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## CRITICAL THINKING IN DEVELOPMENT OF CREATIVITY

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**Abstract:** *Deep democratic transformations in Romanian society, its natural tendency to integrate in the structural assembly of the contemporary world, requires the development of science, culture and improvement of the whole education and training system. Considering the increasingly acute need for natural resources, prestigious analysts of the contemporary society argue the need for a higher exploitation of people's creative potential. The fullest exploitation at national level of the human intelligence and creation is therefore required. Educational ideal of Romanian school is the free, full and harmonious development of human individuality, the autonomous and creative personality formation. The ability to think critically is acquired over time, allowing children to manifest spontaneously, without limitation, whenever there is a learning situation. They should not feel out of their element, should not be afraid of the reaction of others to their views, they learn to trust their power of analysis, of reflection. The thinking and creativity potential develops in a framework which requires independence, investigation, originality. The fundamental purpose of child psychological counseling is his/her optimal psychosocial functioning. The counselor is meant to help with the harmonious development of the child by applying cognitive, motivational, emotional and behavioral intervention strategies, both at individual and group level. In terms of learning, knowledge by the preschooler of the changes occurred along with completing the curriculum, the development of critical thinking and creativity in group, the counselor dealing with general and specific learning problems at individual and group level, considers, on the issue of intervention.*

**Keywords:** *critically, creativity potential, critical thinking*

### 1. INTRODUCTION

Critical thinking is a way of approaching and solving problems based on convincing, logical and rational arguments, which involve verifying, evaluating and choosing the right response for a given task and reasoned rejection of the other alternative solutions.

At the same time, critical thinking is the learning to interact with information actively, to bring the pros and cons, evaluate them to determine the truth value, to transform

information and generate new ideas. Critical thinking is an active, coordinated, complex process, like reading and writing, speaking and listening, which involve thought processes, beginning with the active accumulation of information and ending with taking well-reasoned decisions.

Although some believe that the development of critical thinking is a process too difficult for preschool children due to child intelligence development stages (described by

L. Piaget), this is possible using intuitive support.

There will never be such consequences, and children will certainly reason better, but it will not be to their detriment, as the use of interactive methods, procedures and work techniques increases confidence in their own powers, in the performances obtained, contributing to the intellectual, moral development and their socialization. Thus children actually participate in the act of learning, increasing their responsibility and level of involvement. It is not the early practice of critical thinking that brings harm, but its inadequate or partial practice can lead to the development of a typical behavior, of a passive child who expects everything for granted, and the effect will not be negligible but, morally, it will be harmful and educationally counterproductive.

## 2. THEORETICAL APPROACH

Effective thinking is developed through collaborative work, which means working in pairs, in groups. Collaborative working is effective if there is a transition from the respect for the ideas of others to self-confidence, the transition from concrete to abstract, from intuitive thinking based on the expression of opinions without reflecting on them to logical thinking which supports some conclusions based on assumptions, approaching things from many perspectives. The methods for developing critical thinking, applied to the group, can develop a set of attitudes and behaviors by forming interpersonal relations between children:

- communication skills,
- ability to understand,
- transfer of information,
- interdisciplinarity and transdisciplinarity

The polyvalence of these methods has proven effective from the earliest age because, by practicing these methods, the child became a small researcher, willing to continuously explore everything around him/her.

Living in a rapidly changing society, the student will have to critically, creatively and productively give a meaning to the informational universe met. Educational

instruction and formative action aims at producing cognitive, affective-motivational, attitudinal and behavioral changes in the student's personality, the one always subject to training. To handle information well, the child will have to apply a set of thinking skills that would give him the ability to sort information efficiently. To do this, he/she will have to go through a systematic process of analysis and critical reflection. The teacher must equally offer him/her learning and thinking framework. This framework provided must give the child the opportunity to realize where he/she is in terms of thinking so that he/she can pursue and monitor his/her own thinking processes when learning independently.

Education has gained new contents over the past decades, covering an enlarged area and new finalities, based on democratic values and modern aspirations of individuals, coupled with innovation and reform in education. Thus, the role of kindergarten has become more complex, departing from its initial, formal essence of transmission of knowledge, and actively focusing on the formation of attitudes and behaviors, on building capacities. Among other things, this complex role aims at:

- achieving education to adapt to changes (every child is helped to develop his/her own potential, to be creative, motivated to learn throughout life, to be able to solve problems, to communicate and collaborate with others);
- promoting the values of an open society (with emphasis on valuing diversity, development of cooperation skills, participation in decision making, tolerance, critical thinking);
- equalization of opportunities (children who are at risk, for various reasons, are helped to succeed in terms of education and social integration, kindergartens significantly contributing in this way to the equalization of opportunities by practicing inclusive education);

The following are important for the formation of children as performing adults:

- emotional intelligence - the ability to motivate yourself and persevere in the face of frustration, to adjust your moods, to be earnest and to hope;



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- practical intelligence - the ability to be attentive to what is happening and choose the viable out of several action options.

From this perspective, it is considered that:

- every child is able to learn, and the purpose of education is to develop the potential of each and every one of them;
- children's skills may be changed through effective training;
- intelligence is not distributed differently (some children are more intelligent, others less intelligent, but there are several types of intelligence to be identified, developed and valorized for each child);
- the role of education is not to select those able, but to develop the potential of each child.

The role of modern teaching methods is to create a situational context, so that the learner is engaged and participates actively in achieving the objectives of teaching, it is characterized by constant opening to renewal, innovation.

The main trends of renewal and modernization of training methodology would be:

- making full use of methods for the activation of preschoolers, their effective participation in the acquisition of knowledge, skills, abilities;
- acceleration of formative character of all training methods used in teaching and learning activity;
- implementation, as a matter of priority, of child-centered active-participatory methods.

Increasing the share of active-participatory methods does not mean giving up the

traditional methods of learning, of transmission and assimilation of information.

Modern methodology operates changes related to weight, especially valuing, increasing the formative potential of classical methods by emphasizing their heuristic and active-participatory character.

Modern education promotes active learning methods, learning based on the acquisition of conceptualized experience of mankind, but also on its own investigation of reality and the formation of knowledge and experiences through personal effort. Training no longer means determining the preschooler to store knowledge in his/her mind, but to learn to take part in the production of new knowledge.

### 3. RESEARCH DATA

In the context of the new education reform, a strong focus is, naturally, on developing creativity in the group and critical thinking in preschoolers, a sequence of "extensions" being attached for each class, a way in which the teacher can develop this aspect of human personality.

Purpose: - highlighting work techniques and methods within the instructional - educational process and their effectiveness in developing creativity in the group, by psycho-pedagogical experimental research.

The following are established as *research objectives*:

- the use of teaching strategies designed to develop creative abilities in the group, and critical thinking in preschoolers;
- training the intellectual resources of preschoolers, the application of which may lead to superior results in the instructional – educational activity.

The research was conducted on a sample of 25 subjects, children in the middle preschool group.

Since we worked with a single group, the structure of the subjects sample was performed by gender, and the sample contains 11 girls and 14 boys, their age ranging between 4-5 years.

Starting from the constant that the instructional-educational level of the family of origin would be a variable with information possible in the subsequent psychological evolution and development of children, it is shown below the structure of the sample by the instructional-educational level of the family.

Families with middle school education: 4

Families with secondary education: 17

Families with higher education: 4

Another constant in which the psychological evolution and development of children is favored or disfavored is the family climate, as well as the environment in which they grow and which have a great influence in terms of their further development, is shown

Organized family 19

Disorganized family 6

The type of research used was formative. Formative research aims at introducing in the investigated group several progress factors of some ways and means of cognitive-intellectual capacity development from the point of view of critical thinking in preschoolers, as well as of creativity in the group, for the purpose of discovering and developing critical thinking in preschoolers, these being discovered and exploited by comparing the initial situation to the final one. By comparing the performances of preschool children before introducing new teaching methods against those obtained after using them, we will know whether the methods used are effective or not.

Research has also a constructive component, because they sought the observation and recording of the effects of applying an instructional, individualized, child-centered process, regarding cognitive-intellectual manifestations within instructional-educational activities.

Knowledge tests were chosen as investigative tools, consisting of a series of tests developed to record the presence or absence of a skill, and also the knowledge level of preschoolers, the level of development

of the thinking ability, intelligence, and memory.

- Independent variables - are the changes introduced to influence the evolution of the educational facts in order to study their effects. These were: teaching and learning strategies, active-participative methods that encourage preschoolers to put into play their imagination, understanding, their power of anticipation and provide an opportunity for affirmation and exploitation of creativity in the group.

- Dependent variables - include the changes occurred as a result of the application of experimental measures, are those to be measured and explained. As a dependent variable of the experiment performed, we can nominate the preschool performance, emphasizing the creative factor.

The research was conducted in three stages: initial stage (pretest), formative stage and final stage (posttest).

During data collection on children at the beginning of the school year, we can observe very large training differences between children: some come from family environments with a broad culture, others from modest or even poor cultural environments.

The initial test consisted of oral and practical tests applied on each category of compulsory activity from kindergarten: language education, mathematics activity, environmental education, education for society, practical activities, music education, visual arts, and physical education. Analyzing the responses of subjects after applying the initial tests, it is found that the students have critical thinking. It can be said that every child thinks critically, and the creativity in the group is monitored and developed during preschool.

In the second stage of the research, within the instructional-educational activities, work with subjects is performed using ways and means of developing cognitive-intellectual capacities, given that the active-participative methods transform the preschooler from object to subject of learning, he/she taking part in his/her own training, the preschooler intensely engages all efforts, as well as the motivation for knowledge, develops his/her intelligences and motivation for learning. Within the research, the development of intelligence and creativity of children involves stimulating in



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them the courage to expose their ideas, to develop a working strategy and not to expect solutions from the teacher.

Interactive methods used during the research have been successfully applied in all categories of activities, with the purpose of developing thinking flexibility, developing the originality of preschoolers' responses; enables free spontaneous manifestation of the imagination of children. The methods and procedures used develop the critical thinking of preschoolers, skills specific to creativity in the group.

The formation and development of critical thinking and creativity in groups was sought by using these methods.

In the third stage, the posttest, subjects participating in the experiment, respectively middle preschool group, were given final tests, with a number equal to the tests in the initial stage. The tests were given in order to determine the critical thinking existing in preschoolers, as well as the development level of creativity in the group of each subject. These tests were given following the implementation of both modern and traditional methods, within integrated and traditional activities.

#### 4. CONCLUSIONS

In terms of learning, knowledge by the preschooler of the changes occurred along with completing the curriculum, the development of critical thinking and creativity in group, the counselor dealing with general and specific learning problems at individual and group level, considers, on the issue of intervention, the following:

- construction and functionality of general learning tools: abilities, skills and general and particular capacities;

- focusing, interrelations and social and emotional issues, learning pace (slow or wrong);
- use and exercise of logic and mathematical structures (arguments, algorithms, thinking operability),
- decision-making,
- conflict management and complex communication process, etc.;

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