

CREATIVE THINKING

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***Abstract:** In my phd study ,I will focus on my on the field of the integration of the arts in teaching. A good teaching method promotes the individuals development. However, the existence of interpersonal differences and changes in the circumstances under which the teaching occurs do not enable the use of a single teaching method in my situation . Therefore, the teaching methods must be different so that they will be good for specific cases The teachers role is to choose for herself the teaching technique that is commensurate with her educational goals and her students needs.*

***Keywords:** art, craft , professions, Teaching, Creative Thinking*

Creative Thinking

The existing perception regarding the importance of creativity in education is to empower its development in the school ,to make it an inseparable part of the learning teaching in all learned areasof knowledge, and to adopt the approach that this is an ability that is criticaland not only' nice (kloyer,2014)

Thinking enables us to process the information about the world in which we live, after we absorb it through our senses. When we think, we represent the world to ourselves, without the objects and sights we think about being found necessarily in our immediate environment. It is also possible to say that thinking is a manipulation of internal representations of the world (Ziv, 2014).

Thinking that invents or creates new contents or ways of thinking is called creative thinking or creativity (Ziv, 2011). Creativity is the ability to use familiar and known materials in a way that leads to the creation of something new and special, original and different from what is familiar. The inclination to create and the ability to create depend closely on the creator's social and cultural environment. Creativity is an important and central component in the special ability. The concept of creativity has many meanings, and the reference of society to it tends to change according to fashion (Ziv, 2014).

The article of Shwartzky (2016) notes that creative action is the "birth" of an idea, action, or object, new and with value at the point of time and cultural context in which they were invented. Since every "birth" of an idea occurs following different personal thinking, creativity is diverse and sometimes lacking boundaries. Bono (in Shwartzky, 2016) defined creativity as "bringing into existence something that had not existed beforehand, shaping something new that had existed beforehand or finding an original relationship or new connection between existing factors.

A creative mind can imagine innovative answers to questions, and it is characterized by flexibility and plasticity. Creative thinking can be considered the ability to create new concepts or solutions (Lucchiari, Sala, & Vanutelli, 2019).

Guilford (in Ziv, 2014) notes two different types of thinking. Convergent thinking addresses the types of problems that appear in the known intelligence tests, while divergent thinking addresses the types of problems that require creative solutions.

Levin (2016) asserts in his article that for a person to be creative certain personal, social, and cultural conditions are necessary.

- Certain personality traits, such as courage and willingness to take risks and be different.

- Communication of the individual with the environment and with himself.
- Tolerance of unclear situations.
- Ambiguity about mistakes.
- Ability to ask open-ended questions.
- Dynamism.
- Direction to the future, question as subject and not as object.
- Playful approach – to try, to integrate, to connect, to experience, to display openness to new things.
- Acceptance of anxiety and despite the anxiety to look, to make a connection, to do, to like, to be involved.
- Humor to see something from different aspects, willingness to be surprised, to see and to discover, despite the pain and powerlessness, the other side, the humorous one
- Willingness to address my work – my order in the chaos of existence, not what happens to me but what I do with happens with me (Levin, 2016).

Importance of Creative Thinking

Grossman (in Porat, 2018) describes creative thinking and maintains that it is also a way of life. Creativity is the individual's lifestyle, which prevents the emptying of meaning. It is important to give the individual the belief that he has the power not only to adjust to the requirements of his environment but also to deal with the challenges presented to him by the environment. It is important to end the individual's lack of action, to help him participate in the present, and thus to prepare him for the future (Porat, 2018).

On the basis of the importance of the development of the skills of critical thinking and creativity with the support of the practical ability through the use of connected problem solving and creation of new ideas, it is necessary to examine

the students' ability to think critically and creativity (Dewanto, Agustianto, & Sari, 2017).

The cultivation of creative thinking is important in its own right, but its importance is considerable also in the context of additional thinking skills of student teachers and their attitude towards this field. Porat (2018) showed that the students' attitudes towards teaching in the topic of the cultivation of critical thinking influence their ability to teach in a way that will cultivate the students' creativity. Therefore, it is necessary to develop among the student teachers the value of the cultivation of the creativity of preschool and kindergarten children (from an early age).

It is also important that the education system acknowledge the importance of the value of the development of creativity and excellence of these children (Shwartzky, 2016).

Characteristics of Creative Thinking

Meidan (2017) holds that to be creative it is necessary to identify the stagnation. Three main characteristics exist in the creative idea: simplicity, originality, and usefulness.

Life requires us to integrate between skills of information and skills of autonomous learning, which enables the person to be an independent learner in every stage and to know to plan and to act through the implementation of independent judgment. The Ministry of Education supports the training of students who take the initiative, who are creative, and who invent – who have different thinking. This objective is the outcome of the vision, the objectives and programs of the Ministry of Education for the improvement of the quality of the studies, the increase of the depth and breadth of the knowledge, and the acquisition of skills (Shwartzky, 2016).

The characteristics of creative thinking are the simultaneous consideration of the practical and aesthetic standards, the attention to both the goal and the outcome, acting on the high edges of human ability, establishment of inner motives to create, and slight dependence on outside motives (Glasner & Ben David, 2009).

Additional dimensions of the approaches to the education of thinking include the following:

1. The ideological dimension. These traits are derived from the ideal image of “good, thinking”, accepted in a given culture and expressed in its canonical texts and exemplary figures.
2. The metaphorical dimension. Metaphor, for people for the most part, is a poetic and rhetoric means, an issue of unusual language and not regular language.
3. The hermeneutic dimension. The approaches to education of thinking constitute interpretative constellations through which the main issues in the field of the education of thinking are interpreted. The issues are the origin of thinking disorders, the meta-cognition, and the nature of intelligence.
4. The practical dimension. This or another approach to thinking that will enter the school and fit into the pattern of teaching prevailing there is expected to have a standard deviation (Harpaz, 2019).

The most relevant abilities for creative thinking that can be measured are as follows:

- Divergent creative abilities, which pertain to the raising of ideas and necessitate diversification, for instance, in the solving of problems: fluency, flexibility, and processing.

- Change of form abilities, which pertain to the change of knowledge and enable the production of new and original forms and patterns. The willingness to be flexible is a general characteristic of this group of abilities. The flexibility yields re-explanation and re-organization (Porat, 2018).

Creative Processes

Every creative process brings about the creation of a new product, but something is not created from nothing. The creation is thinking that joins together in a new and non-routine way the existing components into a new conceptual or material product (Ziv, 2014).

Gazit and Patkin (2015) presented four stages in the creative process that are parallel to a certain extent to the four stages of problem solving. These stages are:

1. Stage of preparation. In this stage, the need and the problem are identified, and the information and raw material are collected.
2. Stage of incubation. This is an unconscious, hidden stage, a spiritual pregnancy expecting to be discovered.
3. Stage of illumination. The sudden discovery, in which an idea appears: there is inspiration, the 'aha' moment.
4. Stage of verification. In this stage, the product is examined and processed into a real product, and there is the choice as well as the validation of the solution.

The processes of thinking at the basis of the creative responses are established on the abilities, knowledge, understanding, motivation, and feelings of the person (Lucchiari, Sala, & Vanutelli, 2019).

Creative Product

In Hebrew, the concept of “creativity” is related to the concept of “product”, since the words come from the same root word. Creative people appear in all areas of life, and the products that they produce and create give enjoyment or improve their and other people’s living conditions. The issue of creativity held a place of importance primarily in the education system (Ziv, 2014).

To be creative, there are certain personal, social, and cultural conditions. Certain personality attributes are necessary, such as the courage to take risks and to be different, the ability to communicate with the environment and with the self, the tolerance of unclear and ambiguous situations, the ability to deal with errors, the ability to ask open-ended questions, dynamism, and orientation towards the future. In addition, it is necessary to have a playful approach, to try, to integrate, to connect, to experience, to display openness to new things, the ability to accept anxiety and despite the anxiety to look, to make a connection, to do, to like, to be involved, and the ability of humor, or to see something from different aspects, willingness to be surprised, to see and to discover, despite the pain and powerlessness, the other side, the humorous one (Shwarzky, 2016).

In my opinion, creativity can be expressed in each one of the person’s areas of activity, as can the product of creativity.

Development of Creative Thinking in the Classroom

Lucchairs, Sala, and Vanutelli (2019) maintained that creativity may be considered a cross-disciplinary skill that is useful despite all the educational objectives. It is interesting to understand how the promotion of difference may influence the track of the school. High creative ability will help the teachers not only in the cultivation of their students’ creativity but also in the improvement of the teaching and the increase of the level of academic achievements in the school (Shwartzky, 2016).

Education of thinking includes therefore three sub-sections, which complement one another. Each one focuses on another quality of thinking: critical thinking, creative thinking, and effective thinking.

The rapid development of the education of thinking owes its existence to three factors:

1. The knowledge economy: the raw materials and the energy of sophisticated industry is knowledge.
2. The rise of cognitive science: the formation of “new” educational cognitive science in the 1970s and cognitive psychology that followed it equipped the education of thinking with a mentalist language.
3. The special magic of education of thinking: The education of thinking appears therefore to be education devoid of content or ideology, education for all (Harpaz, 2019).

The conclusions in the article of Porat (2018) are that practice improves creativity and that it is possible to develop skills of creative thinking using different methodologies of teaching. She adds that there are programs for the development of creative thinking, that there are a large number of textbooks as well as considerable teaching materials for the development of the ability of creative teaching, and there are journals dedicated to the topic of creativity. The teachers and the students have at their disposal many different curricula, and this fact offers planned experiences for creative learning and for the legitimization of creative thinking.

According to the perception of the students, there are instruments for the development of creative thinking in the classroom. Examples are “exposure to the form of thinking that incorporates creative thinking”, “it is possible to use the imagination and creativity for every field and topic learned in the school”, “giving a free hand for imagination and creativity of the students, to dedicate time to this”,

“it is possible to cultivate creative thinking”, and “encouragement of the students to think creatively”.

Hancock in his article (in Kloyer, 2014) connects between the creative functioning and the creativity of students in the classroom and the alternative assessment of these different methods. He asserts that since alternative assessment is aimed at evaluating the learners’ functioning through focus on their processes of thinking and learning and since these processes, when they occur, are performed on a high level, they offer for every learner the possibility to organize the knowledge anew, to structure it, and to function in an open and flexible manner. In essence, they all encourage creative functioning in learning (Kloyer, 2014).

There are a large number of textbooks as well as considerable teaching materials for the development of the ability of creative teaching, and journals dedicated to the topic of creativity are published. The teachers and the students have at their disposal many different curricula, and this fact offers planned experiences for creative learning and for the legitimization of creative thinking. The literature offers a selection of models, programs, and techniques for the cultivation of creative thinking and behavior, whether for the stimulation and catalyst of creativity or the overcoming of mental barriers that prevent it (Levin, 2016).

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