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Monitoring the Artistic Development of Fourth-Year Students – An Analysis of the Situation in Croatian Primary Schools

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Abstract

The development of child's creativity in primary school is not just the task of arts education, but of all school subjects. The overall curriculum should be focused on the development of each person in education, both on the development of her or his knowledge and abilities, and on encouraging creativity in various fields. Respect, release, and development of all child's potentials is an important condition for creativity, as children have at their disposal a fair amount of abilities needed to create.

In the paper, we present the outcomes of a study in which the level of artistic development of fourth-year students was analysed in Croatian primary schools. The results indicate that there are differences in the creative levels, manifested as better results in favour of boys. There are also differences in optical-thematic development, in this case manifested as better results in favour of girls.

Key words: *artistic creativity; artistic development; primary school; visual culture.*

Introduction

Education and fostering child's overall development has always been one of the more important goals of study by various experts. American explorers Kemple and Nissenberger (2000) underline that early years are extremely important for the development of creative potentials. Although we are aware of the importance of creative thinking, and in spite of the fact all social development hinges on it, there is a lack of it in practice. The authors conclude that the reason also lies in the school

system. They think that teachers ask questions that require the child to use creative thinking in less than 10% of cases (Kemple & Nissenberger, 2000). Marentič Požarnik even believes there is too little creativity in schools or that it is even suffocated. She points out that many students have ideas, but because of their fears they do not have the courage to present them (Marentič Požarnik, 2003). It is therefore important that all forms of creativity are dedicated sufficient amount of attention, especially when it within the education system. We can agree with Runco when he says that children also have the ability to do something new, opposite to what is known as mimicry, and the possibility of personal realization, no matter how modest. Children cannot be experts, but they can express their originality in drawing, singing, playing, and perceptive examination of the environment (Runco, 2007).

Regarding the definition of creativity, Pečjak (1987) thinks that the biggest problem is that creativity can be defined in one hundred or more ways, but none is adequate or sufficient. "The majority of authors emphasize novelty and originality in creating new combinations or reorganizing those already existent when defining the concept of creativity (Đorđević, 2010; Vigotski, 2005, as cited in Gagić, Japundža-Milisavljević, & Đurić-Zdravković, 2015, p. 42).

We could say the concept of creativity is multidimensional. Jurman perceives creativity as a fundamental anthropological function without which no one could be considered a human being. He says that creativity in a person is something more, that "it is his existential function, which defines the purpose of his life and existence" (Jurman, 2004, p. 190). He also claims that through creativity the human gets confirmed and that it can be found in all forms of human activities, especially in the results of his work.

Trstenjak (1981) makes a distinction between artistic and scientific creativity. He says the difference between one and the other exists because scientific creativity is only cognitive, while artistic creativity is at the same time primarily aesthetic. He also sees a difference in believing that scientific creativity is more demanding than artistic creativity, because "the artist is born", while "the scientist needs yet to be made". We can agree with the claim that creativity is a general human characteristic normally distributed among people. Most people are averagely creative, while there are few who are extremely creative or not creative at all, according to Žagar (1992).

As Trstenjak (1981, p. 11) says, creativity can be identified through four aspects, which American researchers see as four Ps: press (environment), personality, process, and product, "In this way four starting points are derived according to which the structure and factors of creativity are to be discovered". From the educational point of view creative personality is important, and in the planning of art-educational work the emphasis is on creative environment and creative process. The latter is "reinforced with components such as absorption, inclination towards imagination, and dreaming. In imagination, absorption and imaginative process together allow unlimited exploration of habits or of facts. Via dreaming and imagination intuition, creativity and other

unconscious processes can develop" (Peres Fabello & Campos, 2011, p. 38). As the data were obtained on the basis of children's artworks, in the present research it is the creative product that has primary importance.

Artistic-creative process is one of the most complex, the most secret and only partially conscious activities of human consciousness, consisting of intuition and expression. The former is a highly developed capacity of intensively experiencing the world, also including artist's subjective experience which is at the same time a cultural sensitivity for observing the world (Herzog, 2008). Visual creativity could be defined in the same way as artistic, according to Duh (2004, p. 22), "however, specific visual elements, thus visually-expressive resources, must be added. Visual artwork is the product of a creative process; it is multilayered and has multiple meanings. Multilayeredness is manifested in the complexity of the emergence of a work of art". It may be claimed that the characteristics of creativity in visual arts are based on the characteristics of artistic creativity. Various factors related to the artistic aesthetic phenomenon can be identified as indicators of artistic development. In our study we monitored the level of artistic development via artistic-creative, art-formative, and optical-thematic development, all of which are going to be further presented later on.

Artistic-Creative Development

The factors that are derived from divergent production are originality, flexibility, fluency and elaboration, while the factors of sensitivity for problems and redefinition originate from cognition. Understanding creative factors in dynamics indicates two dialectical aspects with which certain phenomena and processes relevant for the development of creativity can be explained. Karlavaris (1981, p. 18) proposes two aspects, namely:

- Personality characteristics and abilities that are interdependent with creative factors in the sense of quantity and quality.
- Personal structure, which could be denoted as unity of opposites, because it contains opposite factors. These have been labelled as quantitative and qualitative, or as factors that allow creativity and stimulating factors that encourage creativity.

Factors in the sense of artistic creativity can, on the other hand, only be defined taking personality characteristics and artistic capabilities into account. These are linked to precise perception, visual memory, imagination, motor skills, sensitive perception, creative thinking, emotions, and motor sensitivity. The aggregate of artistic capabilities and personality characteristics can be named subjective artistic factors, according to Duh (2004, p. 18), "Some authors only speak about artistic capabilities, but we believe all the eight factors cannot be classified as artistic abilities. Some of these factors belong rather into the category of personality characteristics, others into the category of artistic abilities." "Seen quantitatively, creative factors have a stronger concentration of creative thinking, emotionality, artistic experience, and imagination, thus providing a higher qualitative level of artistic creativity. Creative factors are thus

a sublimation of artistic abilities in the area of artistic creativity" (Karlavaris, 1991, p. 22). The influence of the teacher on the development of artistic-creative abilities is considerable. Above all, the teacher can encourage the child, motivate him/her by asking additional questions, open new views through problem teaching, which can influence the child's experience of an artistic task. Rački (2010) suggests that children's artistic creativity, which is developed in arts classes, is an artificial formation. Children would not have produced such artworks by themselves, without being encouraged.

Formative Development

Child's artistic expression is a cognitive necessity and play through which the child plays with artistic theoretical concepts and elements (Muhovič, 1990). Authors (Duh & Zupančič, 2003; Karlavaris, 1991; Schrader, 2000) believe that children have an inborn inner feeling for optimal artistic composition which, however, changes through the stages of personality's and artistic development. So, for instance, at the early stage a child explores and becomes familiar with different materials and artistic techniques, and through artistic expression releases his/her imagination. Later, with adolescents, the reasons for artistic creativity can be looked for in their development and in the formation of their own expression. Child's art-formative development is mainly influenced by art-educational practice and by the teacher. We know that without this the child is left to him/herself, which of course influences the final product. Art-formative development is also interesting from the point of view of comparison between a child and a mature creator. Here we ask ourselves what the difference is between the criteria of artistic formation of a child, which has a universal character, and on the other hand artistic formation of a mature creator, which is denoted as special giftedness and individuality (Butina, 1997). The difference is that in the works of the mature creator the desire for spontaneity, intensity, and immediacy of experience is manifested, while the child is not burdened with prejudice — as already mentioned — his or her creativity is a cognitive need which is mainly a motor, rhythmical and sensory expression that acts as an indispensable factor of child's general and artistic development (Muhovič, 1990). At an early stage the child spontaneously fills the format with elements of artistic form. Kandinski (1985) and Karlavaris (1991) assume that in his/her early developmental period the child has an inner feeling which helps him/her in artistic creation. "It is worthwhile to emphasise the compositional value of a good child's drawing. /…/ Here the child's unconscious, enormous power gets revealed, which exalts a child's work making it comparable in quality to /…/ the work of an adult" (Kandinski, 1985, p. 299). "One body of theoretical literature (e.g. Gardner & Winner, 1982; Rosenblatt & Winner, 1988) and empirical research (i.e. Davis, 1993) addresses children's early facility with the aesthetics of graphic symbolization. These theories and research suggest that children's facility with the aesthetic properties of art (e.g. expressivity, repletion, composition) declines with age and that only the graphic work of artistic adolescents regains aesthetic lives"

(Rostan, Pariser, & Gruber, 2002, p. 127). In children's artworks formative aspect has an important role, because in addition to the factors of creativity it co-creates child's artistic expression. Art-formative development in arts education is an important factor and with this a necessary constituent part of every didactic unit of art-educational activity. It is reasonable to take into account the criteria of formative development in the phase of planning the art-educational process in the sense of introductory motivation, in demonstration, in individual work during creation itself, and in the concluding phase of artistic evaluation.

The level of formative development includes the development of understanding and using various means of artistic expression. With regard to this, we were interested in the presence of artistic elements and principles for the definition of relationships between artistic elements (Karlavaris & Berce-Golob, 1991). In their artistic expression, children individually build and organise artistic elements and thus communicate with themselves and with the environment. The language of arts is a means of communication for the expression of artistic abilities adapted to the developmental stage. In addition, visual, aural, and motor impulses are converted into lines, areas, surfaces, colours, and spaces in the sense of new signs of individual artistic expression, which takes place through different artistic techniques in the framework of individual artistic fields (Tanay, 1988). The criterion of formational development is accompanied by the richness of the language of art and the coherence of visual elements. In contrast with the ability of a realistic presentation of a figure, movement, objects, and space explored by optical-thematic development, formative development includes understanding and knowing the means of artistic expression and following the goal according to which the learner manages this specific knowledge. The scientific system analyses the language of arts via presentation of space, which represents the framework of emergence and of existence of a work of art, of artistic elements, primary relations among visual elements (size, proportion, symmetry, reiteration, alternation, interval, rhythm, orientation, dynamics, balance) and via the principles of composition (Karlavaris, 1991).

Speaking about teacher's influence on the formative development in a child, we can say it is great. This influence reflects mainly on the appropriately demonstrated artistic technique and artistic procedures. It is therefore extremely important that the teacher is professionally trained and sensitive.

Optical-Thematic Development

Optical-thematic development, or artistic-intellectual development, coincides with the stage of intellectual development and is a measure for determining the phases of child's artistic expression. It follows from this that the motif must be in the artistic task, close to the child, while simultaneously offering or allowing opportunities for the development of child's general and spatial-artistic abilities (Duh & Zupančič, 2003). Because in our research we monitored ten to eleven years old students, we must state

that regarding developmental phases at this age students are just somewhere between the phases of intellectual and visual or optical realism. We are speaking about the transition or the beginning of a more controlled period. Children's artistic products depend, to an extent, upon certain universal graphic abilities. The underlying features of children's graphic development are common across all societies and cultures: structurally simpler forms and figures precede the most complex ones (Golomb, 1992, as cited in Rostan, Pariser, & Gruber, 2002); and children the world over are attracted to actively exploring the problem of representing objects and experiences in a given medium (Winner, 1989, as cited in Rostan, Pariser, & Gruber, 2002). "This is not to suggest that there is a universal developmental 'push towards optical realism' – realism is a parochial Western concern – but it is to say that virtually all children want to master the graphic-representational forms provided by their own cultures" (Rostan, Pariser, & Gruber, 2002, p. 129).

Speaking about teacher's influence on child's optical-thematic development we could say that here it is the weakest, as it mainly depends on child's general development.

Methods

Purpose and Objectives of the Study

The purpose of the research was to examine the level of artistic development of fourth-grade primary school students. In this we monitored the level of optical-thematic development, the level of formative development, and the level of artistic creativity. The obtained results were analysed from the perspective of differences between the genders. The gender was an independent variable.

Given the fact that quality art-educational work is important for artistic development, we set ourselves the goal to verify whether the established way of art-educational work better suits boys or girls. We know that art-educational work has less influence on optical-thematic development (artistic-intellectual development) and slightly greater influence on the development of creative abilities of students. Art-educational work does, however, have the greatest influence on the development of creative art-formative abilities. The results of the study will serve as a stimulus for the improvement of art-educational practice.

Research Hypotheses

In the study we started from the following research hypotheses:

- We assume that in artistic development, which consists of artistic-creative, art-formative, and optical-thematic development, no statistical gender differences (HGE) will be found.
- We assume that in the overall level of optical-thematic development there will be no statistically significant gender differences (HOTD).
- We assume that in the overall level of creative development there will be no statistically significant gender differences (HCD).

– We assume that in the overall level of formative development there will be no statistically significant gender differences (HFD).
– We assume that creative, optical-thematic, and formative development run independently from each other.

Besides, we also defined the following research questions regarding each type of development:

RQ1: Are there differences between the genders in individual factors of optical-thematic development (*feet, clothes, cut, fingers, decoration, props, detail, maturity, head, body, legs, clothes 2, detail 2, gesture, hands)*?

RQ2: Are there differences between the genders in individual factors of creative development (*sensitivity for artistic problems, flexibility, fluency, originality, redefinition, elaboration*)?

RQ3: Are there differences between the genders in individual factors of formative development (*lines, forms, value, texture, rhythms, orientation, proportions, formal, and suggestiveness*)?

At the same time we were also interested in the relatedness of individual types of development (creative, formative, and optical-thematic) in relation to the overall pattern and from the point of view of gender. We defined the following research question:

RQ4: What is the connection between individual factors of artistic development with regards to the whole sample?

Research Method

Quantitative method of scientific educational research was applied with the causal non-experimental method in educational empirical research. *T*-test was used in determining the differences. Pearson coefficient was used for the verification of correlations between individual development strands.

Research Sample

The research sample consisted of 320 students of the fourth grade of primary schools in total, 170 girls and 150 boys. Students from urban and suburban primary schools in Zagreb and its surroundings participated in the research.

Data Collection Procedure

Data collection took place in March 2017. After we obtained consent from the schools head teachers, the students were tested with a test of artistic abilities lasting 45 minutes, i.e. one school lesson, at the previously agreed time. The obtained test drawings were assessed by a commission.

Description of the Instrument

In testing creativity and artistic expression we used the test *Kriteriji razvoja* [Development Criteria] which had, in addition to the studied literature on previously

performed research studies (Duh, 1996; 1997a; 1997b; Duh & Büdefeld, 2017; Duh & Logar, 2016; Karlavaris, 1974; Kljajič 2016) proved to be a reliable, valid, and sensitive test for measuring artistic expression and abilities of 3 to 18-year-old children. The production of test drawings in testing conditions took 45 minutes, i.e. one school lesson. The monitored criteria are optical-thematic (intellectual), creative, and formative development. With the support of a special assessment scale adapted from the studies performed by arts educators Karlavaris (1974) and Duh (1996), the level of child's artistic expression was determined on the basis of the test drawing.

The students received the instruction to produce a drawing with the motif *I have invented a new musical instrument.* Through artistic expression we thus measured:

- Optical-thematic or intellectual development through the depiction of a human figure.
- Creative development through the depiction of a new musical instrument.
- Formative development through the way of using artistic technique and artistic elements.

Data Processing Procedure

The data were processed using computer software SPSS intended for statistical processing of data. For the obtained results the arithmetic mean ($\bar{x}$), standard deviation (s), the test of homogeneity of variance and the test of differences between the arithmetic means are presented. With the assistance of Pearson coefficient the relatedness of individual components of development (optical-thematic, creative, and formative) was also analysed separately for boys and girls, and in relation to the whole sample.

Results and Discussion

The obtained results will be presented in the following order: first, the analysis of the results for overall artistic development consisting of the set of optical-thematic, artistic-creative, and artistic-formative development will be presented. After that, the results linked to optical-thematic development in relation to the overall value and, separately, according to individual factors will be displayed. The presentation of results for artistic-creative and artistic-formative development follows. The section will be concluded with the presentation of correlations between individual components of development.

The outcome of the F-test of homogeneity of variance shows the assumption is justified; the condition for the computation of the t-test is thus met. With the analysis of the t-test, however, we detected no statistically significant differences between boys and girls in the overall level of artistic development. The obtained results confirm the general hypothesis H_{GE}, which proposed that in *artistic development,* consisting of artistic-creative, artistic-formative, and optical-thematic development, there would be no statistically significant gender differences. Next, we present the analysis of the results of overall optical-thematic development.

Table 1

The results of the t-test of differences between arithmetic means and F-test of homogeneity of variance (Levene's F test) of results regarding students' gender in the overall level of artistic development

Overall artistic development	Gender	Arithmetic mean	Standard deviations	Test of homogeneity of variance		Test of difference of arithmetic means	
				F	P	t	P
	Boys	203.64	67.26	0.084	0.773	0.096	0.924
	Girls	202.93	65.01				

Table 2

The results of the t-test of the differences between arithmetic means and the F-test of homogeneity of variance (Levene's F test) of the results according to the students' gender in the overall level of optical-thematic development

Overall optical-thematic development	Gender	Arithmetic mean	Standard deviations	Test of homogeneity of variance		Test of difference of arithmetic means	
				F	P	t	P
TOTAL	Boys	60.10	30.08	1.190	0.276	-6.824	0.000
	Girls	83.58	31.27				

The outcome of the F-test of homogeneity of variance shows the assumption is justified and thus the condition for the computation of the t-test is met. At the overall level of optical-thematic development we perceived a statistically significant difference (P = 0.000) in favour of girls. Because of this, the hypothesis H_{OTD} must be rejected. Optical-thematic development coincides with general development. We know girls are slightly more developed at this age (10-11 years), which is also visible in monitoring artistic-intellectual development.

Further we were interested in finding where the difference in performance comes from. In Table 3 we present the results of gender difference according to individual factor of optical-thematic development.

In the case of the factors: clothes, cut, detail, body, legs, detail 2, the assumption of homogeneity on which the t-test is based, is not justified, so we quote the outcome of the approximation method, while in the other nine cases the condition for the usual t-test is met. The t-test showed statistically significant gender differences in as many as eleven of fifteen cases. They are visible in the following factors: clothes (P = 0.000), cut (P = 0.000), decoration (P = 0.000), detail (P = 0.000), maturity (P = 0.000), head (P = 0.000), body (P = 0.000), clothes (P = 0.000), detail 2 (P = 0.000), gesture (P = 0.000), and hands (P = 0.000). In all the cases the difference is in favour of the girls. Statistically significant differences were not detected for other factors (feet, props, legs). A tendency of difference (P = 0.060) was detected for the factor fingers and it was also in favour of the girls. The obtained results provide an answer to the research question RQ1, which inquired whether there were differences between genders in the individual factors of optical-thematic development.

Table 3

The results of the t-test of the differences between arithmetic means and the F-test of homogeneity of variance (Levene's F-test) of results according to students' gender in individual factors of optical-thematic development

Factors of optical-thematic development	Gender	Arithmetic mean	Standard deviations	Test of homogeneity of variance		Test of difference of arithmetic means	
				F	P	t	P
Feet	Boys	2.41	1.13	0.058	0.811	-0.087	0.930
	Girls	2.42	1.11				
Clothes	Boys	3.85	2.46	39.046	0.000	-5.207 (approximation)	0.000
	Girls	5.12	1.81				
Cut	Boys	3.97	3.65	6.687	0.010	-6.405 (approximation)	0.000
	Girls	6.46	3.28				
Fingers	Boys	1.55	1.28	0.132	0.716	-1.889	0.060
	Girls	1.83	1.32				
Decoration	Boys	3.80	4.80	3.533	0.061	-4.776	0.000
	Girls	6.43	4.99				
Props	Boys	11.87	4.38	1.828	0.177	-1.038	0.300
	Girls	12.35	3.89				
Detail	Boys	5.55	6.29	8.465	0.004	-5.151 (approximation)	0.000
	Girls	9.33	6.85				
Maturity	Boys	5.26	6.99	7.521	0.006	-7.320	0.000
	Girls	11.36	7.90				
Head	Boys	3.69	1.49	2.258	0.134	-4.786	0.000
	Girls	4.52	1.62				
Body	Boys	3.77	1.53	6.488	0.011	-4.503 (approximation)	0.000
	Girls	4.61	1.80				
Legs	Boys	3.04	1.29	15.757	0.000	-1.539 (approximation)	0.119
	Girls	3.30	1.67				
Clothes	Boys	3.25	2.19	0.076	0.783	-6.239	0.000
	Girls	4.82	2.29				
Detail 2	Boys	1.99	2.02	13.534	0.000	-4.463 (approximation)	0.000
	Girls	3.12	2.51				
Gesture	Boys	3.00	1.46	16.070	0.000	-5.427	0.000
	Girls	3.99	1.79				
Hands	Boys	3.11	1.88	0.328	0.567	-3.956	0.000
	Girls	3.92	1.79				

Majority part of the results are in favour of the girls. In contrast to results of previous research (Logar, 2015), where there was no statistically significant difference detected between genders in the overall level of optical-thematic development, a tendency of difference in favour of the girls was found.

In the following text the performance of students in overall artistic-creative development will be presented.

Table 4

The results of the t-test of arithmetic means and the F-test of homogeneity of variance (Levene's F-test) of results according to the students' gender in the overall level of artistic-creative development

Overall artistic - creative development	Gender	Arithmetic mean	Standard deviations	Test of homogeneity of variance		Test of difference of arithmetic means	
				F	P	t	P
TOTAL	Boys	110.86	58.05	0.705	0.402	0.651	0.515
	Girls	106.73	55.20				

The results of the F-test of homogeneity of variance indicate the assumption is justified, and the condition for the computation of the t-test was thus met. However, with the latter we did not detected statistically significant gender differences. This result confirms the research hypothesis H_{CD}.

In the following text we present the results linked to gender difference in the individual factors of artistic creativity.

Table 5

The results of the t-test of the differences of arithmetic means and the F-test of homogeneity of variance (Levene's F-test) of results according to students' gender in individual factors of artistic-creative development

Factors of artistic creativity	Gender	Arithmetic mean	Standard deviations	Test of homogeneity of variance		Test of difference of arithmetic means	
				F	P	t	P
Sensibility for artistic problems	Boys	20.31	9.73	0.309	0.578	1.189	0.235
	Girls	19.05	9.30				
Elaboration	Boys	20.07	9.96	1.958	0.163	1.362	0.174
	Girls	18.65	8.77				
Flexibility	Boys	19.55	10.10	0.204	0.652	0.490	0.624
	Girls	19.00	9.83				
Fluency	Boys	18.30	9.26	0.121	0.728	-0.057	0.954
	Girls	18.36	9.03				
Originality	Boys	16.60	12.05	0.557	0.456	0.303	0.762
	Girls	16.20	11.53				
Redefinition	Boys	16.03	10.17	0.119	0.731	0.477	0.633
	Girls	15.48	10.18				

The results of the F-test of homogeneity of variance show the assumptions are justified in all factors of artistic creativity; the condition for the computation of the t-test is thus met.

The latter has in turn shown that no statistically significant gender differences can be detected in the factors of artistic creativity that constitute creative development.

These results provide an answer to the research question RQ2, which inquired about the differences in individual factors of creative development between genders. The performance of boys and girls is rather similar. In some factors the boys outperformed the girls, while in others the girls performed better than the boys. Given the existing research (Herzog, 2008, 2009; Herzog & Duh 2011), this comes as a surprise. In all the quoted studies girls had an advantage in the majority of cases. In this research, performed in Croatia, however, boys had an advantage in the analysis of creative development. Such outcome could perhaps be attributed to the testing conditions, which suited the boys somewhat better than the girls because, as it is known, in this age period girls are better at following and observing teacher's instruction, which, however, were not present in the testing conditions.

We were further interested in the analysis of the overall formative development in boys and girls.

Table 6

The results of the t-test of the differences of arithmetic means and the F-test of homogeneity of variance (Levene's F-test) of the results according to pupils' gender in the overall level of artistic-formative development

Overall formative development	Gender	Arithmetic mean	Standard deviations	Test of homogeneity of variance		Test of the difference of arithmetic means	
				F	P	t	P
TOTAL	Boys	2076.03	974.87	0.180	0.672	1.319	0.188
	Girls	1925.44	985.27				

The results of the F-test of homogeneity of variance show the assumption is justified and thus the condition met for the computation of the t-test. Regarding the overall level of formative development, we detected no statistically significant differences. The research hypothesis H_{FD} can thus be confirmed.

Next, we present the results linked to each factor of formative development with regards to gender differences.

The results of the F-test of homogeneity of variance show that the assumptions are justified for all the factors of formative development; the condition for the computation of the t-test is therefore met. With the analysis of the t-test, statistically significant difference was detected with two factors of formative development: with proportions (P=0.021) and with suggestiveness, which were both in favour of the boys. These results answer the research question RQ3, which aimed to find whether there are gender differences in the individual factors of formative development.

With regards to differences in proportions, it may be proposed that boys are somewhat more independent than girls if not given instruction by the teacher and more confident in their own results than girls, who are more inclined to being guided and more likely to follow teacher's instructions. In relation to the differences in the suggestiveness of artistic expression, the obtained results are somewhat less surprising because in artistic creation boys are more expressive and immediate than girls. Given

the existing research (Duh & Korošec, 2009), this is surprising as in the quoted study the girls mainly performed better than the boys; namely in the overall value of formative development at a statistically significant level.

In this research we were also interested in the interconnectedness of individual developmental factors (optical-thematic, creative, and formative) in relation to the whole sample.

Table 7

The results of the t-test of the differences between arithmetic means and the F-test of homogeneity of variance (Levene's F-test) of results according to students' gender in each factor of artistic-formative development

Factors of formative development	Gender	Arithmetic mean	Standard deviations	Test of homogeneity of variance		Test of the difference of arithmetic means	
				F	P	t	P
Lines	Boys Girls	2.53 2.36	1.13 1.13	0.039	0.843	1.328	0.185
Forms	Boys Girls	2.45 2.40	1.10 1.17	1.164	0.281	0.411	0.681
Value	Boys Girls	2.19 2.03	1.11 1.15	0.425	0.515	1.192	0.234
Texture	Boys Girls	2.45 2.29	1.16 1.20	0.481	0.489	1.199	0.231
Rhythms	Boys Girls	2.40 2.30	1.15 1.16	0.274	0.601	0.772	0.441
Orientations	Boys Girls	2.41 2.25	1.13 1.12	0.002	0.960	1.268	0.206
Proportions	Boys Girls	2.51 2.22	1.13 1.10	0.017	0.897	2.315	0.021
Formal	Boys Girls	3.10 2.89	1.74 1.78	0.197	0.657	1.074	0.283
Suggestiveness	Boys Girls	2.87 2.52	1.65 1.57	0.158	0.691	1.968	0.050

Table 8

The results of the Pearson's correlation coefficient between individual development components in relation to the whole sample

		∑ CREATIVE	∑ OPTICAL-THEMATIC	∑ FORMATIVE
∑ CREATIVE	Pearson's Correlation	1	-0.018	0.077
	α		0.754	0.168
∑ OPTICAL-THEMATIC	Pearson's Correlation		1	-0.069
	α			0.218
∑ FORMATIVE	Pearson's Correlation			1
	α			

The results of the Pearson's correlation coefficient between individual types of development in relation to the whole sample show a negative correlation between artistic-creative and optical-thematic development (r = -0.018). This means that in general there are fewer students who are creative and they are more successful in optical-thematic development. We can infer that students in the pedagogical process are not relaxed enough nor encouraged to have their own visual interpretation. It means that students develop normally, but with limitations in the system in the creative field (Marentič Požarnik, 2003). We also found a weak correlation between creative development and the growth of design (r = 0.077), which means that all students are equally successful in both movements.

In the analysis of correlations of connectedness, negative correlation (r = - 0.069) was also detected during optical-thematic and art-formative development. It means that students who are less successful in optical-thematic development are more successful in art-formative development. Students who achieved weaker results in the artistic-intellectual growth were more relaxed and playful in research conditions. They achieved better results in the sense of art creativity development, using and connecting different art elements.

We can conclude that students follow limiting instruction too often. Usually, these students show somewhat better image of art creativity in the normal artistic-creative and intellectual development. The results provide an answer to the research question RQ4, related to the correlation between the individual factors of artistic development for the whole sample.

The results (Table 8) indicate that creative, optical-thematic, and formative development take place independently. Namely, correlations are mainly insignificant. Optical-thematic development, which is equated with artistic-intellectual development, takes place in consistence with child's overall development. Formative development, where students become familiar with ways of building an artwork, with the use of materials and artistic techniques, is contingent to educational work and in part takes place independently from optical-thematic development. Similarly, low correlations of the mentioned developmental categories with creative development can, however, be explained with the fact that the latter partly depends on innate abilities, while it can certainly be additionally stimulated by quality educational work.

Conclusions

In the article we have analytically touched upon an important segment in art education profession, monitoring artistic development. It is important to draw attention to this important factor in the overall development of the child and to contribute to its improvement in the existing education system with more research in this area. It is also necessary to raise awareness of the fact that, opposite to the obsolete opinion of creative abilities being a special privilege of the few who have been born with a talent, creativity is indeed a general human potential and a need innate to every child (Beghetto & Kaufman, 2007; Jukić, 2011; Kamenov, 2008).

As we have found in the research, there are gender differences in the optical-thematic development. It is therefore a non-negligible fact that teachers must take account of these differences in their art educational work and also be able to perceive them. The knowledge in this area allows them to understand the given differences and facilitate the selection of methods and procedures of work they apply in the art educational process at as high quality level as possible and to take care of the individual development of each student. Gender differences found in this study have proven to be extremely interesting and useful for art educational practice due to the fact they are opposite of those found in previous similar research studies already mentioned in the paper and performed in Slovenia. Generally speaking, more differences have been found in favour of boys, regarding creative development. Given rather similar school systems in both countries (Slovenia and Croatia), the result is surprising and can be interesting for further sociological and cultural research. Are there really such great differences in education and in the environment the children come from? Are the detected differences a consequence of different amounts of time dedicated to art education? We are aware of the existing differences between the two countries – in grades 1 to 8 Croatian children only have one period of arts a week, while Slovenian children have two periods in grades 1 to 5 and only one period in grades 6 to 9. Especially interesting findings of this research presented in the article are also results of the analysis of correlations between individual categories of development. The latter opens new aspects for research in the future.

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Praćenje likovnog razvoja učenika četvrtih razreda – analiza stanja u hrvatskim osnovnim školama

Sažetak

Razvijanje djetetove kreativnosti u osnovnim školama nije samo zadatak predmeta likovne kulture nego svih predmeta. Sveukupni kurikul morao bi biti usmjeren na razvoj svakog subjekta u odgoju i obrazovanju, kako u razvijanju njegova znanja i sposobnosti tako i u poticanju njegove kreativnosti na raznim područjima. Poštivanje, oslobađanje, poticanje i razvijanje svih djetetovih sposobnosti preduvjet je kreativnosti s obzirom na njegovu inherentnu kreativnu sposobnost. U radu predstavljamo rezultate istraživanja u kojem smo analizirali razinu likovnog razvoja kod učenika četvrtih razreda osnovne škole u hrvatskim osnovnim školama.

Rezultati ukazuju na postojanje razlika u razini njihova stvaralaštva, što osobito pokazuju kod kreativnog razvoja. Razlike se uočavaju u korist dječaka, a kod optičko-tematskog razvoja u korist djevojčica.

Ključne riječi: *likovna kreativnost; likovna kultura; likovni razvoj; osnovna škola.*

Uvod

Obrazovanje i poticanje cjelokupnog razvoja djeteta uvijek je bio jedan od značajnih ciljeva proučavanja različitih stručnjaka. Američki istraživači (Kemple i Nissenberger, 2000) naglašavaju da su djetetove rane godine iznimno važne za razvoj njegovih kreativnih potencijala. Unatoč poznavanju značajnosti kreativnog mišljenja i činjenici da se cijeli društveni napredak temelji na kreativnom mišljenju, ono u praksi ipak nedostaje. Autori to pripisuju školskom sustavu te navode da učitelji u manje od 10 % slučajeva postavljaju pitanja koja zahtijevaju djetetovo korištenje kreativnog razmišljanja (Kemple i Nissenberger, 2000). Marentič Požarnik (2003) smatra da u osnovnim školama nedostaje kreativnih poticaja, odnosno da se oni čak guše. Naglašava da mnogi učenici imaju ideje, ali ih se zbog straha ne usuđuju iskazati. Stoga je važno obratiti pozornost na sve oblike kreativnosti, čak i kada je riječ o obrazovnom sustavu. Možemo se složiti s Runcom koji kaže da djeca također imaju sposobnost da

učine nešto novo, suprotno onome što je poznato kao imitacija i mogućnost osobne realizacije, bez obzira na to koliko je skromna. Djeca ne mogu biti stručnjaci, ali mogu izraziti svoju originalnost u crtanju, pjevanju, igranju i perceptivnom ispitivanju okoline (Runco, 2007).

Što se tiče definicije kreativnosti, Pečjak smatra da je najveći problem u tome što je kreativnost moguće odrediti na stotinu ili više načina, ali nijedan nije adekvatan ili dovoljan (Pečjak, 1987). Pri definiranju koncepta kreativnosti većina autora naglašava novitete i originalnost u stvaranju novih kombinacija ili reorganizaciji već postojećih (Đorđević, 2010; Vigotski, 2005, cit. po Gagić, Japundža-Milisavljević i Đurić-Zdravković, 2015, str. 42).

Moglo bi se reći da je pojam kreativnosti višedimenzionalan. Jurman vidi kreativnost kao temeljnu antropološku funkciju bez koje čovjek nikad ne bi bio čovjek. On smatra da je kreativnost u čovjeku nešto više, „egzistencijalna funkcija koja definira njegov smisao života i postojanja" (Jurman, 2004, str. 190), dodajući da se čovjek potvrđuje putem kreativnosti koju možemo percipirati u svim oblicama ljudske aktivnosti, osobito u rezultatima njegova rada.

Trstenjak razlikuje umjetničku kreativnost od znanstvene kreativnosti, pri čemu ističe da je znanstvena kreativnost samo kognitivna, a da je umjetnička uz to i osobito estetska (Trstenjak, 1981). Autor vidi razliku i kad smatra da je znanstvena kreativnost istodobno zahtjevnija od umjetničke kreativnosti, jer se „umjetnik rodi", a znanstvenik se „formira". Međutim, možemo se složiti s tvrdnjom da je kreativnost opća ljudska osobina koja je normalno distribuirana među ljudima. Većina ljudi je prosječno kreativna, malo je onih koji su ekstremno kreativni ili onih koji to nisu (Žagar, 1992).

Kreativnost, kako to navodi Trstenjak (1981), prepoznajemo u četiri aspekta, koje američki istraživači vide kao četiri *p*: *press* (okolina), *personality* (ličnost), *process* (proces) i *product* (proizvod). To nam daje četiri polazišta na temelju kojih otkrivamo strukturu i čimbenike kreativnosti (Trstenjak, 1981, str. 11). S pedagoškog aspekta iznimno je važna kreativna ličnost, a kod planiranja likovno-pedagoškog rada važni su kreativna okolina i kreativni proces. Kreativni proces je pojačan komponentama kao što su: apsorpcija, sklonost mašti i sanjarenje. U mašti apsorpcija i imaginarni proces zajedno omogućavaju neograničeno istraživanje navika ili činjenica. Posredstvom sanjarenja i mašte mogu se razviti intuicija, kreativnost i drugi nesvjesni procesi (Peres Fabello i Campos, 2011, str. 38). Budući da smo prikupljali podatke preko dječjih radova, s tog aspekta je za naše istraživanje osobito važan kreativni proizvod.

Umjetnički kreativni proces jedan je od najsloženijih i najtajanstvenijih, djelomično svjesnih aktivnosti ljudske svijesti, koja se sastoji od intuicije i ekspresije. Prva je visoko razvijena sposobnost intenzivnog doživljavanje svijeta, koji uključuje i subjektivno iskustvo umjetnika, koje ujedno predstavlja kulturnu osjetljivost za promatranje svijeta (Herzog, 2008). Likovna kreativnost može se definirati na isti način kao i umjetnička, pri čemu joj, kako to smatra Duh, moramo „dodati specifične likovne elemente, dakle likovno izražajna sredstva. Likovno-umjetnički rad je proizvod kreativnog procesa

koji je višeslojan i višeznačajan. Višeslojnost se manifestira u složenosti formiranja umjetničkog rada" (Duh, 2004, str. 22). Za karakteristike kreativnosti u likovnoj umjetnosti može se reći da se temelje na karakteristikama umjetničke kreativnosti. Kao pokazatelje likovnog razvoja prepoznajemo različite čimbenike vezane uz likovni estetski fenomen. U našem istraživanju pratili smo razinu likovnog razvoja kroz likovno-kreativni, likovno-oblikovni i optičko-tematski razvoj, koje ćemo poslije detaljnije predstaviti.

Likovno-kreativni razvoj

Čimbenici koji proizlaze iz divergentne produkcije su originalnost, fleksibilnost, fluentnost, elaboracija, a čimbenici osjetljivost za probleme i redefiniranje potječu iz spoznaje. Razumijevanje kreativnih čimbenika u dinamici ukazuje na dva dijalektička aspekta kojima možemo pojasniti određene pojave i procese koji su značajni za razvoj kreativnosti. Karlavaris (1981, str. 18) spominje dva aspekta i to:

- Osobne karakteristike i sposobnosti koje su u međuovisnosti s kreativnim čimbenicima u smislu njihove količine i kvalitete.
- Vlastita struktura, koja bi mogla biti označena kao jedinstvo suprotnosti, jer sadrži suprotne čimbenike, koje smo definirali kao kvantitativne i kvalitativne, odnosno kao čimbenike koji omogućavaju i potiču kreativnost.

Čimbenici u smislu likovne kreativnosti mogu se, s druge strane, definirati uzimajući u obzir osobne karakteristike i likovne sposobnosti. Oni su vezani uz točnu percepciju, vizualnu memoriju, maštu, motoričke sposobnosti, osjetljivu percepciju, kreativno razmišljanje, emocije i motoričku osjetljivost. Niz likovnih sposobnosti i osobnih karakteristika možemo definirati kao subjektivne likovne čimbenike, smatra Duh (2004). „Neki autori govore samo o likovnim sposobnostima, ali smatramo da svih osam čimbenika ne možemo razumjeti kao likovne sposobnosti. Neki od tih čimbenika više se ubrajaju u kategoriju osobnih sposobnosti, a drugi više u kategoriju likovnih sposobnosti". „U kvantitativnom smislu, kreativni čimbenici imaju jaču koncentraciju kreativnog mišljenja, emocionalnosti, likovnih iskustava i mašte, a time osiguravaju višu kvalitativnu razinu likovne kreativnosti. Kreativni čimbenici zapravo su sublimacija likovnih sposobnosti na području likovnog stvaranja" (Karlavaris, 1991, str. 22). Utjecaj učitelja na razvoj likovnog kreativnog razvoja je jak. Prije svega, dijete se može poticati, motivirati dodatnim pitanjima, putem problemske nastave (slov. *problemski pouk*) možemo otvarati nove perspektive koje mogu utjecati na doživljavanje likovnog zadatka. Rački (2010) smatra da je dječja likovna kreativnost, koja se razvija tijekom nastave likovne kulture, umjetna tvorba. Takve likovne radove djeca ne bi mogla napraviti sama, bez poticaja.

Oblikovni razvoj

Dječje likovno izražavanje kognitivna je potreba i igra kroz putem koje se dijete igra likovnim pojmovima i elementima (Muhovič, 1990). Autori (Duh i Zupančič, 2003; Karlavaris, 1991; Schrader, 2000) vjeruju da djeca imaju urođeni unutarnji osjećaj za

optimalnu likovnu kompoziciju, ali se on mijenja tijekom faza osobnog i likovnog razvoja. Tako, na primjer, dijete u ranoj fazi istražuje i upoznaje različite materijale i likovne tehnike, a putem likovnog izražavanja oslobađa svoju maštu. Poslije kod adolescenata možemo poticaje za likovno stvaranje potražiti u njihovu razvoju i oblikovanju vlastitog razvoja. Na likovno oblikovani razvoj djeteta pretežno utječu likovno-pedagoška praksa i učitelj. Bez toga znamo da dijete ostaje prepušteno samom sebi, što svakako utječe na konačni proizvod. Likovno-formativni razvoj također je zanimljiv u smislu usporedbe između djeteta i zrelog umjetnika. Uz to, pitamo se kakva je razlika između kriterija likovne formacije kod djeteta, koji ima univerzalan karakter, i s druge strane kriterija likovne formacije kod zrelog umjetnika, koju karakteriziramo kao posebnu darovitost i individualnost (Butina, 1997). Razlika je u tome što se u djelima zrelog umjetnika izražava želja za spontanošću, intenzitetom i neposrednost doživljavanja. Dijete, međutim, kao što je navedeno, nije opterećeno predrasudama je li njegovo stvaranje kognitivna potreba, koja je pretežno motoričko, ritmičko i senzorno izražavanje koje se smatra nužno potrebnim čimbenikom općeg i likovnog razvoja djeteta (Muhovič, 1990).

U ranoj fazi dijete spontano ispunjava format s likovno oblikovnim elementima. Kandinski (1985) i Karlavaris (1991) pretpostavljaju da dijete u ranoj fazi ima unutarnji osjećaj kojim si pomaže kod likovnog stvaranja. „Vrijedno je istaknuti kompozicijsku stranu dobrog dječjeg crteža. /…/ Ovdje se iskazuje djetetova nesvjesna, velika moć, koja dječji rad uzdiže jednako visoko /…/ kao rad odraslog“ (Kandidnski, 1985, str. 299). „Jedan dio teorijske literature (npr. Gardner i Winner, 1982; Rosenblatt i Winner, 1988) i empirijskog istraživanja (Davis, 1993) govori o talentu djece rane dobi s aspekta estetske grafičke simbolizacije. Te teorije i istraživanja sugeriraju da dječji talent s estetskim svojstvima umjetnosti (npr. ekspresivnost, prepunost, kompozicija) opada s godinama i samo grafički radovi adolescenata ponovno dobivaju estetski život« (Rostan, Pariser, i Gruber, 2002, str. 127).

Oblikovni (formativni) vid ima u dječjim likovnim radovima važnu ulogu, jer uz čimbenike kreativnosti oblikuje dječji likovni izraz. Likovno-oblikovni (formativni) razvoj kod likovne kulture važan je čimbenik i tako važan sastavni dio svake metodičke jedinice likovno-odgojne djelatnosti. Kriterije oblikovnog razvoja treba uzeti u obzir u fazi formiranja likovno-odgojnog procesa u smislu uvodne motivacije, kod demonstracije, kod individualnog rada tijekom samog stvaranja i kod završne faze, likovnog vrednovanja.

Razina oblikovnog razvoja uključuje razvoj razumijevanja i upotrebe različitih likovno-izražajnih sredstava. Pri tome je naš interes bio usmjeren na prisutnost likovnih elemenata i načela za određivanje odnosa između likovnih elemenata (Karlavaris i Berce – Golob, 1991). U svom likovnom izražavanju djeca individualno grade i organiziraju likovne elemente i tako komuniciraju sa sobom i okolinom. Likovni jezik je komunikacijsko sredstvo za izražavanje razvojnom stupnju prilagođenih likovnih sposobnosti. Uz to se vizualni, slušni i pokretni impulsi pretvore u linije, površine, plohe, boje i prostore u smislu novih znakova individualnog likovnog izraza, koji se odvija putem različitih likovnih tehnika unutar pojedinih likovnih područja (Tanay, 1988).

Kriterij oblikovnog (formativnog) razvoja prati bogatstvo likovnog jezika i usklađenost likovnih elemenata. Za razliku od sposobnosti realističnog prikaza figure, kretanja, predmeta i prostora, koji proučava optičko tematski razvoj, oblikovni razvoj uključuje razumijevanje i poznavanje likovnih izražajnih sredstava koja prate cilj, da učenik ovlada tim specifičnim znanjima. Znanstveni sustav analizira likovni jezik putem prikaza prostora koji predstavlja okvir formiranja i egzistencije likovnog rada, likovnih elemenata, primarnih odnosa između likovnih elemenata (veličina, proporcije, simetrija, repeticija, alternacija, interval, ritam, smjer, dinamika, ravnoteža) i načela komponiranja (Karlavaris, 1991).

Ako govorimo o utjecaju učitelja na oblikovni razvoj djeteta, možemo reći da je on vrlo velik. Osobito se taj utjecaj pokazuje u adekvatno demonstriranoj likovnoj tehnici likovnim postupcima. Stoga je jako važan učitelj koji je stručno kompetentan i osjetljiv u tom pogledu.

Optičko-tematski razvoj

Optički-tematski razvoj, odnosno likovno-intelektualni razvoj, podudara se s razinom intelektualnog razvoja i predstavlja mjeru za određivanje razvojnih faza dječjeg likovnog izražavanja. Iz toga slijedi da motiv u likovnom zadatku mora biti blizak djetetu, ali istodobno mora ponuditi, odnosno omogućiti razvoj općih i prostorno-likovnih sposobnosti kod djeteta (Duh i Zupančič, 2003). Budući da smo u našem istraživanju pratili desetogodišnje i jedanaestogodišnje učenike, trebamo reći da su s aspekta razvojne faze u toj starosnoj dobi djeca nekako između faze intelektualnog i vizualnog, odnosno optičkog realizma. Znači da je to faza na prijelazu od spontanog prema svjesnom likovnom izražavanju. Dječji likovni radovi ovisni su o određenoj općoj likovnoj sposobnosti. Osnovne značajke dječjeg grafičkog razvoja uobičajene su u svim društvima i kulturama: strukturno jednostavniji oblici i slike prethode najsloženijima (Golomb, 1992, cit. prema Rostan, Pariser, i Gruber, 2002), a djeca diljem svijeta priklanjaju se aktivnom istraživanju problema predstavljanja predmeta i iskustva u ponuđenom mediju (Winner, 1989, cit. prema Rostan, Pariser, i Gruber, 2002). „To ne znači da postoji univerzalni razvojni „poticaj prema optičkom realizmu", realizam je zapadnjačka zabrinutost – ali to znači da gotovo sva djeca žele svladati likovno-reprezentativne oblike koji proizlaze iz vlastite kulture« (Rostan, Pariser, i Gruber, 2002, str. 129).

Ako govorimo o utjecaju učitelja na optički tematski razvoj djeteta, možemo reći da on nije velik jer je pretežno uvjetovan općim dječjim razvojem.

Metodologija

Svrha i cilj istraživanja

Svrha istraživanja bila je proučiti razinu likovnog razvoja učenika četvrtog razreda osnovne škole. Pratili smo razinu optičkog tematskog razvoja, razinu oblikovnog razvoja i razinu likovne kreativnosti. Dobivene rezultate analizirali smo s aspekta razlike između spolova, pri čemu je spol bio nezavisna varijabla.

S obzirom na činjenicu da je kvalitetan likovno-pedagoški rad jako važan za likovni razvoj, postavili smo si cilj da provjerimo je li utemeljeni likovno-pedagoški rad prikladniji za dječake ili za djevojčice. Znamo da likovno-pedagoški rad ima manji utjecaj na optički tematski razvoj (vizualni intelektualni razvoj) i nešto veći utjecaj na razvoj kreativnih sposobnosti učenika. Naravno, likovno-pedagoški rad ima najveći utjecaj na razvoj likovnih sposobnosti. Rezultati istraživanja poslužit će kao poticaj za poboljšanje likovno-pedagoške prakse.

Istraživačke hipoteze

U istraživanju smo proučili sljedeće hipoteze:

Pretpostavljamo da:

- u *likovnom razvoju* (koji se sastoji od likovno-kreativnog, likovno-oblikovnog i optičko-tematskog razvoja) ne postoji statistički značajna razlika između spolova (HSP),
- neće postojati statistički značajna razlike između spolova u ukupnoj razini *optičkog tematskog razvoja* (HOTR),
- neće postojati statistički značajna razlika između spolova u ukupnoj razini kreativnog razvoja (HUR),
- neće postojati statistički značajna razlika između spolova u ukupnoj razini oblikovnog razvoja (HOR).

Istodobno smo postavili pitanja vezana uz pojedinačni razvoj:

RV1: Postoji li razlika između spolova kod pojedinačnih čimbenika optičko-tematskog razvoja (stopala, odjeća, kroj, prsti, ukras, rekviziti, detalj, zrelost, glava, tijelo, noge, odjeća 2, detalj 2, gesta, ruke)?

RV2: Postoji li razlika između spolova kod pojedinačnih čimbenika kreativnog razvoja (osjetljivost na umjetničke probleme, fleksibilnost, fluentnost, originalnost, redefiniranje, elaboracija)?

RV3: Postoji li razlika između spolova kod pojedinačnih čimbenika oblikovnog razvoja (linije, oblici, vrijednost, tekstura, ritmovi, smjerovi, proporcije, formalni, sugestivnost)?

Istodobno smo bili zainteresirani i za korelaciju pojedinih zbivanja (kreativnost, dizajn i optička mjerenja) s obzirom na cijeli uzorak i rodnu perspektivu. Postavili smo sljedeće istraživačko pitanje:

RV4: Koja je povezanost pojedinih čimbenika umjetničkog razvoja u odnosu na cijeli uzorak?

Istraživačka metoda

Koristili smo se kvantitativnom metodologijom znanstvenog pedagoškog istraživanja s kauzalno neeksperimentalnom metodom pedagoškog empirijskog istraživanja. Razliku između spolova pratili smo putem t-testa, a za provjeru povezanosti pojedinih razvoja koristili se Pearsonovim koeficijentom.

Istraživački uzorak

U istraživanju je sudjelovalo ukupno 320 učenika iz četvrtog razreda osnovnih škola, od toga 170 djevojčica i 150 dječaka. Sudjelovale su gradske i prigradske osnovne škole iz Zagreba i okolice.

Postupak prikupljanja podataka

Prikupljanje podataka provedeno je u ožujku 2017. godine. Učenike smo u unaprijed određenom terminu, uz suglasnosti uprave osnovnih škola, testirali tijekom jednog školskog sata, odnosno 45 minuta. Dobivene probne crteže ocjenjivali smo komisijski.

Opis instrumentarija

Kako bismo testirali kreativnost i likovni izraz koristili smo se testom Kriterija razvoja koji se uz proučenu literaturu o ostvarenim istraživanjima pokazao pouzdanim (Duh, 1996, 1997a; 1997b; Duh i Büdefeld, 2017; Duh i Logar, 2016; Karlavaris, 1974; Kljajič 2016), valjanim i osjetljivim za mjerenje likovnog izražavanja i sposobnosti djece u dobi od 3 do 18 godina. Crtanje probnih crteža trajalo je 45 minuta, odnosno jedan školski sat. Kriteriji koje smo slijedili su optičko-tematski (intelektualni), kreativni i oblikovni razvoj. Uz pomoć posebne evaluacijske ljestvice, preuzete iz već provedenih istraživanja likovnih pedagoga Karlavaris (1974) i Duha (1996), odredili smo razinu likovnog izražavanja na temelju dječjeg crtanja crteža. Učenici su bili upućeni da crtaju crtež s motivom *Izumio sam novi glazbeni instrument* u istraživačkim uvjetima. Tako smo putem likovnog stvaranja mjerili:

- Optičko-tematski, odnosno intelektualni razvoj posredstvom prikaza ljudske figure.
- Kreativni razvoj putem prikaza novog glazbenog instrumenta.
- Oblikovni razvoj kputem načina upotrebe likovne tehnike i likovnih elemenata.

Postupak obrade podataka

Podatci su obrađeni računalnim programom SPSS, namijenjenim za statističku obradu podataka. Dobiveni su rezultati koji pokazuju aritmetičku sredinu ($\bar{x}$), standardnu devijaciju (s), test varijance homogenosti i razliku između aritmetičkih sredina. Uz pomoć Pearsonova koeficijenta analizirali smo i povezanost pojedinih događaja (optičko-tematskog, kreativnog i oblikovnog) posebno kod dječaka, a posebno kod djevojčica, i na cijelom uzorku.

Rezultati i rasprava

Rezultati će biti prikazani tako da će najprije biti predstavljena analiza zajedničkog likovnog razvoja, koji se sastoji od skupa optičkiotematskog, likovno-kreativnog i likovno-oblikovnog razvoja. Zatim ćemo predstaviti rezultate vezane uz optičko-tematski razvoj u odnosu na ukupnu vrijednost i zasebno prema pojedinačnom faktoru. Nakon toga slijedi prikaz rezultata umjetničko-kreativnog i umjetničko-

formativnog likovnog razvoja. Poglavlje će biti dovršeno predstavljanjem korelacija između pojedinih zbivanja.

Tablica 1

Rezultat F-testa homogenosti varijance ukazuje na to da je pretpostavka opravdana, stoga je uvjet za izračun t-testa ispunjen. Analizom t-testa nismo otkrili statistički značajne razlike između spolova u ukupnoj razini umjetničkog razvoja. Dobivenim rezultatima možemo potvrditi opću hipotezu HSP-a, kojom smo pretpostavili da u likovnom razvoju ne postoje statistički značajne razlike između spolova, koje se sastoje od likovno-kreativnog, likovno-oblikovnog i optičko-tematskog razvoja.

U nastavku prikazujemo analizu rezultata zajedničkog optičkog tematskog razvoja.

Tablica 2

Rezultat F-testa homogenosti varijance pokazuje da je pretpostavka opravdana i stoga je ispunjen uvjet za izračunavanje t-testa. U ukupnoj razini optičkog tematskog razvoja promatrana je statistički značajna razlika (P = 0,000), što je također prikazano u slučaju boljih rezultata kod djevojčica. Zbog toga hipoteza HOTR-a nije potvrđena. Optičko-tematski razvoj opći je razvoj. Znamo da su djevojčice u toj dobi (10 – 11 godina) neznatno razvijene, što je također pokazano u praćenju likovno-intelektualnog razvoja.

Nadalje nas je zanimalo gdje se ta razlika u postignućima dogodila. U tablici 3 prikazujemo rezultate razlika između spola prema pojedinačnim čimbenicima optičko-tematskog razvoja.

Tablica 3

U slučaju čimbenika: odjeća, kroj, detalji, tijelo, noge, detalji 2, pretpostavka homogenosti na kojima se temelji t-test nije opravdana, pa smo stoga odabrali aproksimaciju, a kod drugih je devet čimbenika ispunjen uvjet za t-test. T-test je u 11 od 15 slučajeva pokazao statistički značajnu razliku. Pokazuje se kod odjeće (P = 0,000), kroja (P = 0,000), ukrasa (P = 0,000), detalja (P = 0,000), zrelosti (P = 0,000), glave (P = 0,000), tijela (P = 0,000), odjeće (P = 0,000), detalja 2 (P = 0,000), kretanja (P = 0,000) i ruku (P = 0,000). U svim je slučajevima razlika u korist djevojčica. Za druge čimbenike (stopala, rekviziti, noge) nismo otkrili statistički značajnu razliku. Tendencija razlike zabilježena je u čimbeniku prsti (P = 0,060), što je također pokazano u korist boljih rezultata kod djevojčica. S dobivenim rezultatima možemo odgovoriti na istraživačko pitanje RV1, koje je podrazumijevalo interes za otkrivanje razlika između spolova u pojedinim čimbenicima optičko-tematskog razvoja.

Veći dio rezultata pokazuje se u korist djevojčica. Suprotno rezultatima istraživanja (Logar, 2015), gdje ukupna razina optičkog tematskog razvoja nema razlika između spolova na statistički značajnoj razini, otkrivena je tendencija razlike u korist djevojčica.

Pogledajmo rezultate kod učenika u ukupnom likovno-kreativnom razvoju.

Tablica 4

Test F-homogenosti varijance pokazuje da je pretpostavka opravdana i stoga je ispunjen uvjet za izračunavanje t-testa kojim nismo otkrili statistički značajne razlike između spola. Tim rezultatom možemo potvrditi hipotezu HUR istraživanja.

U nastavku prikazujemo rezultate vezane uz razliku u individualnom čimbeniku likovno-kreativnog razvoja.

Tablica 5

Rezultat F-homogenosti varijance pokazuje da su pretpostavke opravdane u svim čimbenicima umjetničkog stvaralaštva, pa je uvjet za izračun t-testa ispunjen. Međutim, pokazalo se samo da nema statistički značajnih razlika u čimbenicima likovno-kreativnog razvoja. S tim rezultatima odgovorili smo na pitanje istraživanja RV2, kojim smo bili zainteresirani za otkrivanje razlika između spolova u pojedinim čimbenicima likovno-kreativnog razvoja. Postignuća dječaka i djevojčica vrlo su slična. Ponekad su bili bolji dječaci, a ponekad djevojčice.

Ono što iznenađuje u prethodnim istraživanjima (Herzog, 2008, 2009; Herzog i Duh, 2011) jest da je većina pokazatelja bila u korist djevojčica. U našem istraživanju, provedenom u Hrvatskoj, dječaci prevladavaju u analizi likovno-kreativnog razvoja. Možda se taj rezultat može pripisati ispitnim uvjetima u kojima su dječaci nešto bolji od djevojčica. Poznato je da djevojčice u toj dobi imaju veću vjerojatnost da će slijediti upute učitelja, koje, međutim, nisu postojale u uvjetima ispitivanja.

Nadalje, bili smo zainteresirani za analizu zajedničkog likovno-oblikovnog razvoja kod dječaka i djevojčica.

Tablica 6

Test F-homogenosti varijance pokazuje da je pretpostavka opravdana i stoga je ispunjen uvjet za izračunavanje t-testa. Ovisno o ukupnoj razini likovno-oblikovnog razvoja nismo otkrili statistički značajnu razliku, pa se može razmotriti hipoteza istraživanja HOR-a.

U nastavku prikazujemo rezultate povezane sa svakim čimbenikom likovno-oblikovnog razvoja sa stajališta spolnih razlika.

Tablica 7

Rezultat testa F-homogenosti varijance pokazuje da su pretpostavke opravdane u svim čimbenicima likovno-oblikovnog razvoja, stoga je uvjet za izračun t-testa ispunjen. Analizom t-testa otkrili smo statistički značajnu razliku u dva čimbenika likovno-oblikovnog razvoja: U proporcije ($P = 0{,}021$) koje su se pokazale u korist dječaka i sugestivnost ($P = 0{,}050$), također u korist dječaka. S dobivenim rezultatima možemo odgovoriti na istraživačko pitanje RV3, koje se odnosilo na postojanje spolnih razlika u pojedinom čimbeniku likovno-oblikovnog razvoja.

Rezultati dobiveni s gledišta razlika u proporcijama mogu se tumačiti tako da su dječaci nešto suvereniji ako im učitelji ne daju upute i da su sami uvjereniji u vlastite rezultate u odnosu na djevojčice koje su prilično usmjeravane i slijede upute učitelja. U razlikama u sugestivnosti vizualnog izraza dobiveni su rezultati nešto manje iznenađujući budući da su dječaci izražajniji i izravniji u umjetničkom stvaranju. S obzirom na postojeće istraživanje (Duh i Korošec, 2009), to je iznenađujuće, jer su u citiranoj studiji djevojke uglavnom postigle bolji uspjeh od dječaka; posebno u ukupnoj vrijednosti formativnog razvoja na statistički značajnoj razini.

U istraživanju smo također zainteresirani za korelaciju pojedinih razvoja (optičko-tematskog, likovno-kreativnog i likovno-oblikovnog) s obzirom na cijeli uzorak. Rezultati su prikazani u nastavku.

Tablica 8

Rezultat Pearsonova koeficijenta korelacija između pojedinih razvoja u odnosu na cijeli uzorak pokazuje negativnu korelaciju između povezanosti likovno-kreativnog i optičko-tematskog razvoja (r = -0,018). To znači da je općenito manje učenika kreativno i da su uspješniji u optičko-tematskom razvoju. Možemo zaključiti da učenici u pedagoškom procesu nisu dovoljno opušteni i ohrabreni da bi imali vlastitu vizualnu interpretaciju. To znači da se učenici normalno razvijaju, ali je na kreativnom polju sustav ograničen (Marentič Požarnik, 2003). Također smo otkrili slabu povezanost između kreativnog razvoja i razvoja dizajna (r = 0,077), što znači da su svi učenici jednako uspješni u oba kretanja.

U analizi korelacija povezanosti, negativna korelacija (r = 0,069) također je otkrivena tijekom optičko-tematskog i likovno-oblikovnog razvoja. To znači da su učenici koji su manje uspješni u optičko-tematskom razvoju uspješniji u likovno-oblikovnom razvoju. Učenici koji su ostvarili manje rezultate u umjetničkom intelektualnom razvoju bili su opušteniji i razigrani u uvjetima ispitivanja, a koristeći se različitim likovnim elementima i povezujući ih, postigli su bolji rezultat u smislu razvoja likovne kreativnosti.

Možemo zaključiti da učenici prečesto slijede ograničavajuće upute koje inače pokazuju nešto bolju sliku likovne kreativnosti u normalnom likovno-kreativnom i intelektualnom razvoju. Dobivenim rezultatima možemo odgovoriti na istraživačko pitanje RV4, vezano uz korelaciju između pojedinih čimbenika umjetničkog razvoja na cijelom uzorku.

Rezultati (Tablica 8) pokazuju da se kreativni, optičko-tematski i oblikovni razvoj razvijaju samostalno. Naime, korelacije su uglavnom beznačajne. Optičko-tematski razvoj, koji se izjednačava s umjetničko-intelektualnim razvojem, odvija se u skladu s ukupnim razvojem djeteta. Formativni razvoj, kada se učenici upoznaju s načinima izrade umjetničkog djela, uz primjenu materijala i umjetničkih tehnika, ovisi o odgojno-obrazovnom radu i djelomično se odvija neovisno o optičko-tematskom razvoju. Slično tome, niske korelacije spomenutih razvojnih kategorija s kreativnim

razvojem mogu se, međutim, objasniti činjenicom da potonja djelomično ovisi o urođenim sposobnostima, a svakako se može dodatno potaknuti kvalitetnim obrazovnim radom.

Zaključci

U radu smo analizirali važan segment likovno-pedagoške profesije, praćenje likovnog razvoja. Važno je skrenuti pozornost na taj važan čimbenik u integriranom razvoju djeteta, a istraživanjem tvog područja doprinosimo unapređenju postojećeg obrazovnog sustava. Važno je posvjestiti da se nasuprot zastarjelom mišljenju da su kreativne sposobnosti privilegija pojedinaca kojima je dan dar posebnog talenta, usvaja činjenica da je kreativnost, kao opći ljudski potencijal i potreba, prisutna u svakom djetetu (Beghetto i Kaufman, 2007; Jukić, 2011; Kamenov, 2008).

Kao što smo zaključili u istraživanju, postoje razlike između spolova u optičko-tematskom razvoju, stoga nije zanemarivo da učitelj treba uzeti u obzir te razlike i opažati ih u svom likovno-pedagoškom radu. Znanje na tom području omogućuje im lakše razumijevanje razlika i time olakšavanje izbora metoda i postupaka rada kako bi se što je više moguće vodili kvalitetom likovnog obrazovanja i skrbi za što veći individualni razvoj svakog učenika. Kao što su pokazali rezultati ovog istraživanja, razlike su evidentne između spolova u suprotnom smjeru, što potvrđuju i slične provedene studije u Sloveniji navedene u radu. Općenito govoreći, nekoliko razlika se pokazalo u korist boljih rezultata kod dječaka u smislu kreativnog razvoja. S obzirom na sličnost školskog sustava između dviju zemalja (Slovenija i Hrvatska), taj je rezultat iznenađujuć, što može biti zanimljivo za daljnje sociološko i kulturno istraživanje. Postoje li doista takve razlike u obrazovanju i okolišu iz kojeg djeca dolaze? Jesu li razlike posljedica različitih sati posvećenih poučavanju likovnih umjetnosti? Znamo da s te točke gledišta postoji razlika između tih zemalja. Tako hrvatska djeca od. 1 do 8. razred imaju samo jedan sat umjetnosti tjedno, a slovenska djeca do 5. razreda imaju dva sata tjedno, a od 6. do 9. razreda samo jedan sat tjedno. Posebno zanimljivi rezultati istraživanja u ovom radu također su rezultati analize korelacija između pojedinih zbivanja. Oni samo otvaraju nove aspekte istraživanja u budućnosti.