

## The Constructivist Paradigm and The Educational Practices

~ First degree teacher graduant **Mariana Viorica Canepescu**

**Abstract:** *The human being must be seen as an integral organism and a social individual, as a person that perceives, thinks and acts and as a complex of social relations. Because it is a bio-psycho-social synthesis, the individual cannot be taken for its social position or relations, but it also cannot be reduced to a complex of processes, skills and internal physical states, process which would be called psychologization of the human being. It can be analyzed simultaneously, from a substantial point of view (what the human being is, what are his structural components) and from a situational point of view (he is being placed in certain situation and he acts according to it).*

**Keywords:** pupils' performance in learning, cooperation, cooperative learning, "superficial" / profound learning approach

### I. Introduction

The human behavior, which is psychically controlled, takes place in a social environment where the individual takes other persons as "object" for his reflections and actions, and these become interlocutors and partners of the individual who is considered responsible for his own actions (GOLU, 2000).

GUY ROMANO (1992) was declaring in a study that a person can easily go to school

for a long time, for example for 12-13 years, without ever developing his thinking skills. This should determine us to elaborate learning activities in order to favor the development of thinking skills at pupils, in general, and of critical, problem solving, increase in intellectual autonomy skills, particularly.

This perspective regards an active and interactive learning, where the one learning is involved intensely, profoundly, with all his dimensions: intellectual, physical, emotional.

Each learning activity must be effective, interesting and, of course, close to the objectives respectively the results of learning, otherwise it can bring boredom and dissatisfaction to pupils.

Each pupil operates differently with information. This information can be "thought-provoking for one and insignificant for another. According to their own cognitive and emotional structure each pupil will accept the information by relating it to the representation already present in his mind" (Nicu, A., 2007).

The constructivist pedagogy "regards the individual and social way of perception of the environment, respectively the multiple perspectives, the necessity of expressing the contra-opinions, but which are argued" (Nicu, A., 2007)

The multiple dimensions of the interior world makes possible the numerous and different reactions to the exterior solicitations. These are most of the times different from the ones the teacher anticipated.

"If we wonder how the constructivism interacts with the critical thinking, we can observe that the critical thinking is the main component of a complete definition of education" (Nicu, A., 2007).

The critical thinking is seen by teachers as the core of the teaching-learning process. According to the principles of this paradigm, the teacher must create experiences that stimulate the development of certain alternative solutions to solving problems, a clear communication, which is significant for the pupils.

The teacher's role, according to the constructivist perspective is not to "spread the knowledge, but to give pupils occasions and stimulations" (Von Glaserfeld, 1994, in Siebert H., 2001).

To get knowledge is not only an individual process, but it is determined by its context. Its purpose is "to form the social pupil, as a product and subject of the interactions developed in the learning process, in group activities" (Cerghit, I., 2002) because the pupil "does not simply exist, but it becomes, he is in a permanent process of becoming, of status and role development" (Paun, E., 2002).

"The statements of the two authors avouch the idea that learning is the result of a complex interaction between the knowledge the pupils already hold, the social context where they manifest and the task of the teacher" (Nicu, A., 2007).

As E. Noveanu (1999) states we communicate with the pupils not to deliver ideas but to orient their constructive effort.

As a conclusion we can say that the position of the teacher in his relation with the pupil must be of co-participant to the lesson in order to help him in the learning process, under an instruction organized on cooperation.

## II. Hypothesis

In the context of the social group psychology and pedagogy we can approach the following hypothesis:

The pupils' performance in learning grows if we use the cooperative learning practice based on the cognitive and emotional compatibility freely expressed by pupils.

We started this research from the idea that, using the educational strategies which are specific to critical thinking, in classes organized on the cooperative learning principle, the pupils can acquire cognitive and social skills which are necessary in a democratic society.

I decided to verify if applying the constructivist pedagogy principles in the class,

using the teaching-learning strategies which are specific to the critical thinking and in a group context, I can develop in pupils a superior thinking skill and new interactional configurations within the group-class.

By organizing the class on cooperative learning principles we expect the way of thinking to change and also the interpersonal relations; the pupils' learning performance to grow – in the sense of applying the knowledge and using it on long term – if we use the cooperative learning practice based on the cognitive and emotional compatibility freely expressed by pupils.

By introducing the strategies which are specific to the development of critical thinking and organizing the class on the cooperative learning principles we expect the way of thinking and the interpersonal relations to change, these becoming factors of educational progress. The theoretical support of this hypothesis is that no cognitive structure develops isolated, but only within interactions with the other physical structures (emotional, evolutionary, and motivational) and not only in a social context.

### III. Conceptual delimitation

Within the social psychology we can find COOPERATION as a way of mutual psycho-social interaction that represents the coordination of efforts for a common purpose, a mutual interaction oriented towards an objective that cannot be achieved through pure individual efforts (Golu, 2000).

The researches in this field show that, at children, the cooperation behavior appears around 3 years old. If the individual and the group efforts in resolving certain problems are compared, the cooperative group activity

is almost always followed by positive effects, say the studies.

According to this premise we can highlight the importance of introducing a change in the present Romanian school that would offer the pupils the possibility of acquiring new constructive social experiences based on collaboration and cooperation in solving life problems and that would ensure the cohabitation in a peaceful world (DUMITRU, 2000).

In order to define the concept “*learning by cooperation*” we must mention the pedagogical perspective of the term learning: the process taking place in a didactical frame in order to determine behavioral changes at pupil's personality level by modifying their capacity of acquiring knowledge, skills, strategies and cognitive attitudes. The learning process involves cognitive dimensions but also emotional, motivational dimensions of the human personality that sustain “*the intentional modification or transformation of the human behavior, conditioned by experience*” (Cristea, 2000).

Conceptualizing, in the cooperative learning pupils must be educated to be one **for** the other and not one **against** the other, to develop their skills of solving possible conflicts in a constructive and not destructive way. This objective can be achieved by promoting, in schools, the learning based on cooperation.

Learning by cooperation takes place when pupils work together, sometimes in pairs, other times in small groups, in order to achieve a common objective: solving problems, producing or creating ideas and new solutions in a given situation.

There are a few **key-elements** that define the cooperative learning: the positive

interdependence (pupil must be helped to acknowledge the fact that it is for their own good if the other pupils have good results and it is a disadvantage if the others do not learn sufficiently); direct interaction, face-to-face between pupils: the individual responsibility of each member of the group, one in front of the other and in front of all the others; the pupils skills for interpersonal relationing and the efficient team work ; time for analyzing and evaluating the efficiency of the group's activity and for establishing some necessary measures of betterment of the team work (of working together) (Dumitru, 2000).

From this perspective, cooperative learning contributes to the development of pupils' skills to understand the other ones' perspective, both from the cognitive and the emotional point of view, to manifest their attachment, care for the neighbour. It contributes to the formation of positive attitudes towards learning, towards the subjects and towards school in general, but also to a series of constructive relations oriented towards solving tasks (problems).

Researches in the field highlighted a series of characteristics of cooperative learning:

- a) Open and sincere communication of relevant information between the participants;
- b) Emphasis on accentuate the resemblances and minimize the differences between the members of the group;
- c) Positive attitude of each member of the group, one in front of the other. A cooperation process leads to trust, friendship and mutual help, to the desire of respond amiably to the requests and needs of the other;
- d) Focus on task.

Cooperation leads to considering the interests which are in a possible conflict a common problem that has to be solved by common efforts, cooperation and collaboration. In the cooperation process for solving a certain task are known: the legitimacy of interests of each member of the group and the necessity of looking for a solution to meet the necessities and interests of everyone.

Even if cooperative learning seems easy to define and describe, putting it into practice is not that easy. It implies essential changes in the way in which learning is conceived and achieved and it infers:

- Transforming the classroom in a learning community where the individual competition based on confrontation is replaced by cooperation and collaboration by using the constructive controversy;
- Acquirement of skills and specific competences by teachers by which certain myths related to learning are surpassed.

The studies in the field prove that the learning efficiency depend on the degree in which pupils get involved in solving the learning tasks, on the effort they consume in the process. Getting involved does not only mean participate, but it also implies the desire and the effective involvement of the one that learns, constant and sustained effort in order to achieve certain goals.

The degree of pupils' involvement in learning is determined by the way in which they approach learning: there are two ways:

- 1) "Superficial" learning approach, which is based on the pupils' intention to solve a problem ("imposed" by outside "coercion") without a

genuine personal involvement. This type of approach implies memorizing the information, the facts, the events, concepts associated to factual information, without a personal reflection, but this type also implies difficulties in differentiate the general concepts, the principles and laws, from the proves and arguments that sustain them.

- 2) Profound learning approach, which is based on pupils' intention of solving a problem by getting involved personally. Learning presupposed a personal effort determined by the desire to adequately understand certain contents. The profound learning approach implies relationing the new ideas with the elder ones, establishing new relations between the new ideological content and the everyday experience, reorganizing the mental schemes by assimilating new ideas, opening to reality; instruction of an " *inner window*" through which the aspects of the surrounding reality become visible and easy to understand.

#### IV. Research Objectives

- O1. Project and compose a Constitution in the context of cooperative learning;
- O2. Applying certain strategies for developing the critical thinking;
- O3. Accentuate the degree of correlation between the strategies of critical thinking formation and those of team work;
- O4. Estimate the educational progress by analyzing the argumentation capacity and the skills to compose a Constitution according to the given requests.

#### V. Research Sample

I decided to minutely verify the interaction type influence – as cognitive-preferential compatibility and incompatibility – between the group members over the learning performance in school. I started from the idea that not every social interaction between the group members conditions the success level, in the formation of notions and intellectual operations, and that is necessary certain compatibility, regarding the intellectual preparation level, in the social and emotional relations.

In this research I used a sample of 85 pupils of three classrooms in the 3<sup>rd</sup> year in Secondary School, from School no. 195, district 3, Bucharest.

These classroom are naturally equivalent having an approximately equal number of pupils in each, a relatively uniform distribution of the number of girls and boys per classroom and we can say that they belong to the same educational culture, and this is proven by the fact that they belong to the same school and they have the same teachers.

The sample comprises:

- **A control group**, which comprises pupils from the classroom 3<sup>rd</sup> year A, secondary school, where the usual system of forming the groups was maintained, namely, the closeness between pupils;
- **An intermediary experimental group**, classroom 3<sup>rd</sup> year D, where the groups were imposed by the teacher;
- **The experimental group** where the groups were formed according to the pupils' preferences.

The representation of the sample is ensured by the approximately equal

chronological age of the pupils registered at a certain level of education and by their preparation level.

**THE RESEARCH**

The research was made at the beginning of the second semester, considering that until that date the pupils got familiarized with the subject "Civic Culture". (In the 3<sup>rd</sup> year and 4<sup>th</sup> years of primary school it is taught "Civic education" and it is continued in the 3<sup>rd</sup> and 4<sup>th</sup> years of secondary school with "Civic culture").

The same request is formulated for all groups: to compose a Constitution – according to an already learnt model – for a population lacking of civilization living on an island.

Group projects are made, the pupils are involved in the team work where they have tasks and responsibilities;

Each group member presents and supports with arguments each article of the Constitution, motivating the choice.

**EVALUATION** – is made by observations of the teacher at every classroom.

**INTERPRETING THE RESULTS**

A statistic analysis of the data will be made based on finding a correlation coefficient between the variables: control group, intermediary experimental and experimental groups, cooperation by preferential cognitive emotional compatibility.

We discovered that the results obtained at the experimental group of cooperation based on freely expressed preferences are productive. This was possible also because

the pupils are at an age where they know their own cognitive capacities and limits; they know their colleagues and their capacities.

That is why the groups can have a great compatibility between their members.

The main hypothesis of the research was verified, the results of the control group based on free cooperation being the best.

This research and its results permit the generalization, in the sense that the cooperative learning practice leads to better learning performances at pupils.

**CONCLUSIONS AND RECOMANDATIONS**

The analysis of the research data permits a general view over the correlation between the learning performance of pupils and the cooperative learning practice based on cognitive emotional compatibility freely expressed by pupils.

This research and its results permit the generalization, in the sense that the cooperative learning practice leads to better learning performances at pupils. But the problem is that the pupils previously dispose of the team work experience, the tasks be correctly and concretely explained and cleared, and the cognitive emotional compatibility of the group be permanently ensured.

Only after these conditions are met we can talk about a correct use of the cooperative learning practice, as a new strategy for the development of critical thinking and other psychosocial skills requested by the future world, where the today pupils will integrate.

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