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**POSITIVE VALENCES OF COOPERATIVE LEARNING AT THE  
YOUNG SCHOOL AGE STUDENT**

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***Abstract***

The present paper aims at the theoretical presentation of the particularities of the cooperative learning model and learning methods, as well offering practical guidelines for implementation in the level of the primary cycle. The study highlights the positive valences of cooperative learning, for the purpose of their valorisation by the teachers in classroom practice. The structure of paper reflects the directions of analysis in the research underlying this study. We emphasize the main elements supporting a cooperative way of learning: the principles of cooperative learning, ways of organizing groups, designing work tasks in cooperative groups, coordinating the teaching activity by groups. The research describe in detail, how to design and conduct the pedagogical experiment undertaken and details of methodological nature for each stage of the research. As we were interested in the particular application of the methods of cooperative learning to the primary school, in the discipline: Romanian Language and Literature, we present research results on the effectiveness of applying the different methods of cooperative learning for children at this level (56 students from „I. H. R.” Secondary School – Urziceni). The conclusions of the research is going on two main axes of analysis: 1. *pupils of small school age* – respectively, the positive impact of cooperative learning methods on social skills training, on school performance, motivation and aspirations of students; 2. *a group-class of students* – respectively, the positive impact of cooperative learning on classroom climate and group phenomena such as group cohesion.

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**Keywords:** Cooperative learning, group cohesion, intervention program, Romanian Language and Literature.



## 1. Introduction

The multiplication of the acquisitions of education sciences has led to radical changes in the process of school education and learning. Thus, there is a growing interest in the promotion of interactive learning models that allows the teacher to develop the student's skills, such as: sociability, communication, interactivity. Cooperative learning is a model of training based on the theory of social learning, validated through research and operationalized through procedures that the teacher can apply to the classroom. The opinion, that the positive affective climate in student collectives makes a crucial contribution to achieving superior performance, is widely spread and accepted. Research in this field demonstrates that the cooperative learning model has positive effects in cognitive, socio-affective and motivational development. Teamwork has a major influence on the development of students' personality, the presence of interaction with partners being an intellectual incentive and a trigger for the exchange of views and information. The teaching materials can be approached from several perspectives, and the possibility of verbalizing knowledge ensures better transferability. At the same time, teamwork solves the drawbacks of individualized learning, giving considerable weight to the social dimension, through interpersonal relationships (Jolliffe, 2007).

The methods of cooperative learning are interactive. They reduce overload and help rationally organizing of learning time. Through their appropriate usage, problems related to communication, mutual learning, relationship, accountability, development of independence in thinking and action can be solved. In other words, "students are taught to learn", thing which is not experienced in traditional education. Involving students in their own training, cooperative learning is an interactive method that is considerably distant from the traditional teacher-centred educational paradigm (Bocoş, 2013).

Cooperative learning is the foundation for many other instructional innovations such as: curricular integration, critical thinking, active reading and problem solving. Cooperative learning is more than just a method; it is a set of methods and techniques by which students can be determined to work in groups, the reason for which can be considered a *didactic strategy*. The strategies of cooperation offer to the students the opportunity to concretise their need to work together, in a collegial and mutual supportive climate. Students who will cooperate during the learning appreciate and encourage each other, recognize the advantages of learning and perceive the school as a way of personal and social fulfillment.

### 1.1. Positive valences of cooperative learning

The positive valences of cooperative learning can be structured in two directions: school performance and interpersonal relationships (Jolliffe, 2007). Cooperation provides an open relationship between partners, develop attitudes and behaviours based on trust, promoting the formation of positive attitudes toward learning and school. By using cooperative learning methods in the classroom, the communication and intergroup relationships can be improved. Also, cooperative learning contributes to the integration of the students with disabilities, as well as of children with learning problems or low self-esteem. The formative-educational valences which recommend cooperative learning are the following: 1. the development of communication competences; 2. the formation and development of functional competences (processing, systematization, restructuring and use of knowledge), active listening skills, psychosocial skills; 3. the development of self-esteem; 4. the cultivation of participatory spirit; 5. the formation and

development of the capacity of cooperation, team spirit; 6. developing motivation for learning; 7. development of prosocial attitudes and behaviours; 8. the development of inter-evaluation and self-evaluation capacities; 9. the development of critical, creative and lateral thinking; 10. the development of creativity; 11. the development of interpersonal intelligence; 12. strengthening self-confidence; 13. the development of individual responsibility; 14. cultivating tolerance, respect for diversity; 15. focus better on learning and less disciplined behaviour; 16. adaptation, well-being; 17. reducing the time to solve problems (Gillies & Ashman 2003; Jolliffe, 2007; Kagan & Kagan, 2009).

## **2. Problem Statement**

In the specialty literature it is argued the idea that organizing learning within a framework that balances cooperation and competition provides a positive and motivating climate with beneficial effects in the field of academic knowledge and socio-emotional development of the young school age students. Psychopedagogical literature in Romania is somewhat poorer, in terms of information on learning through cooperation. That is the reason why, based on the studies of foreign authors on this topic, we have carried out a research to support teachers who have decided to integrate the principles of cooperative learning into school practice and to promote their values. As we were interested in the particular application of the methods of cooperative learning to the primary school, in the discipline Romanian Language and Literature, we made a research to emphasize the effectiveness of applying to such methods.

The structure of our study reflects the directions of analysis in our research. Firstly, we described the student in the context of the class-group focused on the student's young school age, as subject and object of education. Thus, we realized both the psychological profile of the pupil of small school age and the training profile corresponding to the primary cycle, as it appears from the current curriculum documents. We start from the premise that a good knowledge of pupils, with everything that is specific to them individually and in groups, can lead teachers to adapt the educational process to the level, needs and interests of the children. Next, we identify the main characteristics of the class of students as an educational group, the influence of the class climate on the development of the child of a young school age. In the experimental stage of research we applied some of the most recognized models and methods of cooperative learning: "Learning Together" Model (Johnson & Johnson 1975); Structural Model of Cooperative Learning (Kagan, 1985; Kagan & Kagan, 2009); Team Cooperative Learning (Slavin 1985); Student Teams-Achievement Divisions - STAD and Teams Games Tournaments - TGT (Slavin 1985/ 1995); Group-Investigation Method (Sharan & Sharan, 1985); Mosaic/ Jigsaw (Aronson, 1978).

## **3. Research Questions**

The general theoretical objective of the research is to highlight the positive valences of learning methods through cooperation in the educational process, in order to improve the school performance, the formation of social skills and the increase of the group cohesion in the small school age. In the applicative plane we analyzed the relationship: didactic strategies that use the norms of cooperation, school performance, increased motivation for learning, formation of social skills by qualitative and quantitative interpretation of the pupils' results in the knowledge tests and the applied scales of opinions and attitudes.

The main hypotheses of this research were:

H1: We presume that using methods of cooperative learning predominantly in the teaching and learning of Romanian Language and Literature lessons in the fourth grade determines the development of a positive and motivating climate that facilitates the improvement of the school performance and interpersonal relationships, but also to improve the effective communication of the group.

H2: If using didactic approaches based on collaborative learning methods and techniques, then they will increase the cohesion of the class of students.

#### **4. Purpose of the Study**

Our research has started from the study of cooperation within the micro group of pupils in a class (Gillies & Ashman, 2003) considered as a process with positive valences in the formation of pupils' personality, under observance of a certain methodology. The research is an observational-experimental investigation, carried out within the "I. H. R." - Urziceni Gymnasium, at the level of two classes / lots of subjects. The participants in the research are students who have been integrated into an experiment to highlight the formative effects of the didactic strategy that uses the rules of cooperation in the teaching and learning of Romanian Language and Literature in the 4th grade. Through this research we have sought, as well as, to experiment the positive effects of cooperative didactic approaches in the socio-emotional development of the students. Since classes are naturally constituted under pre-existing research conditions, it is based on the idea that all subjects (students) are about the same age (so, in principle, we identify the same characteristics of the biopsychosocial profile) and, relative, the same intellectual level. Establishing the equivalence between the two classes (experimental and control) was done by comparing them in terms of number, gender composition, school performance (closing averages of the previous year). Thus, in each class, sub-samples of very good, good, mediocre, weak subjects.

The experimental group consisted of 24 students of 4th grade B aged between 10 and 11, coming from different social backgrounds. The gender structure is the following: 13 girls and 11 boys. Five of them have difficulties in learning and relationship. The specificity of this collective consists in heterogeneity, both in terms of intellectual possibilities and engagement in instructive-educational activities, as well as from behavioural point of view. The control group, represented by 23 students of the 4th grade A, included 11 girls and 12 boys. Two pupils have deficiencies in learning and relationship.

#### **5. Research Methods**

In order to validate the hypotheses, we applied a set of research methods such as: direct and systematic observation of pupils' behaviour, conversation, pedagogical experiments, questionering survey methods, sociometric tests, knowledge assessment tests, the research of curricular documents, statistical analysis.

The research involved three stages, very well-timed, each having specific objectives and an appropriate methodology for achieving them. In the following lines, we present in detail the methods and tools used during each of these stages, in accordance with the research objectives and hypotheses.

### **5.1. Initial stage**

This stage (15 September - 15 October) required the necessary steps to be taken to substantiate the research, and in the course of the pretesting of the groups / classes involved in the research. The initial evaluation carried out at the beginning of the training program aimed at investigating the following aspects: 1. the level of preparation of students in Romanian Language and Literature; 2. level of social and emotional abilities - effective cooperation and communication behaviours; 3. level of cohesion in the pupil's class. In relation to each of these directions of research, we have applied an appropriate research tool (Nicu & Conțiu, 2010). In order to appreciate the students' acquisition in the Romanian Language and Literature, we applied to the two classes an initial assessment test. The knowledge test focused on the specific competencies of this discipline, as required by the curriculum. The objectives were: a. Pretesting groups / classes participating in the research to know the level of knowledge, attitude, interest's and aspirations of pupils for learning at the discipline of Romanian Language and Literature; b. Knowing some particularities and manifestations of group processes within the groups / classes considered.

To analyze the increase of class to class cohesion, as a result of the systematic use of collaborative learning methods and techniques, we calculated the cohesion index, both in the experimental class and in the control class. The calculation of the cohesion index prior to the experimental stage was important for each group as it reflects the effectiveness of the didactic approaches undertaken.

### **5.2. Experimental stage**

At this stage (during 15 October - 30 March), on the basis of the centralization of the information obtained during the observational stage, of their processing and analysis, the teaching-learning-evaluation activity at the Romanian Language and Literature was carried out by introducing the "progress factor" to the experimental class. The didactic activities carried out in the formative experiment at the Romanian Language and Literature discipline in the 4th grade were ways of implementing the methods and techniques of cooperative learning included in an *intervention program* applied to the experimental class. The experiment tracked the following variables: a. independent variable: systematic use in Romanian lessons of methods and techniques of learning by cooperation; b. dependent variables: 1. level of school performance; 2. the level of social and emotional abilities expressed through efficient communication and cooperative behaviours; 3. the level of cohesion of the group / class of students.

The objectives of this stage were: a. Introduction of the "progress factor" to the experimental class, respectively, the systematic application of methods of cooperative learning in Romanian language lessons, aiming to involve all pupils in their own training process and to obtain better results; b. Observing and monitoring the evolution class of the pupil both in terms of learning outcomes and in terms of behaviour, attitudes / motivation towards learning.

The process of experimentation was integrated organically into the educational process and the teaching/learning process of the Romanian Language and Literature class IV, respecting the official curriculum (Jolliffe, 2007; Kagan & Kagan, 2009). Didactic activities structured according to models and methods of cooperative learning were organized with the experimental class within 25 hours (1 hour / week). Content in the 25 hours was structured on lessons, aiming to achieve their goals. For each objective of the lesson, a cooperative activity can be used. Designing a lesson therefore involves selecting the most appropriate activities, then being integrated into the most appropriate design. Since the beginning of the

experiment we have been looking for ways and variants of using collaborative learning methods and techniques, depending on the specifics of pupils age, ensuring them a playful and activating character. Thus, we used the following methods: Mosaic, STAD, TGT, Group Investigation, Teaching Mutual Learning, Cube, Gallery Tour, Round Table, Middle Pencils, Blind Hand, etc.

Methods of cooperative learning have been used in Romanian language lessons in the experimental class, in each unit of learning and in each lesson of the *intervention program*, becoming a source of higher school returns. The purpose of the implemented program was to train and develop skills specific to the Romanian language, as well as the practice of cooperative learning and the formation of social skills.

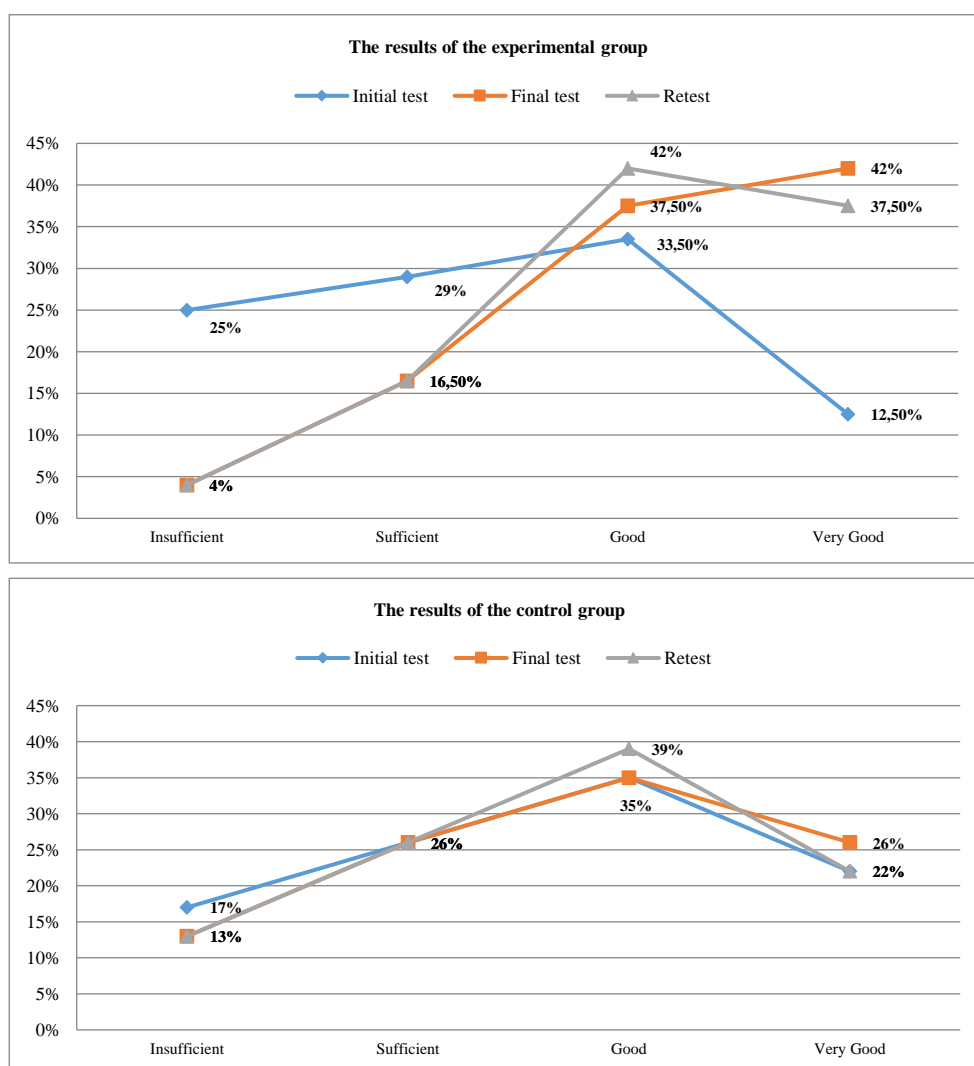
*The intervention program by implementing the cooperative learning methods* applied to the experimental class is done in accordance with the curriculum of the Romanian Language and Literature for 4th grade and was structured by following the three types of lesson designs identified by Kagan and Kagan, (2009). During the experimental phase, we monitored the dynamics of the school performance recorded by students by testing the subjects in different phases of the experiment. The progress tests were applied both at the end and during the learning units included in the sample content. For the applied tests, which mask the tendency of the school performance of the samples, the content to be evaluated was determined, as well as the performance descriptors, taking into account the provisions of the current school curriculum. Knowing the level reached by students has helped us to identify the positive aspects and gaps in the training process, by reference to the objectives sought. Thus, we followed each student, noting what difficulties he encountered in solving the items contained in the tests applied to the Romanian language. In order to improve or even eliminate these difficulties we have organized training activities involving the use of cooperation methods.

### **5.3. Final stage**

The final / post-experimental stage (April 1 - June 15, posttest: April - May, retest: June), whose objective was: a. Final testing / testing of dependent variables and recording of results after the implementation of the cooperative learning program, with a view to highlighting positive effects on pupils. This stage, considered as a control stage, involved several sub-stages, namely: the final stage of the final knowledge test conducted after the completion of the pedagogical experiment in order to measure and compare the school performance of the two groups / classes (experimental and control). This highlights the beneficial effects of the predominant use of learning methods through cooperation in the teaching and learning process of the Romanian language and literature in the experimental class. The knowledge test applied to the two batches had a similar structure to that of the initial stage, aiming at assessing students' oral and written skills. The second sub-stage, that of the administration of the initial stage questionnaire, on effective communication and interpersonal relationships in classes. In the next sub-step, the sociometric test was again used to highlight the differences in the level of cohesion of the groups surveyed. Finally, the subtest retesting conducted in the first part of June to verify the stability over time of the completion of the experiment, the specific knowledge and abilities, the Romanian Language and Literature studied during the didactic experiment. By comparing the results obtained by the subjects at different stages of the investigation, we checked the hypotheses formulated and we deduced the conclusions of the research undertaken.

## 6. Findings

In order to verify the hypothesis from which we left, namely that the use of cooperative learning methods - in Romanian lessons - has a positive impact on school performance, we have carried out a comparative analysis of the results obtained by the students in the verification tests for the applied knowledge in various stages of the research (initial, final, retesting). The tests were applied to both the experimental and the control class, each time having the same degree of difficulty. The graphs below show the comparative analysis of the grades obtained by the students in the experimental and control classes, in the three pretest, posttest and retest evaluation tests, by qualifier categories (Figure 01).

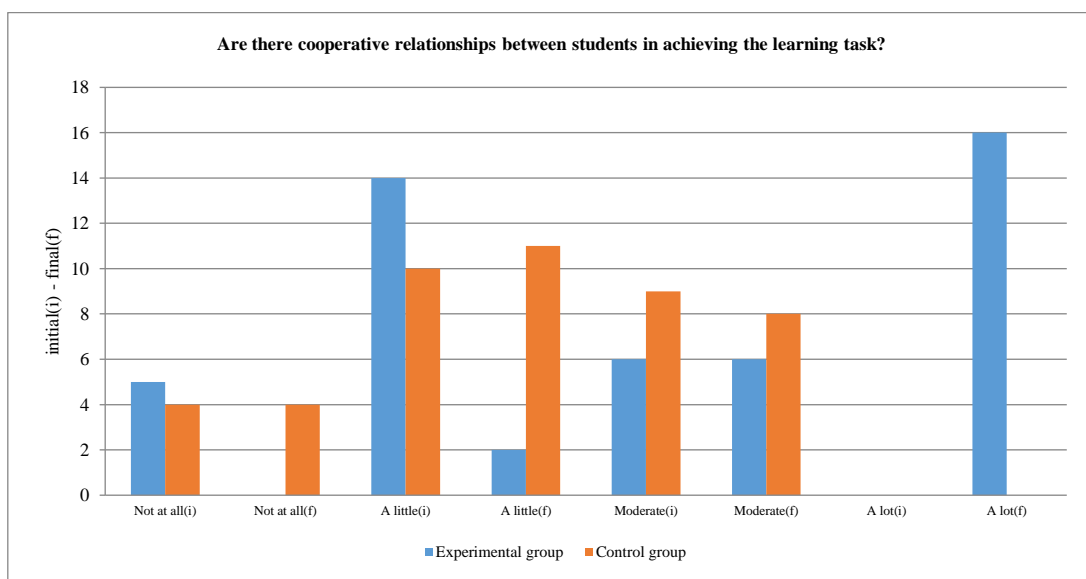


**Figure 01.** The comparative analysis of students' results at the knowledge assessment tests by qualifier

The comparative analysis of the results recorded in the initial, final and distant tests indicates a higher efficiency obtained by the experimental class compared to the control. Thus, in retesting the percentage average of the markings indicates a 37.5% for Very Good in the experimental class, compared to only 22% of Very good in the control class. Also significant are the percentages representing the Insufficient rating, 4% - the experimental class, compared to 13% - the control class. Observing the results, it can be concluded

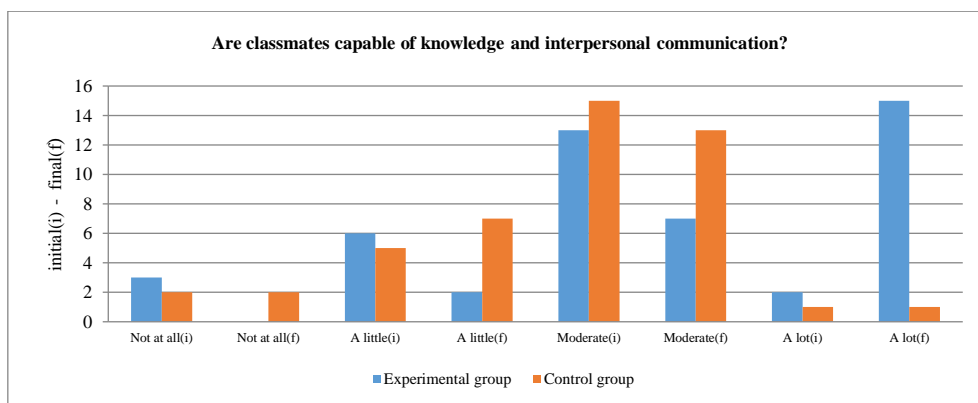
that the use of collaborative learning methods and procedures in Romanian language lessons has a positive effect on student performance. Therefore, *the hypothesis is confirmed that the systematic use of didactic approaches based on cooperative learning methods and techniques will lead to the improvement of student performance.*

To see if and how the application of collaborative learning methods influences group cooperative behaviours and effective communication, we have made a comparative analysis of the results obtained by the subjects in the questionnaires. In this article, we will only show those results that are strictly relevant to the hypotheses and objectives of the research. The responses of the experimental lot to the question of cooperative behavior in teamwork reveal a significant increase in the number of students cooperating in achieving a learning task than in the control group where no significant change is observed (Figure 02).



**Figure 02.** The comparative analysis of group cooperative behaviours

Similar results can be found in the questionnaire on effective communication behaviour, the results revealing an impressive increase in the number of students in the experimental group that communicates with classmates.



**Figure 03.** The comparative analysis of effective communication behaviours



The answers to the two questions in the questionnaire show that the general hypothesis of research is confirmed: *the systematic organization of cooperative structured microgroup learning leads to significant changes in the students' effective and cooperative communication behaviors*. Regarding the increase of the intragroup cohesion, following the application of cooperative learning methods at the level of the two classes, the following assertions can be made. The initial cohesive index obtained for the experimental class is:  $Ic_{[experimental]initial} = 0.82$ , a small index below the value of 1. For the control class the value of this index is also small:  $Ic_{[control]initial} = 0.63$ . The sociometric test from the initial stage was also applied at the end of the experiment in the post-experimental phase at both levels to see the possible differences produced during this time slot, obtaining the following values:  $Ic_{[experimental]final} = 1.02$ , respectively,  $Ic_{[control]final} = 0.64$ . Comparing the values of the group consistency indices in the initial and the final stage at the level of the experimental group, we find that in the case of the experimental, lot the cohesion increased considerably, due to the intervention of the experimental factor, in this case, the application of cooperative learning methods and techniques. In the control group, the final index is almost equal to initial index, the difference being insignificant (0.01) between the two values. It can be deduced that in the case of control group the cohesion group stagnates, with no significant changes (Figure 03).

Therefore, the results obtained by applying the sociometric test confirm the hypothesis according to which *the initiation of didactic strategies that use the rules of cooperation within the micro group of pupils determines the strengthening of the cohesion of the class of students included in the experiment*.

## 7. Conclusion

In our research, we use pedagogical interventions that will lead both to the efficiency of the didactic activities and students learning activities, by valorising the methods of cooperative learning in classroom practice. The results highlighted the high effectiveness of the didactic learning strategy through cooperation, compared to the traditional didactic strategy. The analysis of the results obtained by applying an intervention program based on the use of cooperative learning methods confirmed the hypotheses of the research, emphasizing that in the classroom where a cooperative atmosphere was created and maintained, students feel helped with progress in learning and personally supported. Equally, students feel active and deeply involved in teaching activities. Also, research findings support the idea that using cooperative learning methods determines the development of a positive and motivating climate that facilitates the improvement of school performance and interpersonal relationships, increasing communication and group cohesion. These methods form the basis of learning strategies that are ways of organizing pedagogy of a strong, easy and pleasant learning with active participative character. It is confirmed that the use of collaborative learning methods has significant positive effects, both academically and relatively. The acquisition of pupils from the cognitive sphere (knowledge, abilities, capacities) in the field of Romanian Language and Literature, as well as from the behavioral sphere (cooperation, communication) acquired through the methods of cooperative learning have demonstrated their stability over time.

The benefits of using collaborative learning methods are multiple and aim at a broad range of issues. We will enumerate only those that have been validated by the present research: 1. provides students with the opportunity to develop their interpersonal relationships, the ability to communicate, to form new skills and social behaviors; 2. involves intellectual, verbal and socio-emotional interactions between pupils,

contributing to the development of intellectual (critical thinking) and social skills (active communication, argument and counter-argument, etc.); 3. favors conscious and active participation of learners in learning; 4. positively influence the dynamics of school performance; 5. encourages an open, active, relationship and communication attitude, a pro-social attitude; 6. encourages self-affirmation of pupils; 7. favors interactive engagement of students involving and learning tasks; 8 stimulate increased interest and motivation for learning; 9. influence group dynamics by favoring internal processes (group cohesion, stability, permeability, etc.). The experimental perspective on cooperative learning reinforces our conviction that this strategy has beneficial effects on the quality of the educational process and can be successfully incorporated into the didactic activity. Finally, we can affirm that the conclusions of the research going on two main axes of analysis: 1. *pupils of small school age* – respectively, the positive impact of cooperative learning methods on social skills training, on school performance, motivation and aspirations of students; 2. *a group-class of students* – respectively, the positive impact of cooperative learning on classroom climate and group phenomena such as group cohesion.

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