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## THE IMPORTANCE OF THE LEVEL OF PREPARATION OF TEACHERS IN THE FIELD OF CRITICAL THINKING IN THE CURRENT EDUCATIONAL SYSTEM

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**Abstract.** The current educational situation shows us that the education system is becoming more and more aware of the importance of training students' ability to think critically by making viable, reasoned decisions based on verifiable information and adopting an open and curious vision. The entire responsibility for a harmonious training according to the psycho-pedagogical and age particularities and in accordance with the dynamic requirements of the society rests with the teacher who "orchestrates" and coordinates this systematic and sustained approach to obtain results on cognitive, behavioral and attitudinal level. An effective coordination of the instructive-educational activity must be based on a rigorous scientific training and responsible for a successful educational act.

**Keywords:** critical thinking, teachers, professional training, training program, pedagogical approach.

## IMPORTANȚA NIVELULUI DE PREGĂTIRE A PROFESORULUI ÎN DOMENIUL GÂNDIRII CRITICE ÎN SISTEMUL EDUCAȚIONAL ACTUAL

**Rezumat.** Situația educațională actuală ne arată că sistemul de învățământ devine din ce în ce mai conștient de importanța formării capacității elevilor de a gândi critic prin luarea de decizii viabile, motivate, bazate pe informații verificabile și adoptând o viziune deschisă și curioasă. Întreaga responsabilitate pentru o pregătire armonioasă în funcție de particularitățile psihopedagogice și de vârstă și în concordanță cu cerințele dinamice ale societății revine profesorului care „orchestrează” și coordonează această abordare sistematică și susținută pentru a obține rezultate pe plan cognitiv, comportamental și atitudinal. nivel. O coordonare eficientă a activității instructiv-educative trebuie să se bazeze pe o pregătire științifică riguroasă și responsabilă pentru un act educațional de succes.

**Cuvinte-cheie:** *gândire critică, profesori, pregătire profesională, program de formare, abordare pedagogică.*

### Introduction

The complex process of developing critical thinking starts from the idea that the human being has the skills to process the information he comes in contact with during his life and especially in school, a capacity that consists in acquiring knowledge, skills, abilities. cognitive problems that are required in solving problems and that allow optimal adaptation to the environment.

"Human thinking is not uniform. It is differentiated into types or patterns that have formed over time as a result of education received in school, in the family, or of one's own efforts to explore the unknown" [1]. Critical thinking is considered that kind of clear, rational but also free thinking which does not have as its main purpose the accumulation of information, but emphasizes the development of the capacity to process it. The formation of critical thinking is a complex, time-consuming process and involves a number of skills: making connections between ideas, self-argumentation, detecting

reasoning mistakes, solving problems with a high degree of difficulty, identifying context, and implications of ideas and building solid arguments based on experience gained, making value judgments.

The complex problem of the formation and development of critical thinking requires a complex approach because it requires a psychological research in terms of cognitive operations but also a pedagogical approach from the perspective of the instructional-educational process. "Indeterminacy comes either from ignorance in advance of the conditions, means and consequences of action, or from the existence of several variants of achieving the same goal, but each with its advantages and disadvantages. In such situations, we face the need to develop and adopt decisions, a task that falls entirely within the sphere of competence of thinking" [2].

In order for the change to occur at the cognitive level in students, it must start from the teachers - a well-organized, coherent, consistent and based on clear, well-selected objectives will contribute to a visible progress in terms of intellectual acquisition. In these conditions, an analysis of the extent to which teachers are aware of the importance of developing this aspect and providing a concrete example of reorganizing the instructional-educational activity, measuring the results obtained based on behavioral, cognitive and attitudinal indicators.

The investigative approach in studying the pedagogical dimension had as a starting point the current educational situation in Romanian education by identifying the determining factors for promoting critical thinking in the instructional-educational process and finding solutions at macro and micro level of the school environment.

In the current conditions, the education system is becoming more and more aware of the importance of training students' abilities to think critically for viable, reasoned decisions, based on verifiable information but also the adoption of an open and curious vision. A challenge of the 21st century is the reorientation towards the formation of critical thinking against the background of multiple communication channels and the emergence of new professions based on innovation. Improving critical thinking must be an important goal of education, this is a general awareness and acceptance, but there is the poor aspect of the lack of ability of students to practice it, to practice it from primary education.

Studying the activity of formal education shows that students are not sufficiently guided, guided during the process of assessment, processing and critical reflection on information and that school curricula focus on "what to think" and not on "how to learn to you think".

The pedagogical approach from the perspective of the formation of critical thinking in students implies a general reorientation of the instructive-educational paradigms, of the public investments but also of the policy reforms at the level of the school curricula.

We are witnessing a contradiction regarding the promotion of critical thinking: on the one hand, in school curricula critical thinking is clearly mentioned as a set of

fundamental skills that need to be formed through the processes of analysis, evaluation, explanation, self-interpretation, self-regulation, on the other hand, there is no very well-established definition of these issues.

Analysing the school curricula in terms of training critical thinking in students, it was found that more "visibility" of this goal is needed in adapting the curriculum to the specifics of the school by introducing an explicit reference to the definition of critical thinking. It is considered that students achieve optimal results in this regard only under the conditions of a series of precise instructions on the skills involved, their clear delimitation.

There is a gap in current education between teaching techniques and the designed school curriculum. It is necessary to rethink the curricula at transdisciplinary level at the level of basic subjects in the formation of critical thinking: Romanian language, mathematics, history, geography, civic education by developing the skills of analysis, interpretation, evaluation and their integration into the school curriculum.

Critical thinking is a part of the school curriculum, but it needs to be implemented in school curricula in a structured, organized, logical way. Current school curricula focus on "what to think" and not on "how to learn to think" which requires a reorientation of perspectives on educational paradigms and policy reform in school curricula. There is an ambiguity in school curricula regarding the mention of critical thinking as a set of skills that need to be trained but the notions are clearly defined.

A first condition that is imposed in the achievement of the objective of forming critical thinking in students is the insertion in the school curricula of an explicit reference for a greater visibility of it. The introduction of a clear set of instructions on critical thinking skills would help to achieve optimal results in this area. It is necessary to reconsider the didactic principles by focusing on the student and on an active style by gradually acquiring the student's responsibility in his / her own learning process.

Another requirement is to define the role of the teacher as a facilitator of the student's learning process and not on teacher-centred guidance. However, there is a gap between the designed school curriculum and its practical application. At the transdisciplinary level there are several disciplines that favour critical thinking such as: mathematics, foreign languages, history, geography, music, civic education. The skills specific to critical thinking analysis, interpretation, evaluation, explanation, self-regulation can be integrated into the school curriculum to support and implement in all school curricula.

A holistic approach to didactic design is required at the level of all subjects and the didactic contents should be correlated with the specific knowledge and the promotion of an integrated critical thinking at the level of the entire school curriculum.

The extensive process of reorganizing school curricula is based on the didactic principles that must focus on the student in order to gradually acquire responsibility for the personal learning process. Another aspect that needs to be clarified is that school

curricula define the role of the teacher as a facilitator of the students' learning process. The reality of today's education shows that in some schools there is teacher-centred guidance aimed at transmitting content through traditional lessons focused on textbooks and the curriculum without a contribution from students.

In approaching critical thinking in the school curriculum, a holistic design that includes all subjects is required. In practical terms, critical thinking must be implemented in the specific context of the discipline, the content being correlated with specific knowledge and does not require the organization of a separate course of critical thinking. The promotion of critical thinking must be transdisciplinary and transcultural.

Another important aspect is to provide additional support for teachers in terms of general knowledge in approaching critical thinking. Even if they have information about psychological aspects such as: children's philosophy, studying children's reasoning, debates require the organization and participation in training activities in this field: seminars, workshops, exchanges of good practices, workshops. We believe that teachers are not sufficiently trained in the teaching of critical thinking by studying existing practices and specific promotion and development skills need to be developed throughout the school curriculum.

The study of pedagogical aspects takes into account the modern vision of education in the 21st century and the adaptation to the current dimensions:

- Knowledge - "what we know and understand" - interdisciplinarity
- Skills - "how we use what we know" - critical thinking, creativity, collaboration, communication
- Character - "how we behave and how we get involved in society" - resilience, leadership, curiosity, ethics, courage
- Meta-learning - "how we reflect and how we adapt" - metacognition, the mentality of progress.

Based on these dimensions, the modern vision requires transdisciplinarity seen as a mechanism for connecting traditional disciplines with modern practices that favour the transfer to the three dimensions: character, skills, meta-learning. The interdisciplinary and transdisciplinary approach is beneficial to the students' activity by making connections between concepts and ensuring in-depth understanding of knowledge.

The redesign/ extension of the contents at the level of the disciplines involves a set of skills manipulated by the teacher that covers three areas:

- Concepts and meta-concepts
- Processes, tools, methods
- Branches and topics

The values that are formed by the redesign from the perspective of critical thinking of the education system in general and its components are:

1. Cognitive value – improving skills, character based on the basic learning model examined by disciplines in terms of skills training.

2. Practical value – putting into practice the assimilated knowledge.
3. Emotional value – aims at the inner beauty of the subjects perceived as a source of motivation for students.

The design and organization of the investigative approach regarding the pedagogical dimension of the research was conceived on the basis of some preliminary questions:

- To what extent are teachers professionally trained to meet the challenge of forming students' critical thinking?
- Does the Romanian school offer the necessary conditions to promote a critical thinking style?
- What are the factors that enhance / stop the critical manifestation of thinking in the teaching process?
- What are the measures to improve the activity of organizing the instructive-educational process of the deficient aspects in the development of critical thinking?

The answers to these educational dilemmas were outlined by analysing the impact of the teacher training program, by analysing each activity and systematically scoring the observations made that support the formulation of the final conclusions. The availability of the experimental sample to participate in the undertaken research indicates that there is a recognition of these educational problems and that an attempt is being made to solve them.

The starting point in organizing the pedagogical experiment is the analysis of the current situation of teacher training, to what extent they participated in training courses in this field, which is the stage of knowledge and skills to apply them in practice in working with students.

The analysis of the current education system has shown that the promotion of critical thinking of students is beginning to take shape as a mandatory requirement around which the entire organization of the instructional-educational process must be centred. We are witnessing a contradiction in school curricula where critical thinking is defined as a set of clearly defined skills such as: analysis, explanation, interpretation, but on the other hand, it is not well defined, regulated. The teaching principles underlying school curricula are not student-centred and active learning and do not define the role of the teacher.

It was found that there is a gap between the designed curriculum and teaching practices and a lack of clear instructions and implementation in a structured manner in school curricula. The pedagogical ascertainment experiment aims to diagnose the current educational situation and to identify the factors that are considered barriers in the formation and promotion of critical thinking in young schoolchildren and to find viable solutions to solve these problems.

From a pedagogical perspective, it is necessary to diagnose the level of professional training of teachers in the field of critical thinking development, identify pedagogical

factors conducive to critical thinking in the educational process and substantiate educational policies to support teachers in implementing critical thinking in school context. It is considered that an instructive-educational activity with cognitive impact aimed at forming a critical thinking in students is the foundation for improving teachers in the field of critical thinking and optimizing strategies for the practical application of the acquired notions.

The objectives that formed the basis of the training of teachers in the field of critical thinking were:

- Analysis of the educational context of current education from the perspective of forming a critical thinking style of students;
- Identifying changes in curriculum, school curricula and subject content to promote critical thinking;
- Establishing concrete measures so that the organization and development of the instructive-educational process has as a central objective the development of critical thinking skills;
- Awareness of the importance of the development of critical thinking by teachers through the transition from informative to formative;

The stages of the pedagogical investigative approach were the following:

STAGE I - analysis of the current educational situation by studying aspects related to: pedagogical and scientific training of teachers, the degree to which they use a strategy based on the development of critical thinking, identifying aspects to be improved for optimal development of critical thinking;

STAGE II - training teachers in a training program based on information obtained and recorded from the first stage of research;

STAGE III - analysis of the results and changes produced at the pedagogical, behavioural, attitudinal level of teachers.

The concretization of the answers to these educational dilemmas was achieved by developing, organizing and training teachers in their professional training in the spirit of promoting critical thinking, expanding the curriculum and content of the subjects taught and awareness of the importance of critical thinking in harmonious training of students. A number of 20 primary school teachers belonging to Gymnasium School No. 1 Țolici - Neamț, participated in solving the stated problems. The collaboration with the teachers was achieved by expressing their agreement and willingness to follow all the stages proposed by the training program. The selection procedure for teachers had in view the fulfilment of the condition of teaching in primary education because an optimal intervention in this field is considered to be carried out as early as possible for the correct training of cognitive skills.

The tools that formed the basis of the ascertaining approach for teachers were:

- "Questionnaire to identify the professional training of teachers in the field of critical thinking"

- "Continuous training program for primary school teachers in the field of critical thinking".

The identification of the level of professional training of the teachers was materialized by completing a questionnaire. The questionnaire consists of 6 items and aimed at:

- participation in training courses in the field of critical thinking development;
- the level of information in the field of critical thinking;
- the degree of use in the instructive-educational process of tasks that stimulate critical thinking;
- the didactic vision of the instructive-educational process;
- use of traditional or modern methods;
- practicing formal or informal educational styles.

The initial conclusions that emerge from the application of the questionnaire and which will form the basis for the organization of the training program for the continuous professional training of teachers in the field of critical thinking are the following:

1. there is a lack of involvement of teachers participating in the experiment in training courses in the field of critical thinking;
2. Notes that there is a lack of good information from participating teachers and a lack of training in critical thinking;
3. it is found that the tasks that stimulate critical thinking have been introduced very rarely in the instructive-educational process;
4. there is a frequent use of traditional methods to the detriment of active-participatory ones;
5. There is a frequent approach to a traditional approach without the initiative of the modern approach to learning;
6. there is a frequent adoption of an informal educational style.

Quality vocational training contributes to the achievement of standards of efficiency in education and is achieved only in the conditions of a correct information and an awareness of the importance of the training and development of critical thinking in students.

The directions of action required as a result of the initial diagnosis were:

- extending the curriculum to all subjects of primary education by introducing themes and learning tasks that stimulate the development of critical thinking;
  - elaboration of a professional training program for teachers in the field of critical thinking;
  - elaboration of a methodological model developed in the form of a training session with tasks specific to critical stimulation.
1. The teacher training program was designed through systematically organized scientific sessions that aim at theoretical and practical aspects of the issue under

discussion: critical thinking in primary school students. The training program was designed in 8 activities - each activity lasting 2 hours. The details of the program for teachers include structured activities that lead to a complete knowledge of the aspects related to critical thinking in students:

2. What is critical thinking?
3. Critical thinking in current education.
4. Description of the critical thinking process and skills required.
5. Analysis of the disturbing factors of critical thinking.
6. Analysis of the curriculum and curricula and the contribution to the formation of critical thinking.
7. The transdisciplinary approach of promoting critical thinking.
8. Ways to cultivate and develop students' critical thinking.
9. Final analysis of the training activity.

The development of the "Program of continuous training of teachers in primary education in the field of critical thinking" through its structure provided participants with the necessary information to effectively address the development of critical thinking and techniques for correct application in educational practice.

The training of teachers for the organization of the process of stimulation and formation of a critical thinking style in students was aimed at scientific, psychological and methodological aspects. The conceptual clarification of the notions constituted the scientific foundation that led to a series of changes regarding the didactic design of the instructive-educational activities. Thus, the whole didactic approach was reoriented according to the specifics of forming a critical thinking style.

The participation of teachers in the training program in the field of critical thinking offered new perspectives to approach the instructional-educational process and focus on an important goal: training and developing a style of thinking based on logic, a depth of ideas, solutions to any educational dilemmas.

The **conclusion** of the study is that a professional training of teachers in modern vision on learning and in accordance with current reforms contributes significantly to an appropriate and sustainable psycho-pedagogical approach to the promotion and training of critical thinking in students. The training experiment had positive effects on the participants and favoured theoretical and methodological acquisitions.

## **Bibliography**

1. SĂLĂVĂSTRU, D. *Learning psychology - educational theories and applications*. Iasi: Polirom, 2009. ISBN 978-973-46-1525-4.
2. GOLU, M. *Fundamentals of psychology*. Bucharest: Romania of Tomorrow Foundation Publishing House, 2007. p. 510. ISBN 978-973-725-857-1.