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FACULTY OF PSYCHOLOGY AND EDUCATIONAL SCIENCES**

Summary of the thesis

Cooperation and competition in the educational context.

Applications in pedagogical subjects, highschool

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Cluj-Napoca

2014

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Cooperation and competition in the educational context. Applications in pedagogical subjects, highschool

Key-words: cooperation, competition, cooperative learning, didactical activity in groups, cooperative learning groups, students micro groups, relationship between cooperation and competition, cooperation within groups, intergroup competition, competition with constructive character, educational context, training situation, adolescent personality, roles of teacher, experimental design, pre-experimental research, experimental research, research objectives, sample of subjects, sample content, hypothesis, research variables, research methodology, analysis of experimental data, school performance, self-esteem, mediation of learning, interests and attitudes, communication and cooperation behaviors, courses of action, conclusions.

INTRODUCTION

Contemporary society is marked by profound changes and affected by numerous problems, searches solutions, changes in paradigms in all areas, including in the education. The unprecedented progress in science and technology, computerization and automation in all areas, globalization of the economy and strong contradictions in the economic, political, social, cultural and educational life require new educational policies. The current economic crisis generates lively debate on EU competition policy, on competition and cooperation, on the disappearance from the market of uncompetitive firms, small competitors and those with low performances.

It becomes necessary to review the manner of co-relationship approach to competition in schools so that students trained together in a spirit of cooperation with others, but also in cultivating the spirit of personal, individual performance and high aspirations, to achieve better results for the professional team in which they will integrate and personal success in any field.

Romanian educational policy, in recent decades, has emphasized collaborative learning paradigm, and the positive role of cooperative learning in the education/training of students. However, in our view, ignoring or denying the importance of competition in training future school graduates represents a danger, because young people are integrated into a world of competitiveness, competition and performance for which they are insufficiently prepared.

Adolescence is an age of contradictions, when the individualization and socialization are strong trends and coexisting, and we believe that a more balanced proportion between the

phenomenon of cooperation and competition in school practice would be more realistic, objective and would have advantages in personal development and social development of high school students.

A possible solution to the reconciliation between cooperation and competition would be the proximity to a potentially constructive competition, which brings benefits in personal and professional development of students, respectively an intergroup competition, but between groups in which students cooperate.

The thesis *Cooperation and competition in the educational context. Applications in pedagogical subjects, high school* has proposed a theoretical and applied approach of two phenomena, cooperation and competition, apparently conflicting, but actually being in a relationship of continuum or mutual stimulation of positive valencies, in certain circumstances. The research undertaken aims to discover the approach of the relationship problems between cooperation and competition in the Romanian educational space, establishing teaching approaches to harmonize the two processes, fore shadowing possible mechanisms in order to reduce antagonisms arising from competition, a competition design “potentially constructive” in the classroom, due to cooperation within micro-groups of students, so as to provide the security climate necessary to school learning.

THESIS PRESENTATION

The paper is divided into two sections, the first outlining the theoretical basis of the study on cooperation and competition, especially in the educational context, and the second containing practical research regarding the two phenomena.

Section I is divided into three sections: *Theoretical fundamentals regarding cooperation and competition*, *Considerations on the mediation of learning* and *Cooperation and competition in the educational context*, which is a summary of the main approaches identified in the literature, classic and recent, with reference to: cooperation and competition in teaching, and the issue of mediation in school learning in light of the new paradigms of contemporary pedagogy, implications of using cooperation and competition in adolescent personality development and diversification of teacher's roles in training situations involving cooperation and competition.

In chapter I, *Theoretical fundamentals regarding cooperation and competition*, cooperation and competition are presented as two phenomena present and necessary in human activities, each with a role in obtaining an objective. At the macrosocial and microsocial level, cooperation and competition are in a relationship of coexistence, of interweaving, and their constructive character depends on a number of factors: the concrete situations in which they manifest, their proper dosage, their use.

Excessive polarization of cooperation and competition is not benefic in any area of social life; in educational contexts, like in the political or economic ones, we remark competitive objectives, which determine personality affirmation, and objectives involved in social skills training. In a person's evolution, as J.-M. Monteil (1997) remarks, are equally important the processes of individualization, favored by the competition, and the social, cooperative processes. Promoters of the active school and nondirective pedagogy (M. Montessori, O. Decroly, E. Claparede, A. Ferrière, R. Cousinet, È. Durkheim, J. Dewey, etc.) have pointed out, since the last century, the role of social factors in formation of the child's personality and the need to reconsider the persons with the same age as a factor of individual change.

In our view, for a long time, the classroom, groups of pupils and students' social interactions with peers have attracted particular interests of education professionals. It was necessary the maturation of sciences and branches of them, as well as social psychology, social pedagogy, sociology of education, to reach the issue of social interdependencies within schools

and grades for pupils. Only in the development of explicit prosocial behaviors, of social and communication skills, students have the opportunity to truly cooperate and to consider their colleagues as a possible source of knowledge.

We believe that there is neither “perfect cooperation”, or “abolished competition” (idea proposed for the whole society by the scientist A. Kohn, 1992) in a human community. The two social phenomena coexist and constructively express their potential through a proper balance, a proper dosing, under the conditions of an educational climate favorable to growing educational opportunities for each student within the learning community.

In chapter II, *Considerations on the mediation of learning*, aspects of school learning are analyzed in terms of new paradigms of contemporary pedagogy. In our opinion, the comparative analysis of traditional pedagogy and modern pedagogy absolutizes, from didactic reasons, contrary aspects of cooperation and competition, competitiveness and interactivity.

Interactivity requires educational efforts focused on cooperation, but achieving educational outcomes realise through individual efforts, customized by the students taking responsibility for their own learning, their own purchases, including competitor quality of relationships with others.

Education and training of young generation involves both social skills, networking, active integration group formed by cooperative actions and functional cognitive skills, knowledge capacities, understanding, explanation, interpretation, critical thinking, making decisions, practical valuation of learning experiences, skills involving mechanisms of differentiation, individualization and customization, cultivated in competition. Based on the paradigm of competence and interactivity, cooperation and competition are necessary phenomena, being in a relationship of functional interdependence that ensures formation of student's personality.

Socio-constructivist perspective of learning and cognitive development has a lot of followers in Europe and America, including: M. Deutsch (1949, 1978, 1998, and 2000), W. Doise and G. Mugny (1998), W. Doise, J-C. Deschamp and G. Mugny (1996), J-M.Monteil (1997), S. Moscovici (1998), D.W. Johnson, R.T. Johnson and col. (1989, 1991, 1993, 1998, 2009), A. de Peretti, J.-A. Legrand and J. Boniface (2001) etc. The school of social genetical psychology considers learning as a social-cognitive process. W. Doise and G. Mugny (1998) states that social interaction leads to coordination of individual actions, which allows him to participate in more “developed” social interactions, which, in turn, become a source of cognitive development.

Another interesting theory on the mediation of learning is mediated learning experience theory supported by R. Feuerstein, rejecting the idea of static approach to cognitive processes. People are able to modify cognitive processes, they have a potential for change that can be enabled through favorable interactions. There are several types of mediated interaction, by which the teacher succeeds to improve cognitive performance of children, but also in affective, motivational plan, having a positive impact on personality traits with a major role in learning, such as self-esteem, self- confidence, empathy, altruism etc.

The learning occurs in social contexts, but not by random interactions, free of effects, but through interpersonal relationships with modeling force, generating change. Thus, it is considerable the effort of specialists in educational sciences to reveal the importance of the social factor in child development, to highlight the role of cooperation in learning and to balance the cooperation-competition report. In the context of classroom/school – learning community, we believe that the phenomenon of *constructive competition* would be a mobilizing factor, activation or enhancement of students' psychological resources, motivation, development of self-esteem and self-confidence.

The section on the didactical activity in groups and the mediation of learning emphasizes the importance of the didactical activity in groups as a form of organization of instruction and of education of the students, as an alternative to individual and frontal form of activity, whose maximum efficiency can be achieved by applying some principles, compliance of the methodology of organization, process of learning and evaluation, being absolutely necessary for the formation and operation of micro groups of students (4-5 members) in the cooperative sense. The student micro groups are defined as groups consisting of a maximum of 4-5 members who perform a common task of learning and that respect the conditions of cooperative groups.

In educational practice, the previous steps for the formation of groups are often ignored, and also their training as actual cooperative groups. To overcome the difficulties of the didactical activity in groups, default cooperative learning, it is important to know the specific methodological steps of didactical activity in groups: organizing learning groups/micro groups of students, designing didactical activities in groups, their conduct and their evaluation. We believe that a good knowledge of structural, functional, process aspects of the micro groups of students are under successful implementation of cooperative learning methods and techniques at all levels of instruction.

In chapter III, *Cooperation and competition in educational context*, we analyse cooperative learning and competition within the school, and reconciliation trends of the two phenomena. We also study the issue of adolescent personality development in cooperative or competitive contexts and teacher roles in such situations.

In our opinion, a cooperative learning group involves using students' micro groups in instructional purposes so that, working together and respecting the principles of cooperative groups, to maximize both the process and products for their own learning, and the learning of other colleagues. Also, although the theoretical perspectives on cooperative learning differs in literature abroad and in the country, there is a common core, on the idea of grouping the students to conduct joint training and education actions to achieve common goals, with effects of cognitive and noncognitive type, from which everyone involved benefits.

In the last two decades, promoters of cooperative learning, P.C. Abrams et al. (1995), J. Putnam (1997), D. W. Johnson, R.T Johnson and E.J. Holubec (1993), insists that social skills are not inborn, but they are learned, being as important as cognitive skills. So, effective cooperation between group members depends not only on cognitive skills, but also on a range of communication skills, decision making, leadership, influence, conflict management, negotiation and confidence building - without place them in last place - emotional expression skills that, in turn, are formed.

Promoters of cooperative learning, D.W. Johnson and R.T. Johnson (1989), D. W. Johnson, R.T Johnson and E.J. Holubec (1993, 2008), subclassify cooperative learning groups in three categories, establishing distinct methodological steps for each type of group: formal cooperative learning groups, informal cooperative learning groups and groups based on cooperative learning.

Cooperative learning group is in our view, a group structured on the principles of cooperation, equivalent to the micro group analyzed in the context of didactical activity in groups. The onset of cooperative learning is in teaching in group activity, originally developed in small groups, dyads and triads type, then in micro-groups of 4-5 members to ensure maximum effect in the process and products of learning.

A general conceptual framework allows an optimal connection to different methods of approach depending on the type of cooperative learning group (supported by D.W. Johnson, R.T. Johnson and E.J. Holubec) a correlation with the stages of formation and functioning of a team

education (adapting B.W. Tuckman's model) or comprehension of the stages model of cooperative learning from a socio-constructivist perspective on learning (model supported in Romania by M. Bocoş and C.-L. Oprea).

Regarding the variety of interactive teaching strategies, they can be used in human and within social disciplines and represent an advantage of the training and evaluation process, without undermining the value of other teaching strategies.

In turn, school competition has been studied in the past century, especially as a phenomenon in opposition to cooperation. Competitive relationships between people have always been present throughout history, in all areas, including the school (social subsystem) - area of competition in most cases, despite efforts to turn it into a space of cooperation.

Competition designates a “simultaneous search of the same purpose by two or more interdependent actors, so the probability that one of them reach the goal increases, while the other’s probability decreases” (M. Milcu, 2005, p. 46). For a long time, competitive aspect of school activity was correlated with students' motivational orientations and with the goals that they proposed, especially the award and penalty system (I. Radu, 1976, p. 192, D.P. Ausubel and F.G. Robinson, 1981, p. 491). J-M Monteil (1997, p. 72-76) lists the causes that lead to the school system as ”competitive system”, although the school is not declared a field of combative attitudes: evaluative practices involved in ranking, selection, differentiation, reward, application of evaluation methods that involve ambition, extrinsic penalties for school activity (except for a few students, ”avid for knowledge”), competitive games in schools.

There are many other factors that influence the competitive processes within schools including: teacher expectations, school and grade size, school transitions, school effectiveness, ethnicity, socio-economic status of the child, the child's cultural experience, restrictive or developed language codes, emotional intelligence, etc. (R. Harwood, S.A. Miller, R. Vasta, 2010, p. 408).

The competition in sport has a number of characteristics that can adapt to any situation of competition, including educational contexts (E. Popova, 2006): award, the arbitrator/arbitrators, selection criteria, competition rules, the achievements of competitors, competitors and possibly, supporters. Analysing from an isomorphic point of view, awards are rewards received by the best performing students (average, high ranking position in the grade, diplomas, books, trips etc.) there are assessment criteria, there are rules on the quality of school learning (the process and the

product) student achievements are learning results, and competitors are students. The prizes offered to students bring them appreciation, respect and recognition of their value, a special status, authority at cognitive level, sympathy and attention, etc.

Moreover, the competitive type situations appear in extracurricular activities, such as circles and scientific clubs, literary circles, literary magazines, theater circles, clubs, sports demonstrations, dance ensembles, fun games, community service projects, *e-learning* projects, tours, festivals, etc. Schools are “individualized” not only in terms of their academic results, but also on other issues: interpersonal relationships, established conduct rules, the extent of collaboration between teachers- parents-students-community, values and opinions, all of which outlining school “climate”.

School competition today is addressed in the broader context of theories on intergroup relations, social identity, social comparison and differentiation, social influence, the phenomenon of cognitive dissonance award etc. (W. Doise, J.-C. Deschamps and G. Mugny, 1996, J.-M. Monteil, 1997, A. Neculau , 2004).

Social comparison theory (the concept of “social comparison” was introduced in the social psychology by L. Festinger, in 1954) is available today for older or younger students. They are compared with the others in order to assess themselves correctly, to maintain a certain level of self-esteem, to propose new, superior performances, to grasp the similarities and differences in relation to others.

A. Kohn (1992, p. 4) makes a distinction between *structural competition* and *intentional competition*. *Structural competition* involves comparison with others, in a situation where only one wins, and the others lose, relating to certain criteria, for example how many winners will be or what awards are granted; *intentional competition* concerns attitude and desire to be the best, it is determined internally and can occur even in the absence of earnings or awards. Intentional competition may occur in the absence of structural competition and vice versa.

Competition (and cooperation) can be classified, based on the number of parties involved in the relationship of interdependence, such as: *interpersonal competition* (diad), *competition within groups* (between n persons belonging to a group) and *intergroup competition* (between individuals belonging to different groups) (adapted from S. Băncilă in S. Chelcea and P. Iluț, 2003, p. 100).

Based on levels of social influence, relations in schools realize at the interpersonal level

(between two people), the intra-group level (they are set within the group) and intergroup (between different groups, horizontally - for example, between parallel classes, or vertically - between different grades) (M. Zlate, 1972, p. 212-213). *We believe that intergroup competition also occurs between micro-groups within the same class.*

A special attention is drawn by group and individual behaviors in terms of concepts of "ingroup" (designating "us") and "outgroup" (concerning "others") concepts that refer not only to the actual membership of a person, but also to social categorization, self-identification and hetero-identification. The effect of favoring the *ingroup* (H. Tajfel et al., cf. P. Iluț, in S. Chelcea and P. Iluț, 2003, p. 187-189), the differentiation strategy of *ingroup* profit, illusion of heterogeneity at *ingroup* level and of *homogeneity* at outgroup level, the rivalry tendency with those outside their own group (op.cit., p. 187-189) are phenomena that have attracted the attention of researchers in the social sciences in recent decades.

We believe that the school context, just the idea of belonging to a particular group, which it is a specific idea of adolescents too, may be a factor for progress of the whole personality. At any level competitive processes would run in the education system, this leads to a dynamic individual and group behavior, and to the increase of students' motivation to achieve the best possible results or performance.

In conclusion, at the any social level there are, including in schools, competition trends of standardized conducts, consensus of value between individuals, ensuring collective cohesion. On the other hand, there are tendencies of social differentiation and evaluative comparison with others, and the competition responds to both trends.

Regarding the effects of school competition on an individual and group level, Morton Deutsch (1978, 1998), a psychologist who has studied for a long time *cooperative and competitive relationships* in teaching, established their *effects*, depending on various analysis criteria: the degree of involvement in learning tasks, group processes, effects on motivation in school learning, at motivational, emotional level, and in terms of self-esteem and attitudes towards colleagues.

D. Sălăvăstru (2004), based on recent studies, says that involvement in learning activities of students differ in their cognitive level and in their interpersonal style (competitors or cooperators). Cooperators are more flexible, they pay attention to interpersonal relationships, concerned with group benefits, while competitors are focused on individual results, willing to

affirm, less concerned with pleasant interpersonal relationships.

In our opinion, the training situations involve a combination of cooperation and competition in different dosages/proportions, and therefore we believe that it is possible to reconcile cooperation and competition in educational contexts. Even at the level of micro groups that we consider cooperative, competitive factors are inserted.

The competition should be analyzed more nuanced, because positive phenomena were raised, specific to competition situations in intergroup and within groups. Thus, if the group is devalued by another group, members tend to multiply efforts, they engage to a greater extent, to show greater cohesion, to respect the rules of the group. Competitions between micro groups determine at intra-group level the auto-affirmation motivation, the desire of all members to contribute to the group processes in order to achieve the final result, cognitive capacity training of all members. The anticipation of competition among groups give rise to negative representations of other groups and has the effect of creating antagonism, but there is a greater group dynamics and cohesion.

J-M Monteil (1997, p. 98-99) mentions ways determined by school representatives in Geneva on opportunities to reduce antagonisms in the case of intergroup competition by: positive initial categorization, mobilization of crossing belongings, representations of positive interactions and common fate shared or common goals.

Some researchers, including R.T. Johnson, D. W. Johnson (2009), M. Deutch (2000) consider that competition is *positive, if it is structured properly* when: emphasis is placed on the efficient completion of the task, the perception of participation in competitions is positive, causing self-confidence, social support is ensured, beyond the earnings obtained, challenging tasks are accepted, relationships with other competitors are cultivated and the ability to cooperate and compete is developed, the joy of participating in the competition is felt. Other factor contributing to the positive potential of the competition is the idea of the relative importance of earnings, the fact that all participants have a reasonable chance of winning or the existence of rules, procedures and clear criteria for winning.

On such a ground, of positive interdependence, ensured at micro-group level, we believe that we can build competitive situations with constructive potential between students, especially between high school students, as they manifest the need for individualization and group integration.

For teenagers, interactive training situations respond to the needs for appreciation, for belonging, affiliation, cognitive dissonance reduction; secondly competitive match type situations correspond to the need of esteem, self-realization, for self-improvement to a high level of aspiration. The determinations of adolescent psychology recommend the use of teaching groups during school and placing adolescents in competitive contexts is a dynamic factor, energizing, motivating their training and education activities.

In the current context, it is necessary to redress the balance competition-cooperation in the classroom, in terms of rethinking the relationship of complementarity, placing students in situations that lead them to be more competitive in order to represent optimally the group/team that includes community learning, local or regional community.

We believe that under the circumstances of the training focused on intergroup competition, new requests for the teacher appear, especially if a potentially constructive competition among students is desired. The teacher maintains the roles in the context of interactive learning and training because intergroup competition requires efficient management of groups of students, but adding new roles and tasks specific to competitive situations. In the competition, the teacher is the organizer of this situation, the coach of all the teams and micro-groups of students, the referee who proposes the competition rules, the jury member who ensures compliance with the rules, but also the one that offers prizes and awards.

In conclusion, in the context of learning situations focused on cooperation and competition, teacher roles resize and acquire new meanings, beyond traditional optics, where he was just a provider of information during school hours. Using cooperation and competition in optimal dosage in training situations depends on the teacher, who will have to fulfill different roles and demonstrate various skills generated by context interactivity, as well as the competition.

In **section II of the thesis**, we describe experimental research performed and it includes a chapter on pre-experimental phase of the investigation, a chapter aiming at the experimental stage of the research, and the chapter referring to the analysis and interpretation of experimental data.

In order to clarify a number of theoretical issues related to intergroup cooperation and competition in schools, issues that were at the base of the formative experiment, we performed a pre-experimental research, having the following objectives:

O1 – to investigate the views of students, teachers, principals and members of the Evaluation and Quality Assurance of Schools on the situation concerning cooperation and competition in Romanian schools, the relationship between the two processes, and the effects of the two phenomena in the development of students' personality;

O2 – to investigate the views of students, teachers, principals and members of Evaluation and Quality Assurance of Schools on the use of didactical activity in groups and competition, concrete ways of developing cooperation and competition in schools, the potential for a "constructive" competition, arrangements for the exploitation of constructive potential competition in school space, as well as a possible complementary relationship between cooperation and intergroup competition;

O3 – processing and interpretation /comparative analysis of the opinions of students, teachers, principals and members of Evaluation and Quality Assurance of Schools on the issue;

O4 – use of methods and techniques for determining the readiness of students to teaching subjects, in order to sampling the classes/experimental and control groups by administering pretest, recording media/marks obtained in the teaching discipline, administering self-esteem questionnaires, interests questionnaires and attitudes to studying and teaching subjects to school and school mediation.

In order to study the opinions, assessments and preferences of the students, teachers, principals and members of Evaluation and Quality Assurance of Schools on cooperation, competition and cooperation-competition relationship in the Romanian education system, an investigation was conducted using questionnaire-based survey, a method frequently used for this purpose. In the investigation were involved three categories of respondents: students (1) teachers (2) directors and members of Evaluation and Quality Assurance of Schools (3).

650 students were questioned from three theoretical schools, three high schools with vocational profiles, three colleges and two vocational schools in Cluj-Napoca, but 38 questionnaires were canceled due to objective reasons, the main reasons being the incompleteness and random answers, finally remaining 612 valid questionnaires. Random sampling was used; we elected an average of five students in each class, in the study being included the ninth, tenth, eleventh and twelfth grades.

The respondent teachers, numbering 254, were selected from the same 11 schools, colleges and vocational schools in Cluj-Napoca, having the quality of being headmasters of student respondents. In this way, the views of the two categories of respondents, students and

teachers have started from a similar reality. It was also performed a sample of 102 managers and members Evaluation and Quality Assurance of Schools, with an important role in offering more elaborate answers to items with open responses.

We designed and used two questionnaires, one for students and one for teachers, directors and members of Evaluation and Quality Assurance of Schools. The items in the questionnaires, the majority with closed answers were constructed so as to allow comparison of responses between categories of respondents, a part being even common items. On certain items we also requested the argumentation of option for a particular response option.

The information gained through comparative analysis and interpretation of data obtained from the three groups of subjects, allowed the highlighting of certain educational realities in the high schools and school groups in Cluj-Napoca.

In the pre-experimental stage of the research, were held discussions with teachers in the same subject from Arad and Zalau, were analyzed school performance and school documents of the intending student control group, were applied pre-test, self-esteem questionnaires and interests and attitudes questionnaires to studying and teaching subjects, to school learning mediation sources, so as to establish the equivalence between the experimental and control group of the research in the experimental stage.

In this respect, students averages were compared based on school documents (school catalogues), evaluation tests were administrated on teaching pedagogical subjects studied in school that year, it was applied the self-esteem questionnaire and interests and attitudes questionnaire, and interviews were conducted with teachers and headmasters. We also observed effective communication behaviors and cooperation of students and compared their portfolios at pedagogical disciplines.

The pre-experimental study performed allowed the shaping of beliefs and views on cooperation and competition useful to establish measures to optimize the educational process and increase efficiency in educational contexts.

First of all, all categories of respondents admit, in a percentage of over 70%, that interpersonal relationships equally based on cooperation and competition lead to optimal learning outcomes, but in the Romanian educational system only half of the respondents find a balance between the two processes. Thus, the respondents identified formal relations of competition type between students, generated by a "*culture of competition*", specific at the

macrosocial and microsocial levels, and educational system assessment; however, there are also informal cooperation relations, joint training activities, interactive strategies, etc.

There is a certain conception, relatively uniform, on cooperation. The school is designed to train people with team spirit and, in a lesser extent, has to form competitors. Cooperation has a positive effect in terms of students' personality development, especially in their social development because it is cultivating team spirit, communication skills and positive feelings towards colleagues.

Cooperation cultivates aspects of cognitive development, such as divergent thinking, creativity, academic progress. Students consider, in a greater extent than teachers and headmasters/members of Evaluation and Quality Assurance of Schools, that cooperation is an important factor in academic progress or in the development of creativity. For teachers and headmasters/members of Evaluation and Quality Assurance of Schools members it is more obvious the formative effect of cooperation, influenced tolerance, positive attitude toward school, motivation to learn being influenced.

Among the disadvantages of cooperation, the students mention those on the cognitive level because conflict of ideas (resolved, sometimes with loss of original, valuable ideas), it is necessary to be complacent, to reach agreement with others, but it also remarks the decrease of the involvement degree in the learning task of and individual responsibility; not least, the evaluation is done (sometimes) incorrectly.

It appears that, in the Romanian education system, there is a tendency to use variants of the group of students, in which roles and responsibilities are not distributed, but it is preferred to nominate a leader who "centralizes" actions and communication within the group; few respondents call commonly distributed roles in terms of teaching groups.

However, students' preference for cooperation is explained by the advantages of this form of social interaction: a more efficient learning, which is based on the exchange of opinions, inter-knowledge, valuing communication skills, assuming responsibility within group, cultivating feelings of friendship, solidarity, formation of team spirit.

Students tend to have greater prejudices regarding cooperation and competition. Thus, the students consider the competition to be more fun than cooperation, in opposition to cooperation, a factor that is genetic in nature and builds strong personalities.

Regarding competition, all categories of respondents admit in competition a powerful factor motivogen for learning, a factor of individual and group progress, but with possible negative effects on the interpersonal relationships, on the character traits and certain personality structures, disadvantaging shy, introverted, students with a below average cognitive level. A number of respondents highlighted the importance of situational analysis of the competition because there are various types of grades, different types of students and very different learning situations.

Competition, said most respondents has strong effects in the formation of competitive spirit, in academic progress, responsibility, creativity and motivation in learning, but discourages communication skills, positive feelings towards colleagues and tolerance.

The most common forms of competition are competitions, Olympics, tournaments and sports competitions, national assessments, examinations, and as forms of rewards are mentioned diplomas, awards, medium and high grades, scholarships, money, gifts, a good self-image, popularity or leadership, etc.

Respondents believe in the potentially constructive competition that determines progress, correlates with cooperation and is based on correct principles and rules. However, among the disadvantages of competition there are antagonistic relationships between students, negative traits of character, less noble feelings towards colleagues, low self esteem and the emphasis is placed on grades and averages, not on learning acquisition.

From the point of view of the teachers, principals and members of the Evaluation and Quality Assurance of Schools, competition has a constructive potential while the rules and arbitration are correct, competition is fair, performance is rewarded and if combined with cooperation. Cooperation in the group and intergroup competition would be an effective formula in which the two processes can boost each other and balance. This formula would generate motivation, academic progress, superior products, performance and successful projects. The competition between cooperative groups is a possible formula for potentially constructive competition at various levels in order to optimize the quality of Romanian education. Also, competition between schools would represent a source of increasing the quality of education in schools in Romania.

In line with the above data, we consider as being important the rethinking and reshaping of teaching activities in light of a report of complementarity, and not in light of a duality between

cooperation and competition in order to optimize the educational process in different educational contexts. Thus the following directions become relevant:

- restore a balance between cooperation and competition, based on the renunciation of certain prejudices and to a more efficient information of students and teachers about the pedagogical and training of both processes;
- initial and continuing training of teachers in the direction of using the optimum cooperative grouping of students, and the use of competition at a constructive level, with benefic effects;
- assumption of classroom interactive strategies by the teachers, and awareness of the importance of training students in communication skills, conflict management, negotiation etc.; otherwise problems are involved in the process and evaluation of didactical activities in groups, including low confidence and low motivation of students in this type of activity;
- implementation of instructional and educational activities that involve grouping students in formal and non-formal contexts, curricular and extracurricular;
- establishing of action formula linking cooperation within groups of students and intergroup competition and ways of reducing the negative effects of intergroup competition in the classroom;
- identify ways to increase the quality of education by using the competition criteria, based on clear rules, fair arbitration and rewarding performance at the level of students, teachers, principals and schools.

Chapter V, on the phase of experimental research, started from the consideration that cooperation within micro groups of students in a class and intergroup competition are two processes with positive values in personality development that reinforce each other, respecting a certain methodology.

The objectives of the experimental phase of the research are:

O1 – produce the sampling of subjects, establishing experimental group and control group in the formative experiment;

O2 – content sampling realization, so that lesson systems and other extracurricular activities performed allow concurrent use of the cooperation within micro groups of students and intergroup competition;

O3 – experimentation of lessons/lessons systems and extracurricular activities, application of knowledge tests and self-esteem questionnaires, observations of cooperation behaviors, measuring interest and attitudes towards teaching and learning subjects and towards different mediation sources of school learning;

O4 – recording and comparing the results obtained by students in classes/experimental and control groups on self-esteem questionnaire and assessment tests, developed in the pre-test, post-test and re-test stages;

O5 – recording and comparing the behaviors of effective communication and cooperation, the interest and attitudes towards learning pedagogical disciplines, the different sources to mediate learning in experimental and control groups based on behavior observation sheets or questionnaires of interest and attitudes;

O6 – interpretation of quantitative and qualitative learning outcomes achieved, the data obtained from the application of self-esteem questionnaires, the cooperative behavior observation and questionnaires of interest and attitudes towards learning pedagogical subjects manifested in classes/experimental and control groups;

O7 – make recommendations, suggestions and conclusions, regarding the conditions under which cooperation at intra-group and intergroup level competition are effective ways in obtaining school performance, the formation of prosocial behavior in optimizing their self-esteem and forming positive attitudes towards colleagues as mediators of school learning and teaching to learning.

The *general hypothesis*, on which the formative experiment was conducted, aimed concomitant action impact of cooperation within micro-groups of students and intergroup competition level on students' achievement and on their self-esteem. Specifically, *the concomitance action of intergroup cooperation and intergroup competition determines the achievement by the students of a better school performances and a higher level of self-esteem in the context of the study of subjects teaching, at the high school level.*

The effects of intragroup cooperation and intergroup competition also manifest in the formative plan, not just in terms of academic performance. In this regard, *secondary hypotheses* of experimental research were made, that focused *positive influence of cooperation concomitant action in micro groups of students and intergroup competition on:*

- *behaviors of effective communication and cooperation within groups of students*

and the classroom;

- *interest in studying pedagogical subjects;*
- *the attitude towards learning mediation.*

Research methodology included *data collection methods*: a pedagogical experiment, questionnaire, semistandardized interview, direct and systematic observation, and study of the case, school documents and curricular content analysis, content analysis of activity products and knowledge tests, but also *methods of processing and interpretation of data* and *methods of presenting the results*.

Sampling of subjects was performed as follows:

a. at the level of the tenth grades, specializing in teaching for pre-primary and primary school, in school years 2010-2011 and 2011-2012 an experimental group was constituted, consisting of two grades of the National Pedagogical College "Gh. Lazar" Cluj-Napoca, with a number of 61 students and a control group consisting of two tenth grades, with a total number of 61 students from the Pedagogical High School "Gh. Şincai" Zalău and Pedagogical High School "Dimitrie Țichindeal" of Arad;

b. in the ninth grade, specializing in teaching for pre-primary and primary school, in 2011-2012 school year, the experimental group was composed of a ninth grade with a number of 31 students from National Pedagogical College "Gh. Lazar" Cluj-Napoca, and a control group, another ninth grade, also from National Pedagogical College "Gh. Lazar" Cluj-Napoca, with a number of 32 students.

In order to select the sample of subjects we used the structure analysis of groups, direct observation, systematic student behavior, study of school documents, analysis of annual averages, pretest, self-esteem questionnaires, the conversation to ensure the representativeness of the control and experimental group, for the ninth and tenth grades and the approximate equivalence of these groups.

The content sample was selected from the teaching subjects taught in the ninth and tenth grades: *Introduction to pedagogy and theory and methodology of curriculum* (the ninth grades) and the *Theory and practice of training and assessment* (the tenth grades). *Formative experiment* was conducted in the ninth grades - 31 classes, and at the level of the tenth grades - 22 classes, the *independent variable* being the concomitant use of intragroup cooperation and intergroup competition in teaching approaches.

At the design phase of the experimental, two types of design gathered: *experimental design of cooperation situations within groups* and *experimental design of intergroup competition situations*. We have used methods of cooperative learning, but also competition formulas because both, especially during adolescence, respond simultaneously to the need of affirmation and the membership of high school students.

In order to assure optimal functioning of the micro groups of students, we considered that the core group based on cooperative learning is associated with what we defined as micro group of students, characterized by a very good knowledge between group members, longer-term operation, to accomplish the learning tasks, following the steps of forming an effective team, the compliance of rules and principles of cooperative learning, learning actions in the classroom, but also outside the classroom.

The security climate of learning within micro groups of students was ensured, correlated with the phenomenon of boosting students through various forms of intergroup competition implicitly through various forms of reward. Thus, we designed optimal competition formulas, starting from the aspects analyzed in pre-experimental stage and previous theoretical analyzes, in which we fulfilled the criteria of intergroup and interpersonal honest competition, clear judging criteria, rules and rewards, and opportunities for jointly celebrate victories and reconsideration of competition as a factor in personal becoming, even in less favorable situations, of a simply participant, because they can not all be winners, but all can be “potential winners”.

We aimed to achieve the general and specific curricula, values and attitudes promoted in high school in general, especially in the school profile. *To compare the effects of the independent variable on the dependent variables*, we developed evidence of knowledge in the subjects studied by students of the ninth and tenth grades, from the experimental and control group, we adapted Rosenberg self-esteem questionnaire with reference to the pedagogical classes, we developed a questionnaire of interests and attitudes that makes measurable interest for specialization and pedagogical subjects, attitudes to learning mediation sources (teacher, peers, manuals, books, Internet, family), we developed and analyzed the behavior observation sheets of effective communication and cooperation.

The data obtained by applying research methods and research tools were analyzed quantitatively and qualitatively, through inter-experimental design and the data collected in the pre-test, post-test and re-test were subjected to statistical interpretations.

The averages of the assessment tests were compared between the experimental and control groups, the ninth and tenth grades, with a favorable evolution of school performance, especially in the experimental grades, in the post-test, and the re-test stage, and in the pre-test stage there were no statistically significant differences between groups; thus, the general hypothesis of the research on the positive effects of independent variables on school performance was confirmed.

Also, the self-esteem level was measured in the pre-test and immediately after the formative experiment, intergroup differences being statistically significant. Interests and attitudes questionnaire applied in pre-test phase indicates no statistically significant differences, but in the re-test phase, even three months after the the holiday, there was a substantial change of attitude and interest in the specialty and educational disciplines, in the case of the experimental groups, the ninth and tenth grades.

Effective communication and cooperation behaviors have been pursued in the experimental groups, measurements of the pre-test and re-test phase indicate statistically significant differences, especially in the case of the ninth grade.

Quantitative and qualitative analysis of the data obtained during the stage of formative experiment leads us to believe that the experiments confirmed the general hypothesis, and secondary hypotheses. Students of the ninth and tenth grades, which were part of the experimental group achieved higher academic results in comparison with the control group, showed a higher level of self-esteem, greater interest to study the pedagogical disciplines, and positive attitudes towards learning various sources of school mediation.

Also, students in the experimental classes have changed attitudes toward cooperative learning and acquired, during the experiment, effective communication and cooperation behaviors, showing the ability to transfer these behaviors to other subjects studied during the school years. Ensuring concurrent actions of cooperation among micro groups of students and intergroup competition led to a number of positive effects on student development, both at cognitive and non-cognitive level.

Positive attitude towards colleagues, as potential mediators in school learning, is a gain in teaching approaches, being, in our view, essential in cooperative learning. However, the “face-to-face” placement of the students is not sufficient for the development of teaching

sequences, what is important is the attitude of trust in others and understanding other variants of the same reality.

Harmonious personality development of students is a priority in today's society where cooperation and competition coexist. School, as a social microsystem should form, in our view, teamwork and competitive spirit for optimal professionally and socially integration of future graduates. Cultural cooperation has been emphasized more in theory, in the Romanian educational system, but also in other parts of the European and North American. We believe it is more accurate to recognize competition as existing in society, natural and even necessary at times, and in school to doze it with the phenomenon of cooperation.

In this sense, a number of directions can be made for further research and teaching suggestions for action, which we present below.

First of all, we consider as essential the rethinking of competition in Romanian school, as a powerful motivation factor in school learning, vector of personal and social progress, without becoming predominant in relation to cooperation or generate possible negative effects on personality development and the specific dynamics of classes.

The study made in the pre-experimental stage of the research indicated a number of causes that lead to competitive type relations between Romanian school students: the assessment, “chase” after medias and high grades which generates the entire curriculum of the student, the culture of competition existing in family, school, society etc. Competition, but thought against its own possibilities, as a factor for self-improvement or in relation with those having the same level, leads to better results in cognitive level and beyond.

Competition, as well as cooperation, is learnt, and the existence of a correct conception on competition can lead to benefits in new approaches to teaching. In education policy and in the formal curriculum we remark the frequency of learning by cooperation in classroom. Basically, there is a misuse of the term, perhaps with some exaggeration, since no account is taken of the specific context of learning situations, their conditions, the methodological steps, methods, procedures and specific techniques.

We believe that for the teachers who are beginners or reluctant towards students' cooperation from objective or subjective reasons, a more traditional approach, but with clear conceptual cues could be a support, eventually reaching genuine cooperative learning. For example, ignoring the steps of forming a team, a micro group of students or the rules of

communication and cooperation at the group level may lead to disappointment, for teachers and students. Also, special attention needs individual and group assessment, process and product, in this area the students' dissatisfaction being higher, because they consider themselves unfairly assessed.

In another sense, the design of teaching approaches, where the cooperation within groups and intergroup competition coexist, could be closer to the concept of “potentially constructive competition”, already discussed in the literature. In this way, it provides students with optimal learning climate focused on collaboration, which leads to a greater self-confidence and self-esteem, appropriate behavior towards others and effective reporting to their responsibilities and desire to progress, know, self-improvement and affirmation. In order not to reach intergroup conflicts, we applied in the formative experimental approach ways to reduce antagonisms mentioned by the representatives of School of Geneva, and the effects were positive, beyond socio-cognitive conflicts inherent and dissatisfactions of some “defeated leaders”.

Confirmation of experimental research hypotheses, lead us to believe that the application to other subjects of the realized experimental design, would lead to similar results would be beneficial to students in cognitive and non-cognitive level.

There were superior school performances in the experimental group, compared with the control group, but it drew our attention in particular, the changing attitudes towards school mediation sources. If before the formative experiment the students thought the teacher as the main mediator of learning, paying less credit to other sources of knowledge, after performing the experiment students in experimental classes have become more open to colleagues, but also to other sources, including front specialized texts or non-formal education factors. This change in attitude is a long-term purchase, extremely valuable, and it is part of the principles of socio-constructivist approach to learning, each student being open to others perspective on reality. It thus produces stronger cognitive decentring, so necessary in adult life.

Regarding the interest in learning pedagogical subjects and chosen specialization, they were so obvious after the formative experiment, that we preferred the questionnaire of interests and attitudes at a distance of three months, in the re-test stage. There were statistically significant differences from pre-test between experimental and control groups, the experimental grades maintaining their positive attitudes towards peers as facilitators of learning.

We consider very possible the extension of such attitudes in other subject areas and subjects in similar application conditions of experimental teaching approaches described in this paper.

As a result of this research, the following suggestions can be made to optimize the teaching of teachers in education:

- training of teachers in terms from the perspective of an educational policy, which promotes the formation of team spirit required in professional and social space, and the formation of competitive spirit, useful in personal affirmation;
- competition should be reconsidered as an important vehicle in achieving performance in any field, including school learning;
- review of competition-cooperation relationship and optimal dosing of the two phenomena in the educational space, by reducing antagonisms between them;
- the use of didactical activity in groups and cooperative learning, based on their compliance with specific methodologies;
- knowledge of the main difficulties encountered in the course of teaching conditions on groups and cooperative learning, and the ways to overcome them;
- promoting a valence formative training from a socio-constructivist perspective;
- experimenting, with more courage, the interactive approaches in conjunction with competitive factor, in the different subjects and curricular areas, as producing positive effects on personality development of students.

In conclusion, within the research conducted, we followed the development of educational interventions that lead to effective teaching, but also the learning and educational activity of students, by capitalization of simultaneous action of intragroup cooperation and intergroup competition, action possible and even desirable in compliance with certain formative steps previously experienced. Cultivating an open attitude of teachers not only in relation to cooperation, but also in relation to the competition, is useful in training and educational situations. We believe that the approach of cooperation-competition relationship in school space is an open field for research and pedagogical innovation, and the combination of the two phenomena is natural, normal, necessary and generating personally and socially progress.

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