



STIMULATING ORIGINALITY OF PAINTINGS IN ELEMENTARY SCHOOL CHILDREN

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Abstract: the aim of this paper is studying ways in which originality of elementary school students can be stimulated through the use of artistic activities. The paper is theoretically grounded in considering originality as the capacity to deliver new ideas, ingenious, unconventional, unusual and shocking solutions (Mihaela Roco, 2004; H. Jaoui, 1975; Al. Roșca, 1981; Margaret A. Boden, 1992) compared to previous existing models. The research hypothesis states that if children are involved in learning situations in which they use different painting and collage techniques, then they are stimulated to deliver original outputs. The empirical research was carried on during the school year 2012-2013. The sample consisted from 12 children enrolled in 2nd grade at a school from Sălaj County. 12 topics were proposed. Therefore, children were involved in 12 experimental situations where they used different techniques. In the end, our hypothesis confirms, especially during the experiment, but children have difficulties in transferring the techniques in new contexts.

Key words: divergent thinking, plastic education, level of originality, scale for originality assessment

1. Introduction

This study started from the assumption that children enrolled in elementary school tend to deliver similar paintings during the Plastic education class. As we are interested in stimulating their originality during elementary education, we designed a formative experiment for the particular class. Objectives were as follows:

- 1) designing, analyzing and testing assessment tools for measuring originality;
- 2) analyzing the influence of topic on the level of originality;
- 3) analyzing the influence of teacher on the level of originality;
- 4) analyzing the influence of peers on the level of originality;
- 5) analyzing the influence of technique on the level of originality.

For this study 168 outputs from 12 children were analysed (14/student).

Theoretical background

In different dictionaries, the term 'originality' is used with several different meanings: the ability of being original, unique, new; out of the ordinary, unusual, odd, eccentric, extravagant [9]. There are considered original (authentic) deliverables (papers, theories, ideas etc.) having a non-repeated value [10]. A specific writing or artistic work is original if it did not use any model and it has been created for the first time, being the first issue [7]. Similar meanings are primitive and authentic, unusual, extravagant, bizarre, eccentric. There are original ideas, theories etc. that are told for the first time by someone or entirely belong to someone [7].

The Big Dictionary of Neologisms (2000) emphasizes that something is original when it is "in the primitive form, uncopied, and untranslated". Art people and scientists creating a work of great value are considered being original [10]; poets, musicians composing something new and personal are also considered original [7].

J.P. Guilford considers originality as one of the elements of divergent thinking. It is the capacity to deliver new ideas, unconventional, unusual and shocking solutions; the originality index is given by the statistical sparcity of the answer (1967).

With respect to children's creativity in visual arts, several studies were carried one in testing several

hypothesis: if children are given new information on the possibilities to vary upon a given model, they generate more original outputs [1]); if preschoolers are asked to fulfil several requirements in drawing, then they generate original outputs [5] [6]; if preschoolers are given strict indications and are closely monitored by a person with at least medium competency in visual arts, then they develop drawing and painting abilities and learn new techniques in a shorter period of time [4]. The assumption that the representations of 6-7 years old children are influenced by the context in which they live, has also been confirmed in previous research [2] [3].

2. Method

Research design

Employing a 2-step formative experiment, the research hypothesis tested the assumption of *more exposed children are in learning situations using painting and collage, more stimulated they are in creating original deliverables*. The independent variable is the working task, and the output for each painting represents the dependent variable.

Sample

The study analysed the paintings of 12 children aged 8-9, enrolled in the elementary II at the Sălăjeni Elementary School (Sălaj county) during 2012-2013. The sample includes the entire group of children that attended the Painting classes with the same teacher. Because the students meet the inclusion criteria set at the beginning of the study (age, attendance), the small volume of subjects was extended by a larger sample of papers that were analysed. A total of 168 paintings (14/student) were included. The sample of subjects is quite heterogeneous in terms of intellectual capacities and development. Therefore, the degree of generalization is limited.

Procedure

For setting the baseline, in October 2012 the initial test was applied to the experimental group. Children had the task of choosing a topic they enjoy and to draw/paint a picture for 50 minutes. The assessment of their outputs ranged between 1 and 2 for each criterion: originality in combining colours, originality in combining shapes, originality in combining volumes, originality in combining movement, composition as a whole (synthesis and elaboration). The total grade was composed by summing the individual grades. The maximum grade a student could obtain was 10.

During the formative experiment stage, students from the group were engaged in 12 learning situations focusing on different topics and involving different painting and collage techniques: (1) "Waterfall" – bleaching using lemon salt; (2) "Free shapes" – bleaching using a dry sponge; (3) "Fireworks" – splashing colours; (4) "Landscape of dots" – dots using paintbrush; (5) "Field of dandelions" – tampon using sponge; (6) "Vase with tulips" – stamping; (7) "Leaves" – stamping using leaves; (8) "Material for dress" – printing using a rare fabric (curtain); (9) "Symmetry" – folding the paper; (10) "Spontaneous shapes" – overlapping paper using a wet thread; (11) "Fish" – painting on wrapped paper; (12) "Aquarium" - collage.

All the tasks had the same general rules, only the particular technique and the materials used were changed. We monitored if students comply with the rules and how are they influenced in their creative process by teacher, colleagues, the topic itself, or the technique. Each output was then assessed using the instruments designed for the current research. Results were analysed and displayed in graphic format.

In May 2013, at the end of the experiment, the final test was applied. Students received the same task as at the beginning. Using the same resources, we measured then the progress compared to the initial test.

Instruments

Several instruments were developed for this research. *The analytical scale for originality assessment* (Table 1) includes the assessment criteria, indicators, a 1-3 grading scale and the subjects involved. The maximum score a paper could receive is 30.

Table 1. The analytical scale for originality assessment of paintings

Originality criterion	Indicators (descriptive measurements)	Points (1-3 for each indicator)											
		1	2	3	4	5	6	7	8	9	10	11	12
Originality of shapes	Uses the shapes in a unique manner												
	Combines the shapes in a unique manner												
Originality of volumes	Uses the volumes in a unique manner												
	Combines the volumes in a unique manner												
Originality of proportions	Uses the proportions in a unique manner												
	Combines the proportions in a unique manner												
Originality of movement	Uses the movements in a unique manner												
	Combines the movements in a unique manner												
Originality of colours	Uses the colours in a unique manner												
	Combines the colours in a unique manner												
TOTAL													

The scale for global assessment of originality (Table 2) includes three sets of deliverables: high originality, medium originality and low originality. The criteria are similar with the previous one, but the descriptive level is explicit for each category.

Table 2. The scale for global assessment of originality

Type	High originality	Medium originality	Low originality
Descriptors	Uses and combines shapes in a unique manner. Also uses proportions, movements, volumes and colours in a original way.	Uses original shapes, but combined with common elements from other outputs. Makes both unique and similar combinations. Uses proportions, movements and volumes in a unique manner only on several parts of the drawing.	Does not have unique shapes. Proportions, movements and colours are used in a similar way.

Table 3 was employed for centralizing the results gathered through the scale for global assessment of originality. For each category a score was obtained: (1) output with low level of originality, (2) – output with medium level of originality, and (3) output with high level of originality. The total score a student can have for his/her 12 papers is 36.

Table 3. Synoptic table of the originality assessment

Output subject no.	Level of originality (1- low level; 2 – medium level; 3 – high level)												
	1	2	3	4	5	6	7	8	9	10	11	12	Total
1													
....													
12													

3. Results

Figure 1 reveals the results obtained by children during the initial painting test. Based on these, 3 children were considered having high originality, 6 were considered as medium, and 3 as low.

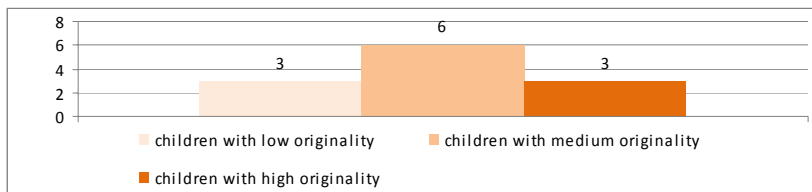


Figure 1. Children’s results to the painting test

Figure 2-13 reveals the children’s paintings from the 12 learning situations during the formative experiment.



Figure 2. Waterfall



Figure 5. Field of dandelions



Figure 3. Free shapes



Figure 6. Vase with tulips



Figure 3. Fireworks



Figure 7. Leaves



Figure 4. Landscape using dots



Figure 8. Material for dress



Figure 9. Symmetry



Figure 11. Fish



Figure 10. Spontaneous shapes



Figure 13. Aquarium

Figure 13 presents the total score obtained by each student for the 12 outputs delivered during the formative experiment. These scores are computed using the scale for global assessment of originality.

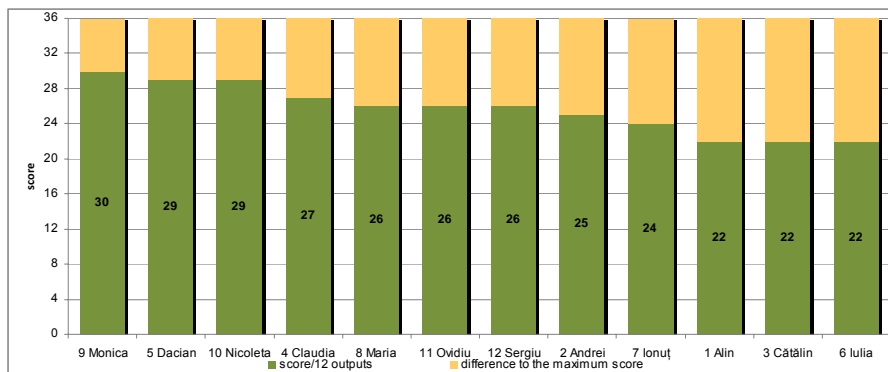


Figure 12. Total score obtained by each student for his/her 12 papers at the global originality assessment

Figure 14 reveals the distribution of the number of outputs delivered by each student during the formative experiment, classified according to the level of originality.

Figure 15 presents the number of outputs children delivered during the formative experiment, in a descendent order starting from high originality.

Figure 16 presents the number of outputs realized for each topic, in a descending order according to the originality.

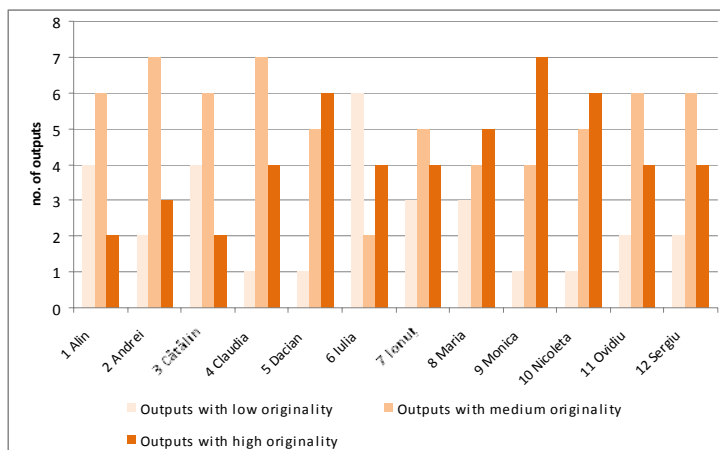


Figure 13. Number of paintings according to the level of originality

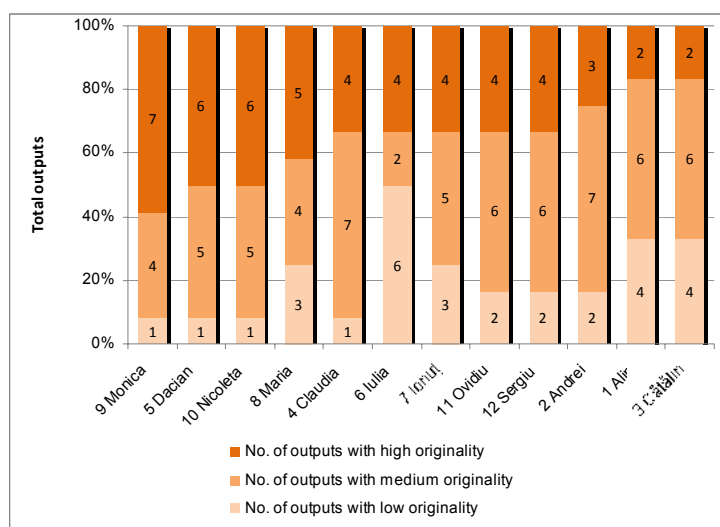


Figure 14. Number of outputs in a descending order according to the level of originality

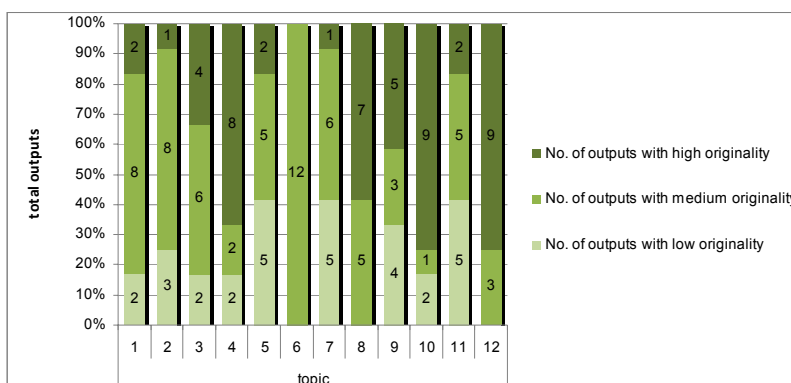


Figure 15. No of outputs for each topic, according to the level of originality

The results from the final painting test are presented in the figure 17. There were no significant changes, 3 children recording high originality, 6 displaying medium originality and 3 displaying low originality.

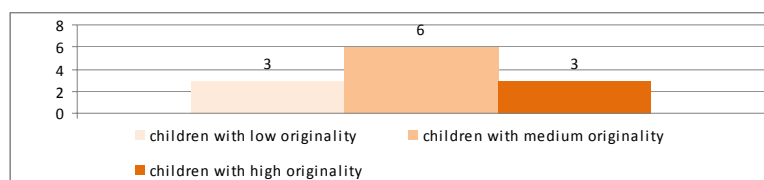


Figure 16. Children's results at the final painting test

4. Discussion

1) Evaluating the tools for originality assessment

The analytical scale for originality assessment. For this scale we decided to use a 3-point grading scale in order to compute the final score easier. In grading the outputs, several principles were taken into consideration: each output was compared to the group and not the other individual outputs; each output was graded according to the topic proposed; each output was graded according to the teacher's requirements. The evaluation process needed a lot of effort and time. Even if this scale is complex, when used by teachers who do not have competencies in visual arts its results are highly subjective. Originality assessment was strongly influenced by the subjectivity of the researcher, by its competency and by the characteristics of the outputs.

The scale for global assessment of originality. We designed this scale in order to simplify the evaluation process, especially for teachers with low level of competencies in visual arts. Based on this tool, outputs were classified into three groups: outputs with high level of originality, papers with medium level of originality, and outputs with low level of originality. We may assume that each output, taken individually, is original and unique. Still, when compared with the group, we recognized some similar elements, proving that they may have inspired from one another. These similar elements are visible in choosing and combining colours, in placing elements on the page or in choosing the elements included in the painting. The scale used several descriptors for each level of originality. Again, when these were assessed, the subjectivity interfered. Placing an output in a group was easier, while more difficult was when choosing the indicators that justified that placement.

2) Evaluating the influence of the topic on the originality of the outputs

We notice that when children are asked to draw a picture that allows them to use different elements, their outputs are quite diverse (Fig. 10). For this topic - *Symmetry* - only 2 children had outputs with similar decorative elements (hearts). Children created original outputs in *Landcape using dots* (Fig. 5). Children painted mainly trees, but these were coloured differently. Teacher suggested several themes: tree, flower field, hills, mountains etc.. The 'tree' reference was the first, and apparently the easier for children to include. Some of the topics should have influenced their originality in a positive manner by allowing them to choose the theme, but still the outputs were very similar. For instance, the topic *Free shapes* (Fig. 3), children used blue for the background, two used green and one used orange. The teacher showed them how to use the technique and presented a model from another child (boat on sea). Students were highly influenced by the model. The blue background was highly restrictive (water or sky). In this case, more children considered blue as water, so they represented boats using the sponge. We believe that if the teacher shows students models, he should clearly state not to use the same theme in their outputs. Other outputs showed similar elements. The level of originality was influences by the topic: *Field of dandelions* (Fig. 6). Outputs may have been different if the topic were *Field of flowers*. Students could have used more colours, but the techniques would have been more difficult as the sponge should have been washed several times. Low level of originality was also noticed for the topic *Fireworks* (Fig. 4). Students painted the sky with fireworks. If students would have been proposed to also paint the ground with fireworks, it may have displayed higher originality. Still there are some differences between outputs. Some used a coloured background and others used white, some used a dry and some a wet background favoring combining colours. The dimensions of the splashes varied from output to output. The topics *Material for dress* (Fig. 9) and *Free shapes* (Fig. 3), favored originality by not imposing any restriction. Original compositions were also delivered for the *Aquarium* (Fig. 13). Students placed in aquarium different fish and coloured them differently. On

contrary, for the topic *Fish* (Fig. 12) they were restricted to paint only one kind. In nature there is a wide variety of fish that could have inspired them, but children do not have the necessary representations in their knowledge system. Children used as a model the fish studied in the Zoological atlas during Science class. We notice that fish are different in terms of shape, surface covered, but low usage of the interior. In conclusion, children were more creative when asked to draw more fish compared to just drawing one. Therefore, the originality may also be influenced by the amount of elements used for a painting. For the topic *Vase with tulips* (Fig. 7), the teacher provided the stamps. Children could be creative in drawing and painting the vase. When children were proposed to draw *Flowers*, then their outputs may have been more original. For the topic *Leaves* (Fig. 8), children used leaves of different sizes and shapes. Their outputs were in general similar. One output stands out (Dacian) who uses leaves to represent trees. Outputs in which leaves were overlapped were interesting. Low level of originality characterized the outputs where there were wide spaces between the leaves. We may therefore conclude that originality could be influenced by the topic proposed to children.

3) Evaluating the influence of teacher on the originality

For the topic *Field of dandelions*, teacher suggestion of the horizon line diminished the level of originality. The model presented also had a negative impact on the outputs. The similar effect was also noticed for *Waterfall* where children were suggested to draw water from left to write, to use similar colours (orange for ground, blue for water). Still we consider that children need models when introducing a technique, but it may be useful to use several models, not just one. Also, it may be useful that children to deliver several outputs on the same topic. In conclusion, the instructions provided by the teacher may have a positive or negative effect on children's originality.

4) Evaluating the influence of peers on originality

Children inspired form other outputs composed by other students (Fig. 2. *Waterfall*; Fig. 3. *Free shapes*). For the same reason, they coloured the edge of the aquarium predominantly in yellow. We notice that at school is different to restrict children to see what their peers are doing, but we may restrict them to copy them.

5) Evaluating the influence of technique on originality

Bleaching using lemon salt (Fig. 2 *Waterfall*) strongly influenced the level of originality. Children bleached different sizes from the surfaces and different shapes. The spots have different dimensions and densities. The edges of the spots are very well shaped and combines mainly blue nuances some children place splashes for the ground. This technique stimulates originality, and outputs are interesting to the viewer. *Bleaching using a dry sponge* (Fig. 3 *Free shapes*) had a low influence on originality. 8 children used a blue background, 2 used green, and 1 used orange, green or white. Blue nuances are also similar. This technique could stimulate originality, but only combined with other techniques. *Splashing using the brush* (Fig. 4 *Fireworks*) strongly influenced the originality. Children used two techniques: splashing on dry paper and splashing on wet paper. Results were different for these two. On the wet paper the fusion of the colours was favored. Children used the techniques on different backgrounds. When the background was let to dry and then the splashes were applied, the colours did not fusion and some outputs appeared as inconsistent. This technique could enhance the originality by using splashes of different colours and dimensions, using a wet paper, and a coloured background. *Painting dots using brush* (Fig. 5 *Landscape with dots*) strongly influenced the level of originality of outputs. The technique offers possibilities to enhance originality by painting dots of different colours and dimensions, painting on a wet paper allowing so the fusion, painting dots on a coloured or black/white background. The dots realized by the children have different colours, dimensions and shapes. *Tampon using sponge* (Fig. 6 *Field of dandelions*) had little influence on their originality. In this case we believe that children would have painted more beautiful pictures if they had painted first the field using green and then painted the dandelions. Of course this would have implied applying the sponge using yellow on the dry green background. This technique would increase the originality if it is used on a smaller piece of paper, and not on the entire surface. *The stamp (potato stamp)* (Fig. 7 *Vase with tulips*) strongly influenced the originality of children. It was difficult for children to create their own stamps. However, the results were good, because the tulips had different sizes and shapes. We believe that if we used more stamps representing different flowers, the

originality could increase. The topic *Leaves* (Fig. 8) also had a positive effect on originality. Children used leaves of different sizes and shapes, positioned them differently on the page, sometimes overlapping them. They created a network of shapes, sizes, a spectacular play of colours and nuances. *Printing using a rare fabric* (curtain) (Fig. 9 *Material for dress*) had a big effect on originality. The printings that were obtained were beautiful. The technique used three manners: applied the fabric on a white sheet and painting between the threads, painting the fabric and then apply it on the paper, painting the fabric, apply it on the paper and then using another white paper to press on the fabric. For the last techniques they obtained two different outputs. The visual effects differ according to the particular manner employed. *Folding the painted wet paper* (Fig. 10 *Symmetry*) also influenced the level of originality. In order to increase the originality, children should have repeated this technique. If at previous outputs they used the entire surface of the paper, in this case they used only a small portion. We suggest repeating the technique by using the entire available surface. *Overlapping paper using a wet thread* (Fig. 11 *Spontaneous shapes*) had a positive effect on the originality. In using this technique we appreciate the edges of the thread should be left aside so that they can be easily pulled. We noticed that children did not pull all the threads, but left them there to create traces. We also notice the usage of threads of different thickness. Usually children limit at using a maximum of two coloured threads which diminishes the creative potential. *Painting on wrapped paper* (Fig. 12 *The fish*) influenced the originality of children. The wrapped paper offers the output an original look upon applying the colours. The teacher choose a paper of low quality, we could enhance the originality by using a paper of better quality. *The collage* (Fig. 13 *Aquarium*) influenced the originality. Children obtained fish of different colours, sizes and shapes. We believe that if they compose drawing where they can combine several elements, the level of originality is enhanced. Of course fish are more different among them than the tulips or dandelions are.

Table 4. The influence of the topic and the technique on the originality

Topic	Influence on originality	Technique	Influence on originality
1. Waterfall	Low	Bleaching using lemon salt	Significant
2. Free shapes	Low	Bleaching using a dry sponge	Low
3. Fireworks	Low	Splashing using brush	Big
4. Landscape using dots (free choice)	Significant	Dots using brush	Big
5. Field of dandelions	Low	Tampon using sponge	Low
6. Vase with tulips	Low	Stamp (potato stamp)	Significant
7. Leaves	Low	Stamp (leaves)	Significant
8. Material for dress	Significant	Printing on a rare fabric	Significant
9. Symmetry	Significant	Folding the wet, painted paper	Significant
10. Spontaneous shapes	Significant	Overlapping paper using wet thread	Significant
11. Fish	Medium	Painting on wrapped paper	Big
12. Aquarium	Significant	Collage	Significant

4. Conclusions

With respect to the two assessment tools we used, we conclude there are useful, but the result of the evaluation is biased by the level of competency in visual arts of the person carrying the evaluation. Compared to the global scale, the analytical scale of originality is more difficult to use, but assures a high level of objectivity. The topics we proposed influenced the originality of the outputs. There are topics with a higher potential than others (e.g. those requiring combining different elements or those where the subject can choose the topic). The teacher's instructions and explanations have a dual effect on originality. The level of originality is also influenced by inspiring from different models or peers. Also, some techniques have a higher influence on originality than others.

At the initial and final test children had the chance to choose the topic and the technique. They obtained similar results for originality and the progress was not consistent. The research hypothesis confirms, especially when they are engaged in the experiment, but when they are required to transfer the skills, it becomes difficult.

Future studies should focus on the capacity of transfer and the ability to combine techniques. Also factors that can enhance originality should also be tackled.

References

- [1] Dulamă, Maria Eliza, Diana Alexandru, Cornelia Vanea (2010), Study on the design creativity of preschool children, in *Acta Didactica Napocensia*, vol. 3 nr. 4, p. 85-97.
- [2] Dulamă, Maria Eliza, Ilovan, Oana-Ramona, Vanea Cornelia (2009), Several characteristic features of children's representations, in *Acta Didactica Napocensia*, vol. 2 nr. 4, pp. 75-90.
- [3] Dulamă, Maria Eliza, Ilovan, Oana-Ramona, Vanea, Cornelia (2009), Study on the features of 6 and 7 years old children's drawings, in *Studia Universitatis Babeș-Bolyai, Psychologia-Paedagogia*, 2, pp. 153-164.
- [4] Dulamă, Maria Eliza, Mihai-Bogdan Iovu, Andreea Rus (2012), The study of drawing and painting abilities in preschool children, in *Acta Didactica Napocensia* vol. 5 nr. 3, p. 23-30.
- [5] Dulamă, Maria Eliza, Mihai-Bogdan Iovu, Cornelia Vanea (2011a), Tasks-oriented activities and drawings in the study of creativity of preschool children, în *Studia Universitatis Babeș-Bolyai, Psychologia-Paedagogia*, vol 56, nr. 2, p. 121-130.
- [6] Dulamă, Maria Eliza, Mihai-Bogdan Iovu, Cornelia Vanea (2011b), The development of creativity in preschoolers' drawings through task-oriented activities, in *Acta Didactica Napocensia* vol. 4 nr. 4, p.19-30.
- [7] Marcu, Florin (1986) *Mic dicționar de neologisme* [DN], Editura Albatros, București.
- [8] Marcu, Florin (2000), *Marele dicționar de neologisme* [MDN], Editura Saeculum, București.
- [9] *Dicționarul explicativ al limbii române* [DEX] (1998), Academia Română, Institutul de Lingvistică "Iorgu Iordan", Editura Univers Enciclopedic, București.
- [10] *Noul dicționar explicativ al limbii române* [NODEX] (2002), Editura Litera Internațional, București.

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