

## THE ROLE OF TRAINING STRATEGIES IN THE DIGITAL AGE

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### **Abstract**

*Over time, educational practice has undergone numerous changes and improvements, particularly under the influence of psycho-pedagogical theories, educational theories and educational paradigms that are in a constant evolution. With these transformations, the previous achievements have been assimilated to the new, being labelled, by comparison, as "traditional," but without being removed or put aside. The co-existence between the traditional and the modern characterizes not only the educational system, but also other systems, starting from the social one.*

*The present study aims to analyze the training strategies used in school, from a comparative approach, highlighting the advantages and limitations of both methods. In order to achieve this, we carried out concluding research on a group of 69 prospective teachers, students at the Faculty of Letters, University of Craiova, who are in the last year of the Teacher Training Programme, Cycle II.*

*The research methods used were the survey, based on a questionnaire, and systematic observation. In order to know the opinion of the subjects regarding the training strategies used in the teaching activities carried out with the students, we designed an opinion questionnaire. We also provided an observation grid that the students used during their teaching practice.*

*Following our investigation, we identified relevant aspects of the efficiency of the training strategy components, both traditional and modern ones.*

**Keywords:** *Training strategy; Teaching methods; Means of education; Forms of organizing the activity; Digital age.*

### **1. Introduction**

The importance of the training strategies is essential for any teacher, regardless the level of students they teach, the discipline, the school type, the class, the student profile, etc., because this is the procedural option that can lead to a successful or a less effective lesson.

The teacher chooses the types of strategies depending on a number of factors, which will be presented in this study. Also, the way of combining the components of the strategy for each lesson or training situation is also the responsibility of the teacher, being a result of his/her subject and teacher training, his/her experience and, last but not least, his/her creativity. The evolution of the psychological theories and curricular reforms have led to changes in the educational practice. Teaching

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methodology is no exception to this, moreover it is even considered the most flexible and dynamic component of the teacher's activity.

There have been long debates about the need of the teachers to be offered (during the pre- and in-service training process) lists of modalities of working with the class, solutions to help them solve the various issues that the activity with the students poses. The answer, disappointing for many, is that there are no "recipes" for such situations. Educational practice is not limited to the mimetic application of some models, methods, tools that have proven their efficiency in other situations, for other teachers. Each situation is different, each class has its own specificity, each student has his/her own peculiarities, which requires the individual, original approach of each individual case.

But there remains the question about how the teachers can be helped in this case. Through specialisation and teacher training to develop those competences that enable them to make decisions in relation to context, by showing flexibility and creativity.

## **2. Theoretical foundation**

The concept of *teaching strategy* or *training* is fundamental to theory and, in particular, to the practice of training, as it undergoes numerous attempts to define and operationalize, according to psychological or pedagogical underpinnings, the educational paradigm it belongs to.

We shall list and discuss these attempts in what follows. Thus, according to Cerghit, *strategy* represents an integrative way of approaching and acting; a procedural structure; a chain of decisions; an optimal interaction between teaching and learning strategies (Cerghit, 2002, apud Mogonea, 2013, p. 77).

In another definition, *strategy* is "a way of approaching education, necessary to achieve a specific goal, by translating into practice the general principles of designing the activity of permanent training and development of personality, optimally integrated training methods at the level of an effective didactic discourse, adaptable in a given context" (Cristea, 1998, apud Popescu, 2014, p. 75).

The educational strategy can be approached at both macro and micro levels. In the latter case, it can be considered "the way the educator manages to choose, combine and organize - in a chronological order - the set of methods, means and forms of organizing the activity of the pupils in order to achieve certain goals (Ștefan, 2017, p. 93). This combination of the three key elements of the strategy, in relation to the learning situation, must be done in an original manner by the teacher (Ilie, 2015). At the same time, *strategy* can also be considered a "plan with the value of an action hypothesis". (Frășineanu, 2014, p. 119).

Ionescu (2000, apud Mogonea, 2013, p. 78) presents some characteristics of the training/ self-training strategies:

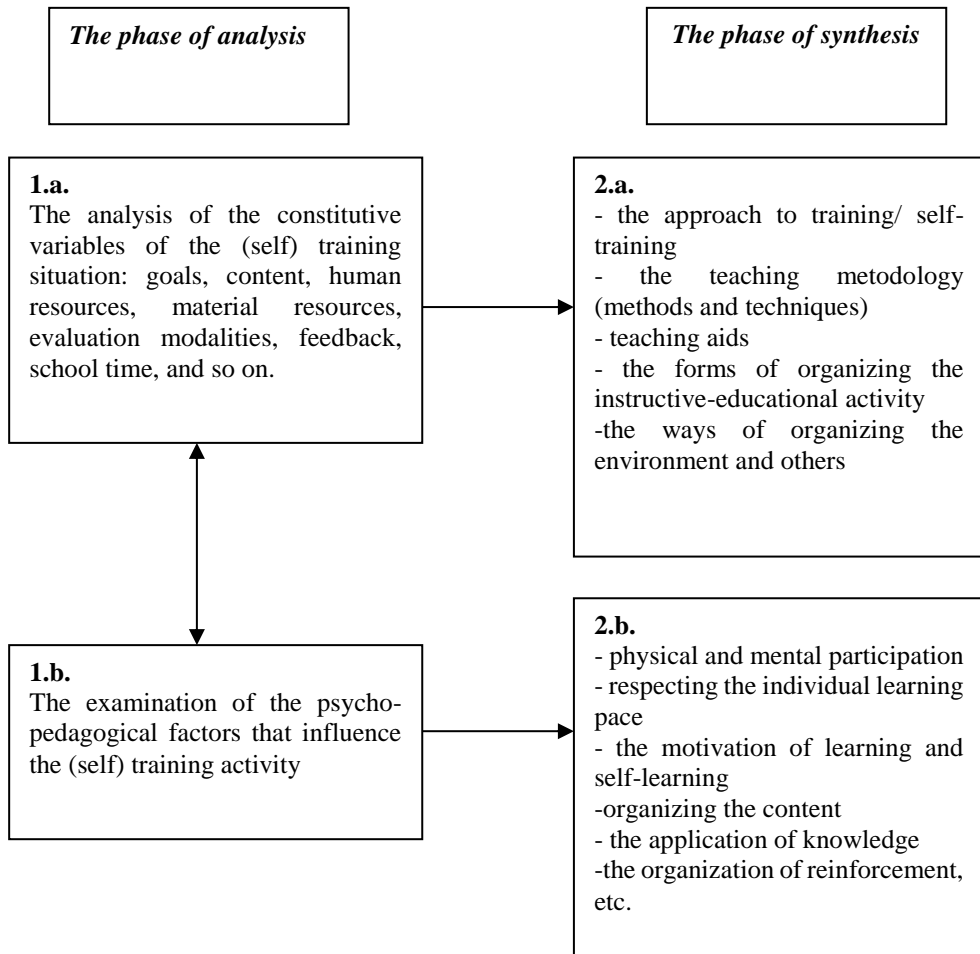
- They have a normative character, but without the rigidity of an algorithm, being a component characterized by flexibility, dynamism, openness to the new and to change;

- They have the role of structuring and organizing the chain of learning situations in which students are involved, and of activating in them the psychological mechanisms of learning;
- They have the character of a system, consisting of several components, between which there are interrelations, inter-conditions;
- They do not identify themselves to the system of educational methods or the basic teaching method, which is only one component of the strategy;
- They are not assimilated to the lesson because they can be used not only within it but also in all types of activities carried out by the teacher and students;
- They have a probabilistic character, which translates into the fact that a strategy, even if it has an adequate scientific basis, cannot guarantee the success of an activity due to the large number of variables that may interfere.

In selecting the training strategies, certain criteria are applied, which acquire a greater or lesser value and importance depending on the context. We mention some of these criteria (Ionescu, 2011, pp. 150-152; Mogonea, 2011):

- The general pedagogical conception of the period referred to, as seen from the main teaching guidelines and the personal conception of the teacher, the result of their personal experience;
- The system of general teaching principles and the teaching principles specific to the discipline of study;
- The general framework objectives (general competences) and the reference objectives (specific competences) of the discipline, the educational-learning objectives of the school, the subject, the operational objectives of that specific activity;
- The level of education and the curriculum;
- The nature and specificity of the scientific content to be presented to the students;
- The particularities of the class: size, degree of homogeneity, level of training, psychological peculiarities of age and individual, level of intellectual development, motivational level, interests, aspirations, students' skills;
- The early/prior learning experience of the students;
- The nature and forms of evaluation;
- The learning material equipment of the school, the characteristics of the school space and of the training environment, the teaching resources of the school, etc.;
- The period of time/timetable available for the teaching activity;
- The personality and scientific, psycho-pedagogical, methodological competence of the teaching staff.

The same author, quoting Parent and Nero (1981), mentions that there are two distinct phases in the development of the training and self-training strategies, as indicated in figure 1.



**Figure no. 1. The phases of developing (self) training strategies (adapted from Ionescu, 2011, p. 150)**

From Figure 1, the components of the training strategy can also be drawn: the methodological system, the educational system, the forms of organizing the activity of the students. Some authors also add to these the type of learning experiences and interpersonal relations.

As for the taxonomies of the training strategies, the typology is diverse, depending on several criteria, as follows:

- according to the area of the predominant activities: cognitive, psychomotor, affective-motivational, combinatorial;

- according to the evolutionary peculiarities of the students' thinking: inductive, deductive, analogous, transductive, mixed;

- according to the degree of guidance/ non-guidance of learning: algorithmic, semi-algorithmic, heuristic (Popescu, 2014, pp. 80-81).

A modern teacher, who explores updated ways of working with the class, according to the progress of the new communication technologies, manages to solve many problems of the students (Gjorgjeva, 2013): adaptation problems; the rational organization of activities, based on the new acquisitions of knowledge, skills, abilities, competences; the stimulation of the students' motivation for the entire activity; providing support to students in organizing their time, monitoring their activities, making them more effective, and solving their bio-psycho-pedagogical problems.

Barak, Nissim, Ben-Zvi (2011) propose some modern teaching strategies:

- View-based strategies - these can help students to get more easily from the abstract to the concrete, to clarify the main aspects and scientific concepts; physical or virtual, the models and graphic representations allow after that discussions between the students and sharing of knowledge;
- Problem solving strategies - preferably real life problems, close to the experience of the students which contribute to the development of cognitive skills, analysis and identifying alternative solutions; applied to group work, these strategies stimulate cooperation;
- Investigation-based strategies – they develop the ability to know and understand scientific ideas, critical thinking, exploration, argumentation;
- Reflection based-strategies – they contribute to the efficiency of their own activity, as a result of identifying the successful and less successful aspects, the obstacles in order to overcome them.

Mainstream literature records lists of advantages and disadvantages of the training strategies, modern and traditional methods and means (Belias, Sdrolias, Kakkos, Koutiva, Koustelios, 2013; Sîrbu, Tonea, Iancu, Pet, Popa, 2015). In our view, each of these modalities has advantages and limitations, their effectiveness being determined not by their pedagogical value, but by the context in which they are used, by adapting them to the specificities of the training situations the teacher faces. The predominant use of one or the other determines the shaping of a teacher's style, predominantly traditional or modern (Hidalgo-Cabrillan, Lopez-Mayan, 2017).

In the context of capitalizing on modern strategies, evaluation also has undergone important changes, being a predominantly qualitative, transparent assessment, a premise for self-evaluation which stimulates the students' motivation for learning (Anghel, 2017).

The approach of training from the perspective of the constructivist paradigm assumes the reconsideration of the relation between teaching and learning and, implicitly, of the teaching methodology, based on methods which imply the building of the knowledge by the student himself/herself, on discovery, investigation, exploration, cooperation, use of modern training aids, the computer, the internet.

The use of graphic organizers, particularly cognitive maps, is also an extension of the constructivist conception on streamlining the learning activity. Thanks to these tools, essential skills such as those of structuring, information organization, essentialization; the achievement of connections and the links between

concepts, notions; the transfer of knowledge have been developed (Stoica, Moraru, Miron, 2011; Mogonea, Mogonea, 2014).

The virtual class is an alternative to the traditional class (Mogonea, 2014a).

The transition from traditional to modern training has also led to a multiplication of the teacher's roles (Joița, 2006; 2007; 2009; Holubová, 2010; Zhu, 2010; Barak, Nissim, Ben-Zvi, 2011; Mogonea, 2014b, Gjorgjeva, 2013): from informant (in the classic version) to facilitator, coach, mediator, tutor, counselor, evaluator, monitor (in modern version). This change can also be observed in university education (Bidabadi, Isfahani, Rouhollshi, Khalili, 2016).

Sumana (2016) believes that using the computer and multimedia can be a condition for the success of the teacher's work in an inclusive classroom. Generally speaking, the use of new communication technologies (NTIC) in the teaching activity has marked the transition from classical to modern training (del Campo, Negro, Núñez, 2012).

A modern the learning environment is a combination of the following elements (Osborn, 2013): customizing learning; the social construction of knowledge; the differentiating learning; initiating learning by the student himself/herself; linking learning with the physical world and authentic contexts. Such an environment must be, in the author's opinion, flexible, open and allow for access to resources, including technology.

### 3. The research methodology

Our investigation aimed at knowing the opinion of the subjects on the efficiency of certain training strategies according to the situation.

The research **objectives** were:

- Investigation of the students' opinion on the role and importance of the training strategies and its components for the success of the teaching activity;
- Knowing the frequency of using traditional and modern methods in the teaching activity;
- Identification of the advantages and disadvantages of the traditional and modern teaching methods and teaching aids;
- Investigation of the subjects' opinion on the usefulness and frequency of exploitation of the forms of organizing the class of students.

In accordance with the stated purpose, the research aimed at establishing the truth value of the following **hypotheses**:

*I.p. 1. The effectiveness of the use of new information and communication technologies in teaching is determined by their adaptation to the specificities of the training situation.*

*I.p.2. In school practice, there can be observed an evolution of the training strategies in the sense that they are based on the student activity.*

The research was carried out on a sample of subjects, consisting of 69 second year Master's students at the Faculty of Letters, who also attend the Teacher Training Programme.

The research methods used were the survey based on a questionnaire, and systematic observation. The questionnaire included 14 items of different categories, ranging from those with closed answers (most of them) to those with open or semi-closed responses, which gave the subjects the possibility to formulate their own alternative, other than those offered. The applied research instrument aimed at knowing the students' opinion about the usefulness of traditional and modern methods and means of training, as well as the forms of organizing the learning activity of the students.

The observation grid comprised 15 items, the frequency of which was set on a 5-step scale (*Very much, Much, Little, Very Little, Not at all*). The students followed the frequency with which the teachers, practice mentors, capitalizing on the activities, methods and aids, both classical and modern, as well as the organizational forms of different students, varying from lockstep to the individual ones.

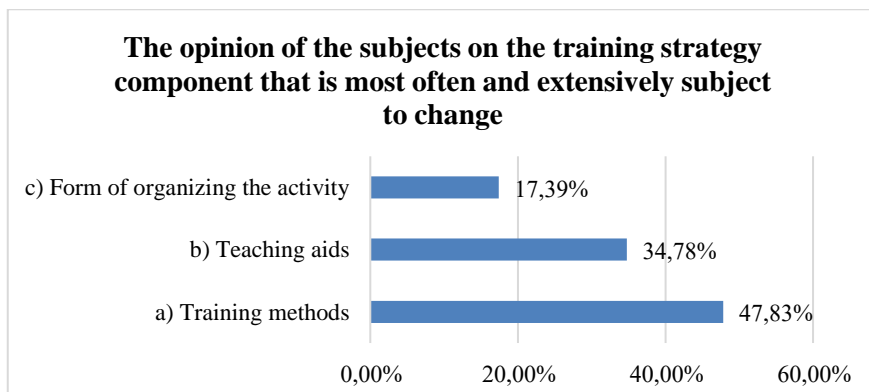
#### 4. The presentation and analysis of the results

We shall briefly present the findings of the research, drawn from the centralization of the answers given by the subjects to the items of the opinion questionnaire, depending on how they allowed the validation of the two hypotheses of the research.

***Ip 1. The effectiveness of the use of new information and communication technologies in teaching is determined by their adaptation to the specificities of the training situation.***

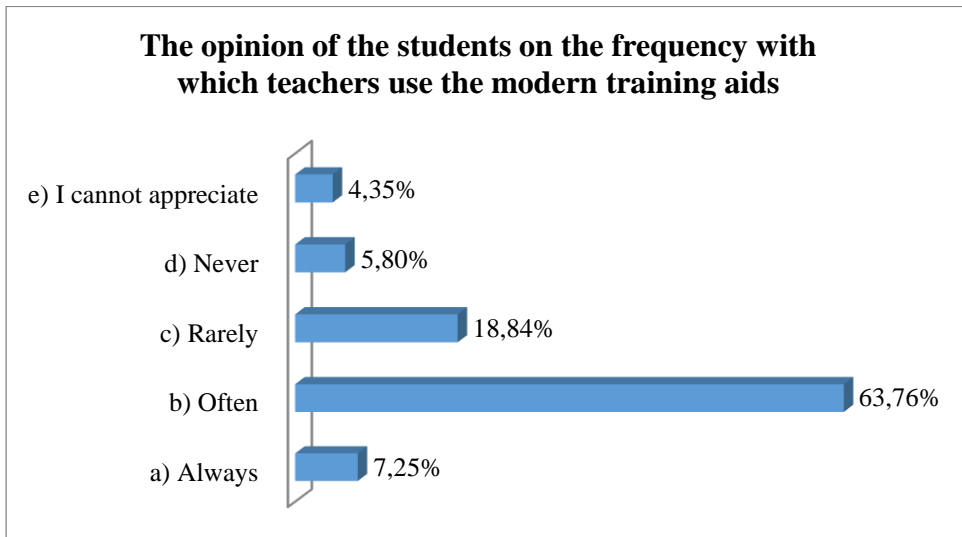
In order to validate this hypothesis, we capitalized on the answers of the subjects for items 1, 7, 8, 9, 10, 11, 13.

According to the answers of the respondents to the first item of the questionnaire, the training methods and the teaching aids are the components that are most often subject to change, as seen in Figure 2.



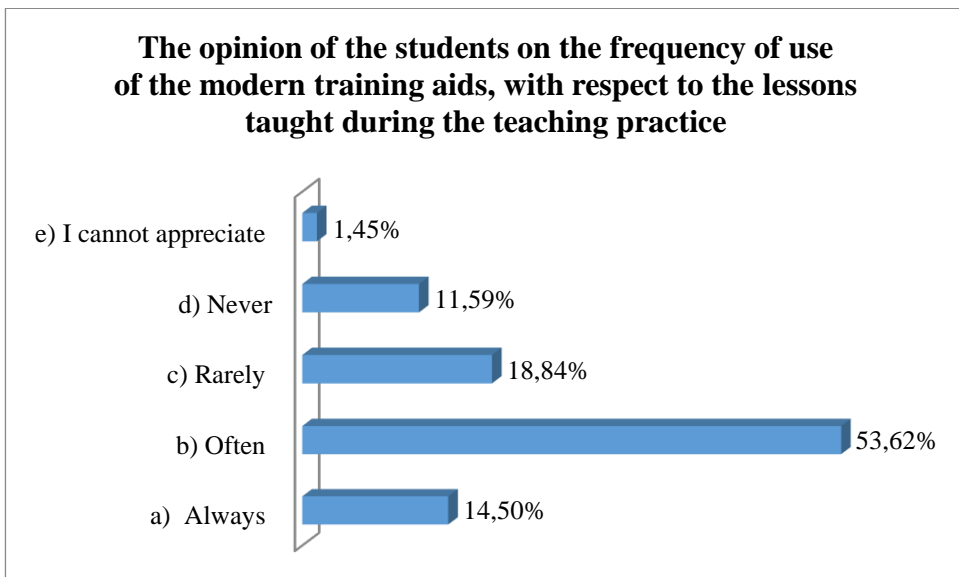
**Figure no. 2. The opinion of the subjects on the training strategy component that is most often and extensively subject to change**

Most of the respondents (63.76 %) appreciated that teachers often use modern teaching aids in their activity, while 18.84 % of them think this rarely happens (Figure 3).



**Figure no. 3. The opinion of the students on the frequency with which teachers use modern training aids**

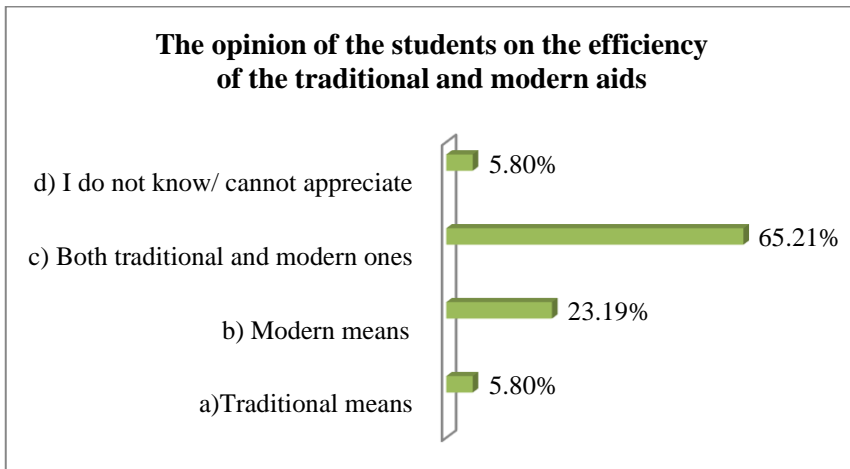
Item 8 addressed the same question, but aimed at the students themselves, checking the extent to which they capitalized on new training technologies with respect to the lessons taught during the teaching practice. The distribution of responses on the four variants is relatively similar to the one of the previous item (see Figure 4).



**Figure no. 4. The opinion of the students on the frequency of use of the modern training aids, with respect to the lessons taught during the teaching practice**



Regarding the efficiency of the traditional and modern training aids, more than half of the students think that both categories can be effective in the teaching practice. Chart no. 5 confirms this idea.



**Figure no. 5. The opinion of the students on the efficiency of the traditional and modern aids**

Items 10 and 11 were open-ended, asking for the advantages and disadvantages of the traditional and modern learning means.

Table 1 summarizes the views of the subjects in relation to the analysis of the aids based on efficiency.

**Table no. 1. The opinion of the students on the advantages and disadvantages of the traditional and modern aids**

Category of means	Advantages	Disadvantages
Traditional	<ul style="list-style-type: none"> <li>- they stimulate memory</li> <li>- they can be seen by the whole class</li> <li>- some objects are tangible, they can be perceived directly by the students</li> <li>- they are accessible</li> </ul>	<ul style="list-style-type: none"> <li>-they promote mechanical learning</li> <li>- rigidity of the message</li> <li>- they can be monotonous, causing boredom</li> </ul>
Modern	<ul style="list-style-type: none"> <li>- they raise the interest of the students</li> <li>- they stimulate interaction</li> <li>- they enable group work</li> <li>- they develop creativity</li> <li>- they are characterized by diversity</li> </ul>	<ul style="list-style-type: none"> <li>- sometimes they require time to install</li> <li>- focus on details can lead to the loss of the essence about a topic</li> <li>- they may give rise to technical problems</li> <li>-they are not accessible in all schools, classes</li> <li>- reluctance of some teachers to use them</li> </ul>

Item 13 was a multiple choice one and aimed at subjects' expressing their opinion about the educational aids they used in the activities carried out during the teaching practice period (Table 2). All subjects, being also enrolled in Cycle II of the Teacher training programme, completed their teaching practice.

**Table no. 2. The opinion of the students on the teaching aids used during the lessons**

Worksheets	66.67 %	Computer	21.73 %
Video projector	36.23 %	Textbooks	59.42 %
Boards	31.88 %	Board and chalk	59.42 %
Pictures	44.92 %	Scale models, moulds	0
Audio/video recordings	23.18 %	Natural means (plants, animals, rocks etc)	1.44 %

As shown, the most frequently used aids were worksheets, the textbook, the board and the chalk, as well as pictures, the video projector, boards and even the computer.

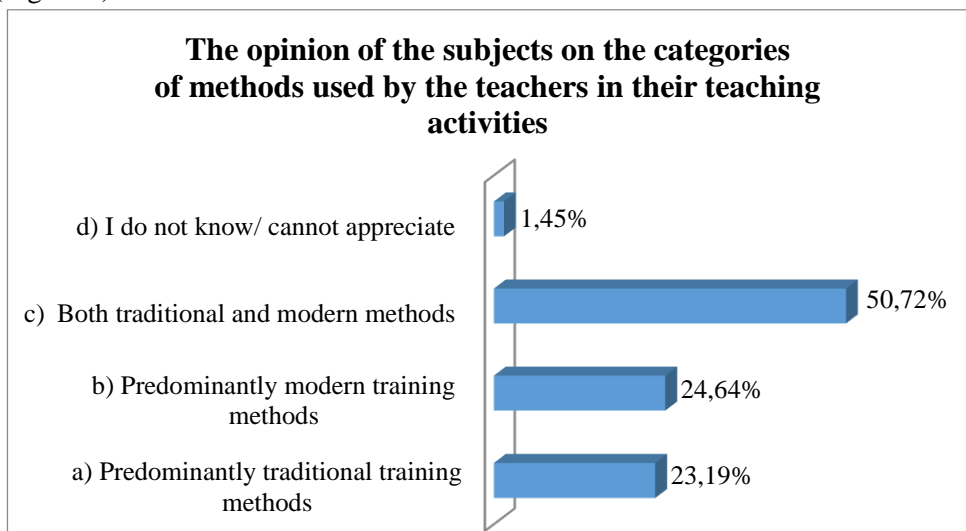
Although the traditional means seem to have a higher frequency in use, however, there is also a capitalization on the modern ones.

### **Validation of hypothesis 2**

*I.p.2. In school practice, there is an evolution of the training strategies in the sense that they are based on the student activity.*

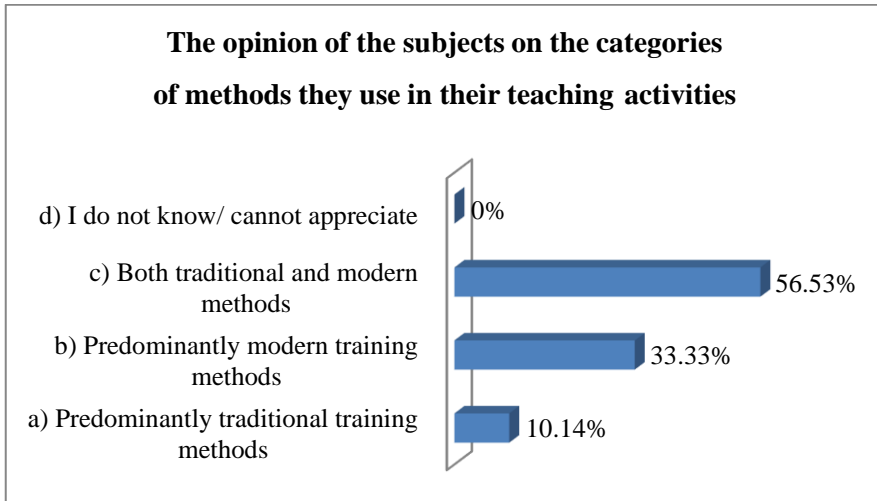
In order to verify this hypothesis, we capitalized on the answers of the subjects for items: 2, 3, 4, 5, 6, 12, 14.

In item 2, the answers of the students confirm some ideas already mentioned, related to the intertwining of the traditional with the modern elements in both the teaching activity and methodology, not only in the case of the educational aids (Figure 6).



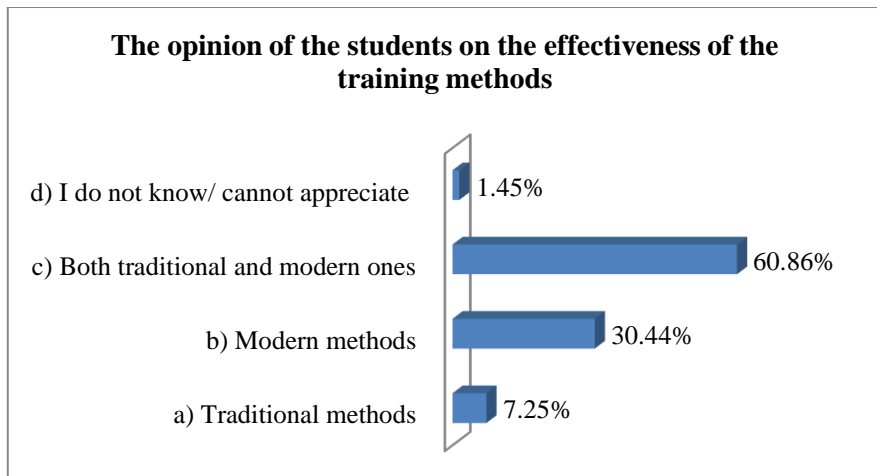
**Figure no. 6. The opinion of the subjects on the categories of methods used by the teachers in their teaching activities**

The opinion of the students is also maintained with regard to their own class activity (Figure 7).



**Figure no. 7. The opinion of the subjects on the categories of methods they use in their teaching activities**

The students appreciate both traditional and modern training methods, considering that both categories can prove their effectiveness in school practice. Figure 8 graphically represents the responses of the subjects.



**Figure no. 8. The opinion of the students on the effectiveness of the training methods**

Items 5 and 6 asked for the opinion of the subjects on the advantages and disadvantages of traditional and modern training methods. As in the case of the aids, we present, in a table, the answers with the highest frequency.

**Table no. 3. The opinion of the students on the advantages and disadvantages of the traditional and modern training methods**

Category of means	Advantages	Disadvantages
Traditional	<ul style="list-style-type: none"> <li>- they allow for the transfer of a large amount of knowledge</li> <li>- they allow for the clear transmission of the message, without the risk of scientific mistakes</li> <li>- they favour an objective evaluation</li> </ul>	<ul style="list-style-type: none"> <li>- they focus too much on content</li> <li>- they favour mechanical learning</li> <li>- they might become boring</li> <li>- they do not much encourage communication</li> <li>- lockstep prevails</li> <li>- monotony, stiffness</li> <li>- they are focused on the teacher's work</li> </ul>
Modern	<ul style="list-style-type: none"> <li>- they facilitate rapid learning</li> <li>- they ensure focus</li> <li>- they determine a greater involvement of the students</li> <li>- they favour communication</li> <li>- they are centered on the student</li> <li>- they allow for cooperation</li> <li>- they facilitate learning by playing</li> <li>- they allow for positive feed-back</li> </ul>	<ul style="list-style-type: none"> <li>- they require a particular class design</li> <li>- they can lead to the fragmentation of content</li> <li>- there is a risk of conflict</li> <li>- they can make a mess in the classroom</li> <li>- they need more time to use them</li> </ul>

In table no. 4, we present the frequency with which the training methods are used in the student-supported teaching activities.

**Table no. 4. The opinion of the students on the training methods used in the lessons**

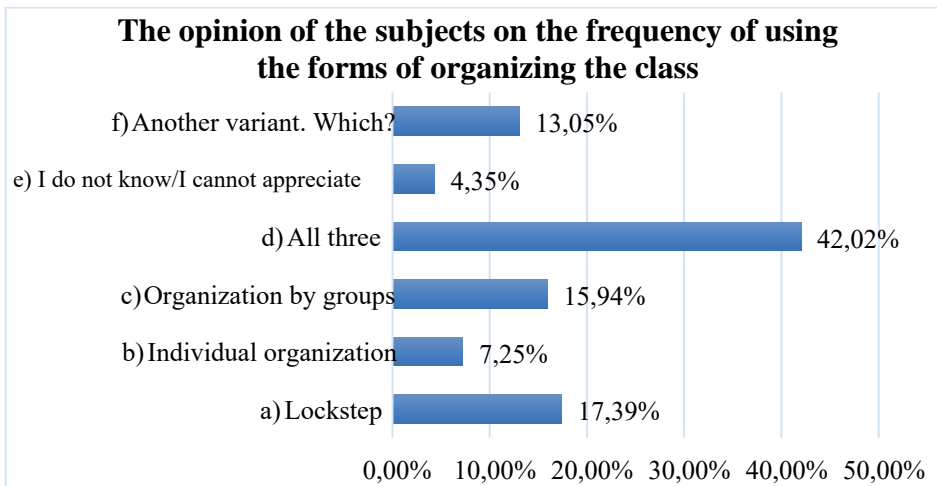
Conversation	73.91 %	Case Study	15.94 %
Explanation	60.87 %	Debate	33.33 %
The mosaic method	13.04 %	Use of the textbook	53.62 %
Exercise	56.52 %	The cube method	20.29 %
Experiment	13.04 %	Brainstorming	20.29 %
Problem-solving	30.44 %		

As we can see, the most commonly used methods were: the conversation, the explanation, the use of the textbook (belonging to traditional methods), but also the exercise, problem-solving, the cube method or brainstorming (pertaining to modern methods).

In explaining the options of the Master's students, we should also take into account the specificities of the subjects taught: Romanian or foreign languages.

The students' answers to the previous items can be correlated with those from the last item of the questionnaire, regarding the frequency of the ways the class of students is organized.

As there can be observed in chart 9, here too, students consider that a combination of all categories would be most appropriate.



**Figure no. 9. The opinion of the subjects on the frequency of using the forms of organizing the class**

In another variant, the students mentioned: lockstep + group organization; lockstep + individual and individual organization + by groups.

The results obtained from the use of the observation grid confirm the answers given by the students in completing the questionnaire. Thus, in school practice, both traditional and modern methods and training aids are used, the choice being imposed by the specificities of the training situation.

## 5. Conclusions

The results of our investigation confirm the working hypotheses, namely the fact that there is an improvement of the educational practice, which refers to its connection to the evolution of the new technologies, diversification of the teaching methodology, its focus on the possibilities and needs of each student. However, the choice of the teacher for a particular strategy, or for its component elements is determined by compliance with all the variables of the training situation. On the other hand, the evolution, the qualitative leaps cannot and must not eliminate the former elements, the traditional, but embrace, assimilate and optimize them.

We, therefore, advocate for the flexibility and creativity of the teacher, to find ways of projecting, organizing and conducting the teaching activities that are most appropriate to be effective, precisely by their selection. We also encourage the

methodological, actional alternatives, as a solution to successfully solve any educational or training situation.

We conclude that the teaching activity, the working methods with the classroom, the teacher's style must be reshaped according to the quality standards, current needs and evolution of the new communication technologies.

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