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DEMOGRAPHICS OF COMMUNICATION SKILLS OF PRESCHOOL CHILDREN (4-5 YEAR OLD)

DEMOGRAFIJA KOMUNIKACIJSKIH VJEŠTINA PREDŠKOLSKE DJECE (4-5 GODINA)

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ABSTRACT

The research was carried out with the aim of identifying the impact of demographic factors on the expression of communication skills of 4-5-year-old children in Montenegro. The influence of several factors that can affect the speech development (gender, educational level of mother and father, birth order, length of stay in kindergarten and the age subgroup within the same year) has been examined. This is a transverse study. From the overall, four-part model of the Gunzberg II test, we highlighted items related to communication in the order of age 4 and 5. Items were observed in relation to development standards and in relation to the Curriculum in preschool institutions. The sample is consisted of 639 children from 17 kindergartens. The results of the research suggest that the participants of this research do not have enough developed communication skills in accordance with the standards for appropriate ages. The variables we tested as independent did not show a constant impact on the appearance of differences in some tasks. In order to improve children's communication development, it would be necessary to: a. redesign the curriculum, b. develop programs of systematic parent training; and c. reduce the number of children in one educational group.

Keywords: communicative skills; curriculum; differences among children; Gunzberg II test; preschool child.

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SAŽETAK

Istraživanje je sprovedeno s ciljem identifikovanja uticaja demografskih faktora na izraženost komunikacijskih vještina kod djece uzrasta 4-5 godina u Crnoj Gori. Ispitan je uticaj nekoliko faktora koji mogu uticati na razvoj govora (pol, obrazovni nivo majke i oca, redoslijed rođenja, dužina boravka u vrtiću i starosna podgrupa unutar iste godine). Ovo je transverzalna studija. Iz cjelokupnog, četvorodijelnog modela Gunzberg II testa, istaknuti su stavke vezane za komunikaciju u redoslijedu uzrasta od 4 i 5 godina. Stavke su posmatrane u odnosu na razvojne standarde i u odnosu na Kurikulum u predškolskim ustanovama. Uzorak se sastojao od 639 djece iz 17 vrtića. Rezultati istraživanja sugeriraju da učesnici ovog istraživanja nemaju dovoljno razvijene komunikacijske vještine u skladu sa standardima za odgovarajuće uzraste. Varijable koje smo testirali kao nezavisne nisu pokazale konstantan uticaj na pojavu razlika u nekim zadacima. Kako bi se poboljšao komunikacijski razvoj djece, bilo bi potrebno: a. redizajnirati kurikulum, b. razviti programe sistematske obuke roditelja; i c. smanjiti broj djece u jednoj obrazovnoj grupi.

Ključne riječi: komunikacijske vještine; kurikulum; razlike među djecom; Gunzberg II test; predškolsko dijete.

INTRODUCTION

Development of the communication skills of children, with the focus on development of their speech, has been described in many studies. The developmental characteristics of the speech and nonverbal communication of the child, from the time of his birth, during early childhood to the final formation of all elements of primary speech activities: listening and speaking are established and described in details (Baucal, 2012; Hoff and Shatz, 2007; Hoff, 2009; Karmiloff and Karmiloff Smith, 2001). Children's language competence is shaped by many factors: inborn disposition, listening and speech development, social environment (parents, i.e. adults from the child's environment and peers), exposure of the child to the media, self-activity, as well as systemic training (Šego, 2009). During the first three years of life, speech and language development are the most intense. The child is an active builder of his language competence, and most children successfully master their mother tongue up to the age of three (Baucal, 2012). The child's environment plays an important role in communication development, so the child's environment must be rich in stimulus and communication incentive, for which cognitists have provided a lot of evidence (Bruner, 1975; 1983; Pijaže and Inhelder, 1978; Vygotsky, 1978; [1934],1986).

Speech is a social category, caused and enabled through social interaction (Hoff, 2003), and as sociocultural circumstances change, they will have an impact on changes in speech, i.e. communication skills of children (Vygotsky, 1986). This would mean that every major civilization change – and one is just happening through a strong technical and technological development that shapes new media and creates new communication patterns – inevitably leads to changes in communication skills, which could have an impact on children's speech in all development phases. Recent research in Montenegrin primary schools suggests that teachers believe that children in their homes are less and less exposed to speech communication (Vučković, 2017).

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Teachers emphasize that children are not spoken to enough, that they are more refer to media and that parents expect preschool institutions and schools to take key roles for children's speech development (Vučković, 2017). Children's vocabulary needs to be enhanced and enriched (Vučković, 2019).

THEORETICAL BACKGROUND

Some factors of children's communication, especially speech development, have been often studied: gender differences, ethnic, social characteristics, birth order, age, etc. and it is not uncommon for the results of the research to give diverse conclusions, which is partly dependent on the specific conditions in which the research is taking place (sociocultural circumstances), and the second is partly a consequence of a different methodology (Marković, 2017).

In the field of gender differences, many specificities have been identified. Thus, some studies indicate that parents do not have the same way of communication with boys and girls since the early age (Cakić, 2015; Leaper et al., 1998), and gender stereotypical communication sometimes occurs, which negatively influences the development of girls in i.e. understanding of scientific concepts (Crowley et al., 2001; Huges et al., 2004), which could lead to gender differences in the later development of literacy (Lummis and Stevenson, 1990; OECD, 2018). However, other researchers consider that parents are equally addressing boys and girls, so differences in speech development cannot be caused by the linguistic experience of children, but are conditioned by a certain psychological mechanism that affects girls being more successful than boys (Karmiloff & Karmiloff Smith, 2001). In any case, differences in general communication skills exist and are noticeable early, so 2-year-old boys are lagging behind girls in speech development (Reilly et al., 2007).

A recent review of the interaction between a parent and a child as a factor with a direct causal relationship with the child's development of speech and communication in general, points out the existence of a large number of studies (1750) dealing with this relationship (Topping et al., 2013). It has been found that a variety of research was carried out, both in terms of the research area, and methodological, and this topic is basically multidisciplinary and especially current. Researchers emphasize that the quality and intensity of this reaction is the most important for the development of communication skills, which is confirmed by many evidence. On the other hand, communication with peers is less supported by evidences as a factor of speech development (Topping et al., 2013). The influence of parental incentive is remarkable for the development of children's communicative competence, as are the overall sociodemographic characteristics of the family (Hoff-Ginsberg, 1998; Tamis-LeMonda et al., 2013).

Parents with a higher education level are also expected to have better communication with children (Arranz Freijo and Rodrigo López, 2018; Denmark et al., 2016). They use language for different purposes, and mothers with high educational attainment create verbally more incentive situations than those who do not have such a level of education, which positively reflects on the speech of children ages 3–7 (Hoff, 2009). However, education does not necessarily mean the most appropriate type of parental behaviour in the family, but that behaviour is built out of many components (Poolman et al., 2017; Saracho, 2017).

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There are studies suggesting that birth order (firstborn are more advanced in communication patterns) causes significant differences in the child's communication development (Berglund et al., 2005). And other studies show that firstborns have advantages over secondborns in the domain of general communication skills, the adoption of grammar and vocabulary, and also that secondborn children are more advanced in conversation skills (Hoff-Ginsberg, 1998).

The birth order of the child has an impact on speech development in certain segments, but this influence is not so strong that the secondborn or later born children in the family are at risk of a speech delay through this factor (Reiley et al., 2007). It turns out that the secondborn children are not lagging behind in general speech development compared to the firstborn ones (Oshima-Takane et al., 1996), so the birth order as a factor that slows the speech development of the secondborn children has never been proven, in the opinion of some scientists (Berkowitz, 2000). So, as in many other aspects of this issue, it is evident that the results do not correspond, they are almost opposed, which is interpreted as a consequence of the methodology, but especially the different sociocultural circumstances in which the research is being carried out.

Attending a preschool institution has positive effects and benefits over exclusively taking care in a family, according to research by Berglund, Eriksson and Westerlund (2005). However, some recent research has shown interesting and partly unexpected results that children attending preschool institutions do not achieve better results in speech development than their peers who are not in kindergartens (Hildenbrand et al., 2017). Regardless of the results of studies that did not notice the particular influence of kindergarten attendance on the better communicative ability of children, today it is doubtful that early education programs represent a necessity, with a special focus on children who do not come from incentive environments, which is undoubtedly distinguished from those studies whose results point to the importance of social (and systematic) stimulation of children's communication development, because the language experience of children is an important factor in their communication development (Hoff-Ginsberg, 1998). Therefore, it is no longer questionable whether or not to have a preschool education – the only question is which model of this education to develop (Slavin and Chambers, 2017). Of course, studies such Hildenbrand's et al. (2017) could suggest the importance of re-examining the quality of preschool education and improvement of the program.

RESEARCH METHODOLOGY

The main goal of this study was to describe the communicative development of children and to determine whether there are some differences in this development in relation to several independent variables: gender, parents' education, age, attendance at preschool institutions, birth order of a child.

Key research constraints stem from the fact that examiners are unknown to children, which could have an impact on their responses and reactions. However, on the other hand, this factor enabled a more objective assessment of respondents' responses. The examiners professionally removed the barriers, relaxing the children in order to show their communication skills. In addition, the restrictions also come from the application of the instruments (Gunzberg II test), which has four tasks for each of the ages.

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With these tasks, it is not possible to get detailed insights into the communication skills of children. Evaluating achievements according to this test implies that only "yes" and "no" responses are recorded. However, given the instability of children's communication functions at the age of study, we also included "partial", as a medium success rate, which represents the adjustment of instruments to the needs of the research.

The main research question is: Have the identified communication skills been developed in accordance with the expectations that are prescribed by the development standards for the appropriate age?

Research hypotheses are:

H1: Girls are more successful than boys in the communication area tasks that are given in the Gunzberg II test.

H2: The firstborn are more successful than later born children.

H3: Children whose parents have higher education are more advanced in communication than those whose parents finished a high school.

H4: Children who attend preschool institutions for a longer period are more successful in solving tasks in the communication area than their peers who attend preschool institutions for a short time.

H5: Older children are more communicative than younger ones, within the same year.

As independent variables, the following are observed: child's gender, mother's level of education, father's education level, child's birth order, length of stay in preschool, age group within the same year. Dependent variables are the communication tasks contained in the Gunzberg II test.

RESEARCH INSTRUMENT

The research was carried out by a testing technique based on the Gunzberg scale of psychomotor development. The Gunzberg II test, which is consisted of four basic areas to be assessed (socialization, communication, work and self-service), was used, but only a part of the communication skills test for the ages 4 and 5 was isolated for this research. For each of the two years tested, the Gunzberg II test has four special items, while the development scale is cumulatively observed. The test tasks correspond to those contained in the development map (Baucal, 2012), and are also included in the objectives of the Curriculum (2011).

We quote items with an explanation of their significance and method of checking in our research:

A four year old:

Connects experiences in a concrete way. Perform tasks such as: Put a sock on a doll / give it water … and transfer your experience to others, i.e., on the doll. When testing this task, it is done individually with the child and concrete tasks are given: Let's play with a pastry... How does mother do it? How did you do it with your mom?

Sentences contain plural, past time and I, we, we were – the first person and past tenses. When testing this task, it is done individually with a child, questions are asked: Where were you during the summer? With who? What were you doing? What did you do? What did they do?

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It uses prepositions: in front of, above, below, etc. (more complex spatial relations / orientations in relation to oneself). When testing this task, it is done individually with the child, asking him/her questions: Where is the chandelier... chair... where is the cat? The conversation refers to the objects shown in the drawing.

Coincides with the same colour (matches tiles of the same colour and names the basic colours). When testing this task, it is done individually with the child, a board with different colours is set in front of the child, red, green, yellow, blue, white, black... the chips of different colours are given to the child and he/she should put it on the same colour they see on the board.

A five year old:

1. Understands simple questions and gives prudent answers. When testing this task, it is done individually with a child. Why do we take an umbrella when it rains, in winter boots? Why are we going to the sea in the summer, and on the mountain in the winter?
2. Counts mechanical items up to 10. Work is individual with a child. There are more items on the table and the child is asked to count ten / separate ten / to group them.
3. Solves numerical situations up to 4. When testing this task, it is done individually with a child. There is a circle. Add to be four total ... Here are six circles. Move some to have four.
4. It differs concepts: short, long, big, small. When testing this task, it is done individually with a child. Objects are placed in front of the child in which the difference of these terms is observed. We ask the child to give us some objects on our request determined by the terms given before.

RESEARCH SAMPLE

The total sample is consisted of 639 children attending 17 kindergartens (Table 1). It is a deliberate sample, which includes children from kindergartens in the largest Montenegrin municipality (Nikšić) from the central region. Objects Zvjezdice, Neven, Vrabac, Mačak, Zvončić, Proljeće, as institutions in suburban or rural areas have one kindergarten group for each of the ages, while all others have two groups. Kindergartens with two groups have a higher number of enrolled children than the standards prescribed (>24). One group was tested in kindergarten and all children who were present at the time of testing were included. Parents have signed a test approval.

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Table 1. Sample structure in kindergartens.

Kidnergarten	A four year old	A five year old
Zvjezdice	9	7
Ciciban	23	20
Neven	22	15
Leptir	23	21
Vrabac	14	12
Mačak	23	18
Palčica	18	15
Zvončić	8	5
Kuća mašte	25	20
Bistrica	20	12
Pčelica	26	25
Radost	13	30
Osmijeh	25	23
Sunce	22	25
Kosovka djevojka	28	24
Lastavica	21	20
Proljeće	16	11
TOTAL	336	303

The 4-year-old sample is homogenous in terms of gender (163 girls and 173 boys), 165 first born, and 171 later born. Regarding the education of parents, 149 fathers have Higher education and 187 High education, while 148 mothers have Higher education and 188 High education. These respondents satisfy the conditions for applying for the chosen test (Chi-square). Children usually stay in kindergarten for 16 months, and the standard deviation is for 5.4 months. The average age of the sample members is 53.6 months, and the deviation is 3.5. Table 2 shows overview of variables at ratio scale.

Table 2. Overview of the sample of a four year old.

	Length of stay in kindergarten (in months)	Child's age (in months)
N	336	336
M	16.11	53.61
SD	5.43	3,50

N – total number; M – Mean; SD – Standard Deviation

As for the five-year-old sample, there is considerable homogeneity. The sample is consisted of 144 girls and 158 boys. By education, 142 mothers have Higher education and 160 High education. 148 fathers were with Higher education, and 154 were with High education. 129 firstborn children, while 173 were born later.

The average age of children is slightly over 64 months, which means that the sample allows the application of the Gunzberg II test. An average length of stay in kindergarten is more than 20 months. Table 3 contains overview of the sample according to variables at ratio scale.

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Table 3. Overview of the sample of 5 years old.

	Length of stay in kindergarten (in months)	Child' age (in months)
N	303	303
M	20.45	64.17
SD	6.57	2.91

RESULTS

The results of the research are reported by age groups. Each item has a dichotomous character, so the child either does (yes) or does not perform the (no) task. However, given the age of children and the instability of their communication reactions, we also included a secondary degree of reaction (a partially performed task), which implies that children (with additional stimulus) solve the task.

Following are the results of a four year old (Table 4), i.e. statistical indicators of their success in four test tasks for their age.

Table 4. Frequencies for a four year old.

	Links experiences in a concrete way	Sentences contain plural, past tense, and I	He/she uses prepositions: in front, above, below	Matches the same colors
Yes	43 12.8%	131 39.0%	95 28.3%	145 43.2%
Partial	193 57.4%	197 58.6%	234 89.6%	190 58.5%
No	100 29.8%	8 2.4%	7 2.1%	1 0.3%
Total				336 100%

In the 4-year-old group, the fourth task was most successful, and the least successful was the first one. This group of tasks indicates that the speech and communication development of these children are something to be worked in addition. For example, for the first task, as many as 30% of children do not still have the opportunity to respond, which is – if compared with the development standards used in Montenegro (Baucal, 2012) – an indicator that activities in the development of speech and communication in kindergarten, but and within the family, must be intensified with emphasis on functionality of knowledge. On the other hand, a large number of children use stable grammar categories of plural, tenses and correctly use a personal pronoun for the first person of singular. Thus, there is a disagreement between the results for the first and second tasks, which suggests that receptive speech activities are those that need to be particularly practiced. In a situation where children have developed productive activities (they speak correctly), almost – according to all theoretical directions – receptive activities can be implied.

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However, the first task required from children to perform the assigned tasks, which is a requirement that implies understanding of the task, but also a willing activity to perform this task.

Table 5 shows medium measure and measure of dispersion for this sample. The arithmetic mean is represented as a measurement of the mean for categories: 1 (yes), 2 (partial), and 3 (no). The arithmetic mean of a value close to 1 indicates that the task is done better.

Table 5. Measures of medium value (Mean) and dispersion for a sample of a 4 year old.

	Links experiences in a concrete way	Sentences contain plural, past tense, and I	It uses prepositions: in front, above, below	Matches the same colors
N	336	336	336	336
M	2.17	1.63	1.74	1.57
SD	0.63	0.53	0.48	0.50
Skewness	-0.15	-0.07	-0.52	-0.22
Kurtosis	-0.57	-1.0	-0.45	-1.78

The difference in the arithmetic environments between the first and the fourth item is 0.60. The first task was the worst and the result of the sample was significantly shifted to the negative reaction. In the case of this sample, the distribution of the results is shifted for each of the sides to the right, i.e. according to “no”. Also, this is a distribution of platykurtic, with the flattened distribution being increased in the fourth task. The smallest result dispersion is for the third task (SD = 0.48), and the highest is for the first task. It is possible that this is a consequence of the fact that the kindergarten program specifically expands learning about space and spatial relationships, while the execution of simple tasks involving child experiences is not sufficiently present.

Differences in independent variables are presented in Table 6.

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Table 6. Differences in independent variables on a 4-year-old sample.

	Links experiences in a concrete way	Sentences contain plural, past tense, and I	It uses prepositions: in front, above, below	Matches the same colours
Gender				
Chi-Square	2.10	4.83	1.51	6.26
Cont. Coef.	0.08	0.12	0.07	0.14
Asymp. Sig. (2-sided)	0.35	0.09	0.47	0.04
Mother‘s Edu level				
Chi-Square	0.54	12.30	3.81	1.28
Cont. Coef.	0.04	0.15	0.11	0.06
Asymp. Sig. (2-sided)	0.76	0.06	0.15	0.53
Father‘s Edu level				
Chi-Square				
Cont. Coef.	0.17	7.07	4.53	1.70
Asymp. Sig. (2-sided)	0.02	0.14	0.12	0.07
	0.92	0.03	0.10	0.43
Birth Order				
Chi-Square	14.69	13.11	6.37	3.28
Cont. Coef.	0.21	0.19	0.14	0.10
Asymp. Sig. (2-sided)	0.02	0.04	0.38	0.77
Length of Stay				
Chi-Square	24.30	3.32	12.17	0.64
Cont. Coef.	0.26	0.10	0.19	0.04
Asymp. Sig. (2-sided)	0.0	0.19	0.0	0.72
Age Subgroups				
Chi-Square				
Cont. Coef.	27.31	20.63	12.76	2.22
Asymp. Sig. (2-sided)	0.27	0.24	0.19	0.70
	0.0	0.0	0.01	0.08

Gender as an independent variable has influenced the fact that girls are statistically significantly better in matching the same colours. Mother’s education level did not affect the appearance of differences on a single item, while father’s education level influenced the appearance of differences in the case of a task “sentences contain plural, past time and I”. In the case of variable birth order, the differences appeared in favour of firstborn children in tasks “linking experiences in a concrete way” and “sentences contain plural, past tense and I”. The length of stay in the kindergarten had an impact on items “linking experiences in a concrete way” (more successful were those who stayed shorter period of time in the kindergarten) and “use the prepositions in front, above, below” (more successful ones are those who stay longer). The fourth item shows that special attention is paid to spatial

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relationships in preschool institutions, so children who stay longer in kindergarten have more success in the tasks on this subject. In terms of age subgroups, differences occur in tasks "linking experiences in a concrete way" (the youngest are the most successful), "the sentences contain plural, the past tense and I" and "use the prepositions in front, above and below" (members of the oldest group are more successful).

A five year old also solved four tasks and Table 7 gives the frequency of their reactions and responses.

Table 7. Frequencies for a five year old.

	Understands simple questions and gives prudent answers	Count mechanically up to ten	Solves numerical situations up to 4.	Differs concepts: short, long, big, small.
Yes	107 35.4%	126 41.7%	112 37.1%	125 41.4%
Partial	130 43.0%	157 52.0%	111 36.8%	167 55.3%
No	85 28.1%	19 6.3%	79 26.1%	10 3.3%
Total				302 100%

Even the results of a five year old are not good enough, because at these frequencies there is a (too) large number of children who have unstable reactions to the requested requirements (category "partial") or have negative reactions, cannot solve set tasks (category "no"). Tasks one and three are resolved quite badly and cannot be done by more than a quarter of the sample.

The results of the five year old are slightly shifted to the right-hand side for each of the items, especially for the third one, so it is a positive asymmetric distribution (Table 8).

Table 8. Measures of medium value and dispersion for a sample of a 5 year old.

	Understands simple questions and gives prudent answers	Count mechanically up to ten	Solves numerical situations up to 4.	Differs concepts: short, long, big, small.
N	302	302	302	302
M	1.86	1,89	1.65	1.62
SD	0.74	0.79	0.60	0.55
Skewness	0.23	0.20	0.32	0.12
Kurtosis	-1.16	-1.37	-0.67	-0.88

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Regarding the value of kurtosis, they indicate flattened distributions in some items (platykurtic). Kurtosis is most prominent for the second and for the first item. The last two tasks were better done in relation to the first two, with the less standard deviation for these two tasks. And here it is possible to link (un)success to the Curriculum (2011), since the concepts of size and numerical situations up to 4 stand out. It is interesting that the task of mechanical counting up to 10 has pretty bad results.
Table 9 shows differences on this sample.

Table 9. Differences in independent variables on a 5-year-old sample.

	Understands simple questions and gives prudent answers	Count mechanically up to ten	Solves numerical situations up to 4.	Differs concepts: short, long, big, small.
Gender				
Chi-Square	6.66	1.50	4.81	7.41
Cont. Coef.	0.15	0.70	0.12	0.15
Asymp. Sig. (2-sided)	0.04	0.47	0.09	0.02
Mother‘s Edu Level				
Chi-Square	5.93	6.81	6.11	6.67
Cont. Coef.	0.14	0.15	0.14	0.15
Asymp. Sig. (2-sided)	0.21	0.15	0.19	0.15
Father‘s Edu Level				
Chi-Square	1.76	2.22	0.08	1.28
Cont. Coef.	0.08	0.08	0.02	0.06
Asymp. Sig. (2-sided)	0.41	0.33	0.96	0.53
Birth Order				
Chi-Square	6.49	7.21	3.53	1.97
Cont. Coef.	0.14	0.15	0.11	0.08
Asymp. Sig. (2-sided)	0.16	0.12	0.47	0.74
Length of Stay				
Chi-Square	10.42	23.92	15.51	54.4
Cont. Coef.	0.18	0.01	0.22	0.0
Asymp. Sig. (2-sided)	0.40	0.27	0.11	0.39
Age Subgroups				
Chi-Square				
Cont. Coef.	61.42	49.85	99.07	62.90
Asymp. Sig. (2-sided)	0.0	0.0	0.0	0.0
	0.41	0.38	0.50	0.41

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The gender conditioned the emergence of statistically significant differences for the first and fourth tasks. In the first task boys (M (m) = 1.79) were better than girls (M (f) = 1.94), and in the fourth item the average success was equal (M = 1.62), but majority of boys was completely unsuccessful in this task.

DISSCUSION

The total sample of respondents is consisted of two age-differentiated sub-assays, i.e., a four year old and a five year old were included. We wanted to check how successfully they solve tasks in the field of communicative skills, given in the Gunzberg II test for appropriate ages.
It is also important to discuss the question of whether the assignments from the test are adapted to the age groups of children in the socio-cultural-linguistic context, and especially in the context of the curriculum. In the Montenegrin preschool system, a development map (Baucal, 2012) is used, which we consulted before and during the research in order to check the conformity of the items from our instrument with the standards for appropriate ages. The age of 4-5 corresponds to a group that is treated as 36-72 months old in the development map and which defines three areas of development: reception of speech – listening and understanding, verbal expression: spontaneous expression, conversation, narrative and pragmatics: the ability to use of language in communication in a proper, successful and appropriate way (Baucal, 2012). All our items are fully recognized as standard descriptions and/or as examples. When it comes to the Curriculum (2011), which is a joint document for all preschool institutions in Montenegro, it is targeted and goals are written in three large groups: getting to know themselves, others and the world surrounding them. The goals were written rather "wide", i.e. their meaning is subject to a variety of interpretations by the educators. For example, goals "develop fluency in language expression" or "develop the ability to clearly and comprehensively demonstrate their own actions, experiences, adventures and ideas" can open a very extensive field of work research. Basically, careful reading of goals indicates that all the items from the Gunzberg II test are contained in the Curriculum (2011). Some of the tasks (counting up to 10, numerical situations up to 4 and matching the same colours) are found in the part of the Curriculum for mathematical-logical and artistic activities. Reading the Curriculum in order to check the achievement of goals has indicated that it is necessary to redesign it in terms of greater concretization of goals.
The results obtained by years are not satisfactory. A four year old achieved M = 1.78, with the worst task of all 8 recorded in the group of tasks that were tested with them. The task is "linking experiences in a concrete way", which the respondents did with an average success of M = 2.17. A five year old scored M = 1.75.
In the areas in which the attributes belong to the standards of development (Baucal, 2012), we can speak of two groups:

1. Items related to understanding i.e. speech reception and execution of an order. These tasks are: understands the orders they are looking for: in, behind, under (a 4 year old, M = 1.75), coincides the same colours (a 4 year old, M = 1.57), combines experiences in a concrete way (a 4 year old, M = 2.17) solves numerical situations up to four (a 5 year old, M = 1.65) and differentiates terms: short, long, big, small (a 5 year old, M = 1.62). None of

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the tasks were done at that level to say that the children were able to handle the demanding request.

2. Items of the two-way communication with the interrogator and which imply verbal expression: sentences contain plural, past tense and I (a 4 year old, M = 1.63), uses prepositions in front, above, under (a 4 year old, M = 1.74), understands simple questions and gives prudent answers (a 5 year old, M = 1.86) and counts mechanically up to ten (a 5 year old, M = 1.89).

The independent variables we observed did not show a stable impact, i.e. they did not work equally on the items intended for the appropriate age. The variables of the gender, viewed as those whose influence is possible on the appearance of differences, caused statistically significant differences in two items in a five year old, and on a single item in a four year old, so the hypothesis of the influence of gender on the appearance of differences cannot be accepted. On our sample, it is not possible to accept any other hypotheses since no variable has an impact on a sufficiently large number of items. Mother's education has no impact on the appearance of differences in speech development in any group, while father's education makes a difference in a single item in a 4 year old. Birth order caused the appearance of the difference of two items in a four year old, with a fairly high C = 0.20. In particular, the length of stay in the kindergarten makes a difference in two items of a 4 year old. However, although the number of points in which this variable is affected is smaller, it is interesting that the tasks are: links experiences in a concrete way (C = 0.26) and uses suggestions in front, above, below (C = 0.19), which are all programmed content. The coefficient of contingency is high every time. Older subgroups (groups of children within the same age) are shown to be significant for three items for a 4 year old. The smallest difference was found on the sample of a five year old, although, in general, the results they achieved were not good.

CONCLUSIONS

The research suggests the following conclusions:

1. Tested children do not yet have a stable response to tasks from a communication domain predicted for an appropriate age. Tested tasks are fully in line with the development map on which the Curriculum (2011) relies. This would mean that the communication maturity of this sample is not at the level of the expected standards.
2. None of the variables for which we have assumed, based on numerous previous studies, that it could affect the appearance of differences in children's speech development, has not shown expressed and stable impact. Some variables worked on 1–2 items, and it is interesting that mother's education level did not affect any of them. This information is partly interpreted from the traditionally recognized role of the mother in education in Montenegrin society. Namely, it is possible that mothers – regardless of the different educational level – are equally trying to communicate with children.
3. In the 5-year-old sample, there was a slight difference, i.e. independent variables do not make a difference between children in terms of their speech development, which is an unexpected piece of information that could lead to the conclusion that age differences are

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decreasing or whether these children – as they are in school preparation – are psychologically more willing to communication.

4. The best completed tasks have the clearest connection with the Curriculum (2011), specifically with the part related to the development of speech.

Considering that the results of the research do not show that children are successful in speaking skills, and bearing in mind the importance of speech for their overall further development and learning, we think it would be important to:

1. Redesign the Curriculum for ages 3–6. Namely, our research has shown that children of these two ages are more successful in those tasks that the Curriculum clearly sets as objectives directly in the field of speech development. Educators, therefore, implement the program objectives and the program's specification would direct them to those development standards that are necessary for a certain age.
2. It is necessary to develop a parenting system for encouraging the development of children's speech early in life. Our research shows that parents' education does not have an impact on speech development, and that equally (not) successful children are more educated and less educated parents. Comparing the results with development standards, we must note that this is a poor performance of children from our sample, which could be improved by parents' training programs.
3. The number of children in certain preschool groups needs to be reduced in order to work with them better. Most of the groups in which testing has been carried out has more than 20 children, some 30 and more. When it comes to children of preschool age, it is clear that the results of the work would be much better in smaller groups.

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