

Institutional Pedagogical Intervention in Early Years of Life on the Path of Lifelong Learning

Nataša Cvijanović¹ and Danica Mojić²

¹Faculty of Education, University of East Sarajevo

²Children's Kindergarten Čika Jova Zmaj in Bijeljina

Abstract

The research presented in this paper focuses on establishing the relationship between institutional pedagogical interventions in early years of life, such as the programme before going to school, and early learning of children.

This relationship is observed through established outcomes that define developmental changes of a child in all aspects of his development: physical, emotional and cognitive, and development of speech, communication and creativity. The task of the research was to determine the correlation between attending the preschool curriculum and the growth of certain developmental aspects in children as an indicator of early learning, while observing preschool education and education as a fundamental process for developing lifelong learning competence.

Evaluation of the aspects of child development is carried out with the use of the Scale for determining developmental aspects of children, with the teachers who performed the evaluation of children starting the first grade also recording the data on attending preschool institutions.

1,439 children were monitored in 18 schools, which represents about 14% of the total population of children who attend the first grade in the Republic of Srpska, one of the entities in Bosnia and Herzegovina.

The results of checking the relationship between involving children into the curriculum before going to school and the developmental aspects of children show that children who were involved in the curriculum have more expressed aspects of development, which also reflects onto more developed abilities for lifelong learning.

Key words: *aspects of child development; lifelong learning; preschool curriculum.*

Early childhood education - the basis for lifelong learning

An everlasting and constantly increasing record of scientific evidence is generated on a daily basis emphasizing the importance of early childhood learning for the development of human potentials (Brković, 2011, p. 42; Barnett, 1995; Reynolds & Temple, 1996; Reynolds & Temple, 2008; Campbell & Ramey 1994), thereby regarding it as a crucial period of human development. However, this period of life was once regarded as something that might not be that important from the education point of view, as this period is marked by the genetically preconditioned spontaneous process of maturity. Children grow up by playing, and as our region still nurtures the prejudice that children need to put play before learning prior to starting school, the question is whether early learning is learning at all, as it comes naturally by itself and, as some authors claim, it cannot be linked to the academic programs of learning that are yet to follow (Spasojević, 2013, p. 39). However, the results of numerous pedagogical research on early childhood education, as well as the changes that are taking place in society, are reflected in the pronounced development of science and technology and the emergence of globalization, which further led to an incredibly rapid flow of information, ultimately creating a whole new picture of early childhood education and development. Likewise, the research performed in other scientific areas such as psychology, medicine and biology has led to changes in the understanding of early learning as a process crucial for the further development of human resources (Cvijanović, 2017).

The debate on early childhood is still relevant today in the same way as it was about a century ago (Woodhead, 2012, p. 21), owing to the aforementioned research findings in this area, but also to the changes in the information transfer, as younger generations are experiencing an “inhuman explosion” where a society is subjected to a change over the course of only three years, whereas the same change used to take about thirty years at the beginning of the previous century (Božović, 2007, p.7). That is why the school programs overcluttered with facts and with no operational value should be replaced by programs offering a transition from the school of memory to the school of thought (Stojaković, 2012, p. 12). The school of thought, with its methods of effective problem solving and coping in new situations, is not developed overnight, nor does the adoption of such methods begin at the elementary school age. To achieve this, it is primarily crucial to bear in mind the importance of the preschool development period in developing the abilities important for successful functioning in later life. This principle was applied as a foundation for the development of numerous preschool education programs around the world, being focused precisely on contemporary theoretical knowledge on early education, embodied as international documents of educational policies of various countries throughout the world. Such programs recognize the importance of preschool age in developing lifelong learning skills such as self-confidence, openness, curiosity, perseverance, resilience and creativity (Mitić & Marković, 2018). Thus, a new

Serbian document „Fundamentals of Preschool Educational Programme – Years of Ascent” (orig. *Osnove programa predškolskog obrazovanja – Godine uzleta*) states that only the preschool period of life is a period with so many open possibilities, in which a person with an abundance of energy, perseverance and enthusiasm manages and develops the complex capacities on which his future possibilities will depend, which is why the years in this period are known as the years of ascent (*ibidem*). In order for them to stay true to their name, it is necessary to recognize the needs of children in terms of learning that should be spontaneous, holistic and play-based (Woodhead, 2012, p. 21), as suggested by research (Bredenkamp, 1996; Kopas-Vukasinovic, 2006; Kamenov, 2006; Frost et al., 2012) whose results also indicate that children tend to learn most successfully through play-oriented approaches when, through spontaneous shift between play activities and educational influences, they are brought into life and encouraged to notice the world surrounding them, as well as to explore it. Such approach will generate the best conditions for instigating key educational competences for lifelong learning.

Educational competences for lifelong learning and aspects of child development

Since the early days of mankind, ancient societies have paid particular attention to the process of education and upbringing, both when the need for lifelong learning and education was profound but also when education as such was the privilege of only the wealthiest citizens. There were schools for the highest society classes and for a small number of selected children, who had the privilege of becoming literate and adopting other skills required for jobs that awaited them in later stages of their lives. Therefore, it was required of them to acquire the highest level of knowledge that would later on provide them with the highest privileges. However, in the 21st century, the context for lifelong learning and education has been thoroughly changed, which entails: a very dynamic development of technology, the emergence of the Internet and contemporary media, new access to information, as well as new types of work and methods for acquiring knowledge, etc. Surely, globalisation yielded changes in all areas: perception of value, cultural, economic, social and perhaps most of all – political, which represents a new context, but also a challenge for education as such (Cvijanović, 2017). In addition to globalization, the process of democratization is by no means any less important in the context of social change (Klemenović, 2009, p. 87). In such relationships, education can be perceived as a lever in embracing the new global economic, political and social reality (*ibidem*). That is why the European Commission, based on the conclusions of the Lisbon European Council, adopted a Memorandum for Lifelong Learning (Working Paper of the European Communities, 2000.) in March 2000, which also defines the objectives of lifelong learning, i.e. promoting active citizenship and employability. In support of these objectives, a document recommending lifelong learning as the essence of the Lisbon 2010 project was adopted by the European Union in 2006, on

the basis of which the entire European Union should become a place for learning. To achieve this, a young man needs to develop a positive attitude towards learning and be taught how to learn (Cornford, 2002, p. 357). It is unacceptable to expect someone to continuously learn throughout their entire life without loving learning or not knowing how to learn. In consideration of the accumulated needs of the entire society integrated in the European Union, the European Commission recommended, whereas the European Parliament adopted the introduction of the „Key competences for lifelong learning“ model as a reference mechanism to support the reforms and changes of educational policies and strategies of lifelong education in EU Member States (Official Journal of the European Union, 2006). Here, competences are defined as the system of knowledge, skills and attitudes that an individual needs to acquire in the compulsory education process and to further develop them later through non-formal education (*ibidem*).

Following the aforementioned EU documents, in accordance with its constitutionally mandated competences, the Republic of Srpska adopted the Strategy for the Development of Education of the Republic of Srpska for the period 2016-2021 in April 2016. The document also outlined more important goals of lifelong learning: raising general level of education of an individual, recognizing his/her personal potentials and capabilities, as well as their ability to cope with changing working conditions and environments. These goals are articulated in key competences, the adoption of which enables the individual to live in a knowledge-based society, namely:

- 1) Linguistic and communication competences in the native language
- 2) Language and communication competences in a foreign language
- 3) Mathematical literacy and competences in science and technology
- 4) Computer literacy
- 5) Learning on how to learn
- 6) Mutual, intercultural, social and civic competences
- 7) Entrepreneurial competencies
- 8) Creative and productive competencies.

In addition to the above stated competencies recognized in the EU documents, the Strategy also recognizes competencies such as cultural expression and physical-health competences.

The desire to learn is a prerequisite for continuous learning. Learning experiences occurring early in the developmental period need to be made pleasant and amusing, with a positive indicator in which the child will be the focal point and the key player in the learning process, as well as the key contributor to his/her own development. This could be achieved by including children in well prepared, exceptional development-oriented preschool education programs, allowing the children to receive the best support in their developmental process, perceiving knowledge as a procedural, dynamic category, whereas learning would be seen a shared co-creation of acquired knowledge and a transactional process. Based on what a preschooler needs to know,

is able to do or will be able to do at a certain age level following the learning process, an authentic, unique curriculum is constructed for each preschool institution, and is further developed within such institution to suit a specific educational group with specific children, their experiences, needs and interests. Thus, Table 1 presents the Preschool Education Curriculum of the Republic of Srpska (hereinafter referred to as „the Curriculum“) and all of the children’s skills and abilities categorized into developmental aspects within which a grid of outcomes and competencies the child brings into the next level of development.(Table 1).

Table 1
Structure of Preschool curriculum content (learning outcome grid)

Physical development	Socio-emotional development and personality development	Cognitive development	Development of speech, communication and creativity
Outcomes related to various types of movement	Outcomes of social activities	Outcomes of exploration-discovery-cognition activities	Outcomes of speech, communication and literacy activities
Outcomes of perceptual-motor activities	Outcomes of affective activities	Outcomes of logical-mathematical activities	Outcomes of children’s creativity: speech-drama, dance-music, art-modelling
Outcomes of health-hygiene activities	Outcomes of environmental activities Outcomes of practical activities (work and transport)	Outcomes of graphomotor activities	

From the perspective of a comprehensive pedagogical and educational system, while perceiving preschool education as the first step in the system itself, we can say that, by enhancing every aspect of the child’s development, it forms the foundation for the development of lifelong learning competencies. Therefore, e.g. the development of speech, communication and creativity, as one of the aspects of children’s development, supports the following lifelong learning competences: language-communication competences in their native language, language-communication competences in a foreign language, as well as the creative-productive competences. A testimony of such standpoint can most certainly be found in the comparison of activities leading to development of speech (Cvijanović, 2017, p. 53) and the specificity of key educational competences for lifelong learning in preschool upbringing and education (Fundamentals of preschool upbringing and education curriculum). Speech, communication and creativity are backed by expanding children’s vocabulary, developing verbal and non-verbal communication, cultivating the speech experience in various speech situations, enabling the child to listen to others in the communication process, supporting a child’s

understanding on thinking processes and to express his/her thoughts and ideas in words, by written material, sounds, and by raising awareness of the native language value and recognizing the languages and arts of other nations and cultures (Cvijanović, 2017, p. 53). Communication in the native language is developed “through the opportunities to enlarge the vocabulary and use various language functions; through supporting the child for proper, expressive and creative verbal expression and linguistic creativity; by encouraging different methods of graphic and other means of symbolic representation and by creating opportunities for their practical use in play” (Fundamentals of Preschool Educational Curriculum, p.14). Likewise, communication in a second language is developed through the development of the native language and the development of awareness and knowledge of different cultures and languages, while cultural awareness and expression is focused on the cultivation and encouragement of children’s play, the development of cultural and national identity, the cultural heritage of the community and humanity, as well as through encouraging the creative expression of children through music, movement, dance and literature (*Ibidem*) (Table 2).

Table 2

Comparative summary of activities leading to the implementation of certain aspects of development and specificities of certain competences of lifelong learning.

Aspects of a child’s development*		Competences of lifelong learning**
Speech, communication and creativity	Nurtures the speech development and the vocabulary improvement of children; enrichment of speech experience in different speech situations; development of verbal and non-verbal communication with peers and adults; enabling the child to listen and interact with others in the communication process; supporting a child’s understanding that thoughts, experiences and ideas can be represented by words, images, written material, sounds, forms, models; providing the ability to combine various media, materials, resources, games and personal imagination as easily as possible to express one’s own idea, thought or feeling; promoting an individual method of creative expression and nurturing the sense of beauty and artistic value; raising awareness of the value of native language, art and culture and recognizing the languages and arts of other nations and cultures	Language-communication competences in native language
		This competence is developed through opportunities for vocabulary enrichment and through use of various language functions; through supporting the child for proper, expressive and creative verbal expression and linguistic creativity; by encouraging different methods of graphic and other ways of symbolic representation and through creating opportunities for their practical in-game use as well as by developing awareness of their importance and usefulness; through developing awareness of the importance of language in interpersonal relationships and the use of language in a positive and socially responsible manner. Early literacy is developed in an encouraging and supportive linguistic environment through activities in which different methods of symbolic logging and written communication serve a purpose in the activity itself, rather than teaching children to read and write through separate activities
		Language and communication competences in a foreign language
		At the preschool age, the foundation for learning other / foreign languages is developed through the development of native language and of the awareness and knowledge on different cultures and languages, as well as the function of languages in communication between people and cultures. If a second language is introduced at preschool age, learning involves situational language acquisition by incorporating a foreign language into situations and

		<p>activities through which the child learns and uses it meaningfully by him/herself, rather than through separate teaching, utilizing specially formulated methodical procedures</p>
		<p>Creative and productive competencies</p>
		<p>This competence is supported by cultivating children's play; by developing the cultural, national and the „inhabitants of the planet“ identity; by introducing children to the cultural heritage of the community and humanity, by nurturing creative expression of ideas, experiences and emotions of children across different artistic areas (visual arts, drama, music, movement and dance, literature); by furnishing spaces that encourage wonder and aesthetic experience; by encouraging children in different ways to creatively recreate their adventures and experiences through different media.</p>
<p>Intellectual development</p>	<p>Encouraging and developing curiosity and openness to new knowledge, findings and research; familiarizing the child with cause and effect relationships through personal experience; nurturing resourcefulness, entrepreneurialism, perseverance, independence, dexterity, responsibility; supporting in discovering problems, asking questions and solving problems; noticing the characteristics of objects and phenomena and classifying them according to different criteria; developing logical thinking and experimentation, influencing the ability to analytically observe phenomena and objects in real life circumstances; support in the process of seeking knowledge and interpretation of phenomena and things in the environment, as well as developing a thought process from a concrete/specific to a symbolic and abstract level.</p>	<p>Mathematical literacy and competences in science and technology</p>
		<p>Mathematical, scientific and technological competences are developed through rich sensory experiences and practical manipulation; by encouraging development and application of logical and mathematical thinking in perceiving and understanding the phenomena, relationships and problem solving; by supporting research, inquiries, discovery and inference about natural and physical phenomena in various game situations and activities within a theme / project and in life-practical situations; by applying acquired knowledge in addressing practically life needs and problems. The educator shapes his/her participation in collaborative research through various support and expansion procedures rather than through verbal teaching.</p>
		<p>Digital competence</p>
		<p>Digital competence is developed through the meaningful utilization of digital technologies as tools allowing children to: obtain information; to express and represent themselves in the function of play and exploration; to document various activities. Digital competence also implies developing an adequate relationship and behaviour regarding the use of digital technologies.</p>
		<p>Learning to learn</p>
		<p>This competence is developed by encouraging children to become aware of their own learning process; by supporting the development of their perceptual and metacognitive abilities to reflect, question, plan, and self-regulate learning that is meaningfully related to the play, activity, and situation which the child participates in, as well as through the involvement of children in curriculum development.</p>
<p>Initiative and entrepreneurship</p>		
<p>This competence is achieved through supporting an open children's play, through developing projects together with children and through involving children in different situations and activities that support their initiative. Original and genuine approaches to solving different problems and providing various opportunities for children to review, question, test and evaluate their ideas, as well the possibilities and opportunities for creative processing of experience and creative expression of their ideas, experiences, opinions and insights.</p>		

Socio-emotional development	Augmenting the children’s experience obtained in the family and understanding the relationships in a group; understanding the rules of socially acceptable behaviour; the empowerment of a child in terms of independence and self-initiative and exchange of opinions; strengthening emotional stability through learning about one’s own emotions and those of others, as well as how to express, regulate and control one’s emotions; acting on developing empathy and responding to the feelings of others; empowering the child in learning about the social life of the environment; understanding the value of human labour; getting to know one’s own origin both in a narrower and broader context.	Social and civic competences
		These competencies are achieved through developing a fellowship among the children, adults and a peer community: by nurturing a relationship of belonging, respect and acceptance; by nurturing a relationship of respect for diversity and caring for others; by developing a group identity; by participating in games, activities, different social groups and situations that require mutual compliance, cooperation, coordination, mutual support and allow them to provide their own contribution to the community which they are involved in; by engaging and/or hosting events, actions and projects in the local community.

Source: *(Cvijanović, 2017 p. 53),

**(*Osnova programa predškolskog vaspitanja i obrazovanja*, Konceptcija Osnova programa – Godine uzleta, 2018).

In this context, institutional preschool education makes it likely that children who have attended preschools or have been enrolled in curricula such as the preschool one have more distinctive aspects of development, and thus, as we could see, lifelong learning competences.

Preschool curriculum for children as a pedagogical intervention

Since 2011, a preschool curriculum has been organized in the Republic of Srpska for children who had not been involved in any form of institutional preschool upbringing or education, i.e. for children who did not attend kindergarten and shall become eligible to attend the first grade of elementary school in the following school year. Pursuant to the Ordinance of the Preschool curriculum (Official Gazette of the Republic of Srpska), this curriculum is defined as a curriculum organized for children not included in any form of preschool education. The curriculum takes place on weekdays, 3 hours minimum on a daily basis, including recreational breaks and breaks for a joint meal and it lasts for at least three months. The implementation of this curriculum provides the child with the opportunity to acquire basic knowledge that will be upgraded at school, to acquire work habits, to develop a love for learning, to be able to work independently and creatively, to develop a sense of responsibility and mutual tolerance and to learn the rules of behaviour in a society and in a group. Thus, the curriculum supports children’s development in terms of physical health and physical maturity, cognitive development, social maturity and emotional stability, which is the ultimate purpose of this curriculum. This curriculum, lasting over a period of three months or no less than 195 hours, is implemented in preschools and in some elementary schools in the areas where it is not possible to establish and implement preschool institutions,

thereby generally increasing the percentage of children encompassed by a preschool curriculum in the Republic of Srpska. Therefore, the percentage of children enrolled in this curriculum is raised to the average, ranging from 45% to 50% of the total number of children enrolled in the first grade.

The preschool curriculum in the year preceding the start of school education is implemented as “an attempt to provide every child with an equal chance to successfully adapt to the learning conditions characteristic to the respective teaching process” (Klemenović, 2014, p. 15) without directly preparing him/her for school through adopting academic content that allows for acquiring certain knowledge and skills that classify the child as “ready for school”. The curriculum is based on the idea that a child learns through play, whereas the educator assists the child to expand his/her experiences and knowledge that would later be further expanded in school. Through this curriculum, children acquire work habits, develop a sense of responsibility and mutual tolerance and learn the rules of behaviour in society and in a group (Cvijanović, 2017). Children acquire the adequate key knowledge and skills required to function in a school context, whereas some educators state that children are able to “distinguish and name colours; locate a source of a known sound (near-far); name spatial dimensions and relationships; recognize and name geometric shapes: circle, triangle, square, and rectangle; count to 10 and back; know the days of the week, the months of the year as well as the seasons ...”, while others state that children are “successful in fine arts and physical exploratory games; they are independent in getting dressed, feeding and personal hygiene; have working habits in relation to the hygiene of surrounding space; the cooperative relationships among children are the dominant form; collaborative relationships within a group provided a precondition for developing self-esteem ...” (*ibidem*). Based on these examples, we find that educators perceive this curriculum in a very different manner, which often leads to a dilemma focused on the quality of this institutional mechanism for increasing the children’s inclusion into the preschool curriculum. The obligation to further elaborate and define the goal of this three-month curriculum intervention to the educators is therefore imposed, as different approaches may create misconceptions for parents and later teachers regarding the purpose of this curriculum, as well as difficulties in further work with children during the transition from preschool to the school learning environment (*ibidem*). Certainly, this curriculum is a significant contribution to creating more favourable conditions for a large number of children deprived of a stimulating and favourable environment for development and learning, since many research findings suggest that early introduction of children into institutional learning results in later academic advantage and academic success (Shonkoff & Phillips, 2000).

Based on this research, we established our research objective seeking the answer to the question of whether attending preschool curriculums and preparing children for school responsibilities is related to the expression of lifelong learning competences, as such competencies will be perceived through aspects of child development set out in Preschool Education Curriculum.

Method

Our interest in this paper is focused on establishing the relationship between preschool curriculums for children and the expressiveness of certain aspects of children's development following our registering of data on children's involvement in preschool curriculums, which would allow us to evaluate through a single dimension the relationship between children's inclusion in the preschool curriculum and the expressiveness of certain developmental aspects. Hence, we can evaluate the development of lifelong learning competencies since each competency has been classified for the purposes of this paper into a specific group of aspects of children's development. Aspects of children's development were observed through manifested learning outcomes that define a child's developmental changes, as shown in Table 1. Data on learning outcomes achieved were summarised from a number of interrelated variables into a smaller number of common variables that will be able to describe them, but also to elaborate their interconnectedness.

Based on such hypothesis, our aim was to determine the interdependence of attending the preschool curriculum, which we set as an independent variable in the study, and the development level of certain aspects of child development, set as the dependent variable.

We achieved the preset goal through tasks that were related to determining the expression of learning indicators operationalized in aspects of child development and their correlative relationship, as well as determining the attendance of the preschool curriculum and individual aspects of child development, whereas it was necessary to determine which development aspects are mostly affected by the preschool curriculum.

To help clarify the observed facts, we assumed that there is a significant interdependence between attending preschool and certain aspects of child development, that is, attending preschool curriculums certainly determines the expressiveness of developmental aspects of children, in such a way that children attending preschool have more pronounced development aspects and thus the lifelong learning competences.

Based on the first grade teachers' self-assessment by using a *Scale for Determining the Aspects of Children's Development*, the effects of attending a preschool curriculum prior to going to school were assessed on the volume, i.e. level of each of the four aspects of child development. The generated grid of learning outcomes in the Preschool curriculum and the theoretical foundations of the Curriculum have conditioned the generation of the instrument. As the instrument, which measures both educational and upbringing efficiency of such process in the educational institution and the pupils' achievement level, features harmonization of the programme's goals and content with the instrument's content as one of the most acceptable and logical criteria of validity (Mužić, 1982, p. 157), we can say that the official Preschool Curriculum's validity was confirmed within our research (Cvijanović, 2017, p. 126). In the initial phase of the instrument's development, all the learning outcomes defining a six-year-old child's developmental changes and achievements were extracted from the curriculum. The result of this process was a finalized version of the instrument used in this research

after a three-month pilot trial, designated as the Scale for Determining the Aspect of Children's Development. The instrument entailed four scales and 85 items, and it was used to examine the relationship between preschool attendance and early childhood learning (Cvijanović, 2017). Following the verification of the instrument through factor analysis and Principal Axis method, the number of items was reduced to 55. The scale consists of four development indicator subscales for each aspect of child development. The items were evaluated on a five-degree Likert-type scale, thus indicating the intensity of expression of a particular development indicator, where number 1 indicated a poorly expressed development indicator and number 5 marked a distinctively expressed one. In addition to this information, teachers also documented attendance at the preschool curriculum, that is, times of absences from attending the programme, by answering „yes / no“ questions.

Using the instrument reliability test, we found that the Alpha Cronbach internal consistency coefficients for each subscale are very high (Table 3), as well as the composite score for the entire scale ($\alpha = .98$), indicating that all the scales have high internal consistency reliability.

Table 3

Descriptive data and reliability of scales for determining the aspects of children's development

Scale	X	s δ	Item No.	α	skewness	kurtosis
Physical development	4.18	0.85	5	.95	-.975	.372
Socio-emotional development	4.37	0.66	12	.94	-1.110	1.208
Cognitive development	3.97	0.84	22	.98	-.913	.269
Speech, communication and creativity	3.93	0.83	16	.96	-.778	.199

Asymmetry and kurtosis coefficients indicate that the distribution is close to a normal one (Table 3), whereas the negative values of skewness parameter indicate that most of the results are to the right-hand side of the mean value, i.e. that there is a tendency of curvature to the right relative to the normal frequency distribution, whereas the positive values of kurtosis indicate that the distribution of the results is slightly more spiked than normal, which suggests that the greater number of results is concentrated around the mean. Likewise, negative asymmetry values indicate that there are more scores with high numerical values for each individual aspect of child development.

The survey was conducted in 14 municipalities and in 18 elementary schools across the Republic of Srpska, including first-grade children who had attended preschool programs prior to going to school, but also those children not previously involved in any institutional form of preschool education. Gender-wise, the sample of 1439 children was fairly uniform, as confirmed by the chi-squared test, where the value of the chi-square is: $\chi^2 = .507$, with 1 degree of freedom, meaning that the differences between the genders were statistically insignificant: $p = .477$.

Data on attending the preschool curriculum, not relating to the primary preschool curriculum were collected by parents declaring how long their child attended the programme, with a period of one month being used as an interval unit. Thus, 863 children did not attend the preschool curriculum, while the number of children who attended the preschool curriculum for three, four, five and six months was 523. Only a few children (53) attended the programme from seven to 12 months, and they were not subjected to further analysis, whereas the children who attended the programme for three to six months were grouped into a single categorical variable.

During the first semester, the teachers monitored the progress of the children and, once the semester ended, entered the data into the Scale to determine the developmental aspects of the children. We have opted for this time period, as a longer period of, say, one year may also be significant in terms of maturation changes, so it would be more difficult to determine the effect of attending the preschool curriculum onto child development outcomes.

The Results

The severity or certain aspects of development was determined on the basis of the arithmetic means of four developmental factors, once we noticed that all aspects of a child’s development were generally more pronounced, but that the aspect of socio-emotional development was the most pronounced one (Table 3). Such results lead to seeking the answer to the questions: Why are the differences in developmental aspects most in favour of the socio-emotional developmental aspects? Are the innate capacities for early acquired and learned adaptive forms of social behaviour (Bowlby, 1958) the ones that have determined the severity of socio-emotional development? Assistance in finding answers to these questions can also be sought in the correlations obtained between all the development aspects, whereas such correlations are quite high, as indicated by Pearson’s coefficient *r* (Table 4).

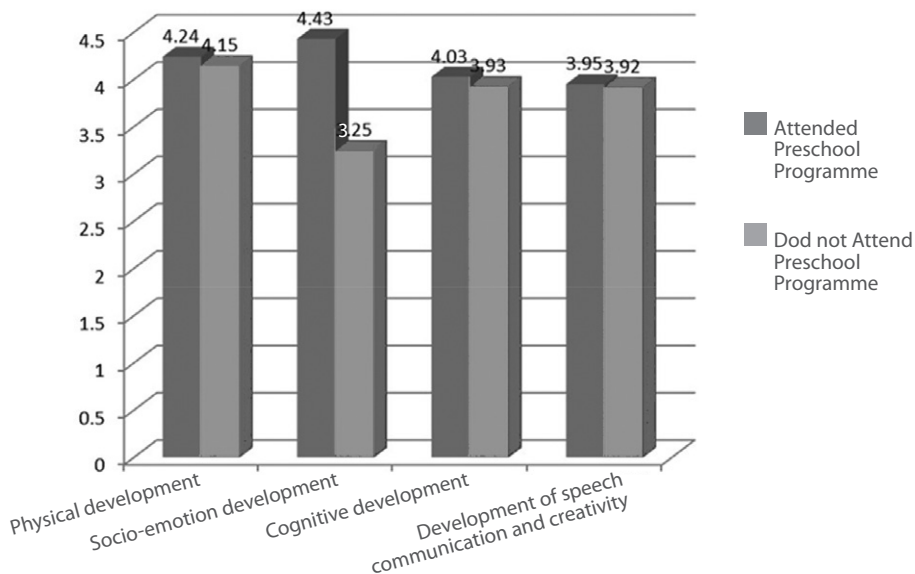
Table 4
Correlation indicators among the child development aspects as per Pearson model

	Physical development	Socio-emotional development	Cognitive development	Speech, communication and creativity
Physical development	1	.760(**)	.810(**)	.744(**)
Socio-emotional development	.760(**)	1	.802(**)	.781(**)
Cognitive development	.810(**)	.802(**)	1	.843(**)
Speech, communication and creativity	.744(**)	.781(**)	.843(**)	1

** correlation is significant at the 0.01 level.

As the correlations are high and significant, this also indicates the spatial coherence of the Scale. In addition, the high r coefficients indicate that the distinctive abilities and skills of children most often go together. This basically means that a child with a more developed speech skills, for example, will also have a more pronounced cognitive development. On that basis, we can assume that there is a higher order factor that indicates the general development of different abilities of children.

If we were to take a look at the attendance variable, i.e. the variable of non-attending the preschool curriculum, based on the pronounced evaluation of child development aspects, we notice that children who attended the preschool curriculum tend to score higher in all aspects of development (Graph 1).



Graph 1. Attendance of Preschool Programme

The magnitude of the difference is not so great on certain aspects of development, such as the developmental aspect of speech, communication and creativity, as well as of physical and cognitive development. However, by observing the mean value for socio-emotional development, we note that the magnitude of the differences is very pronounced, that is, socio-emotional development is much more developed in children attending preschool curriculum.

In order to assess the effect of attending the preschool curriculum on child development outcomes, by using a multivariate analysis of variance, we attempted to identify differences in terms of the programme's impact on particular aspects of child development. The assumption of homogeneity of the covariance matrix has not been violated, as the significance level of the Box's indicator M is greater than 0.001 (Sig. - 0.08). The findings of this analysis indicate that there is a significant difference between the children who attended the preschool curriculum and the ones who did

not attend it, in terms of the expression of particular aspects of development, given that the Wilks' lambda indicator ($\lambda - 0.990$), $F(4.1375)$, partial eta squared - 0.010 features a significance level $p = .011$. As the multivariate test showed the existence of significance of differences among children's groups, we further examined each dependent variable, wherein we found that a significant effect of attending the programme exists only in terms of the socio-emotional development aspect (Table 5).

Table 5

Significance of attending the preschool curriculum and education for a child's development

Independent variable:	Dependent variable	F(1,1378)	p
attending preschool curriculum	Physical development	3.303	0/069
	Socio-emotional development	6.296	0/012
	Cognitive development	4.470	0/035
	Speech, communication and creativity	0.469	0/494

As we can see, the only difference that reached a statistical significance relates to the expression of the socio-emotional aspect of childhood development: $F(1.1378) - 6.296$, $p = .012$. Such findings direct further discussion to determine the reasons for the strongest expression of this developmental aspect in children.

Discussion

The following aspects have been observed in the context of expressing particular aspects of development: physical development was observed through variables that determine graphomotor activities and mastery of locomotor movements; socio-emotional development was observed through the establishment of adequate social interactions with the environment, social competences through the expression and control of children's emotions, as well as through understanding the emotions of others; cognitive development was observed through the developmental level of curiosity and inventive-discovery preferences of a child, through processing and interpretation of knowledge about the world, as well as through expressiveness of logical thinking; the development of speech, communication, and creativity was observed through variables relating to the ability to utilise speech as a system of verbal communication and expression of thoughts and feelings, as well as the ability to subjectively process sensory impressions into original children's creations. Based on these aspects of development, we sought to determine whether attending preschool curriculum and preparing children for school responsibilities is related to the expression of lifelong learning and education competences, when the competencies were observed exactly through aspects of child development.

The research results clearly indicate that there is a connection between attending the preschool curriculum and certain aspects of development, but also that these connections are very complex and intertwined, which again indicates the specificity of the presupposition made and the complexity of the assessed phenomenon.

All the aspects of child development are generally more pronounced, but the aspect of socio-emotional development is the most pronounced one, whereas the cause for higher level of expression of the socio-emotional aspect of development can be sought in the first social contacts of a child and the influence of environmental factors, particularly of the family onto the child, as the first social contacts of a child are generally limited to his/her parents. It is the parents who primarily assist the child in his/her development by monitoring the behaviour of their children, by observing reactions in different situations, noting how he/she relates to other children and how other children may relate to him/her. In this way, the parents are primarily focused onto the rules of behaviour of children that they perceive as acceptable, and somewhat less onto the acquisition of academic knowledge and skills.

On the other hand, by reviewing the results obtained relating to the correlative relationship between aspects of child development, we see that the observed aspects of development are positively correlated with statistical significance at the level of 0.01, indicating a 99% reliability level and unified reporting of all aspects of development. Thus, our findings are consistent with the results of research conducted before, which found that changes, e.g. in terms of self-confidence and motivation, lead to changes in cognitive achievement (Topley & Drennen, 1980), which also confirms the view of a child's holistic nature. This means that if the cognitive (intellectual) aspect of development is more pronounced, the aspect of speech development is also to be more pronounced, as indicated by our findings of correlations between developmental aspects of children.

The assumption that children who have attended preschool curriculums have more pronounced aspects of development, and thus the competences of lifelong learning, has been confirmed in the section dealing with socio-emotional development. We believe that such results have been obtained as the preschool curriculum focuses on components that can be recognized as the indicators of socio-emotional development such as: becoming enabled for independent work and acquiring work habits, learning the rules of behaviour in a group and in the society, developing a sense of responsibility and mutual tolerance, which was the most influenced aspect within the three months duration period of the programme. In addition, we can assume that the preschool curriculum is dominated by outcomes focused on personal, social and emotional development, while the outcomes related to gaining academic knowledge are less prevalent. Likewise, the very interpretation and application of the programme by the educator should be taken into consideration, bearing in mind that the programme based on learning outcomes presupposes greater freedom of the educator in the organization of work, selection of methods, means and educational styles (Skupnjak, 2011, p. 310) which further complicates the readiness of the educator to successfully complete the educational process. Certainly, in this case, the confirmation of the research becomes more comprehensible, whereas its results indicate that the effect of the preschool curriculum on socio-emotional development is not as clear and evident as on cognitive

development and achievement outcomes (Yoshikawa et al., 2013, p. 4). This is quite understandable, primarily due to the fact that the indicators of cognitive development are more easily notable and visible, compared to the indicators of socio-emotional development that can be observed most often through manifested behaviours of the child in a particular situation the child may find itself in.

Conclusions

As we have been familiarized with the results of the inclusion of children in the preschool curriculum and the impact of the curriculum on the developmental aspects of children, it is evident that the issue of such pedagogical intervention should be approached from the aspect of reviewing the complementarity of the goals of the entire system of education and upbringing, social and economic needs, political demands but also visions of the society in which the child lives and grows.

In terms of the relationship between the expressiveness and distinctiveness of developmental aspects and the preschool curriculum, the findings of this study support the arguments for greater investment in early education for all children, and particularly for children growing up in a less stimulating environment. From the perspective of humanistic pedagogy, we can also call it an investment in human development, which economists tend to view through the prism of better educational outcomes and better situation of the health system, which is later reflected in lower spending on health care, higher labour productivity, higher economic growth, higher income from state taxes and lower crime-related spending rates (Van Ravens, 2014). That is why the claim that children are “our future” is more than justified, because by investing in them we actually invest in the human and economic development of the whole society (Cvijanović, 2018). If we also take into account the scientific and technological changes that produce information occurring at a movie-like speed, human cognitive (intellectual) resource becomes an important factor of development, therefore justifying the need to invest in educational, scientific and research activities to increase overall well-being, both of the individual and society as a whole (Barić, 2003, p. 361).

Precisely the aforementioned items are greatly supported by the well-established, defined and specified lifelong learning competences that are created and strengthened by the first steps a child takes in his/her life. In addition, institutional upbringing and education from the child's youngest days and every day thereupon is an important prerequisite for an individual to acquire new skills and competences necessary in knowledge-based economies.

References

- Barnett, W. S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. *The Future of Children*, (3), 25–50. <https://doi.org/10.2307/1602366>
- Barić, V. (2003). Temeljne odrednice investiranja u obrazovanje odraslih. *Pomorski zbornik* 41 (1), str.361-379.
- Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psycho-Analysis*, 39, 350–373.
- Božović, R. (2007). Od dosade do dokolice. *Sociološka luča*, 1, 7–18.
- Bredenkamp, S. (1996). *Kako djecu odgajati*. Razvojno primjerena praksa u odgoju djece od rođenja do osme godine. Educa.
- Brković, A. (2011). *Razvojna psihologija*. Čačak: Regionalni centar za profesionalni razvoj zaposlenih u obrazovanju.
- Campbell, F.A., & Ramey, C.T. (1994). Effects of early intervention on intellectual and academic achievement: A follow-up study of children from low-income families. *Child Development*, 65(2), 684–698. <https://doi.org/10.2307/1131410>
- Cornford, R.I. (2002). Learning-to-learn strategies as a basis for effective lifelong learning. *International Journal of Lifelong Education*, 21(4), 357–368. <https://doi.org/10.1080/02601370210141020>
- Cvijanović, N. (2017). *Predškolski program i dječiji razvoj: teorijski i empirijski pristup*. Zavod za udžbenike i nastavna sredstva.
- Cvijanović, N. (2018). *Moć ranog djetinjstva i značaj ranog učenja*. 10. međunarodna konferencija, 'Horizonti', Kategorija rada / godina X. Broj 10.
- Frost, L. J. Wortham, C. S., & Reifel, S. (2012). *Play and child development*. (4th ed.) Pearson Education.
- Kamenov, E. (2006). *Dečja igra*. Zavod za udžbenike i nastavna sredstva.
- Klemenović, J. (2009). *Savremeni predškolski programi*. Savez pedagoških društava Vojvodine, Novi Sad. Visoka škola strukovnih studija za obrazovanje vaspitača, Vršac.
- Kopas-Vukašinović, E. (2006). Uloga igre u razvoju djece predškolskog i mlađeg školskog uzrasta. *Zbornik Instituta za pedagoška istraživanja*, 1, 174–189. <https://doi.org/10.2298/ZIPI0601174K>
- Memorandum o cjeloživotnom učenju. (2000). Radni materijal Europske komisije. SEC 1832. Bruxelles, 30.10.2000.
- Mitić, A., & Marković, Z. (2018). *Vrtići budućnosti za nove generacije – godine uzleta*. Predškolsko obrazovanje. Nedeljnik: 15. novembar.
- Mužić, V. (1982). *Metodologija pedagoškog istraživanja*. Zavod za udžbenike i nastavna sredstva.
- Osnove programa predškolskog vaspitanja i obrazovanja, Konceptija Osnova programa – Godine uzleta. <http://www.mpn.gov.rs/wp-content/uploads/2018/09/OSNOVE-PROGRAMA-.pdf>
- Reynolds, A.J., & Temple, J.A. (1996). Extended early childhood intervention and school achievement: Age 13 findings from the Chicago longitudinal study. *Institute for Research on Poverty*, Discussion Paper, 1095-96, 1–38.

- Reynolds, A.J., & Temple, J.A. (2008). Cost-effective early childhood development programs from preschool to third grade. *The Annual Review of Clinical Psychology*, 4, 109–139.
- Skupnjak, D. (2011). *Kurikulum i profesionalni razvoj učitelja u Hrvatskoj*. Napredak, 2, 305–324. <https://doi.org/10.1146/annurev.clinpsy.3.022806.091411>
- Spasojević, P., Pribišev Beleslin, T., & Nikolić, S. (2007). *Program predškolskog vaspitanja i obrazovanja*. Ministarstvo prosvjete i kulture Republike Srpske. Zavod za udžbenike i nastavna sredstva.
- Spasojević, P. (2013). *Metodika predškolskog vaspitanja i obrazovanja*. Nova škola plus.
- Stojaković, P. (2012). *Prvih šest godina, psihologija za vaspitače i roditelje*. Grafid.
- Shonkoff, P. J., & Phillips, A. D. Ed. (2000). *From neurons to neighborhoods: The science of early childhood development*. National Academy Press.
- Topley, K. S., & Drennen, W. T. (1980). The influence of an affective curriculum on the cognitive performance of four and five year olds. *Child Care Quarterly*, 9(4). University of South Carolina. <https://doi.org/10.1007/BF01555184>
- Van Ravens, J. (2014). Predškolski odgoj i obrazovanje za sve: Finansijski izvediv plan za osiguravanje jednogodišnjeg predškolskog odgoja i obrazovanja za svu djecu u Bosni i Hercegovini. Unicef: Sarajevo.
- Vudhed, M. (2012). *Različite perspektive o ranom detinjstvu: teorija, istraživanje i politika*. Institut za pedagogiju i andragogiju Filozofskog fakulteta.
- Yoshikawa, H., Weiland, C., Brooks-Gunn, J., Burchinal, M. R., Espinosa, L. M., Gormley, W. T., Ludwig, J., Magnuson, K. A., Phillips, D., & Zaslow, M. J. (2013). Investing in our future: The evidence base on preschool education. *Society for Research in Child Development*. <http://fcd-us.org/resources/evidence-base-preschool>

Nataša Cvijanović

Department of Preschool Education

Faculty of Education

Univerzitet u Istočnom Sarajevu

Semblerskih ratara bb, 76300 Bijeljina, Republic of Srpska,
Bosnia and Herzegovina

natasa.c09@gmail.com

Danica Mojić

JU Children's Kindergarten "Čika Jova Zmaj"

Svetog Save 9, 76300 Bijeljina, Republic of Srpska,
Bosnia and Herzegovina

mojic.danica@gmail.com

Institucionalna pedagoška intervencija u ranim godinama života na putu cjeloživotnog učenja

Sažetak

Istraživanje predstavljeno u ovom radu fokusira se na uspostavljanje odnosa između institucionalnih pedagoških intervencija u ranim godinama života, poput predškolskoga programa i ranoga učenja djece.

Ovaj odnos promatran je kroz uspostavljene ishode koji definiraju promjene djeteta u svim aspektima razvoja: fizičkom, socioemocionalnom i kognitivnom aspektu te razvoju govora, komunikacije i kreativnosti.

Cilj istraživanja bio je ispitati vezu između uključenosti u predškolski kurikulum i poboljšanja određenih razvojnih aspekata djece kao indikatora ranoga učenja, prilikom promatranja predškolskoga obrazovanja i obrazovanja kao temeljnoga procesa za razvoj kompetencije cjeloživotnoga učenja.

Evalvacija aspekata dječjega razvoja provedena je upotrebom Skale za utvrđivanje razvojnih aspekata djece, a provodili su je učitelji koji su procjenjivali djecu na početku prvog razreda, također bilježeći podatke o pohađanju predškolskih institucija.

U istraživanje je bilo uključeno 1439 djece iz 18 škola, što predstavlja oko 14 % ukupne populacije djece koja pohađaju prvi razred u Republici Srpskoj, jednom od entiteta u Bosni i Hercegovini.

Rezultati istraživanja odnosa uključivanja djece u predškolski kurikulum i njihovih razvojnih aspekata pokazuju da djeca koja su pohađala vrtić imaju izraženije razvojne aspekte, što se također odražava na razvijenije sposobnosti cjeloživotnoga učenja.

Ključne riječi: aspekti dječjega razvoja; cjeloživotno učenje; predškolski kurikulum.