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ARTISTIC PLASTIC CREATIVITY OF CHILDREN WITH MUSICAL SKILLS

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Abstract

The issue of creativity is of utmost importance in contemporary education, focused on the potential of expressing the personality of each trained subject. Creativity transcends the boundaries of interest of the science of education being an existential problem in the modern society, an interdisciplinary and cross-curricular problem. The concept of creativity is very close from the linguistic and th semantic point of view to the concept of creation. The concept of creativity refers to the production of new and original ideas, the concept of creation is focused on finalizing the idea, putting it into scientific, artistic, technical works, etc. The necessity to carry out this study is justified in the context of the curricular content approach in the vocational-art elementary education in Romania and supplemented by a series of shortcomings as far as the beneficiaries of this education are concerned. Thus, it is necessary to educate the creativity of thinking as a general and complex skill, but also the artistic-plastic creativity as a specific skill, in this case the artistic-plastic creativity in children with musical skills.

Keywords: Creativity**,** musical skills**,** artistic-plastic skills .

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1. Introduction

Creativity finds fulfillment in creation and creation is accomplished in the creative process. "To create means to make, to bring to life, to cause, to generate, to produce, to be the first to interpret the role and to give life to a character, to compose quickly, etc. Creative is the one that is characterized by its originality and expressiveness, that is imaginative, generative, innovative, inventive, etc" (Cioca & Cluj-Napoca, 2007, p.13).

1.1. Creativity factors

The process of creation is "the inner psychological aspect of collective activity, it encompasses all the moments, mechanisms and internal psychological dynamics: from the generation of the problem, the hypothesis, to the realization of the creative process" (Anucuta & Anucuta, 2005, p.24). Creativity is not a chaotic phenomenon, it is a process that crosses several stages, it is influenced by different factors.

The intellectual factors are: divergent thinking, convergent thinking and perceptual style. Divergent thinking was first used by is creative thinking, exploring in various directions, multidirectional thinking, and producing new answers, the main role being held by associative and ideological fluidity, flexibility, sensitivity to problems, originality and capability of redefininig.

The non-intellectual factors involved in creativity are: motivation, affectivity, temperament, character and intimate resonance. Creative motivation is the most important thing in the creative approach because, on one hand, it is subjected to external influences, on the other hand, intrinsic motivation has a primary role in creation. The special importance of affectivity in the human psychic system in general, especially in creativity, results also from the association that Roco (2001) made between the two notions: "creativity and emotional intelligence." Character is how an individual is, feels and creates.

A decisive role in stimulating creativity is played by social factors. The school environment can influence creativity, teachers can exert a positive or negative influence on students.

Heredity, age, gender, and mental health are biological factors that condition the manifestation of creativity. The role of heredity in creativity is demonstrated by the existence of "miraculous children" who showed special skills with superior performances from a very young age: Mozart, Chopin, Enescu, Goethe, Eminescu, Grigorescu, Luchian etc. The emergence of talents for several generations within the same family (Strauss, Bach, Dumas, Darvin, etc.) can be said to be influenced by heredity and the environment.

1.2. Skills

What are the skills? Al. Rosca (General psychology, 1966, p. 431) synthesizing the concepts of valuable psychologists (Clapared, Bingham, Rubinstein, Leontiev) asserts that skills are "the psychic and physical attributes that enable humans to perform certain forms of activity". Skills can be categorized into:

- General skills-ensure success on several levels;
- Special skills (musical and artistic-plastic) - manifest only in a certain field and do not exclude general skills.

The special skills of the students participating in the experiment lead to better results in intensity and quality and will positively imprint their creative personality. All the students that took part in this experiment are tested at the age of 6-7 years at admission to primary-vocational education the sample is

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deliberately chosen Artistic skills says Anucuta and Anucuta, (2005), are "instrumental structures of the personality that assure the achievement of superior average performances in particular spheres of professional activity" (p.20). Thus, artistic skills have an influence on literature, music, painting, sculpture, theater, acting, etc. By analogy, I assume that some of the students will demonstrate important artistic and plastic qualities. The socio-cultural climate in which the student with special skills grows and develops, in this case the College of Arts, does not only influence the formation and affirmation of creativity, but also the manifestation of creative performances (Table 01).

Table 01. The perspective of the concepts involved

General Skills/ Psychic processes	**Special musical skills**	**Special artistic-plastic skills**
cognitive	Voice	memorizing visual forms and reproducing them in the drawing
affective	hearing-auditive perception	the spirit of observation-the visual perception
volitional	Rhythm	imaginative memory;
	musical memory	working with shapes and images in mind
	musical thinking (melodic sense, rhythm, harmony)	the accuracy of the hand movement
	emotional sensitivity	combining elements of perception into new images
		color differentiation;
		visual perception of differences in dimensions

Creative proofing tests have generally taken up the quantifiable aspect, namely the measurement of the factors - skills, aptitudes or personality traits involved in the creative process: E.P. Torrance that have as a purpose to diagnose creative and differentiated potential, and assesses fluidity, flexibility, originality and development as factorial abilities; Guilford which measures the ease or fluidity of words, ideas, associations, expressions, flexibility, elaboration and originality as factors of divergent thinking, and authors such as Osborne and Gordon study the dynamics of group creativity- brainstorming (Figure 01).

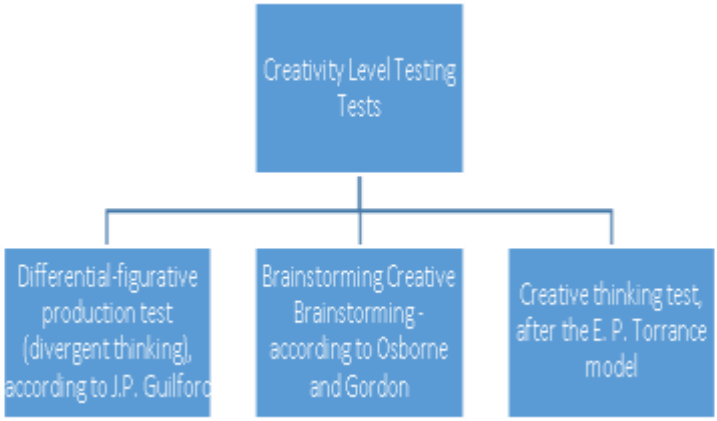

Figure 01. Tests for the measurement of creativity

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By conducting these tests, the measurement of creativity parameters was intended: fluidity, flexibility, originality and elaboration, recording two levels (pronounced creativity, low creativity)

2. Problem Statement

The nature of the issues addressed is relatively narrow "developing the creative potential of pupils with special skills in primary education" with an immediate practical applicability, operating in an inductive way by direct confrontation with reality, but also in a deductive way. The field of study is in acoordance with the arts and technologies curricular areas, namely Visual Arts and Plastic Skills (AVAP). The components of educational action are realized from a systemic perspective and represent the relational teaching-learning-evaluation field. The analysis perspective is interdisciplinary. Conclusions, generalizations, predictions are formulated by exploring this educational reality.

2.1. The need to carry out this study

The necessity to carry out this study is justified in the context of the integrated approach of the curricular content in the vocational art education in Romania and completed by a series of shortcomings as far as the beneficiaries of education are concerned:

- vocational school students with specific Arts in the Romanian education system are given the initial aptitude test (only musical skills) at the beginning of primary school, pupils aptitude testing and verification doesn't exist for artistic skills
- in the Framework Plan (Primary Education) for Vocational Schools with Specific Arts, OMEN Nr. 3371 / 12.03.2013, there is the same number of classes in AVAP just as in all the other schools;
- in the Framework Plan (Primary Education) for Vocational Schools with Specific Arts, OMEN Nr. 3371 / 12.03.2013, there are the disciplines Music and Movement and Game and Movement, disciplines with non-synchronized curriculum with Vocational-Art Specifics.

3. Research Questions

The theme of the research is the development of the creative potential of pupils with special skills through playful sensory games and activities and answers to the following questions:

- What is the artistic and plastic creative potential of students with musical skills?
- Do the special skills of the students participating in the experiment lead to better results in intensity and quality and will these positively imprint their creative personality?
- Does the socio-cultural climate in which the student grows and develops, in this case the College of Arts, only influence the formation and affirmation of creativity or also the manifestation of the creative performances?

3.1. Which are the coordinates of the research?

The approach direction is longitudinally supplemented by a "panel study" with successive measurements at different times. The function is projective. The function is projective-to guide. The level

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of intentionality is research-action involving a high level of intent and involvement, autoreflexive approaches towards the participants in the action. The form of student organization is combined and intensive. The research is carried out on a sample of 25 schoolchildren. The results obtained are confronted and corroborated with those obtained by applying the extensive research methods recorded in the tables and graphs lead to the formulation of the conclusions. The beneficiaries of this psycho-pedagogical research are the school in which I work, the Baia Mare Art College, and the whole primary education segment on the vocational-art branch in Romania. The research characteristics are:

- measuring the creativity parameters before and after the experiment;
- the contribution of the "experimental factor" to the development of children's creative potential.

4. Purpose of the Study

The aim of this study is to trigger creative potentials and to develop the creativity of the small pupil, stimulating the individual potential (in order to make use of their talents and cultivate creative attitudes.

4.1. The aims of the research

The objectives of the research are as "curricular cuts" from the art, technology, language and communication curriculum areas, each of which contributes through the possibilities offered by its specificity in shaping the overall theme. These are some of them:

- conducting specific creativity tests, measuring the creativity parameters before and after testing appying “experimental factor-the sensorial didactic game”;
- evaluating the progress achieved by various methods and tests: psycho-pedagogical experiment, observing behaviors and results during the experimental period, specific tests, children's portfolio;
- formulating conclusions;
- issuing predictions, the prospect of future proposals.

4.2. The research hypothesis

The freedom of chromatic expression and visual-plastic expressiveness of children in response to certain stimuli (sensations and perceptions) through didactic play-leads to the development of the creative potential of pupils with special skills. This opposes the null hypothesis that freedom of chromatic expression and freedom of visual-plastic expressivity leads to artistic and plastic works subject to chance, hazard, without message, etc. Therefore …. strict guidance only, through appropriate and creative teaching methods and strategies, can achieve the expected results.

- **The independent variable** is the "cause" that leads to change; in this case the experimental conditions are organized ludicrously, the basic method of all the instructive-educational activities that stimulate creativity is the "didactic sensory game".
- **The dependant variables** the performance and the results obtained from the experiment, the artistic and plastic skills discovered during the experiment, the difficulties encountered, the behaviors and attitudes of the students.

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5. Research Methods

The psycho-pedagogical experiment consists in testing, verifying the hypothesis, the assumption formulated.

5.1. Several research methods used

(Systematically) observation was used in all stages of the research in order to obtain additional data in relation to various aspects of the investigated phenomena.

The interview - "focus group" method of direct research in which it is deliberately discussed with the pupils to obtain data related to certain phenomena and pedagogical manifestations (facts, behaviors, opinions, desires, interests, aspirations) are the expression of preferences, emotions, feelings or behavioral intentions. The efficiency of the method is conditioned by the students' sincerity, but also by the flexibility and elasticity (transparency) of the conversation.

The method of analyzing portfolios / products of the activity of the subjects of education requires the analysis, both in terms of product and process, from the perspective of certain parameters established in accordance with the purpose and objectives of the research.

5.2. The didactic sensorial game - the didactic method used as "experimental factor"

The didactic game is a method of learning, which represents ways of action, the means by which students, under the guidance of the teacher or independently, acquire their knowledge, form and develop intellectual and practical skills, aptitudes, attitudes." (Ionescu & Bocoș, 2009, p.224). The didactic game is a set of principles, rules, techniques, procedures established as an instrument of knowledge. It has an action plan, it is a succession of operations conducted in order to achieve a goal, a tool in the work of knowledge. The didactic sensorial game is the form in which all the contents of this research come in color and shape. These are tangential to the chosen topic, with the pupils' work tasks and have a major importance in the weighing of the results. The sensorial didactic games applied are: **The Magic Sack**- touch / thermal sense, **Master chef**-taste sense, **The Magis of Smell**- smell sense, **The Enchanted Ear**- hearing sense.
"Playing Art", says Cioca (2007), is available to both educators and it has a double value… (p.9).

6. Findings

Upon the completion of the research it was found that the sensorial didactic game and the experience of games in children are equally work and art, reality and fantasy. Under the influence of the game, the creative potential of the child is formed, developed and restructured. The game has a universal human character, being a manifestation in which a fight between contradictions is obvious, an overcoming effort having a role of propelling into the objective process of development. The special skills of the schoolchildren who have participated in the experiment have led to better results in intensity and quality and positively imprint their creative personality.

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6.1. The teacher's activity

All activity in this research has been designed, conducted and evaluated through the course of a year and a half. The initial, final and long-term testing of the level of creativity was done under the name of "Musical Landscape", and the "experimental factor" was introduced as didactic sensorial games.

6.2. The students' activity

They responded to the creativity tests, they were motivated to bring the imaginary into the real plan and to develop it, to develop their creative imagination and specific skills. They have demonstrated their chromatic and visual-plastic expression in response to certain stimuli (sensations and perceptions) through the didactic game, developing their creative potential (Table 02).

Table 02. Creativity factors

Fluidity Fl	Flexibility Fx	Originality O	Elaboration E
- given by the total number of responses to a sample; - the number of elements included in the composition and the number of colors, - considered as an ability to produce a large number of ideas;	-the total number of different categories in which the answers from a sample / item can fit; -looks at the theme from all perspectives; - the ability to produce varied responses for different areas; - here, special skill;	-is measured by the statistical scrutiny of a response; - the modality of building a composition; - here, the ability to produce ideas distant from what is common / banal;	-transformation of ideas received into complex products processed by cognitive and imaginative processes; - represents the ability to develop, broaden and enrich ideas; - the number of details used in the elaboration of the paper;

The diagnosis regarding the level of pupils' creative potential was done by following four parameters / factors of creativity on two levels of low / high intensity (Figure 02).

Figure 02. Sensorial games

The Magic Sack-Fluidity is represented by 96%, which demonstrates that the students have identified through tactile sense the feelings of cold-hot, fine-coarse, soft-rigid, etc. and represented them in colors and shapes. The 48% flexibility and the 44% originality show that they did not know how to use the multitude of ideas, did not make enough associations, analogies, combinations. The works are developed in a

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proportion of 52%. The pronounced level of creativity components averages 60% and the low level, an average of 40%. **Master Chef**-A high percentage of students, 92%, transforms the sensations and emotions transmitted by taste stimuli into ideas, shapes and colors (Fluidity), but only 76% can operate with the multitude of ideas (Flexibility). The originality of 64% and the elaboration of 68% register levels close to creativity. If we read longitudinally, we achieve an average creativity level of 75% for the high level, and 25% for the low level of creativity. **The Magic of Smell** - After this sensual game we found that the Fluidity of ideas is 88%, Flexibility, their association with different colors, shapes, in different categories is lower, namely 72%, the Originality degree is 76%, and Elaboration is 80%. The high level of creativity of the sample is 79% and the low level of creativity is 21%. **The Enchanted Ear** - Following the musical audition "The Enchanted Ear", the students made compositions full of vivid colors, a multitude of forms, dynamic compositions. Fluidity is represented by 96%, Flexibility 68%, Originality 80% and Elaboration 44%.

7. Conclusion

The development of the creative potential, as an act of manifestation, finalized and elaborated in a product of great originality, is only for children endowed with special skills. Following this experiment, it was demonstrated that a significant number of the sample had artistic and plastic aptitudes, 32% of the students were admitted after the entrance examination in the 5th grade at the visual arts specialization – in Baia Mare College of Arts in 2016- 2017, namely 8 out of the 10 pupils who demonstrated special artistic and plastic skills during this psycho-pedagogical research. The other two remained in the music-piano specialty of the Baia Mare Art College, a specialization in which they were first tested (musical skills) in the first grade. In conclusion, 1/3 of the students with musical skills also have artistic-plastic skills. From these conclusions, the question arises: How many of the children initially tested with artistic and plastic skills also have musical aptitudes? The answer to this question is the topic of a future research.

7.1. Aesthetic aspect

The behaviors and attitudes of the students, the performance and the results obtained from the experiment, the artistic and plastic skills, the special skills discovered during the experiment, the reactions to different stimuli (visual, tactile, olfactory, taste and auditive), practical works, all marked a considerable evolution, demonstrating the development of the creative potential.

7.2. The utility of the study

Through this experiment it was demonstrated that the teacher's intervention in the creative process, with all his personality, his mastery and the baggage of the psycho-pedagogical methods used, helps and develops the creative potential of children with musical skills (Table 03).

Table 03. Statistical Indicators-Musical Landscape

Statistical indicators	Musical Landscape 1	Musical Landscape 2	Musical Landscape 3
Simple deviation (X)	2.64	3.44	3.48
Medium deviation (Dm)	1.07	0.58	0.624
Average dispersion (σ^2)	1.33	1.62	1.65
Standard deviation (σ)	1.153	1.272	1.284
Standard error	0.23	0.255	0.257

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The statistical calculation showed that N=25. In order to determine t, we must determine the dispersion of the differences. The standard deviation is for the first difference σ2d1 = 0.58, σd1 = √0.58 = 0.76 from where it results that t = 5.33, and the standard deviation for the second difference is σ2d2 = 0.55, σd2 = √0.55 = 0.74 where t = 5.67. In this case, n = N - 1 = 25 - 1 = 24. In the Student table (Bocos, 2003 Appendix 2) we note that at 24 degrees of freedom, the value of t at significance threshold P = 0,05 is 2.06 and at the significance threshold P = 0.02 is 2.49. In this case it means that the null hypothesis can be denied / neglected, according to which the freedom of plastic expression leads to artistic and plastic works without message, absurd, subject to chance and hazard. The differences between students' averages are statistically significant and the assumption that the children's chromatic freedom of expression in response to certain stimuli (sensations and perceptions) through the didactic sensorial game can lead to the development of the creative potential of the small age pupil is valid.

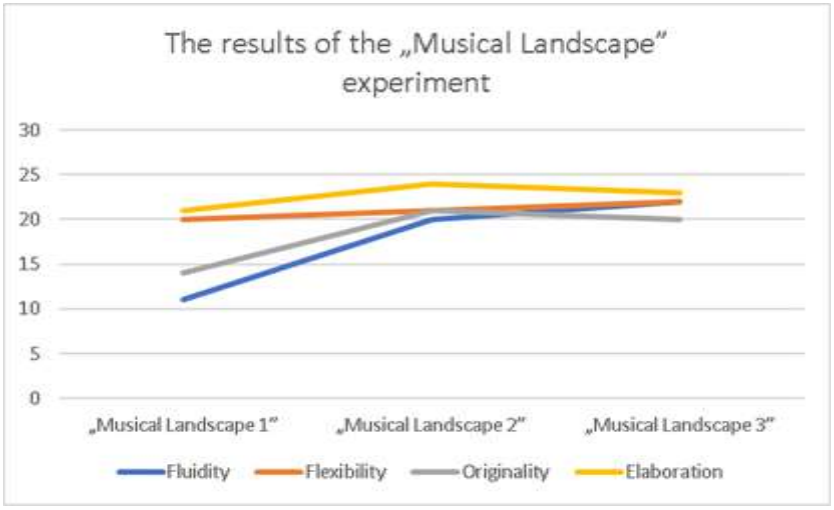

Figure 03. "Musical Landscape" experiment

The results of the measured differences (%) show in the following way: **Fluidity** increased by 12% at the end of the experiment and after retesting by 8%, **Flexibility** increases significantly at the end of the experiment, a difference of 28%, and after retesting 24%. **Originality** shows a not very spectacular increase of 4% at the end of the experiment, and after retesting 8%. **Elaboration** is the component of creativity that has the most obvious increase at the end of the experiment 36% and after retesting 44% (Figure 03).

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