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TEACHERS' PERCEPTIONS OF CREATIVITY. WAYS TO STIMULATE CREATIVITY IN PRESCHOOL AND PRIMARY EDUCATION

Roxana Constanța ENACHE[1], Ana-Maria Aurelia PETRESCU[2], Mădălina ENACHE[3], Adriana Elena PĂTRU [4], Ana-Maria GHEORGHE[5],
[1] Teacher Training Department, Technical University of Civil Engineering, Bucharest;
[2] Teacher Training Department, Valahia University of Târgoviște; [3] Kindergarten no. 15 Târgoviște; [4] Kindergarten no. 15 Târgoviște; [5]Gymnasial School no. 5, Bucharest; ROMANIA
E-mail: [1]rocatare@yahoo.com , [2]anapetrescu2007@yahoo.com, [3] adriana_elena4@yahoo.com , [4]madalina_crissy@yahoo.com , [5]dutu_ana_maria@yahoo.com

ABSTRACT

In this paper, we aim to identify teachers' perceptions of creativity, analyze the structural components of creativity, the psychical processes involved in generating creative processes, as well as solutions related to the initial and continuing training of teachers, in order to stimulate creativity in preschool and primary school children. Our research was conducted on a target group of approximately 150 preschool and primary school teachers who responded to a questionnaire designed with 15 items, of which 12 referred to creativity and 3 to the level of education, environment, and experience of teachers. Another research tool was the observation sheet designed and applied by the author in classroom teaching interactions. The correlation between the responses in the questionnaire addressed to teachers and the results obtained from observing children's behaviors determined by the use of certain categories of teaching strategies (inductive, deductive, analogical, transductive) generated the conclusions of this research. Combining the teachers' perceptions captured through the questionnaires and the results obtained from the observation sheet, we can emphasize that initial and continuing training of teachers in the field of psychopedagogy of creativity would stimulate creativity among children, which would facilitate their cognitive learning, adaptation with personalized solutions to different contexts, improvement of social skills, acceptance of their own emotions, experiences, feelings, and increased self-confidence.

Keywords: *creativity; psychic processes; teaching strategies for stimulating creativity; preschool and primary education*;

INTRODUCTION

In our opinion, creativity marks the entire personality and mental activity of a person and, at the same time, is subsumed and integrated into the personality system. We have considered the following as traits of creative personality: fluidity, flexibility, elaboration ability, sensitivity to problems, redefinition, originality (J. Guilford), independent thinking, strong conscience, preference for complex phenomena (Barron), tolerance for ambiguous situations, diverse and complex interests, specific cognitive style (I. Taylor), intrinsic

motivation, strong emotionality, nonconformity, increased need for independence, and high self-direction. Through education, creative potential can be developed even by teachers who do not have a high creative quotient, but by training the appropriate processes and developing the specific characteristics of creativity, they can, over time, transform creativity into a personality trait that will produce the new and the original. Educating creativity at preschool and school age requires a coherent, organized set of activities, projects, and tasks. These activities develop spontaneity, independent thinking, receptiveness to problems, creative motivation, and the ability to elaborate and anticipate. At the same time, the child becomes familiar with documenting, researching reality with a keen eye, selecting what is important but hidden, asking questions, and anticipating solutions to verify. Through these same actions, children are accustomed to wanting to express their opinions and to express them in an appropriate, convincing manner. The foundations of personality are laid as early as preschool age, when some more stable traits of behavior and character are outlined, but also the foundations of holistic, creative, divergent, but also analytical thinking, of organizing information, of classification. In the opinion of some contemporary researchers „leaving children in the middle of a problematic situation, motivating them to use an object for different purposes or asking them to complete a story are among the practices that may be carried out to support creativity" (Yildirim & Yilmaz, 2023)

The school stage, with its new demands and requirements, increases the social importance of what the student undertakes and achieves. The new circumstances leave a strong mark on his personality, both in terms of his internal organization and in terms of his external behavior, relationships, and communication. According to author Ramona Elena Rotaru (2020) „when children's divergent thinking is stimulated, it contributes enormously to maintaining their motivation to learn in the long term. Similarly, encouraging primary school children to continue generating original and new ideas stimulates their creative thinking skills". As they grow older, children's creative abilities also develop, because creativity undoubtedly takes shape over time. Thus, if in preschoolers creativity manifests itself mainly in play, then in grades 1 and 2, the creative manifestations of students are determined by learning through discovery and action, through various means (in Romanian language, mathematics, music education, art education, and technology education classes), in middle school, with intellectual and physical development, students demonstrate a stronger creative spirit, their creativity manifesting itself in a striking, obvious, and spontaneous way. The field of study known as Romanian language and literature, with its sub-branches (grammar, reading, and writing), provides fertile ground for exercising and stimulating students' cognitive and creative potential.

1. CONCEPTUAL DELIMITATIONS USED AS THE BASIS FOR THE RESEARCH

There are numerous definitions of creativity, without a generally accepted definition having been formulated. Some definitions are contradictory or subjective, which is why several definitions from reference dictionaries are cited below, as well as definitions proposed by experts in the study of creativity.

*The American Psychological Association (APA) defines creativity as: „*he ability to produce or develop original work, theories, techniques, or thoughts. A creative individual typically displays originality, imagination, and expressiveness. Analyses have failed to ascertain why one individual is more creative than another, but creativity does appear to be a very durable trait.*" (https://dictionary.apa.org/creativity).*

For Ken Robinson, "creativity is the process of having original ideas that have value," and he suggests that it is based on the ability to combine and reconstruct existing ideas in innovative ways. (2017, p.5). Mihaela Roco defines creativity as a complex mental ability involving cognitive, affective, and motivational processes. (2001, p.6) Collins, M. A., & Amabile, T. M. (1992). defines creativity as "the production of new and useful ideas in any field" of human activity, from science to the arts, in education, in business, or in everyday life. Innovation is the implementation of creative ideas in an organization. Creative input is an essential part of solving problems that arise in all phases of the innovation process. The creativity of persons and teams "is a necessary but not sufficient condition for innovation" (Amabile, 1983). Successful innovation also depends on other factors; it can come not only from creative ideas originating within an organization, but also from ideas created elsewhere (as in technology transfer). Research by Teresa M. Amabile (1983) suggests that three factors can determine individual creativity in any situation:

- Experience is "the basis of all creative activity." It provides a person with the technical, procedural, and intellectual knowledge to identify the important elements of any particular problem.
- Creative thinking skills: this refers to the imaginative, inventive, and flexible way in which a person approaches problems; these skills depend on personal traits (independence, risk-taking orientation, tolerance for ambiguity) and type of thinking. Creative thinking is characterized by a strong ability to generate new ideas by combining previously disparate elements.
- Motivation is generally accepted as fundamental to creativity, and the most important motivating factors are intrinsic passion (self-motivation) and intrinsic interest in performing the work (the object of creation), which are more effective than extrinsic motivation (rewards, recognition). In a sense, creative people are at the mercy of their own values and motivations and are best at dealing with problems for which they have a strong emotional affinity.

2. RESEARCH METHIODOLOGY

Our research includes theoretical aspects related to teachers' perceptions of the concept of creativity, as well as aspects of educational practice, that include teaching strategies related to creativity.

The target group consists of 140 teachers, most of them teaching in Romanian pre-university education, with over 80% teaching in urban areas. The distribution is balanced in terms of education level, with over 20% teaching in preschool, primary, and high school, and 40% in middle school. 64% are beginners, and 12% each have permanent teaching positions, teaching degrees II and teaching degrees I.

The questionnaire aimed to define the concept of creativity as perceived by the responding teachers. The answers illustrate each respondent's subjective perception, but also the frequent association of creativity with certain mental processes that are often triggered by creativity or on which creativity is built and which it involves in its practice and development, the ability to innovate, to create original, unique products. Among the frequent responses we can mention imagination, innovation, generating unique ideas, fluid, flexible, and original expression, the ability to work easily with diverse concepts that fall outside the common pattern of thinking and understanding. Among the most comprehensive and original answers are: the ability to create new, innovative things or unique interpretations by

combining accumulated knowledge and experience with imagination; it involves the courage to experiment, to take risks, to sometimes play with uncertainty; is the ability to generate new, original, and valuable ideas and things, new ways and solutions through divergent thinking; represents the freedom to explore, combine seemingly opposing ideas, and accept that sometimes the best solutions come when we allow ourselves to make mistakes and try again.

For item number 2, the majority of respondents perceive that creativity is very important in personality development (80%). Although it is not a primary/essential psychological process for the existence and development of personality, social expectations and needs have recently brought creativity to the fore as an essential characteristic of compulsory education graduates.

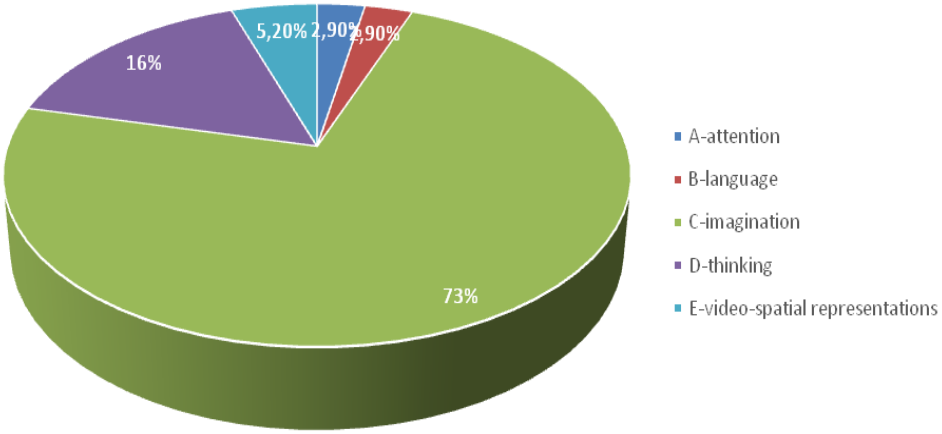

Figure no. 1 *Respondents' perceptions of the processes involved in activities organized for the development of creativity*

The association of creativity with imagination (73%) for most respondents illustrates that such approaches are frequently required in educational practice to develop creativity, but also that this concept is assimilated with the process of imagination. Creativity is least frequently associated with language and video-spatial representations, and in our opinion this illustrates how rarely creativity is developed through association with elements of oral or written communication (the language and communication curriculum area being associated with language), as well as with elements that require video-spatial representations (the field of mathematics being correlated with these mental processes). This leads to the worrying conclusion that creativity is very little trained in the subjects that play an important role in terms of the number of hours, but also in terms of the development of key competences.

Creativity is a more complex ability than imagination. It makes it possible to create real or purely mental products, constituting progress in social terms. The main component of creativity is imagination, but the creation of real value also requires motivation, the desire to achieve something new, something special. And since novelty is not easily achieved today, another component is willpower, perseverance in making numerous attempts and checks. The most important form of imagination is, of course, creative imagination. Imagination manifests itself in different ways, either involuntarily (daydreaming, dreams, hallucinations)

or predominantly voluntarily (artistic, scientific, technical creation, etc.).The teachers' perception about the frequency of participating in training courses is that this experience should be annual (73%) and less than 5% of the respondents said that it should be once every 5 years, as the current legislation in Romanian education provides, which indicates a very high level of responsibility, desire to update information, techniques, tools and working strategies, involvement, professional development among teachers in Romanian pre-university education.

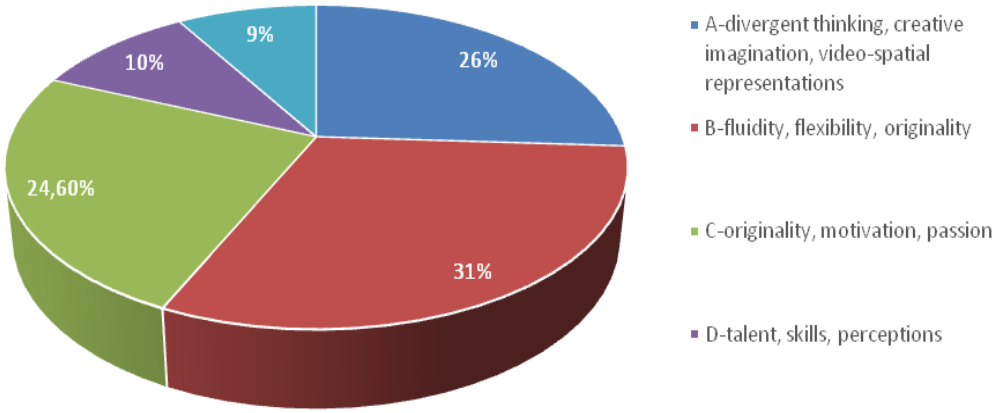

Figure no. 2 *Teachers' perception about the characteristics of creativity*

The psychological training of respondents is not consistent or long-lasting, which is why, in our opinion, only 31% of them chose the correct association, and the confusion due to conceptual ambiguity is caused by the association of mental processes that are driven by creativity with the basic attributes of creativity for 24.6% of respondents and with a mixture of characteristics (originality) and mental processes (motivation, passion/talent) for 26% of them. The theoretical foundations of psychology, educational psychology, psychology of creativity, creativity management (or other disciplines in the initial or continuing training of teachers) are poor (they are completely lacking or take up too little time and are not found among the predominant skills in Romanian pre-university education) in the psycho-pedagogical training of teachers, and the consequences are visible in the profile of graduates who do not find and fail to achieve rapid professional integration correlated with the requirements of the labor market critical, divergent, holistic thinking, teamwork, creative imagination, video-spatial representations that underpin technical and technological skills, the use of new information technologies, etc. Imagination and creativity involve three qualities:

a) Fluidity – the ability to quickly imagine a large number of images, ideas, situations, etc.; there are people who surprise us with what we commonly refer to as a "wealth" of ideas and visions, some of which are completely bizarre, but which would never cross our minds;

b) Plasticity/flexibility consists in the ease of changing one's point of view, one's approach to a problem, when a procedure proves ineffective; there are "rigid" people who find it difficult to give up a method, even though it proves ineffective;

c) Originality is the expression of novelty, of innovation, and can be observed when we want to test someone's possibilities, through the statistical rarity of a response or an idea.

Each of these three qualities has its own significance, but the main characteristic remains originality, which guarantees the value of the creative work. (https://www.scrigroup.com/educatie/psihologie-psihiatrie/IMAGINATIA-SI-CREATIVITATEA33164.php)

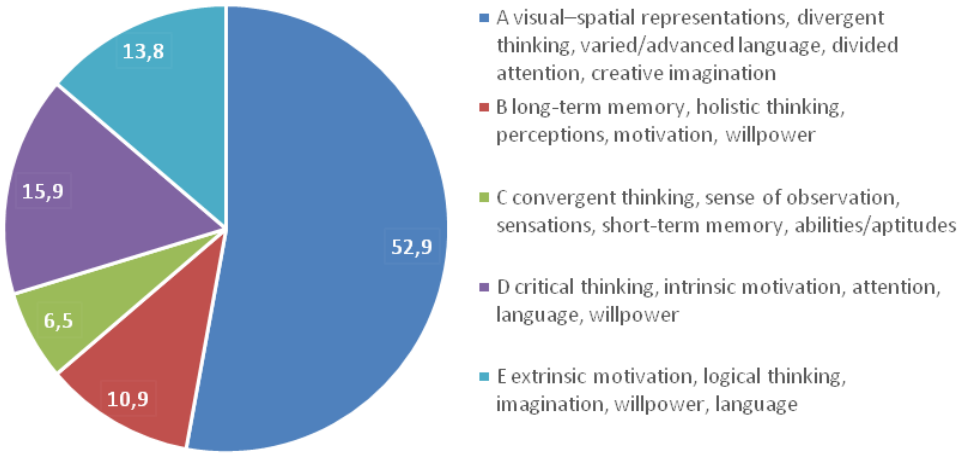

Figure no. 3 *Respondents' perceptions of the psychic processes directly involved in the development of creativity*

The answers to this item confirm the conclusions from the previous item because they indicate a very low level of psycho-pedagogical preparation of the respondents, especially in the field of psychology and, in particular, the inability of the respondents to clearly define the concepts they convey and develop through practical activities in the educational process. Comprehension is a preliminary stage in the practical application of concepts, and if it is not ensured through examples and exercises, it is not sufficiently consolidated, and all other cognitive stages-application, analysis, synthesis, and evaluation will be affected. In our opinion, the fact that an effective understanding of psycho-pedagogical concepts is not ensured affects the ways in which educational activities are carried out and the skills of pupils or preschoolers are developed.

It is noteworthy that 18.8% of respondents associate communication with creative skills. In our opinion, this is due to the high frequency of subjective assessment items in the assessments of subjects in the *language and communication* curriculum area.

The association of creativity with the arts confirms that the frequency of work assignments for students is higher (50%) in drawing, music, or optional subjects (theater, calligraphy, etc.) to develop creative skills, and the lowest percentage is recorded in science. Psychologists who have studied creative people explain that the act of creating something has benefits for well-being. Two groups were tested: the first group of 10 people spent about 10 weeks in artistic activities, and the second group spent more time evaluating art in museums. After 10 weeks, the psychologists put the subjects through an MRI scan. They observed that those who had been involved in painting had more connections in the brain's "default network." This network is associated with several functions, such as reflection on emotional state, empathy, and imagining the future. In addition, those who produced art had better resistance to stress. Other research has shown that visual art production diminishes the

intensity of negative emotions and increases the intensity of positive ones, reducing depression, stress, and anxiety. (https://revistacultura.ro/iuliana-alexa-despre-creativitate-si-gandire-divergenta/)

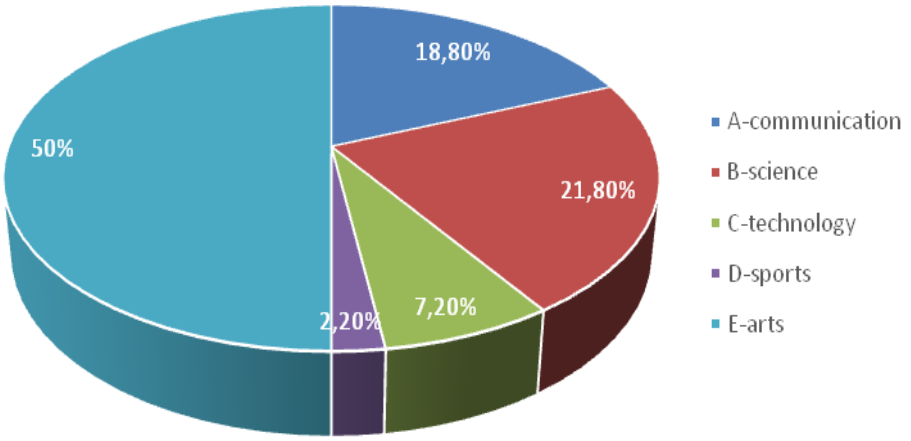

Figure no. 4 *Respondents' perceptions of the curricular areas most involved in creativity development*

Collaboration is correctly perceived by respondents as the form of classroom organization used to develop creativity. Teamwork or group work is also recognized in the literature (9) as the form of organization that determines the development of creativity

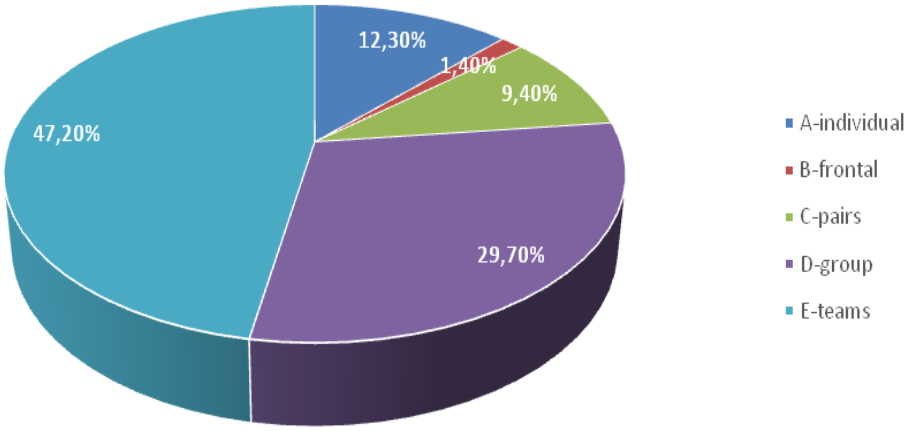

Figure no. 5 *Respondents' perceptions of forms of student group organization that promote creativity development.*

In the same time, discovery/exploration methods (direct observation, experimentation, case studies, surveys, or indirect demonstration, modeling) were chosen by 68.8% of respondents, and in our opinion, this choice is justified by the concrete learning activities carried out by students when the teacher uses these methods. The main tools for stimulating creativity used by different users are: brainstorming, Ishikawa diagrams, Pareto diagrams, other types of diagrams, questionnaires, suggestion schemes, metaphorical analysis, and the scenario method.

However, there are other creativity techniques in the literature, including Edward de Bono's lateral thinking method used as the thinking hats method in education, synectics (developed by William Gordon), Abraham Moles' discovery matrix, the TRIZ method (from Russian literature), translated as: Theory of Inventive Problem Solving, developed by Genrich S. Altshuller and his collaborators, and others.

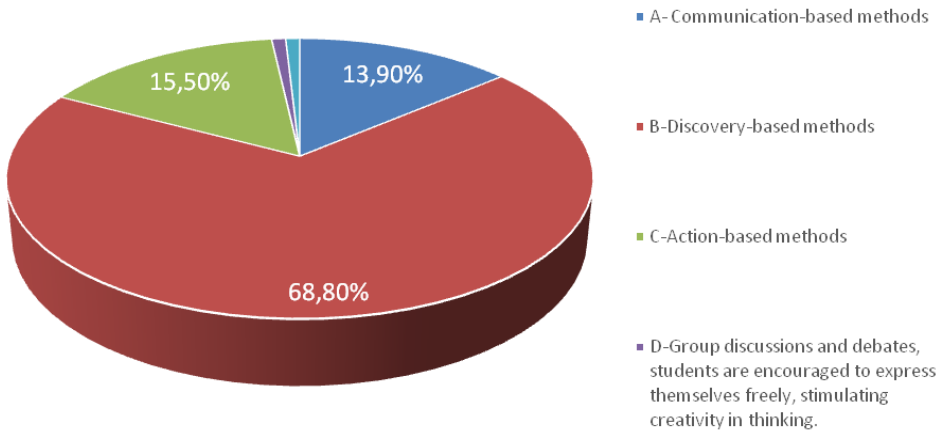

Figure no. 6 *Respondents' perceptions of teaching methods associated with creativity development*

Time and priority management is a category of skills that is poorly represented in both initial and continuing training for teachers, which, in our opinion, explains the responses. Unable to manage their time effectively, 27% of respondents consider this resource to be an impediment to their development. Also, the lack of material resources is the cause of blockages in the development of creativity for 39.5% of respondents, 11% of respondents perceive the lack of skills of learners as a major impediment, and 20.5% blame the lack of training in the field, which, in our opinion, is one of the obstacles to the development of creativity that can be easily and quickly remedied with a major impact.

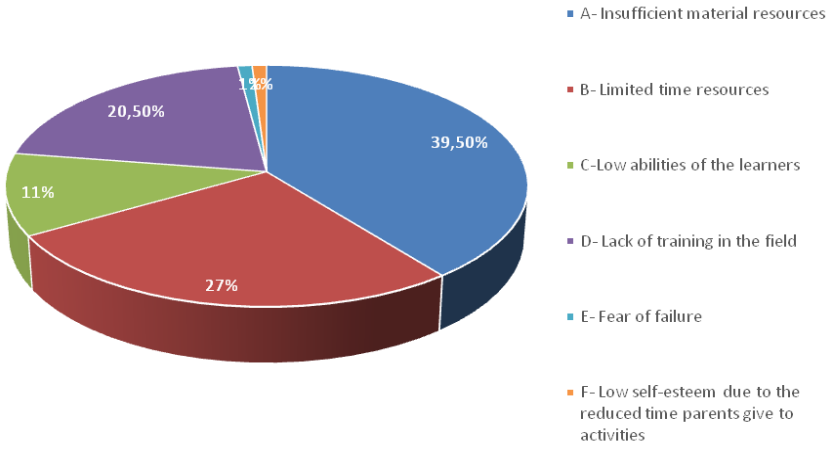

Figure no. 7 *Respondents' perceptions of the greatest challenges they face in developing the creativity of learners*

Although respondents acknowledge their low interest in this objective - the development of creativity- and their lack of training in this area, the majority correctly identify the tasks that help and challenge students in this regard. It is worrying that a similar percentage, 5.8%, of respondents have the mistaken perception that creativity can be developed through requirements that only test memory, language training, or other mental processes other than those actually involved in the development of creativity.

Item 11 concerns teachers' perceptions of the extent to which the current national curriculum in pre-university education supports the development of children's/students' creativity. In the respondents' perception, the development of creativity is not actually a priority of our education system because these categories of skills, content, and strategies are very rarely found in curriculum documents (33.3% of respondents choose the answer "to a small extent," over 55% chose 'moderately', and only 11.2% chose 'to a very large extent').

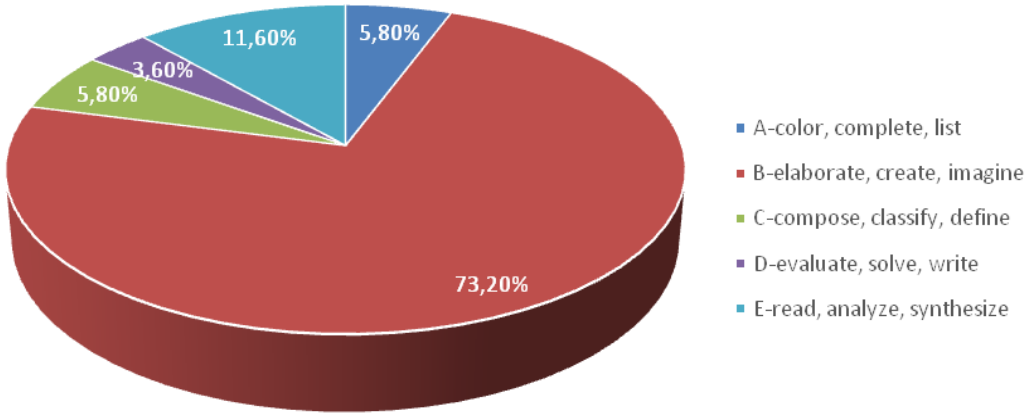

Figure no. 8 *Types of teaching tasks used in activities that develop creativity*

Most respondents chose to evaluate creative products by analyzing activity products (38.7%), touring the gallery (27%), systematic observation (16.1%), and self-evaluation (15.3%). which, in our opinion, can be explained by the correlation between creativity and the clear evaluation criteria found in all these methods, given that it is very difficult to measure creative potential, which is rather left to the discretion of the subjects, through assessment based on individual aspects, making the evaluation subjective. The difficulty of evaluating creative products is also reflected in the low frequency of use of these methods in the teaching-learning process.

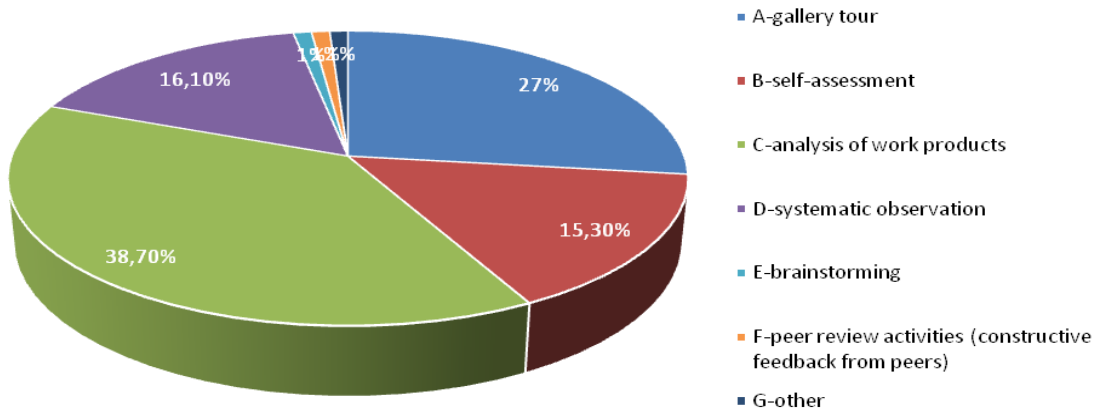

Figure no. 9 *Types of methods for evaluating creative products used in activities with learners*

Based on the responses obtained in items 10, 11, and 12, we propose a possible correlation of methodological aspects for activities in pre-university education aimed at developing creativity .

Table no 1. *The correlation of methodological aspects in the context of teaching activities aimed at developing the creativity of learners*

Type of Cognitive Strategy	Proposed Learning Activities	Learning Tasks / Objectives	Teaching Methods and Procedures	Instructional Materials	Forms of Organization
Transductive	Artistic-plastic activity "Autumn"	Creation of artistic products using at least three defining characteristics of the autumn season	Conversation, observation, practical exercise	Leaves, crayons, paints	Frontal, individual
	Language development activity "Autumn Story"	Developing short stories based on visual stimuli by integrating specific autumn-related elements; assigning an appropriate title to the image	Conversation, observation, guided exercise, brainstorming	Autumn-themed images	Frontal
	Practical activity "Autumn Collage"	Designing a collage entitled "Autumn" using available natural materials	Exercise, 6/3/5 creativity method	Leaves, natural materials	Individual, group
	Language development	Memorizing and continuing a	Conversation, repetition	Visual support images	Individual

	activity "Poem Memorization"	poetic text by adding a new verse	exercise		
	Role-play activity	Interpreting different social roles starting from a given scenario (e.g., doctor–patient, teacher–child)	Conversation, role-play method	Creative costumes	Group
Inductive	Artistic-plastic activity "Fruit and Vegetable Basket"	Modelling fruits and vegetables using plasticine	Observation, explanation, practical exercise	Plasticine, fruits, vegetables	Individual
	Language development activity "The Little Storyteller"	Creating an original narrative based on a provided introductory sequence	Guided conversation	Images	Frontal
	Didactic game "Guess the Shadow"	Identifying fruits or animals based on their shadows	Exercise	Tokens, images	Individual
Deductive	Environmental knowledge activity "Autumn"	Generating multiple ideas starting from a given keyword: *autumn*	Brainstorming	—	Frontal
Analogical	Construction activity "Park"	Creating constructions by combining objects from the surrounding environment	Practical exercise	Objects, building blocks	Group
	Artistic-plastic activity "Autumn Continues"	Completing a drawing initiated by another child	Practical exercise	Sheets, crayons, paints	Individual
	Construction activity "Robot"	Building LEGO constructions or robots using imagination and spatial reasoning	Practical exercise	LEGO pieces	Individual
	Didactic game "Find the Pair"	Matching pairs of animal figures through memory-based associations	Exercise	Tokens	Group
	Didactic game "Continue the Series"	Identifying the rule of a sequence and continuing it with up to six elements	Exercise	Objects, natural materials, tokens	Individual

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CONCLUSION

In our opinion, creativity could be the path to high-quality, competitive, motivating, and relevant education for all educational actors. In this context, the following measures should be adopted:

- proper and comprehensive training of teachers who use methods to stimulate creativity, in order to avoid ineffective or even counterproductive improvisation;
- avoiding stereotypes, wrong mentalities, and preconceived ideas;
- aligning creativity development techniques, methods, and strategies with the specific classroom situation and the psycho-individual characteristics of learners;
- revising school curricula and educational practices to shift the focus from informative to formative and creative.
- valuing the specific content of all areas of
- development, i.e., curricular areas, in a balanced manner, with a view to developing creative potential.

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