view of interconnectedness between research itself, the evaluation process, and the role of a practitioner in the process of research. The characteristics of the researches carried out by pedagogues are analyzed from the point of view of the nature of the problem being studied, the purpose of research, sample/respondents, methods and techniques employed in the process of data acquiring and processing (Hebib, Matovic, 2012). Therefore it is necessary

to develop students' scientific research skills and make them competent to perform their future job, and to train them to perform high-quality pedagogical work.

Chart 6: Post hoc test for the determination of statistical significance

Dependent Variable	(I) Year	(J) Year	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Scientific research skills	Second	third					
		fourth	-3,08941*	,72644	,000	-5,0388	-1,1400
		master	-6,72063*	1,04245	,000	-9,5180	-3,9233
	Third	second	2,67778*	,91545	,025	,2212	5,1343
		fourth	-,41163	,92198	1,000	-2,8857	2,0625
		master	-4,04286*	1,18702	,005	-7,2282	-,8575
	Fourth	second	3,08941*	,72644	,000	1,1400	5,0388
		third	,41163	,92198	1,000	-2,0625	2,8857
		master	-3,63123*	1,04818	,004	-6,4440	-,8185
	Master	second	6,72063*	1,04245	,000	3,9233	9,5180
		third	4,04286*	1,18702	,005	,8575	7,2282
		fourth	3,63123*	1,04818	,004	,8185	6,4440

Chart 6 shows the groups of respondents between which there is a statistically significant difference with value of 0,05 or less, and it is concerned with the *scientific research skills* factor. Considering the results obtained, we can see that the second year is statistically significantly different from the fourth year, but also from the master students of pedagogy (p=0,00) in relation to scientific research skills acquired during their studies. This claim is particularly valued by the master students (M= -6,72), so this information does not surprise us since they are most experienced in this domain. The third year is statistically significantly different from the second year (p=0,03) and from the master students (p=0,01). The fourth year is statistically significantly different in terms of their responses from the second year, who are only at the beginning of being introduced to the importance and characteristics of scientific research (p=0,01), and from the master students who are fully aware of the importance of possessing those skills and who highly value this factor (p=0,00). The master students of pedagogy are statistically significantly different from the students of second, third and fourth years (p<0,05). Our hypotheses about differences in the perception of competencies between the students proved true. Similar research (HuiC et al., 2010) showed that even though the students go through the same educational program, they are still different in terms of the practical experience they have and their perception of practical skills importance.

Unlike the first year students, the students included in the sample highly value the acquisition and significance of theoretical knowledge necessary for a high-quality pedagogical work, the application of scientific research methods and techniques, and intellectual work techniques: literature studying and using of scientific sources, knowing of scientific report writing structure.

Concluding remarks

The work of pedagogues as professional counselors in educational institutions implies a wide array of tasks, such as participation in curriculum planning, the realization of educational process, tracking and evaluation of activities, collaboration and work with students, parents

and teachers, and pedagogical counseling. This research indicates the importance of students' professional competencies acquisition as the part of process of globalizing education. The future pedagogue must be both a practitioner and a practice theoretician and has to be oriented towards lifelong education, since the process of the pedagogue's education can never be considered to be complete.

The results obtained by the research indicate the true condition of future pedagogues' opinions of the competencies they acquire during the course of studying. The results are satisfying. The students highly value the professional knowledge of a pedagogue necessary for a high-quality pedagogical work, and they are familiar with the area of work of a pedagogue and with the profession requirements. Also, they realize the importance of the acquisition of scientific research and professional competencies, the ability to theorize and to apply theories in practice. That really is significant information about students' reflection on this topic. The students consider and confirm that university education develops the competencies required for their future profession, and also their consciousness of personal cognition and the evaluation of personal intellectual work. Moreover, they express positive attitudes acknowledging that the studies encourage their development of critical, creative and flexible thinking. They also prefer non-violent communication; encourage responsibility, conscientiousness, persistence and the ability to take initiative. We presented the obtained data, using the tabular method by the means of factor analysis, so all of the statistical parameters indicate quite encouraging and positive results, since, after all, the aim of university education is to train future pedagogues for a high-quality pedagogical work and to improve their personality characteristics as to make them capable of bearing with various situations.

By examining the pedagogues' opinions by the means of factor analysis we concluded that they highly value the following factors referring to professional competencies necessary for their future: the importance of developing personal potentials throughout the study course required for a high-quality professional work, the importance of scientific research skills, professional knowledge and the readiness for permanent education, the importance of being informed about pedagogues' area of work and the profession requirements, the importance of pedagogical counseling work, as well as the role of pedagogues in the acquisition of the professional competencies required for a high-quality work in educational practice.

This is the proof that timely information regarding the profession's requirements and encouraging interest in pedagogical practice research can encourage the further development of young pedagogues' professional competencies as well.

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