# The Role of Modern Methods of Teaching and Learning in Developing and Promoting Creativity and Innovations

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#### Abstract

Using modern methods in the process of teaching - learning contribute to increased efficiency of education and training of specialists with skills and competencies necessary to develop and promote innovations. Modern methods of teaching and learning fosters fundamental qualities necessary to the specialist for employment today: independence, critical, creative thinking, skills, etc. Using modern methods of teaching - learning in educational activity influence: increasing motivation for learning and student self-confidence; formation of positive attitudes towards objects of study; creative development of students; ability to think and act freely and creatively; providing conditions for training students' ability to interact and communicate, better preparing them for work in the real sector.

Key words: modern methods of teaching and learning, the didactic process.

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One of the conditions that are critical for ensuring the quality of the education provided by higher education establishments is to make a change in educational views, strategies and practices. Modern education aims at developing self-study skills in students who will develop their ability of thinking and acting freely and creatively.

The education science is in a constructivist era, and the constructivism proposes a change of paradigm – the transition from a normative pattern to an interpretative one. The peculiarities of every paradigm are shown below: [5]

Table 1. Normative and interpretative paradigm features

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Normative Paradigm	Interpretative Paradigm
Optimism of technological solutions	Supporting self-organization
Information society	Learning and communication-based
(emitter/receiver pattern)	society
Transfer of knowledge, guidance	Self-learning
Absolute truths	Plurality of structurations of reality
A reductionist conception about the world	A holistic conception about the world
Giving answers	Stimulating questions
Consensus/unity	Difference/diversity
Perfect solutions	Error probability
Cognition as a representation	Cognition as a construction

*Source:* Zlate Ş., Drăghicescu L., Stăncescu I. Strategii moderne de predare-învățare-evaluare. [online] Available at: <a href="http://www.academia.edu/17502544/STRATEGII MODERNE DE PREDARE">http://www.academia.edu/17502544/STRATEGII MODERNE DE PREDARE</a> [Accessed: 20.03.2017]

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When the constructivist conception is considered in terms of the teaching-learning process, it presupposes "the change of the educational paradigm from a behaviourist transfer of knowledge to approaching knowledge in a communication and cooperation process, where the learner has an active role [3]".

The didactic process represents a set of methods, devices, means and forms of organization of the didactic activity, which are combined and integrated in unitary operational structures, destined to ensure an active and creative accumulation of knowledge and development of abilities and skills (figure 1.).

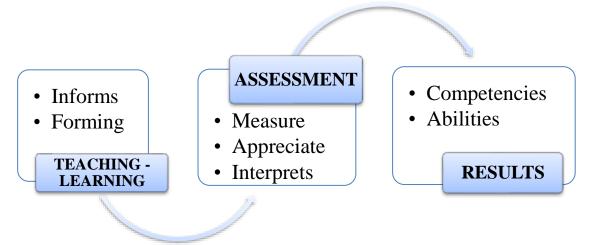


Figure 1. The components of didactic process

Teaching and learning cannot be considered separately, but as a whole to which assessment shall be added, these three actions being complementary and thus surprising the whole activity. Modern didactics insists on teaching-learning-assessment relationship improvement, as the objectives-content-methodology-results relationship becomes logic, unitary and perfectible only in this manner [1].

The effects of the didactic process depends directly on students' participation level to teaching-learning activities, which increases the value of the actions of the didactic staff that, due to its involvement, manages the learning process and stimulates students' active participation to gaining knowledge and skill development. In this context, the role of the didactic staff and student change, and namely:

## The Teacher:

- She/he is no more the absolute holder of knowledge;
- She/he becomes student's partner in learning;
- She/he organizes the framework where knowledge can be gained and used;
- She/he creates abilities that increase interaction in fulfilling learning;

## The Student:

- She/he can express the own point of view;
- She/he brings arguments and asks questions for a better understanding of phenomena;
- She/he cooperates for task resolution;
- She/he takes initiative; she/he proves critical thinking, participation and personal involvement.

For obtaining results of a maximal efficiency, the teaching-learning process shall be carried out by using didactic methods, devices and means that can challenge and stimulate students' creative thinking. Students must participate actively to the didactic process and they shall use modern learning methods that will increase the chance of obtaining professional success.

In modern didactics, the pedagogical quality of a didactic educational method presumes its transformation into a way of cognition proposed by the didactic staff in the educational path which opens further permanent educational opportunities to the learner. In this action-related perspective,

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the methods represent tools that help learners to progress, under the guidance of the didactic staff or independently, in their cognition and development of intellectual and practical skills and habits. [4]. The choice of the optimal teaching-learning method is made depending on: the aim and objectives pursued during the course, the difficulty degree of the subject taught, the peculiar features of the delivered content, the peculiar features of the target public (age, level of training, receptivity, expectations and interests), teacher's didactic experience, student's interest and motivation to study, the peculiar features that relate to didactic process organization in the establishment.

A variant of classification of the teaching-learning methods is their delimitation depending on their place in the didactic process timeline, and namely classic and modern methods. The classic methods have a long implementation history, can be kept provided that they will be subject to a further reconsideration and adaptation to modern education requirements. The modern methods develop the fundamental skills that are necessary to the expert nowadays and in the future: independence, critical thinking, creative thinking, skills, research skills, etc.

The modern methods have the following characteristics: they give priority to the development of students' personality, dealing with the development-related aspect of education; they are oriented to student's learning activity, the latter becoming the subject of the educational process; they are focused on action, on learning by discovering; they are success-oriented; they are flexible, encourage learning by cooperation and lay stress on the self-assessment ability; they stimulate intrinsic motivation; the teacher-student relation is democratic, it is based on respect and collaboration and the subject derives from lesson organisation [1].

One cannot affirm that it is a good or bad, efficient or inefficient method, we can see this only by analyzing the training situation where it is used and the concrete integration modality in the strategy of training and development in the training-educational process. Modern teaching-learning methods include: the Lotus Method, the Six Thinking Hats Method, Cube Method, Brainstorming, Clustering, etc.

The Lotus Method or the method of the water lily flower presumes the deduction of connections between ideas, concepts, starting from a central topic. The central issue or topic determines the eight secondary ideas that are built around the central one, as the leaves of a water lily flower. These eight secondary ideas pass around the central topic and they become, at their turn, central topics for other eight water lily flowers. Then other eight new secondary ideas will be built around every new central topic. Thus, starting from a central topic, new study topics are created and new connections and concepts will be developed [2].

The advantages of the Lotus Method include: it is compatible with multiple activity fields, it activates students' cognitive skills, it stimulates and develops students' creative potential, and it can be applied in group or individually.

The Six Thinking Hats Method "presumes role interpretation by the students that chose one of the six hats, which are just symbols of different colors which have different significations and different interpretation modalities". Students must know well the signification of every colour and must assume the role suggested by it:

- 1. The *white hat* is neutral; it provides an objective view of the facts discussed, limited to giving information about the chosen subject; this hat represents objective thinking;
- 2. The *yellow hat* is the one that offers a positive view of the situation; this hat represents optimistic thinking;
- 3. The *red hat* provides an emotional perspective of the facts discussed and it represents affective thinking;
- 4. The *green hat* expresses new ideas and offers a productive perspective on the situation; it represents creative thinking;
- 5. The *blue hat* is the one that expresses the control over the thinking process and watches over the proper course of things; it represents speculative thinking;
- 6. The *black hat* is the one that offers a sad perspective, judging the facts and signifying the negativist, critical thinking [5].

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The advantages of the Six Hats Method are: it stimulates the communication skill; it encourages the decision-making skill; it develops objective, optimistic, creative, and critical thinking; it develops interpersonal intelligence.

The Cube Method presumes getting over six stages: 1. Proposing the subject of the activity; 2. Dividing the team in 6 groups; 3. Giving explanations to the affirmations from the six sides of the cube: *Describe!*, *Compare!*, *Give associations!*, *Analyse!*, *Apply! and Give pro &con arguments!* 4. Activity task solving, 5. Subject presentation from the perspective of every of the 6 groups, 6. Final discussions related to the studied subject.

The advantages of the Cube Method are: it develops the analysis, synthesis, application and argumentation skills; it develops communication skills; it creates a complex and integrating approach of the discussed issue; it allows subject exploration from several perspectives.

The modern teaching-learning methods have advantages and disadvantages. Student's transformation from an object to a subject of learning by his/her co-participation to his/her own training; the intensive use of all psychic cognitive abilities; the development of critical thinking; the practical application of student's own experience; providing the student with optimal conditions for his/her individual selfexpression and for his/her selfexpression in the team; developing the motivation to learn; own activity assessment are just some of the advantages of the modern teaching-learning methods, which transform a classic organized lesson into an interesting, informative, breath-taking, useful and motivating one. The disadvantages of modern teaching-learning methods relate to assessment, time, material, planning and can be diminished by choosing the appropriate method and the correct planning for applying the chosen method.

In conclusion, the use of modern teaching-learning methods in the didactic activity influence the following: increasing motivation for learning and self-confidence; students' creativity development; the development of a positive attitude in relation to the study subjects; the provision of conditions for developing students' interaction and communication abilities, offering them a better preparation for their professional activity. Both the teacher and students shall be involved in the didactic process for a successful application of modern teaching-learning methods. The teacher has the role of changing the conception on the educational process by permanent self-training, participation to the educational decisions, the provision of a quality education and the student contributes by showing interest and active participation in the educational process. The teacher will not be able to contribute to students' development and training as experts by means of reasonable and creative freedom if they don't know and understand this by themselves.

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