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**Education, Reflection, Development****A THEORETICAL APPROACH OF EFFECTIVE CRITICAL  
THINKING METHODS IN DEVELOPING SELF-ASSESSMENT**

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**Abstract**

Through this research topic we want to highlight the connection between critical thinking and self-evaluation. We will present the impact of critical thinking in the process of developing the capacity for self-assessment. Critical thinking consists in selecting information and formulating appropriate opinions. Arguing the point of view, but also opening up to the opinions of those around. The development of critical thinking leads to a development in the level of self-assessment of the student of young school age. Self-assessment allows the appreciation of one's own performance. The self-assessment process involves informing the student about the objectives of the task, and he will better understand the content of the task he has to solve and how his effort to solve it is worthwhile, at the same time, it is the ability to self-appreciate your own performances. We will approach the theoretical part of the subject, introducing the essential concepts and presenting interactive teaching methods that contribute to the development of critical thinking.

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## **1. Introduction in Critical Thinking**

Thinking is the main feature and the most important component of the human psyche. It consists in the logical and rational knowledge of information. It is a complex and developed psychic mechanism that processes, interprets, and evaluates the information received. Thinking is a part of the human system that connects a functional organization and its relationship with the external environment (Coșarbă et al., 2021). Critical thinking involves the following: formulating and asking questions, properly solving problem situations, justifying choices, and logical analysis of the judgments of others.

Critical thinking can be developed from early education if the teaching-learning system is interactive. Critical thinking can be developed if the interactive activities are suitable for the level of the group of students (Mielu, 2017). The instructive-educational activities must be adapted to ensure the permanent activity of the student. Critical thinking involves updating knowledge and analyzing differences in new and known information to realize similarities and differences.

### **1.1. Theoretically approach of critical thinking**

We will analyze critical thinking from the perspective of different authors to achieve an overview of what this type of thinking means.

#### **1.1.1. Robert H. Ennis**

Robert H. Ennis defines critical thinking as „, a process, the goal of which is to make reasonable decisions what to believe and what to do” (Ennis, 1996, p. 3). In the opinion of Robert Ennis, critical thinking focuses on the set of abilities and attitudes of transmitting the information. He selects certain abilities and attitudes specific to critical thinking, making a list.

- i. Abilities: focusing on a problem, assessing the credibility of information, observing and judging information, defining terms and evaluating definitions, and creating good judgments.
- ii. Attitudes: use of credible sources and presentation of these sources, awareness of the global situation, making connections between information, openness to mind, openness to new information.

#### **1.1.2. Richard W. Paul**

Richard W. Paul believes that critical thinking consists of basic skills, which can be used to serve two incompatible goals: self-centeredness or fair-mindedness. When we learn to use our thinking, develop it, and formulate our own opinions, these expectations can lead to an open attitude or a selfish and proud attitude. This is way Richard Paul uses the terms: weak versus strong critical thinking. (Paul & Elder, 2002)

He is encouraging the strong thinking saying “to think critically in the strong sense requires that we develop fair-mindedness at the same time that we learn basic critical thinking skills, and thus begin to practice fair-mindedness in out thinking” (Paul & Elder, 2002, p. 18).

He explains some specific features of correct thinking and some for selfish thinking.

- i. Strong-sense thinkers have: intellectual humility, intellectual sense of justice, intellectual empathy, intellectual perseverance.
- ii. Weak-sense thinkers will more likely have: intellectual unfairness, intellectual hypocrisy, intellectual arrogance.

### **1.1.3. Matthew Lipman**

Critical thinking, in Lipman's (2003) perception, is defined as thinking that facilitates judgment because it is based on criteria, is self-correcting and is open.

Critical thinking is influenced by certain criteria that play the role of rules and principles, forming the main idea that constitutes this type of thinking. These criteria are diverse (principles, norms, objectives, procedures, methods, etc.) and ensure the objectivity of critical thinking. As long as these criteria are the basis of thinking, the judgment will be structured, argumentative and substantiated. When the student expresses his opinion or desire on a subject, in order for them to be valid and understood, appropriate justifications are needed. The role of the teacher is to educate students based on these criteria to develop critical thinking.

In Matthew Lipman's conception, critical thinking also contains the self-corrective side, because through self-reflection and self-evaluation one will discover one's own strengths and weaknesses. Self-correction is expressed by: analyzing coded, unclear information, realizing and identifying one's own mistakes in thinking, identifying a debate, and presenting one's own concepts.

## **1.2. How to develop the critical thinking in primary school**

The ability to think critically is important in many aspects of life: debates, discussions, choosing careers, etc. We need to be critical thinkers to make sure we don't have an inappropriate judgement. Critical thinking ensures higher-level study, which becomes easier and more accessible. A.R. Asari denotes some characteristics specific to critical thinkers (As'ari, 2014):

- i. Honest about their capacity, recognize what they do not know, are realistic about their limitations, and understand the consequences of their own mistakes
- ii. They strive to look for new information, are always up to date with new information, are patient and ready to know more.
- iii. Are interested in the opinions of others without judging them.
- iv. They are very open-minded to new ideas.

All these skills offer both a better and more satisfying life for yourself and for those around you. That is why it is good for critical thinking to be developed. In order to have an easier and continuous development, it is recommended that this thinking be aroused from an early age. Primary school is a very good opportunity to start developing critical thinking (Stan, 2014). Children, through thinking, build mental structures generated by correlating actions with accumulated knowledge. They seek the meaning of every event that occurs in the world around them. The role of the teacher is to create events for the student to analyze and explore.

In the activities and didactic design, the authors Kurtis S. Meredith and Jeannie L. Steele, propose their structuring in three essential sequences for the invocation and development of critical thinking (Steele et al., 2000):

- i. The moment of evocation - is the first sequence of the lesson, where consciousness is updated, questions are asked, and students are challenged to explain what they understood and to ask questions where they think more explanations are needed.
- ii. The moment of realizing the meaning - is the stage of the lesson when the students are put in front of the new contents, through specific activities prepared by the teacher. The teacher has the role of leading the teaching process, and the realization of the meaning provides the effort and involvement of the student in the activity built especially for the class, of the teacher.
- iii. The moment of reflection - the stage of consolidating the new information and contents. This stage gives the student the opportunity to structure the information received, to understand and deepen the new knowledge. In designing in-depth activities, the teacher must take into account the team, its way of understanding, both individual and group activities to develop teamwork and critical thinking.

In going through these stages of the educational instructional process, we must consider the following aspects: the correct formulation and addressing of questions, the making of connections between concepts, the use of teaching methods suitable for the development of critical thinking.

### **1.3. Teaching activities that develop critical thinking**

In order to make possible the development of students' critical thinking, the teacher, in the preparation of educational activities, will provide activities or moments for the development of this type of thinking. Next, we will observe interactive methods that aim to develop critical thinking. If these methods are applied correctly and often, critical thinking will be developed and students will develop correctly cognitively. Psychologists and pedagogues have reached a consensus on the positive influence of interactive activities in the psychological, intellectual and emotional development of children (Bocoş, 2013).

#### **1.3.1. I know- I wish to know- I have learned**

This method is distinguished by the fact that it focuses attention on the student, on what he knows and at the same time, what he wants to know. He is put in a situation where he has to create connections between knowledge himself, in order to reach the new information. In this didactic method, learning by discovery is used, the student had a high interest because he will realize how important the already assimilated knowledge is (Bocoş, 2013).

Carrying out the activity: For this method, students can be divided into groups, or it can be done individually. For the first stage (I know), students will write down, in this column, the information they have until then. In the second stage (I want to know), students will be asked to write questions about that topic, about what information they want to know. And in the last stage (I learned), they will write down new information they have, after teaching the new content.

The *I know- I wish to know- I have learned* method involves the student in an active way in his own learning process. It gives him the opportunity to realize how much he knows and how he can find out more information about a known subject.

### **1.3.2. OREO**

This method is an acronym that reminds students of the process they must go through when developing their own opinion. The main of this activity is to help students remember four steps in formulating and supporting their own idea (Love & Stobaugh, 2018).

These four steps are:

**O**- Expressing the **O**pinion

**R**- Give several **R**easons for their opinions

**E**- Give several **E**xamples for their opinions

**O**- Rephrase their **O**pinion

The management of the activity. The teacher chooses a topic in accordance with the current topic in class, for students to express their opinion. Each student receives a sheet with a drawing of an OREO, and on each layer of the cookie is written one of the letters. Students will use the acronym to present and support their personal idea about the chosen topic.

### **1.3.3. Descriptive Map**

This method includes in a graphical scheme, the possible relationships between the knowledge gained in the teaching-learning process. The performance is based on the organizational spirit of the student's ideas and knowledge. The aim is for the student to observe the common points and the similarities of the accumulated consciences. At the same time, it helps the student to organize his thoughts and ideas, developing the subject in the representative subcategories (Love & Stobaugh, 2018).

### **1.3.4. Debate**

It is a method that facilitates everyday connections. Develops: the ability to analyse a topic, a statement, a statement, from multiple perspectives. Develops the ability to classify criteria, to apply the criteria objectively, to issue conclusions, and judgments related to the topic. It also develops the ability to argue, to support or combat the statement based on the argument. Thus, students become tolerant of opposing views.

These methods are just a few examples of the multitude of activities that provoke and develop critical thinking. These applied correctly and at the right time, will have a strong and positive influence on the students' way of thinking.

These activities, with the role of developing critical thinking, also take into account the development of self-evaluation. Critical thinking develops the capacity for self-evaluation. Why? Because

critical thinking requires information and evaluation of the information received, to form one's own opinion, in support of an opinion it is necessary to appreciate one's own knowledge and skills, to formulate and explain correctly what you think, and at the same time new information.

Because we seek the formation of self-assessment capacity, we will analyze this concept.

## **2. Self-assessment**

Evaluation is the process of measuring and appreciating school results but also of the instructive-educational process. Evaluation is divided into two categories: traditional evaluation methods and complementary evaluation methods. Self-assessment is a complementary method of assessment, along with systematic observation, investigation, project and portfolio (Cucos, 2008).

Self-assessment is a specific component of metacognition. The fact that self-evaluation is involved in the educational process lately, proves that the society in which we live is one determined by responsibility and individualism. The teacher has the duty to involve the student both in teaching the new contents and in the evaluation. The student must be involved in the evaluation process to understand the reason for the result (Vogler, 2000).

Through self-evaluation, the student makes assessments of his own performance in accordance with the operational objectives in the self-evaluation process. Thus, the student will better understand the objectives and content of the task to be solved, and his effort will be capitalized. A suitable tool in the self-assessment process is the self-assessment grid, which allows the student to determine the efficiency of the activities performed. Having as a reference the education objectives, this grid will contain: targeted capacities, work tasks, and performance values (Manolescu, 2019). Self-assessment can be carried out both by verbal self-assessment and by self-assessment, which must be supervised by the teacher. The active involvement of the student in his own evaluation constitutes numerous benefits: the teacher is notified about the opinion that students have about their own results, the student takes the role of subject of the educational process participates in his own educational training, teaches students to appreciate the results obtained from their work.

In the contemporary formation of the evaluation and self-evaluation competencies, communication must be realized bilaterally. The relationship between teacher and student is highlighted by the active involvement of both sides. The teacher must permanently change the role of the interlocutor with that of the listener. The contemporary education process is directed towards the development of truly active education, in which the student has the central role (Roman, 2014). An efficient training of self-assessment skills will form an effective assessment act. If the evaluation is efficient and formative, the capacity of listening and receptivity of the new transmitted contents will be developed.

The efficiency of the evaluation is also determined by self-evaluation. Assuming and assimilating the student in achieving the objectives, but also of the performance descriptors presents an image of the purpose of integrating self-assessment in the learning process. In the context of self-assessment, the student learns to manage learning difficulties. The evaluation criteria (performance descriptors) are the essential element in the development of self-regulation and self-correction. The criteria for achievement and success are basic in carrying out the evaluation. Their knowledge and mastery lead to the success of

tasks. Communication, explanation and presentation of students The evaluation grids lead to the accomplishment of the tasks for the betterment of the students (Manolescu, 2019).

### 3. Conclusion

Teachers have the freedom to organize the teaching-learning process according to their own creativity, as long as the activities lead to the formation of a framework and specific competencies. In the development of self-assessment, there are different methods that teachers have the opportunity to apply in class. Learning through play ensures the development of students' intellect (Rad et al., 2022). The use of critical thinking methods leads to the development of the capacity for self-evaluation, because critical thinking consists in the formation of one's own judgment, while self-evaluation helps to self-assess one's own performance. The capacity for self-evaluation can be acquired only when the student knows how to appreciate both his strengths and shortcomings and this aspect is acquired through critical thinking.

### References

- As'ari, A. R. (2014, April). Ideas for developing critical thinking at primary school level. In *International Seminar on Addressing Higher Order Thinking*. University of Muhammadiyah Makasar. <http://doi.org/10.13140/2.1.4534.9921>
- Bocoș, M. D. (2013). *Instruirea interactivă* [Interactive training]. Polirom.
- Coșarbă, E., Roman, A. F., & Costin, A. (2021). Parents' perception regarding the concerns, competencies and perspectives of involvement in non-formal activities. *Technium Social Sciences Journal*, 26, 177-185. <https://doi.org/10.47577/tssj.v26i1.5115>
- Cucos, C. (2008). *Teoria și metodologia evaluării* [Theory and Methodology of Assessment]. Polirom.
- Ennis, R. H. (1996). *Critical thinking*. Prentice Hall, Upper Saddle River, NJ 07458.
- Lipman, M. (2003). *Thinking in education*. Cambridge University Press.
- Love, S., & Stobaugh, R. (2018). *Critical Thinking in the Classroom*. Mentoring Minds Critical Thinking for Life, TX 75711.
- Manolescu, M. (2019). *Evaluarea în educație: meritocrația și mediocritatea* [Evaluation in education: meritocracy and mediocrity]. Editura Universitară.
- Mielu, Z. (2017). *Fundamentele psihologiei* [The foundations of psychology]. Polirom
- Paul, R., & Elder, L. (2002). *Critical thinking: Tools for taking charge of your professional and personal life*. Pearson Education.
- Rad, D., Magulod, G. C., Jr., Balas, E., Roman, A., Egerau, A., Maier, R., Ignat, S., Dughi, T., Balas, V., Demeter, E., Rad, G., & Chis, R. (2022). A Radial Basis Function Neural Network Approach to Predict Preschool Teachers' Technology Acceptance Behavior. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.880753>
- Roman, A. F. (2014). *Evaluarea competențelor* [Perspective formative]. Pro Universitaria.
- Stan, L. (2014). *Pedagogia preșcolară și școlară mică* [Pedagogy of preschool and early childhood]. Polirom
- Steele, J. L., Meredith, K. S., & Temple, Ch. (2000). *Reading and Writing for Critical Thinking* (vol. 2). Center Education 2000+, Gloria Publishing.
- Vogler, J. (2000). *Evaluarea în învățământul preuniversitar* [Assesment in pre- university education]. Polirom