Proper selection of active-participatory methods for training design engineer from light industry

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Abstract

Application of active participatory methods has many formative facets; it contributes to developing creativity, involves students in learning, putting them in situations to think, to make logical connections and express their ideas and reasoned opinions, etc.

The selection of methods is not simple, it requires time, patience and practice. They should be selected and used rigorously, creatively, according to objectives and the specific educational group. Therefore, the option for a particular teacher's method is a very complex decision for teaching.

Keywords: active learning, application, teaching instrument, training.

Rezumat

Aplicarea metodelor activ-participative de instruire au multe valențe formative; contribuie la dezvoltarea creativității, implică studenții în învățare, punându-i în situații de a gândi, de a realiza conexiuni logice și de a exprima idei și opinii proprii argumentate, etc.

Selectarea metodelor nu este simplă, ci necesită timp, răbdare și exersare. Ele trebuie să fie selecționate și utilizate în mod riguros, creativ, în funcție de obiectivele propuse, de specificul grupului educațional. Prin urmare, opțiunea profesorului pentru o anumită metodă, este o decizie de mare complexitate pentru actul didactic.

Cuvinte cheie: învățare activă, aplicare, act didactic, formare.

Introduction

A teaching method is the process for the attainment of educational objectives. The method is selected by the teacher and is implemented in lectures, seminars and practical applications with the benefit of students and their means in all cases, a collaboration between teacher and student participation in seeking solutions to distinguish between truth and error and the form of options and / or methods selected is used for the assimilation of knowledge, values and experiences to stimulate the creative spirit.

When choosing a method it is needed to take account of the aims of education, the content of the training process, the peculiarities of the age and individual students, groups universities, the group composition, the nature of the means of education, experience and competence of the teacher.

In agreement with a formative education, focused on skills is required active use of participative methods.

The mentioned methods are listed because they have formative effects on light textile design engineers, evident not only in cognitive level (because it involves students in an effort to search, selection, analysis and comparison of information), but also socially (develop a spirit of collaboration, effective communication with colleagues) and even staff (working with fellow students can realize their own resources, possibilities and limits, may be learning resources for their peers can learn from others).

In recent years, "grew up unprecedented interest in so-called active-participatory methods. This interest is generated by the current school open to new goals and content, to new experiences of knowledge, experience and action»

To be able to involve, indeed, the learner, active-participatory methods focus on the processes of knowledge (learning) and not on knowledge products. They are, therefore, methods that help students to search, investigate, only to find knowledge and to assimilate them, to find single solutions to problems, to handle knowledge, to come to rebuild and re-systematization of knowledge, they are, therefore, methods which teaches students to learn to work independently.

Can be considered active, participatory methods those that bring students into direct contact with real life situations and practical problems of life, giving the opportunity to participate in solving practical problems of life, labor, students, resulting in the creation of goods materials.

In general, active-participatory methods are distinguished by their request; they implement the action from multiple perspectives, intellectual forces of the student - thinking, imagination, memory, and involuntary. Due to this request, they make an extensive process of education and genuine exercise of intellectual and physical capacities.

Starting from the fact that there is a "recipe» of an effective strategy in itself, the teacher through the experience and expertise is the one that determines how best to conduct the business of taking into account a series of "critical factors" underlying the strategy of training (Panțuru, 2002, p. 160): types of targets covered, level of education: primary, secondary, particular group of pupils / students, types of learners in terms of those teams: the nature of school motivation, intellectual capacity, cognitive style, personality factors, the nature of the discipline of education / logico-theoretical structure, the time available, equipment and materials, features of the teacher.

Here are that the adaption some teaching of strategies is a matter of responsibility and competence, especially as, in the context of education reform, we must regard the formation of skills, attitudes and values towards high school, life, work.

In a praxiological way I. Cerghit shows that the method has the meaning "of an effective way of action and, by extension, of a professors of practical way of working with pupils / students, a realization of the action techniques of teaching and learning" (Cerghit I., 2002).

In short, the method is an effective way of learning, organizing and leadership, a common way of acting that meets in an all familiar the efforts of the teacher and his students.

Vaideanu G. (1986, p.3-4) captures some features of the method of training / education, which is shown in Figure 1, in a form adapted to higher education institutions.
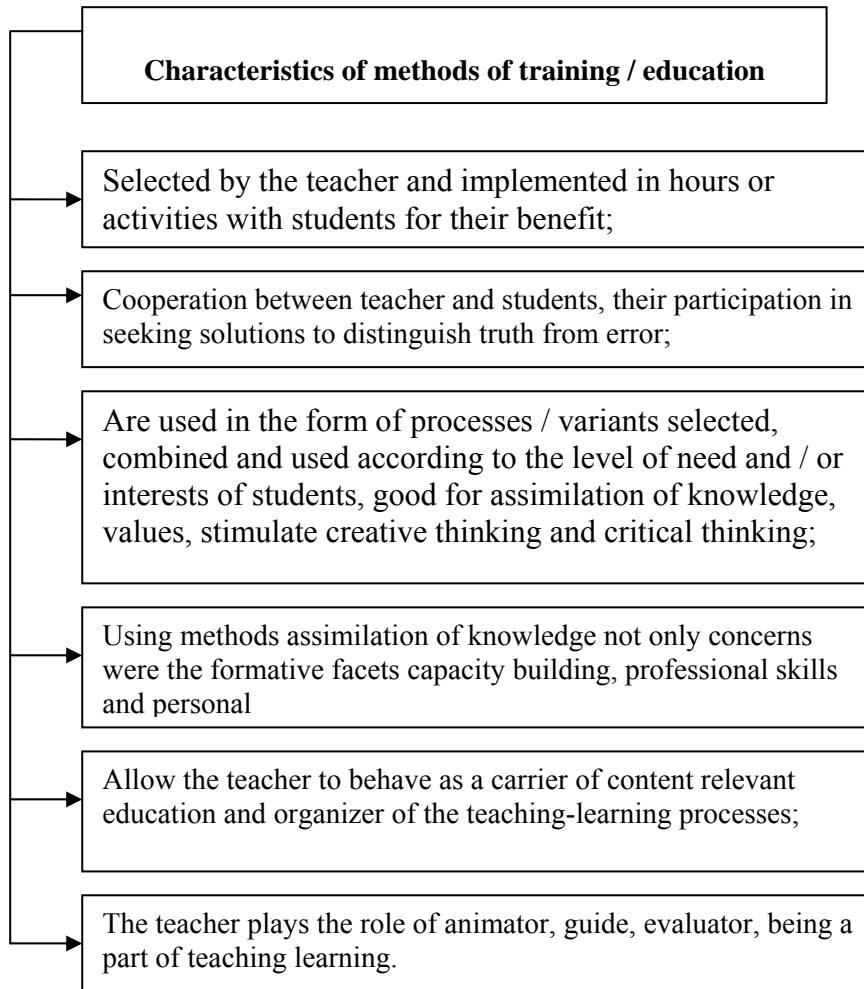
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│      **Characteristics of methods of training / education** │
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│ Selected by the teacher and implemented in hours or │
│ activities with students for their benefit;        │
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│ Cooperation between teacher and students, their participation in │
│ seeking solutions to distinguish truth from error; │
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│ Are used in the form of processes / variants selected, │
│ combined and used according to the level of need and / or │
│ interests of students, good for assimilation of knowledge, │
│ values, stimulate creative thinking and critical thinking; │
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│ Using methods assimilation of knowledge not only concerns │
│ were the formative facets capacity building, professional skills │
│ and personal │
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│ Allow the teacher to behave as a carrier of content relevant │
│ education and organizer of the teaching-learning processes; │
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│ The teacher plays the role of animator, guide, evaluator, being a │
│ part of teaching learning. │
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Figure 1. Feature tour schedule training methods / preparation of design engineers in the light industry

Many educators point out methods are that used multiple purposes: knowledge (mastery of standards and methods of thinking), training (assimilation of knowledge, skills and work tasks), and formative (training and development of personality traits).

This reveals specific functions (Cerghit, 1980, p.12-17) held by them and which methods are:

1.	cognitive function (the method is the students gateway to truth, the procedures for action to acquire science and technology, culture and human behavior, making it a curiosity for it - research, discovery);

2.	formative-educational function (method does practice and development of various mental and physical functions of the student, is formed skills, abilities, behaviors);

3.	instrumental function (serving as a technical method of execution);

4.	regulatory function (method shows how it should proceed to obtain the best results).

By modern active-participatory methods tends to a new approach to selected content in a new way of teaching strategy, which involves all students in individualized and differentiated learning, they were placed in a position to not only learn certain concepts, but also to discover, to join them, creatively applying them at different times.

The method has a multifunctional character, because it can participate simultaneously or successively in several educational objectives. Option for a particular teacher's teaching method is a very complex decision.

Selection criteria for active - participatory methods

Specifying methodological system of educational activities is an integrated approach to conception and design of training strategies, but it must take into account the criteria for selecting training strategies, and other specific teaching methodology. The phrase "methodological system" highlights the fact that the methods and procedures to be capitalized in a training situation are influenced, to support and complement each other, between the components of teaching strategies, thus establishing a close correspondence. Thus, teaching methods system is are developed in vision systems and is closely correlated with the means of education, forms of organization of educational activity, with the approach of learning by students, etc. Table 1 summarizes the main criteria underlying the choice of teaching methods and system (Chiş, p. 36).

Table 1. Criteria for selecting teaching methods and procedures

Nr. crt.	Nature factors	Examples
1.	Objective factors	♣ fundamental objective; ♣ the operational objectives; ♣ General education system principles and system of study discipline specific teaching principles; ♣ systemic analysis of scientific content; ♣ unity between content and method; ♣ means of education; ♣ internal logic of science; ♣ regularities learning process.
2.	Subjective factors	♣ students' psychological resources; ♣ characteristics of the class / group of students; ♣ personality and competence of the teacher; ♣ social human context of the application method.

If the methods and processes they choose will be the right ones this will lead to the operationalization of learning, to ensure mobility in the teaching-learning-evaluation at the request appropriate and differentiated student learning density, stimulate and motivate the participants in this process, causing academic success.

Assuming that if the teacher chooses higher education, combines and develops active-participatory methods and processes in teaching, then learning becomes individualized and differentiated, on this basis is chosen for the application of participatory methods in dealing with active-content engineering design in clothing.

Most active-participatory methods based on cooperation and joint work in dealing with learning tasks. This means that, the work group is especially geared towards the social aspect of learning, students pursuing the development of social behavior, future design engineers. For group work to develop more effective organization design and practical applications, the following methodological steps:

-examine themes and tasks of training and self-training;
- dividing tasks among group members;

- documentation on themes and issues of interest by researching various sources;
- assumptions and opinions on the issue of probable outcomes;
- investigation of practical and theoretical applications;
- record results;
- interpretation of results;
- drawing "the report" final;
- assessment and evaluation.

Conclusions:

One way is not good or bad in itself, but by reporting them to the teaching situation that the criterion whether or suitability to a particular fact is one that can do more or less effective. At the same time, not only external adequacy is an indicator of the relevance of the method, but also a component matching sequences (respectively, learning processes) and alternation, fireworks successively methodological quality of coordination and articulation between the methods of a process and a method etc.

From this we conclude, that methodological quality is a matter of convenience, dosage, between the facets of combinatorial methods or methods is a matter qualitative of articulation and less of prominent or extension of a method at the expense of another. To say a priori that one method is better than another (or a method is desired), without taking into account the context in which the method that is (or becomes) effectively constitutes a hazardous assertion and even meaningless.

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