



ПРЕДУЧИЛИЩНА И НАЧАЛНА УЧИЛИЩНА ПЕДАГОГИКА

PRESCHOOL AND PRIMARY SCHOOL EDUCATION

ESTABLISHING CONTINUITY AT THE INITIAL LEVELS  
OF THE EDUCATION SYSTEM

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**Abstract:** *Some of the imperatives of the modern education are to establish continuity at the initial levels of the education system and a solid and functional relationship between preschool and school education. The purpose of this paper is to identify estimates made by the teachers of preschool children and younger school children about the solutions regarding establishing continuity between preschool and school education. The research included 244 examinees. Gathered results showed that examinees estimate the offered solutions as important and also that there were no significant differences in their estimates with regard to certain social and demographic characteristics. Work experience in elementary school education proved as a variable that influences the teachers' estimates about the given solutions.*

**Keywords:** *continuity, education system, preschool education, elementary school education.*

**INTRODUCTION**

Establishing continuity at the initial levels of the education system, in the first place between preschool and elementary school education, is a topic that figures as important for quite a long time now (Cleave et al. 1982; Kakavulis 1998; Peters 2000; Geiser et al. 2013). However, it can be stated that in Bosnia and Herzegovina this topic is underrepresented and that empowering cooperation between preschool institutions and elementary schools is present only in the new education development strategies (Ministarstvo prosvjete i kulture Republike Srpske 2016).

“Preschool and elementary school education are inseparable parts of the lifelong learning system and the first basic levels of education in child development” (Travar 2019: 65). At the initial levels of education system, the whole of education initiative is directed towards the same goal – optimal development of all potentials in a child. Considering that preschool education represents the foundation of a school system (Kamenov 2009), we think that there are many advantages and benefits in establishing continuity between these parts of the education system. We single out as the most important the following ones: early learning as a sprout, root and foundation of all later types and forms of learning, better school accomplishments and motivation for further learning among the children who attended preschool edu-

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cation programs, mutual information of the institutions (preschool institutions and elementary schools) about certain questions of child development, as well as the development as a whole, etc.

Taking into consideration that close relation between preschool and elementary school education is one of the imperatives of modern education system and that very often there is a discontinuity between them in practice (Andrej 2004; Stanisavljević-Petrović 2011), one could raise a justifiable question: what are the potential solutions and ways for establishing continuity at the initial levels of education system? Whether it is realistic to speak about the solutions for this continuity between preschool and school education at his moment is something that the actual participants in the education process at these education levels, preschool and elementary school teachers, could offer in their attitudes and estimates.

One of the possible ways for establishing continuity at the initial levels of education system is to introduce and realise similar programs in preschool institutions and elementary schools. This is why “integrated (holistic) program is introduced in the first grade in Republika Srpska, the one that is more similar to the preschool programs so that the pupils at the beginning of their school could build proper relationship towards learning and school” (Spasojević et al. 2017: 310). Establishing continuity in acquired knowledge, skills and habits, as well as social experiences of children in the families, preschool institutions and elementary schools, and more intensive inclusion of family into the work of the institutions, is one of the possible models and solutions for establishing necessary continuity. The fact that development characteristics of the children in preschool and younger school age are similar implies that immediate education work with the children and implementation of methodical solutions should be similar. Lately, authors point to the importance of play in the learning process in preschool and younger school age (Kopas-Vukašinović 2006), which is another among possible solutions for establishing continuity between preschool and elementary school education.

## **METHODOLOGY**

### ***The goals of the research***

The importance of establishing continuity at the initial school levels is a subject of many scientific studies in the world. In this regard, we were interested in the estimates given by preschool and school teachers, who work with children at the initial levels of education system, about the solutions for establishing continuity between preschool and elementary school education. This is also the subject of this research. The goal of the research was to identify the estimates made by preschool and school teachers about this topic. Special tasks in the research deal with determining differences in the estimates made by the preschool teachers about the offered solutions with regard to the following social and demographic characteristics of the examinees (years of age and work experience in the kindergarten). A special task was also to determine differences between the estimates of the teachers about this topic with regard to the following social and demographic characteristics of the examinees (work experience in elementary school and school environment). In line with previous steps in the research, we have formulated the main hypothesis as follows: preschool and school teachers estimate as important the solutions for establishing continuity between preschool and elementary school education. Special hypotheses in the research are: There are no significant differences between the estimates made by preschool teachers about the suggested solutions with regard to chosen social and demographic characteristics of the examinees; There are not any differences between the estimates made by teachers about the suggested solutions with regard to chosen social and demographic characteristics of the examinees.

### ***Variables and instruments of the research***

The methods used in the research are: descriptive research, a survey as the research technique and a questionnaire as the research instrument. For the purposes of the research, an original questionnaire was made which consisted of two parts: 1. Inventory for gathering basic social and demographic data about preschool and school teachers; 2. Scalar estimation “Solutions that can be used for establishing continuity between preschool and school education” (RKPO). The scalar consisted of 8 suggested solutions which the examinees estimated according to five degrees intensity scale (from 1 to 5), where the number 1 represented the lowest contribution to establishing continuity between preschool and school education, and number 5 the highest contribution. The examinees were offered solutions such as: reconstruction of

the preschool programs as well as those in the first triad of school education; inclusion of parents in the education process in kindergartens and elementary schools as well as the learning process. Then, equal responsibility of kindergarten, elementary school and family for child learning and development; continuity in implementation of methodical solutions (goals, contents, methods, materials and forms of work) in kindergartens and elementary schools; pedagogical and psychological education of parents in kindergartens and elementary schools; play in younger classes in elementary school; organisation of joint activities in kindergarten and elementary school. Reliability of instruments was tested after preliminary research by calculating coefficient of internal consistency (Cronbach's Alpha) after which we excluded the items with reliability coefficient below 0,70. After the correction, reliability of instruments was 0,88.

Independent variable used on the sample of preschool teachers was comprised of the following set of social and demographic characteristics: years of age (20 – 30; 31 – 40; 41 – 50 and 51 – 60) and work experience in the kindergarten (up to five years, up to ten years, up to twenty years and over twenty years). Independent variable used on the sample of school teachers was comprised of the following set of characteristics: work experience in elementary school education (up to five years, up to ten years, up to twenty years and over twenty years) and school environment (village, suburb or town). Dependent variable was comprised of the estimates made by preschool and school teachers about the solutions for establishing continuity between preschool and school education.

#### *Sample and research procedure*

Out of the total population of preschool and school teachers in Republika Srpska, as an integral part of Bosnia and Herzegovina, we chose a sample of 94 preschool teachers who were at the time of the research employed in the public or private kindergartens in Bijeljina, Zvornik and Brčko District. We also chose 150 teachers who worked at the time of the research with the younger school children (in the first and the second grade) of the elementary schools in Bijeljina, Zvornik and Doboj. The sample was chosen by the method of simple random choice and it is representative with regard to the population of preschool and school teachers. The research was carried out in January and February of 2016.

#### *Procedures for statistical processing of the data*

Procedures used for statistical processing of the data are basic descriptive indicators and one-way analysis of variance with additional comparison (ANOVA).

### **RESULTS AND DISCUSSION**

The results of the research about the influence of different social and demographic characteristics among the preschool and school teachers to their estimates about the solutions for establishing continuity between preschool and elementary school education are shown in the following pages of the paper according to the data received by one-way analysis of variance with additional comparison (ANOVA).

#### *The age of preschool teachers*

We assumed the age as a variable that could determine the estimates of the preschool teachers about the solutions for establishing continuity between preschool and elementary school education, mostly because of the difference in their outlook on life and their own professional role.

**Table 1: Difference in the estimates about the solutions for establishing continuity between preschool and elementary school education in relation to the age of preschool teachers (ANOVA)**

Variable: The age of preschool teachers	N	M	SD	F	p	$\eta^2$
20 – 30	22	33,68	3,03	1,22	,30	0,96
31 – 40	38	33,89	4,36			
41 – 50	22	32,45	4,29			
51 – 60	12	35,17	4,40			
Total:	94	33,67	4,09			

By looking at the data from Table 1 (N, M, SD), it can be concluded that preschool teachers between 50 and 60 years of age showed greater trust in the solutions for establishing continuity between preschool and elementary school education by comparison with their younger colleagues. Still, based on

the rest of the statistical indicators (F, p,  $\eta^2$ ), we conclude that there is no statistically significant difference between the estimates of the preschool teachers about the offered solutions in relation to their age.

#### ***Work experience in the kindergarten***

The research included the influence of the work experience in the kindergarten to the estimates of the preschool teachers about the solutions for establishing continuity between preschool and elementary school education.

**Table 2: The difference between the estimates of the preschool teachers about the solutions for establishing continuity between preschool and elementary school education in relation to work experience of the preschool teachers in the kindergarten (ANOVA)**

Variable: Work experience in the kindergarten	N	M	SD	F	p	$\eta^2$
Up to five years	30	33,40	3,27	,20	0,89	0,99
Up to ten years	22	33,59	4,80			
Up to twenty years	26	33,62	4,41			
Over twenty years	16	34,38	4,20			
Total:	94	33,67	4,09			

The data from Table 2 (F=0,20; p=0,89;  $\eta^2=0,99$ ) show that there is not any statistically significant difference between the estimates of the examinees about the solutions with regard to work experience of the preschool teachers in kindergartens. So, the preschool teachers with work experience less than five, ten, twenty and over twenty years equally perceive the solutions for establishing necessary continuity at the initial levels of education system.

#### ***Work experience in elementary school education***

Professional work experience was also taken into consideration in our analysis of the estimates made by school teachers about the solutions for establishing continuity between preschool and elementary school education. Based on the level of significance of the difference of Levene's test (p=0,03), we conclude that a hypothesis on homogeneity of variance was contravened. Therefore, Welch's and Brown-Forsythe tests were used.

**Table 3: The difference between the estimates about the solutions for establishing continuity between preschool and elementary school education in relation to work experience of the teachers**

	Statistics	df1	df2	p
Welch's test	8,117	3	72,25	,00
Brown-Forsythe test	3,617	3	145,17	,01

Table 3 shows the data on the point of contravention of the hypothesis on homogeneity of variance.

**Table 4: The difference between the estimates about the solutions for establishing continuity between preschool and elementary school education in relation to work experience of the teachers**

Variable: Work experience in elementary school education	N	M	SD	F	p	$\eta^2$
Up to five years	44	31,66	5,96	2,94	,03	0,94
Up to ten years	52	30,75	6,86			
Up to twenty years	37	30,51	5,47			
Over twenty years	17	35,29	2,91			
Total:	150	31,47	6,05			

The value of F-test ( $F=2,94$ ) is statistically significant ( $p=0,03$ ) (see Table 4), which shows that the result of some of the groups is statistically significant. Gathered results show that there is no agreement among the teachers on the suggested solutions with regard to their work experience in the first grades of elementary school. This variance analysis shows that overall difference of significance is 0,03 (see Table 2) and that the results of the groups are statistically significant. The size of the Eta coefficient ( $\eta^2$ ) used to determine the size of actual difference is 0,05, which is seen as small influence, but it is also very close to the medium influence boundary according to Cohen's criterion (Cohen 1988). For the sake of accuracy in interpretation of the gathered results and scientific correctness, it is important to point out that the determined statistically significant difference between medium values of the groups belongs to small sizes, very close to the boundary value of medium size. The other groups of teachers with regard to work experience in elementary school did not show any statistically significant differences. Additional comparisons performed by Tukey's HSD test helped us to determine the groups of teachers with regard to work experience in elementary school which indicated mutual difference.

**Table 5: The difference between the estimates of the solutions for establishing continuity between preschool and elementary school education in relation to work experience of the teachers (Multiple Comparisons)**

(И) Work experience in elementary school education	(J) Work experience in elementary school education	Medium difference (И-J)	$\sigma$	p	95% reliability interval	
					Lower limit	Upper limit
Up to five years	up to 10 years	,90	1,21	,87	-2,25	4,07
	up to 20 years	1,14	1,32	,82	-2,30	4,59
	over 20 years	-3,63	1,69	,14	-8,04	,77
Up to 10 years	up to 5 years	-,90	1,21	,87	-4,07	2,25
	up to 20 years	,23	1,27	,99	-3,08	3,55
	over 20 years	-4,54*	1,65	,03	-8,85	-,23
Up 20 years	up to 5 years	-1,14	1,32	,82	-4,59	2,30
	up to 10 years	-,23	1,27	,99	-3,55	3,08
	over 20 years	-4,78*	1,73	,03	-9,30	-,26
over 20 years	up to 5 years	3,63	1,69	,14	-,77	8,04
	up to 10 years	4,54*	1,65	,03	,23	8,85
	up to 20 years	4,78*	1,73	,03	,26	9,30

Note: \* differences that are statistically important.

Data showed in Table 5 indicate the size of significance between certain groups of teachers with regard to the solutions for establishing continuity between preschool and school education. The results showed that "the critical mass" with regard to mutual differences in the estimates is made of the teachers up to 20 years of work experience ( $M=30,51$ ;  $SD=5,47$  и  $\sigma=0,89$ ) and teachers over 20 years ( $M=35,29$ ;  $SD=2,91$  и  $\sigma=0,70$ ). Furthermore, younger teachers point to the phenomenon of resistance to changes in schools, the lack of attempts in innovating practice regardless to the external influences. The second determined difference is the one between teachers with less than 10 years of work experience in the first grades of elementary school ( $M=30,75$ ;  $SD=6,86$  и  $\sigma=0,95$ ) and teachers over 20 years of work experience ( $M=35,29$ ;  $SD=2,91$  и  $\sigma=0,70$ ). This result reveals that teachers with longer work experience in one-teacher education have more trust in the solutions for establishing continuity between preschool and school education. In both cases, the determined differences can be interpreted as a product of work experience and professionalism of the teachers over 20 years of work experience which helps them to perceive the suggested solutions differently.

"Modest consideration" about professional improvement could be one of the reasons for such results, as well as the fact that it is rather difficult to determine what the teachers know about the impor-



tance for establishing continuity, if one takes into consideration that in practice everything is actually divided (to subjects, themes, years or social status). Therefore, instead of proclaimed long-life learning and continuity in improving professional knowledge, one could actually talk about serious confusion and differences in approaching professional responsibilities.

### ***The school environment***

One-way analysis of variance ANOVA with additional comparison was used to examine the influence of the school environment to the estimates of the teachers about the suggested solutions.

**Table 6: The difference between the estimates of the solutions for establishing continuity between preschool and elementary school education in relation to school environment (ANOVA)**

<b>Variable: School environment</b>	<b>N</b>	<b>M</b>	<b>SD</b>	<b>F</b>	<b>P</b>	<b><math>\eta^2</math></b>
<b>Village</b>	80	31,35	6,27			
<b>Suburb</b>	11	32,00	6,08	,06	,94	0,99
<b>Town</b>	59	31,54	5,82			
<b>Total:</b>	150	31,47	6,05			

ANOVA, a procedure for determining differences among measured variables, has shown that the examinees – teachers do not differ in their estimates about the suggested solutions with regard to the aspect of school environment ( $F=0,06$ ;  $p=0,94$ ;  $\eta^2=0,99$ ). Gathered results confirm our initial hypothesis, as well as the subhypotheses, apart from the case of the influence of work experience variable to the estimates of the teachers.

## **CONCLUSION**

Based on the theoretical grounds about the importance for establishing continuity at the initial levels of education system and personal empirical research about the topic, the following conclusions could be presented:

– It is necessary to “relieve” the contrast between “early childhood programs” and school program in the future, and to establish necessary continuity between preschool and elementary school education, so that both of these subsystems could reach their goals and provide complete support to child development;

– The chosen sample of the preschool teachers did not show any significant difference between the estimates of the solutions for establishing continuity between preschool and elementary school education. In this regard, it could be carefully stated that this relation is the result of a long practice of traditional mode from the era of so called “industrial kindergartens” where the question of establishing continuity at the initial levels of education was not seriously considered;

– School practice based on old fashioned and obsolete paradigm, which do not show respect towards the personality of a child and find “no place for childhood”, should be replaced with the practice of respect for the individual and development potential of each child (Spasojević 2009).

– The role of the teacher in modern elementary school is, among other things, to implement, follow and estimate the solutions for establishing continuity between preschool and elementary school education. We think that teachers with longest work experience in elementary school could offer to the public the results of their diagnostic work and research instruments which could be useful to other colleagues and school practice in general. Also, it would be useful to start professional journals where these ideas, experience and findings would be available to wider public instead of being “trapped” within an individual or “school walls”;

– Work experience in elementary school proved as an important variable that influences the estimates of the teachers about the suggested solutions. In line with this result, we maintain that authorized individuals and institutions should take care about real and not declarative professional improvement

of the teachers. This is necessary because younger teachers indicate the phenomenon of resistance in school towards changes and any attempts of practice innovation whatever the solutions might be. Recent literature underlines that university education of preschool teachers and teachers should be modernised “by introducing a new area which deals with preserving continuity in child development and learning during the transition from family surroundings or kindergarten to elementary school in the syllabuses of the pedagogical subjects” (Travar 2018: 364). In that regard, we are of an opinion that it is necessary to also include the area of establishing continuity at the initial levels of education system into the programs of professional improvement of preschool and school teachers.

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