

DEVELOPMENT OF CREATIVE ABILITIES THROUGH ARTS EDUCATION

Milena Stojanović Stošić*

University of Niš, Faculty of Pedagogy Vranje, Serbia

Abstract

The paper examines possibilities for enhancing creativity in primary school children through Arts education. Specifically, this study investigates the impact of visual, auditory and tactile stimuli (VAT stimuli)¹ on the development of creative thinking in children when these aids are carefully selected and suitable for use for a particular teaching topic within the Arts education curriculum. The study was conducted in Serbia, through an experimental two-term programme called The Development of Creativity by Employing VAT Stimuli, which included 270 first and second-year primary school pupils (7-8 year-olds). The impact of the experimental programme was assessed according to the Torrance Test of Creative Thinking (TTCT) – figural form A. This study found that the use of VAT stimuli in Arts education contributed significantly to developing and cultivating pupils' creative abilities, and that the effect of the programme had a stronger impact on the 2nd year pupils.

Key words: creativity, creative abilities, VAT stimuli, Arts Education.

РАЗВИЈАЊЕ КРЕАТИВНИХ СПОСОБНОСТИ У НАСТАВИ ЛИКОВНЕ КУЛТУРЕ

Апстракт

У раду се разматрају могућности подстицања креативности деце кроз наставу Ликовне културе у млађим разредима основне школе. Основни циљ истраживања јесте да се утврди да ли визуелни, аудитивни и тактилни подстицаји (ВАТ подстицаји)² могу утицати на развијање креативног мишљења деце када

* Аутор за кореспонденцију: Милена Стојановић Стошић, Педагошки факултет у Врању, Партизанска 14, 17500 Врање, Србија, milenas77@gmail.com

¹ Visual stimulus – discussion and observation of an artwork as a stimulus for artistic expression; Auditory aid – instrumental composition as a stimulus for artistic expression; Tactile stimulus – finger painting.

² ВАТ подстицаји – посматрање и разговор о уметничким делима као подстицај на ликовни израз; Аудитивни подстицај – инструментална композиција као подстицај на ликовни израз; Тактилни подстицај – сликање прстима.

су пажљиво одабрани у односу на наставну тему и компатибилни са наставном јединицом у оквиру теме. Истраживање је спроведено у Србији на узорку од 270 испитаника (ученика првог и другог разреда основних школа). Експериментални програм под називом *Развијање креативности деловањем ВАТ подстицаја* трајао је једну школску годину. За мерење креативних способности деце коришћен је Торансов тест креативног мишљења, фигурална форма А. Резултати до којих се дошло истраживањем показују да се деловањем ВАТ подстицаја у настави Ликовне културе може значајно утицати на развијање креативних способности деце и да је експериментални програм имао бољи учинак код ученика другог разреда.

Кључне речи: креативност, креативне способности, ВАТ подстицаји, Ликовна култура.

INTRODUCTION

The original semantic range of the term “creation” (lat. *creatio*): 1. creating, the process of creating; 2. accomplishment, discovering something new and original (*Veliki rečnik stranih reči i izraza*, 2010) – has been expanded and refined by theoretical discussions. Most broadly, creativity can be defined as searching for solutions from different perspectives and choosing from multiple possibilities; creativity is about creating something new, original and useful (Mumford, 2003). Ever since the term “creativity” was first used (Guilford, 1950), researchers have been proposing a range of theories and conclusions regarding the importance of enhancing creative abilities and creative behaviour (Amabile, 1989, 1992, 1996; Gardner, 1983, 1993; Guilford, 1967; Isaksen, Stead-Dorval and Treffinger, 2000; Kaufman and Beghetto, 2009; Robinson, 2011; Sternberg and Lubart, 1991, 1992; Sternberg, 2006; Campbell and Campbell, 1999; Torrance, 1965, 1972, 1987), both in the classroom and outside it.

As Torrance pointed out, the definitions of creativity range from those concerned with the final result, a product (an invention or a discovery), to definitions which refer to the process (Torrance, 1965, 1972; Sternberg and Lubart, 1991; Robinson, 2009), personality traits (Guilford, 1950; Maslow, 1976), or the importance of motivation for creative behaviour (Runco and Chand, 1995; Lowenfeld and Brittain, 1964; Torrance, 1999; Amabile, 1996; Eisenberger and Armeli, 1997). Torrance held his definition of survival as his most concise and accurate definition of creativity: when a person does not have a familiar, practiced approach and solution to a problem, and a new situation requires a certain amount of creativity (as cited in Shaughnessy, 1998: 443). For Lucas (2001), creativity is a state of mind in which our various intelligences operate jointly and simultaneously, because:

Creative people question the assumptions they are given. They see the world differently, are happy to experiment, to take risks and to make mistakes. They make unique connections often unseen by others (p. 38).

In *The Theory of Multiple Intelligences*, Gardner likewise discusses seven basic types of correlated intelligences, mutually complementary as people develop abilities or solve problems (Gardner, 1983). He argues that different intelligences indicate various individual potentials. Robinson similarly sees creative thinking as a collaboration of different processes: alongside finding new ideas and considering alternatives, the creative process requires developing these ideas and estimating their efficiency. These processes work together (Robinson, 2009: 122). For Sternberg (2006), creativity is a way of life which an individual activates spontaneously and effortlessly, while Baron's perspective of creativity refers exactly to what could be defined as genius, namely, established artists and scientists (as cited in Montuori, 2003: 17). According to the Investment theory, "Creativity requires a confluence of six distinct, but interrelated, resources: intellectual abilities, knowledge, styles of thinking, personality, motivation, and environment" (Sternberg, 2012: 5).

Some researchers think that motivation (Amabile, 1990; Hennessey, 1994; Shuldberg, 1994) and "knowledge base" (Simon, 1988) are crucial for creative thinking (as cited in Runco and Chand, 1995: 246). As Amabile states, people are the most creative when they are motivated, primarily by their interests, pleasure and the challenge that the work provides (Amabile, 2012). However, although people tend to be most motivated when they are engaged in something they are good at, due to the nature of creativity and its social perception, there may sometimes be just negligible correspondence between creative abilities and motivation, and the skills which are necessary to activate these abilities and accomplish a creative achievement (Torrance, 1999).

Some of the most significant researches conducted in Serbia, regarding the importance of developing creative abilities, showed the following results:

- Studies with older primary school children (11 to 15 year-olds) concluded that fostering visual creativity through specifically planned activities in the classroom contributed to the development of creative thinking in general (Karlavaris and Kraguljac, 1981). New research in this area has been long overdue.
- Kopas Vukasinović's study (2005) suggests that creative abilities in children tend to decrease during the transition from a pre-school to a school environment, so she recommends the following: a) More time allotted to hosting college pupil interns working on creative processes in education; b) Elective advanced level courses for future educators focusing on stimulating creativity in children; c) Designing options for different courses of study, and specialized programmes in this area.
- The research conducted by Šefer, with primary school children, followed the development of creative thinking and cooperative behaviour among children who were stimulated by creative activities. According to the author, a thematic interdisciplinary approach led to

positive results; although the centre of attention were the teaching methods, rather than the organization of the content of the subject matter, the author emphasized the importance of integrative learning, which required flexibility and original thinking as important components of creative behaviour (Šefer, 2005).

- In the paper titled “The Work of Art Aimed at Stimulating the Development of Artistic Abilities of Junior School Pupils” discussing the importance of observation of works of art in Arts education, Selaković (2015) concludes, “An artwork as a visual stimulus in Arts education is an invaluable teaching resource for acquiring knowledge, stimulating creativity, and for awakening imagination towards the abstract and unreal” (p. 51).

CURRENT STUDY

Our study addresses the need to view and organize Arts education much more comprehensively than it traditionally has been. As Robinson points out, school systems as such have a tendency to limit the definition of intelligence and abilities and disproportionately favour certain talents and skills at the expense of others (Robinson, 2009).

This study, therefore, investigates whether the use of appropriate visual, auditory or tactile stimuli in first- and second-year primary school Arts education can help develop creative abilities in children.

Visual stimulus refers to the use of observation of artworks in introducing a particular topic in Arts education. According to Karlavaris (1987), regarding the motives, artworks with figures in motion appeal to younger primary school children, while they do not show much interest for portraits, still life and landscapes; regarding the form, the children like naive art, realism and expressionism. Postmodern works of art were also used for the purpose of this research. Observation of a work of art was accompanied by the following questions: 1. What do you see on the painting? 2. Do you like what you see, why? 3. What are the colours like (can you notice different shades of red)? 4. What else can you discover on the painting, does it appeal to you? 5. What name would you give to this painting? Observation of artworks and discussion about them had educational purpose: through the ‘communication’ with the work of art, children gained knowledge about different art styles and art techniques, and had the opportunity to hear some interesting anecdotes from the lives of artists. One cognitive function of various art forms is to help us learn how to perceive and feel the world (Eisner, 2002: 21).

Auditory aid in approaching visual content means using music to stimulate the creative search for a visual solution (the correlation between music and visual art). The sound of music can generate a strong impulse for visual expression, provided that the music is purposefully selected with an Arts education topic in mind. The music chosen for this research

was classical music, jazz, various percussion compositions on drums and tambourines, and traditional African music. Musical and visual expression are aesthetically analogous through association of melody with lines, and tone with colours; furthermore, both music and visual art use specific signs in their expression (line, colour, form, texture, contrast, rhythm, melodic lines, harmony, gradation), as their universal language (Tanevski, 2008). A visual interpretation of an instrumental composition can offer a much more satisfying experience of the composition itself. At the same time, with the teaching goals being: expanding creative fantasy, developing creative ways of thinking, and expressing individual emotional and aesthetic experience, experiencing music in this way informs the pupils' skills in visual expression (Stojanović Stošić and Stojadinović, 2016). Our own selection of auditory aids in visual creativity is to some extent indebted to the reflections of Kandinsky, who "built" his painting on music, which fascinated and inspired him (Kandinsky, 1911/2004). Auditory aid was used when the topic referred to visual representation of emotions or moods (e.g. *I'll draw what I feel while I'm listening to this music*), or natural phenomena (e.g. *Storm*). An auditory aid was used on its own or combined with visual and tactile stimuli.

Tactile aid, in this study, mostly refers to finger painting, instead of traditional painting techniques. Additionally, visual expression is stimulated through contact with and combining non-artistic objects and materials, such as scrap paper, fruits. By using tactile aids in Arts education, children participate in a series of complex activities, such as acquiring sensory and tactile experience, exercising visual memory, processing and recombining sensory impressions, which ultimately leads to the development of divergent thinking. Lowenfeld thinks that art begins, always and everywhere, as a reflection of haptic perception (as cited in Arnheim, 1986/2003: 256). A summary of the selected artworks, music and tactile aids is provided in the "Appendix".

METHOD

Participants

The sample for this study consisted of 119 first-year and 151 second-year pupils in three elementary schools in the city of Vranje, "Dositej Obradović", "Vuk Karadžić" and "Radoje Domanović", Serbia. The total of 270 pupils were divided into experimental group (E) and control group (C), counting 134 and 136 subjects, respectively. The groups were formed to be equivalent, namely, the pupils were evenly distributed in both groups according to their diagnostic test score, number of subjects, sex and age. Each group was assigned 7 supervising teachers (14 total) all with the same academic qualification, a bachelor's degree.

Measures

For assessing creative abilities, we used – following Cropley (2001) – The Torrance Test of Creative Thinking (TTCT) – figural form A (Thinking creatively with pictures – Figural response booklet A) consisting of three tasks, each focusing on different aspects of the creative process. The research dealt with measuring creativity according to two parameters, criterion and norm-referenced indicators of creativity. The norm-referenced measures include: 1. Fluency; 2. Originality; 3. Elaboration; 4. Resistance to Premature Closure; 5. Abstractness of Title (Torrance, Ball and Safter, 1992). The list of creative strengths³ provides a set of thirteen criterion-referenced measures: 1. Emotional Expressiveness; 2. Storytelling Articulatness; 3. Movement or Action; 4. Expressiveness of Title; 5. Synthesis of Incomplete Figures; 6. Synthesis of Lines; 7. Unusual Visualization; 8. Internal Visualization; 9. Extending or Breaking of Boundaries; 10. Humour; 11. Colourfulness of Imagery; 12. Richness of Imagery; 13. Fantasy.

Procedure

In order to design the programme for the experimental group, we thoroughly analysed the current 1st and 2nd year Visual Arts Education annual curriculum. Each lesson during the school year was paired with one chosen stimulus, a combination of two, or all three stimuli. The teachers from the experimental group were actively involved in the preparation of the experimental programme and familiar with the goal of the research. They received basic training in theories of creativity and a comprehensive and detailed introduction to the methods of the experimental VAT stimuli programme. The research was carried out over the course of two semesters (one school year) in 2014/15.

Data Analysis

The results of the research were analysed with the appropriate statistical methods (the arithmetic mean with the standard deviation, minimum and maximum values, frequencies and percentages). The differences between the groups were determined with the t-test for dependent samples and variance analysis. Mixed analysis of variance (SPANOVA) was used to assess the impact of independent variable – year on the changes in achievement before and after the experimental programme. Statistical significance was defined on the probability level of null hypothesis $p \leq 0.05$ do $p < 0.01$. For the statistical analysis and data processing we used SPSS ver. 20 (Statistical Package for the Social Sciences).

³ Can also be referred as *Special creative strengths* – a rating of + is given for some evidence of strength, and the rating of ++ is given for repeated evidence of strength, 3 or more occurrences

RESULTS AND DISCUSSION

We present the results of the research by comparing scores from the initial and final measuring in the control and experimental group, before and after our experimental programme, *The Development of Creativity by Employing VAT Stimuli*.

Table 1. The comparative review of the final measuring in the experimental and control group

	Group	n	M	SD	t	p
Fluency	E	134	22,9776	5,29926	6,554	,000
	C	136	18,7059	5,40934		
Originality	E	134	11,9925	4,41204	15,237	,000
	C	136	5,2426	2,66804		
Elaboration	E	134	5,3134	2,16749	8,639	,000
	C	136	3,5515	,97236		
Abstractness of Titles	E	134	5,5224	3,38443	9,306	,000
	C	136	2,2794	2,23339		
Resistance to Premature Closure	E	134	3,7985	2,29344	13,556	,000
	C	136	,8897	,99385		
Creative Strengths	E	134	19,0746	7,50301	15,221	,000
	C	136	7,9485	4,01722		
Creativity Index	E	134	105,8075	17,62379	17,312	,000
	C	136	71,7647	14,56475		

E – experimental group; C – control group; n – the number of the examinees; M – arithmetic mean (average value of the sample variable); SD – standard deviation (average deviation of individual variable values from the sample average); t – test; p – statistical significance

Table 2. The comparative review of the initial and final measuring in the control group

	n	M	SD	t	p
Fluency (i)	136	16,5074	5,06842	-4,241	,000
Fluency (f)	136	18,7059	5,40934		
Originality (i)	136	6,5074	3,05747	4,831	,000
Originality (f)	136	5,2426	2,66804		
Elaboration (i)	136	3,6397	,85784	1,115	,267
Elaboration (f)	136	3,5515	,97236		
Abstractness of Titles (i)	136	2,2353	2,23519	-,204	,838
Abstractness of Titles (f)	136	2,2794	2,23339		
Resistance to Premature Closure (i)	136	1,4853	1,51039	4,578	,000
Resistance to Premature Closure (f)	136	,8897	,99385		
Creative Strengths (i)	136	10,3456	4,80799	6,252	,000
Creative Strengths (f)	136	7,9485	4,01722		
Creativity Index (i)	136	75,5765	15,96261	3,357	,001
Creativity Index (f)	136	71,7647	14,56475		

E – experimental group; C – control group; n – the number of the examinees; M – arithmetic mean (average value of the sample variable); SD – standard deviation (average deviation of individual variable values from the sample average); t – test; p – statistical significance; i – initial measuring; f – final measuring

Table 3. Year and the measured indicators of creativity in the experimental group

	Year	n	M	SD	t	p
Fluency (i)	I	57	14,1053	4,29985	-,927	,356
	II	77	14,8052	4,34087		
Fluency (f)	I	57	22,7193	5,20904	-,484	,629
	II	77	23,1688	5,39103		
Originality (i)	I	57	4,2281	2,55663	-3,492	,001
	II	77	6,2987	3,89691		
Originality (f)	I	57	11,5965	4,34601	-,893	,373
	II	77	12,2857	4,46583		
Elaboration (i)	I	57	3,1930	,47953	-3,472	,001
	II	77	4,0519	1,82018		
Elaboration (f)	I	57	4,7368	1,57578	-2,712	,008
	II	77	5,7403	2,44089		
Abstractness of Titles (i)	I	57	1,9298	2,20276	1,329	,186
	II	77	1,4675	1,81793		
Abstractness of Titles (f)	I	57	4,9649	3,54544	-1,651	,101
	II	77	5,9351	3,22138		
Resistance to Premature Closure (i)	I	57	,5263	,75841	-3,933	,000
	II	77	1,5974	1,94841		
Resistance to Premature Closure (f)	I	57	4,0351	2,33731	1,028	,306
	II	77	3,6234	2,25971		
Creative Strengths (i)	I	57	7,6491	3,58315	1,022	,309
	II	77	9,8052	7,04878		
Creative Strengths (f)	I	57	18,3684	7,27184	-,937	,350
	II	77	19,5974	7,67474		
Creativity Index (i)	I	57	65,0246	14,81221	-1,713	,089
	II	77	69,8234	16,87424		
Creativity Index (f)	I	57	105,2351	17,04562	-,322	,748
	II	77	106,2312	18,13911		

n – the number of the examinees; M – arithmetic mean (average value of the sample variable); SD – standard deviation (average deviation of individual variable values from the sample average); t – test; p – statistical significance; i – initial measuring; f – final measuring

Table 4. The influence of the independent variable–year on the change in the test result before and after the experimental programme - experimental group

Effect		F	p
Experimental programme * Year	Pillai's Trace	3,167	,001
	Wilks' Lambda	3,167	,001
	Hotelling's Trace	3,167	,001
	Roy's Largest Root	3,167	,001

F - ANOVA; p – statistical significance

Through the implementation of VAT stimuli in Arts education, children gain auditory and tactile experience, process auditory and tactile impressions and then form new ones, develop visual memory, and establish

a dialogue with an artwork. According to Škorc (2012), it is imperative to experience a work of art actively, establish a dialogue with it, find one's own interpretation. The first few months of the programme already showed that the use of stimuli for motivating pupils and inspiring their visual expression are directly correlated to the enrichment of children's drawings, enhancing their original, authentic expression. The comparison of the final test results in the experimental and control group showed that the visual solutions in the final tests in the experimental group were much more successful according to all measured indicators of creativity and the total creativity index (Table 1). According to Amabile (1992), cultivating a creative environment can enhance children's abstract and analytical thinking and they can become more receptive to 'out of the box' thinking. Therefore, we can conclude that using the VAT stimuli in Arts education influenced the creativity development in children. All of the measured indicators of creativity in the experimental group showed statistically significant increase when compared to the control group in the final measuring (Fluency: $M(E)=22,97$; $M(C)=18,70$; Originality: $M(E)=11,99$; $M(C)=5,24$; Elaboration: $M(E)=5,31$; $M(C)=3,55$; Abstractness of Titles: $M(E)=5,52$; $M(C)=2,27$; Resistance to Premature Closure: $M(E)=3,79$; $M(C)=0,88$; Creative Strengths: $M(E)=19,07$; $M(C)=7,94$; Creativity Index: $M(E)=105,80$; $M(C)=71,76$) (table 1).

When we compared midterm works from pupils of both group, we noticed that the control group pupils produced, with rare exceptions, predictable visual expressions on a particular teaching topic. These pupils rarely considered alternative possibilities in order to produce a more original perspective. Fluency was the only measured parameter where the pupils from the control group demonstrated a statistically significant difference between the initial and the final test results, in that there was an increase in the measured parameter in the final test results ($M(i)=16,50$; $M(f)=18,70$). In all the other measured parameters where there was a statistically significant difference (Originality: $M(i)=6,50$; $M(f)=5,24$, Resistance to Premature Closure: $M(i)=1,48$; $M(f)=0,88$, Creative Strengths: $M(i)=10,34$; $M(f)=7,94$ and Creativity Index: $M(i)=75,57$; $M(f)=71,76$) there was a decrease in the measured parameter in the final test results (table 2).

We wanted to examine whether the experimental programme had a better effect on the 2nd year pupils. The independent samples t-test was used to examine whether there was a statistically significant difference between the first and the second year primary school children in the experimental group regarding the measured indicators of creativity (Table 3). When we analyse the arithmetic means (M) of the measured indicators of creativity with the statistically significant difference in the table 3, it can be seen that they are higher in the 2nd year pupils, when compared to the 1st year pupils. In the final test results, the average values of the

measured indicator of creativity – Elaboration are statistically significantly higher in the 2nd year pupils, when compared to the 1st year pupils ($5,74 \pm 2,44$ vs. $4,73 \pm 1,57$, $p < 0,01$).

We used a mixed analysis of variance (SPANOVA) to assess the impact of independent variables on the change in the test result, measured in the experimental group before and after the experimental programme. The year is the only factor which increases the impact of the experimental programme (Table 4).

Therefore, we can conclude that the effect of the programme had a stronger impact on the 2nd year pupils (Tables 3 and 4). To offer a possible reason for this difference, it may be that the programme made less impact on the 1st year pupils because they are still adapting to school activities as such, traditional or otherwise, and are plausibly less confident in expressing their ideas in an unknown context.

CONCLUSION

While creative instruction is necessary throughout the school curricula, for Arts education it is essential and indispensable. Creativity is a complex phenomenon and requires an innovative approach to Arts education, lifelong learning, commitment to rethinking and adaptation, flexibility and open-mindedness, cultivating creative and unconventional thinking.

The aim of the research conducted by Tomljenović and Novaković (2014) was to investigate the teachers' opinion about the importance, the purpose and the teaching methods in Arts Education. The results of the research showed that the most important segment of Arts Education is the enhancement of imagination and creative thinking. Therefore, it is extremely important for teachers to continually learn and perfect their teaching skills so that they could be able to adequately respond to their students' demand for a more dynamic and creative learning process and classroom atmosphere (Robinson, 2015). Robinson (2015) emphasized the importance of teachers and their ability to inspire and motivate students to learn.

This study was preceded by years of observing the approach to Arts education in lower years in primary school.

The experimental programme *The Development of Creativity by Applying VAT Stimuli* is based on the idea that children, especially younger learners, need to be able to explore, experiment, ask questions and offer solutions through their work in Arts education. The results obtained from this research confirmed that "small" changes, such as the use of tactile, visual and auditory stimuli in Arts education, can have an important impact on the development of creativity in children. Through contact with the works of art, children plan and ponder over their artworks, which results in a more creative output. Cognition is more permanent and functional. Therefore, we think that, from an early age, children will benefit

from direct experience and communication with works of visual art, with various musical genres, and by practicing finger painting rather than using traditional painting instruments. Arts education classes organized in this way offer pupils the possibility to explore through creative play. Such classes both reach their curricular requirements in that pupils are familiarized with the content, and enable pupils to develop critical thinking and learn empirically. To conclude, this study argues that it is important to modernize Arts education through teaching methods which stimulate the development of pupils' creative potentials (and, at the same time, require constant teacher training (Bodroža, Maksić and Pavlović, 2013; Maksić and Pavlović, 2014)) which, as a result, creates better conditions for creative output. Creative learning through education is the foundation of every society, as well as the need of every individual.

REFERENCES

- Amabile, T. (1989). *Growing up creative*. Amherst: The Creative Education Foundation.
- Amabile, T. (1992). *Growing up creative: nurturing a lifetime of creativity*. Buffalo: Creative Education Foundation Press.
- Amabile, T. (1996). *Creativity in Context*. Boulder, CO: Westview Press.
- Amabile, T. (2012). *Componential Theory of Creativity*. Boston: Harvard Business School.
- Arnheim, R. (2003). *Novi eseji o psihologiji umetnosti [New Essays on the Psychology of Art]*. Beograd: SKC, Knjižara Book War, Univerzitet umetnosti.
- Bodroža, B., Maksić, S., & Pavlović, J. (2013). Ispoljavanje i podsticanje kreativnosti u osnovnoj školi iz perspektive nastavnika [Manifestation and Encouragement of Creativity in Primary School from the Teacher's Perspective]. *Zbornik Instituta za pedagoška istraživanja*, (45)1, 108-130. doi: 10.2298/ZIP11301108B.
- Campbell, L., & Campbell, B. (1999). *Multiple Intelligences and Student Achievement: Success Stories from Six Schools*. Alexandria, Va.: Association for Supervision and Curriculum Development.
- Cropley, A. J. (2001). *Creativity in Education & Learning*. London and New York: Routledge Falmer.
- Eisner, E. W. (2002). *The Arts and the Creation of Mind*. New Haven & London: Yale University Press.
- Gardner, H. (1983). *Frames of mind: the theory of multiple intelligences*. New York: Basic Books.
- Gardner, H. (1993). *Creating minds: an anatomy of creativity seen through the lives of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Gandhi*. New York: Basic Books.
- Guilford, J.P. (1950). Creativity. *American psychologist*, 5(9), 444-454.
- Guilford, J. P. (1967). *The nature of human intelligence*. New York: McGraw-Hill.
- Isaksen, S. G., Stead-Dorval, K. B., & Treffinger, D. J. (2000). *Creative problem solving: an introduction*. Waco, TX: Prufrock Press.
- Kandinsky, W. (2004). *O duhovnom u umetnosti: posebno u slikarstvu: sa osam slika i deset originalnih drvoreza [Über das Geistige in der Kunst]*. Beograd: Esoteria.
- Karlavaris, B., & Kraguljac, M. (1981). *Razvijanje kreativnosti putem likovnog vaspitanja u osnovnoj školi [The Development of Creativity through Arts Education in Primary Schools]*. Beograd: Institut za pedagoška istraživanja, Prosveta.

- Kaufman, J. C., & Beghetto, R. A. (2009). Beyond Big and Little: The Four C Model of Creativity. *Review of General Psychology*, 13(1), 1–12. doi: 10.1037/a0013688.
- Klajn, I., & Šipka, M. (5th ed.). (2010). *Veliki rečnik stranih reči i izraza* [Serbian Dictionary of Foreign Words and Expression]. Novi Sad: Prometej.
- Kopas Vukašinovic, E. (2005). Osujećenje kreativnosti u likovnom izrazu prvaka [Disconcertment of Creativity in Visual Expression in Primary School Children]. *Zbornik Instituta za pedagoška istraživanja*, 37(2), 82-98.
- Lowenfeld, V., & Brittain, W. L. (1975). *Creative and mental growth*. New York: The Macmillan Company.
- Lucas, B. (2001). Creative Teaching, Teaching Creativity and Creative Learning. In A. Craft, B. Jeffrey, M. Leibling (Eds.), *Creativity in Education* (pp. 35-44). London & New York: Continuum.
- Maksić, S., & Pavlović, J. (2014). Implicitne teorije kreativnosti nastavnika osnovne škole: studija slučaja [The Implicit Theories of Creativity of Primary School Teachers: Case Study]. *Psihologija*, 47(4), 465-483. doi: 10.2298/PSI1404465P.
- Maslow, A. H. (1976). *Motivation and Personality*. New York: Harper & Row.
- Montuori, A. (2003). Frank Barron: A Creator on Creating. *Journal of Humanistic Psychology*, 43(2), 7-23. doi: 10.1177/0022167802250582.
- Mumford, M. D. (2003). Where have we been, where are we going? Taking stock in creativity research. *Creativity Research Journal*, 15(2-3), 107-120. doi.org/10.1207/S15326934CRJ152&3_01.
- Robinson, K. (2009). *The Element: How Finding Your Passion Changes Everything*. New York: Viking Press.
- Robinson, K. (2011). *Out of Our Minds: Learning to be creative*. Oxford: Capstone.
- Robinson, K. (2015). *Creative schools: the grassroots revolution that's transforming education*. New York: Viking.
- Runco, M. A., & Chand, I. (1995). Cognition and creativity. *Educational Psychology Review*, 7(3), 243-267. doi:10.1007/BF02213373.
- Selaković, K. (2015). *Umetničko delo u funkciji podsticanja likovnih sposobnosti kod učenika mlađeg školskog uzrasta* [The Work of Art Aimed at Stimulating the Development of Artistic Abilities of Junior School Students]. (Doctoral dissertation). Retrieved from: [https://www.cris.uns.ac.rs/DownloadFileServlet/Disertacija143644207878031.pdf?controlNumber=\(BISIS\)95384&fileName=143644207878031.pdf&id=3967&source=NARDuS&language=sr](https://www.cris.uns.ac.rs/DownloadFileServlet/Disertacija143644207878031.pdf?controlNumber=(BISIS)95384&fileName=143644207878031.pdf&id=3967&source=NARDuS&language=sr)
- Shaughnessy, M. F. (1998). An interview with E. Paul Torrance: About creativity. *Educational Psychology Review*, 10(4), 441-452.
- Sternberg, R. J., & Lubart, T. I. (1991). An Investment Theory of Creativity and Its Development. *Human Development*, 34(1), 1-31. doi.org/10.1159/000277029.
- Sternberg, R. J., & Lubart, T. I. (1992). By low and sell high: An investment approach to creativity. *Current Directions in Psychological Science*, 1(1), 1-5. doi.org/10.1111/1467-8721.ep10767737.
- Sternberg, R. J. (2006). The Nature of Creativity. *Creativity Research Journal*, 18(1), 87-98. doi: 10.1207/s15326934crj1801_10.
- Sternberg, R. J. (2012). The Assessment of Creativity: An Investment-Based Approach. *Creativity Research Journal*, 24(1), 3-12. doi.org/10.1080/10400419.2012.652925.
- Stojanović Stošić, M., & Stojadinović, A. (2016). Instrumentalna kompozicija kao podsticaj na likovni izraz [Classical Music as a Stimulus for Visual Expression]. *Godisnjak Pedagoškog fakulteta u Vranju*, 7, 375-381.
- Supek, R. (1958). *Umjetnost i psihologija* [Art and Psychology]. Zagreb: Matica Hrvatska.
- Šefer, J. (2005). *Kreativne aktivnosti u tematskoj nastavi*. Beograd: Institut za pedagoška istraživanja.
- Škorc, B. (2012). *Kreativnost u interakciji* [Creativity in Interaction]. Zemun: Mostart.

- Tanevski, T. (2008). *Muzikoterapija: sastojbi, problemi i resenija* [Music Therapy: State, Problems and Solutions]. Skopje: Dzunzule.
- Tomljenović, Z., & Novaković, S. (2014). Mišljenja učitelja razredne nastave o učenju i poučavanju likovne kulture u osnovnoj školi [Attitudes of Primary School Teachers About Teaching and Learning Art in Primary School]. *Inovacije u nastavi* 27(1), 31-41. doi: 10.5937/inovacije1401031T
- Torrance, E. P. (1965). Scientific Views of Creativity and Factors Affecting Its Growth. *Daedalus*, 94(3), 663-681.
- Torrance, E. P. (1972). Can we teach children to think creatively? *The Journal of Creative Behavior*, 6(2), 114-143. doi.org/10.1002/j.2162-6057.1972.tb00923.x.
- Torrance, E. P. (1987). Teaching for creativity. In S. G. Isaksen, (Ed.), *Frontiers of creativity research: Beyond the Basics* (pp. 189-215). Buffalo, NY: Bearly Limited.
- Torrance, E. P., Ball, O., & Safter, H. T. (1992). *The Torrance Test of Creative Thinking. Streamlined Scoring Guide Figural A & B*. Bensenville, IL: Scholastic Testing Service, Inc.
- Torrance, E. P. (1998). *The Torrance Tests of Creative Thinking norms-technical manual figural (streamlined) forms A&B*. Bensenville, IL: Scholastic Testing Service, Inc.
- Torrance, E. P., & Safter, H. T. (1999). *Making the Creative Leap Beyond*. Buffalo, NY: Creative Education Foundation Press.

РАЗВИЈАЊЕ КРЕАТИВНИХ СПОСОБНОСТИ У НАСТАВИ ЛИКОВНЕ КУЛТУРЕ

Милена Стојановић Стошић

Универзитет у Нишу, Педагошки факултет у Врању, Србија

Резиме

Како се циљем васпитнообразовног рада у настави Ликовне културе сматра подстицање и развијање креативности ученика, основни циљ истраживања јесте да се утврди да ли визуелни, аудитивни и тактилни подстицаји у настави Ликовне културе, названи ВАТ подстицаји, могу утицати на развој креативних способности деце. Резултати приказани у овом раду јесу део истраживања спроведеног за потребе докторске дисертације. У истраживању је примењен експеримент са паралелним групама на узорку од 270 испитаника, ученика првог и другог разреда основних школа (119 ученика првог и 151 ученика другог разреда). Истраживање је спроведено у три основне школе у Врању, а експериментални програм под називом Развијање креативности деловањем ВАТ подстицаја трајао је једну школску годину (два полугодишта). За потребе истраживања коришћен је Торансов тест креативног мишљења, фигурална форма А, који обухвата три задатка конструисана по принципу „цртежом доврши започето”: Конструкција слике, Довршавање слике и Линије. Тест мери: оригиналност, флуентност, елаборативност, апстрактност наслова, отпор превременом закључивању и групу креативних способности (емоционална експресивност, јасноћа израза, акција (покрет), експресивност наслова, синтеза непотпуних фигура, синтеза линија, необична визуелизација, унутрашња визуелизација, проширивање граница, хумор, живописност ликова, богатство приказа и фантазија). Резултати до којих се дошло истраживањем показали су да се применом ВАТ подстицаја у настави Ликовне културе може утица-

ти на развијање креативног мишљења: резултати ученика експерименталне групе показали су статистички значајну разлику у висини свих мерених параметара креативности након завршеног експерименталног програма, у односу на испитанике контролне групе. Истраживање је ставило у први план важност посматрања уметничких дела, слушање музике и тактилних подстицаја као могућих начина за развијање и неговање креативности деце кроз наставу Ликовне културе.