

## COOPERATIVE WORK IN THE CLASSROOM. OPINIONS BY UNIVERSITY STUDENTS

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### ABSTRACT

*Opposite the traditional methodology, cooperative work is a key element for the education reform in university environment. It is based on a holistic conception of the teaching / learning. It is a practice that implies linking classroom efforts, agreements and reciprocal relationships among people. Social exchange is the principal axis of classroom organization. It answers the plurality; allows interaction from the difference; and is a gap in the general education curriculum and the university one in particular. Our research was focused on the promotion of cooperative learning in the university classroom, in 4 subjects of the Teacher Degree in Early Childhood and Elementary Education. Our goal was that students valued cooperative learning as a teaching strategy and alternative to traditional learning methods, and analyze potential gender differences in attitudes to the previous methodology. The study was descriptive in nature and was framed within a pre-experimental methodology with a pretest and posttest design. For 6-8 class sessions of 90 minutes, 69 students in total, guided by the teacher, lived their own experience of cooperative work, developing practical content related to subjects of these activities, in small and big groups. Students were assessed for their skills in cooperative work, before (pre-test) and after (post-test) of the intervention plan in the classroom. The results of this experience testify opinions that future teachers of Early Childhood and elementary education give to the cooperative teamwork as competence for their own personal and professional development.*

**Keywords:** Cooperative work, higher education, active methodologies, perceptions and attitudes of university students.

### INTRODUCTION

European Convergence has brought methodological changes in university classrooms, which have focused more on learning and individual learning than on the teacher who teaches. This has led to a teaching work that emphasizes active student participation and the use of tools in the classroom, different from the traditional ones, allowing them to be players in this process and help them find information, analyze it, share it, edit new and especially learn to manage their own learning processes, individual or in group, and design materials to facilitate students acquire such skills [1].

In recent years, cooperative learning is being promoted as an alternative to education in crisis [2]. In an eminently changing society where our students perform jobs that currently do not exist, cooperative learning is emerging as a strategy for learning to learn, pillar of the XXI century education, that promotes independent learning and makes students

assume individual responsibility for their own learning, noting their skills and limitations within a group. The teacher, meanwhile, stops being an expert in his field to acquire the fundamental role guiding the learning process of the student and his group [3] and the student, the protagonist of the teaching-learning process [4].

Current educational reform emphasizes procedures, values and attitudes that constitute the curriculum and the educational intervention. According to this language and momentum, teamwork, team-learning, the development of cooperative attitudes, etc., are important variables in basic training in higher education, in order to achieve effective integration of graduates in the work [5] field.

González [6] emphasizes collaborative learning and independent learning, as two strategies to try to lead the kind of university practice than are demanding current values of cooperation and autonomy of thought and action, in order to build a more

constructive and critical university about current social reality.

Behind a cooperative learning structure, there is the conviction that students don't learn only because the teacher teaches but also do so through the interaction that exists between them, teaching one each other, and in a much more symmetrical relationship. Ovejero [2] defends the idea that cooperative learning experiences, compared with competitive and individualistic nature, allow the establishment of more positive relationships, characterized by sympathy, care, courtesy and mutual respect, adding that these positive attitudes that occur working from cooperative learning, not only are observed in the students but also in the teachers and in the whole school.

The research conducted in the field of cooperative learning and its educational effects have increased in recent years. A review of some of these studies [7] [8] [9] [10] [5] [11] [12] [13] [14] [15] [16] [17] [18], leads to the conclusion of the enormous benefits that this type of learning has for the individual, in the personal and emotional level, but in the academic and social also [3] [19] [20].

The cooperative learning techniques are an innovative methodology that can help to solve the most pressing problems in education, such as school failure, lack of motivation, teacher student relations, bullying and, of course, the treatment of multiculturalism in the classroom [14].

Cooperative learning techniques allow students to work together to act on their own learning process, engaging more with the subject to study and the task, and coworkers who makes them with. They also capitalize the ability of groups to increase the level of learning through peer interaction [10], increasing in this way the perceived autonomy and perceived competence.

Most of these researches are focused on finding relationships between different ways of structuring social interdependence in the classroom and its impact on academic performance, social relationships and psychological well-being of students. Although there are studies that emphasize the advantages for teachers in their teaching practice.

In this line, Domingo [10] believes that working in small groups of students, provides unquestionable advantages to teaching because, being an active

learning technique, not only allows the student the opportunity to achieve meaningful learning but also adding values as the ability of expressing both orally and in writing, structuring ideas, defend them, qualify them, etc.; also develop critical thinking, divergent thinking, self-awareness, empathy, emotion regulation, conflict resolution, etc.

But there is no doubt that active methodologies based on cooperative learning have a benefit to the student, both in terms of academic achievement and socio-emotional aspects. Similarly, these advantages are extrapolated to the working group, the class group. Meanwhile, interpersonal skills developed in the working group can be extrapolated and generalized to the group of peers in the personal and social level of each subject, both in the school system and in the family, which also will affect satisfactorily in the society in general. Enough reasons that lead us to defend its development in the classroom.

Research and studies have shown the relationship between cooperative learning and academic performance of students indicate that cooperation leads to a greater individual performance and increases the group productivity [21] [10] [5] [23] [24]. In this sense, Allport [25] speaks of the effect of social facilitation. The mere presence of other people running the same action facilitates the execution of the task.

The cooperative intervention may even enhance the intellectual capabilities of the students and their metacognition [26]. Metacognition implies the student knows their own cognitive processes, learn to critically examine situations, verify, clarify, expand or replace information, reflect on what has been done within the group, in class and therefore can develops a conscious self-regulation of their own learning. Cooperative work provides students with direct feedback from their mistakes and provides a context that encourages the presentation of their ideas or beliefs before being internalized and automated, can be contrasted and discussed with the group. In this sense, promotes aspects of self-assessment and peer assessment.

The sociocognitive conflict implies communicative exchange processes. Each participant expresses what to do, how and why; everyone should take into account their own point of view and his partner one and together decide the optimum [27]. When a student explains or offers answers to their peers in a

group, it is bound to deepen and reorganize their own knowledge. So, they will be aware of their gaps and misunderstandings and will proceed to reformulate.

Cooperative learning, in addition to critical thinking, promotes creativity, intrinsic motivation, psychological well-being, self-concept and self-esteem [8] [21] [28] [2]. Contributing with creative solutions and using divergent thinking strategies increase when we use cooperative type strategies. The image of ourselves is determined in part by our personal identity (our subjectivity) and partly by the contribution and social identity that shows the status of the group to which we belong to [29].

Cooperation contexts facilitate the interrelation among team members, group cohesion and the development of skills, not only individual but social and interpersonal, most positive [3] [19] [20]. In these relationship frameworks, individuals implement different kinds of social strategies of such as negotiation, respect, consensus, empathy, assertiveness, etc.

Teamwork improves positive interdependence, individual enforceability or personal responsibility, self-motivation and individual assessment, establishes a climate of confidence and security in the peer group [30] [22] and promotes the acceptance of others [25]. In this sense, cooperation is a facilitator of social inclusion and integration of students who have or may develop at any time any specific educational needs. Using cooperative learning structures in the class dynamics implies respecting the principles of standardization and individualization of instruction. Cooperative learning involves, therefore, a measure of attention to methodological diversity. The cooperative context, compared with competitive and individualistic, substantially improves the positive attitudes toward culturally different students or those with special educational needs [31] [32] [33] [2].

The convergence to the European Higher Education Area in the Camilo José Cela University is implying the definition of a proper model of university education and methodological changes in classrooms that place the student as a true protagonist of the learning process [34] and the group as a source of mutual enrichment in the acquisition of knowledge [3] [19] [20].

In this line, from the 2011-2012 academic year to the present, innovative experiences with academics are being developed, which aims are to promote collaborative work in the classroom as a learning strategy within the Teacher Degree in Early Childhood and Elementary and Secondary Education.

In the experience that follows, we wanted to know the opinion of students in Teacher degree in Early Childhood and Elementary Education about cooperative work as a teaching and classroom learning strategy and the skills achieved with this way of work alternative to the traditional teaching.

As before, the cooperative practice that we show in this communication is part of the cooperative learning formal groups in which students work together to achieve shared objectives [10]. Such clusters are not created spontaneously to work at a certain point in the class, but having a defined [35] structure, with a clear identification of objectives to pursue. In this sense, students receive clear instructions. Learn from each other and have the teacher as facilitator of learning and guidance throughout the process of working together.

## OBJECTIVES

The aim of the research was that our students, future teachers of kindergarten and primary education, valued cooperative learning as a teaching strategy and alternative to traditional learning methods, and analyze potential gender differences in attitudes previous to this methodology on aspects that have to do with the constitution, regulation and prevalent dynamics in cooperative work.

## HYPOTHESIS

The working hypotheses were:

- College students have mean attitudes likely to cooperate and work together.
- The culture of competitiveness does not prevent cooperative capabilities of students.
- No gender differences regarding attitudes to cooperation and management of emotions within the group.

**DEVELOPMENT**

The study was descriptive and formed part of the methodology of action research. At this stage of the investigation, we used a pre-experimental, pretest and posttest design. Students were assessed for their skills in cooperative work, before (pre-test) and after (post-test) of the intervention plan in the class.

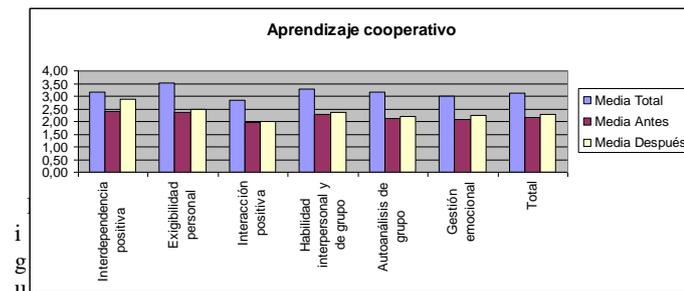
The sample consisted of a total of 69 students in the subjects of Communication Techniques and Educational Consulting, Technology and Media in the classroom, Observation and Education and Teaching Research of Mathematics, of the Teacher Degree in Early Childhood Education and Primary Education, who agreed to participate voluntarily in the whole process.

For getting the opinions of the four groups of students participating in the experience of methodological changes, we used a specifically designed questionnaire of 35 closed-end questions with 4 Likert response alternatives, which took into account the five essential components [36 ] and necessary for cooperative learning work properly[22] [30]: positive interdependence, personal enforceability, positive face to face interaction, interpersonal and group skills, and capability for group self-analysis, to which we adds another dimension related emotional intelligence.

During 6-8 sessions of class of an hour and a half, students guided by their teachers, lived their own experience of cooperative work, developing practical content related to these subjects through activities in small and large groups. His views concerning the dimensions of cooperative work evaluated were recorded before and after the intervention in the classroom, using a questionnaire that was administered electronically.

**RESULTS**

The results of this experience were very positive, and testify the value that the prospective teachers gave to teamwork, and their use in facilitating classroom climates promoters of learning and living. 75% of students knew this methodology in the classroom compared to 25% who did not know (see Figure 1).



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Of these, only 20% had ever applied their professional performance, compared to 80% who have never used it (see Figure 2).



Figure 2. Working knowledge of the technical

Regardless, 100% felt that cooperative learning was a practical, innovative, positive and useful methodology to motivate students. It improved their ability to present ideas, argue and defend the pint of views themselves. It promoted decisions was taken in the classroom based on consensus. It provided conflict resolution strategies. It had academic benefits for students in the classroom that was applied. It enhanced their social and communication skills, their abilities of learn to learn, and of evaluate themselves and their peers. It favored the idea that the teacher is not the only source of information. It hold students accountable for their own learning process and involved them directly, while exerted an influence on aspects of his personality, such as achievement motivation, autonomy and self-esteem, among other things.

Table 1 and Figure 3 cooperative work skills means observe how, in general, his opinion concerning the competence of cooperative work you achieved improved slightly after having worked in the classroom.

Table 1. Mean scores of cooperative work skills before and after work in the classroom

Aprendizaje cooperativo	Media Total	Media Antes	Media Después
Interdependencia positiva	3,18	2,39	2,88
Exigibilidad personal	3,50	2,38	2,48
Interacción positiva	2,83	1,98	2,01
Habilidad interpersonal y de grupo	3,29	2,29	2,37
Autoanálisis de grupo	3,15	2,13	2,21
Gestión emocional	3,02	2,09	2,24
Total	3,12	2,16	2,26

Figure 3. Mean scores of cooperative work skills before and after work in the classroom

In Figure 3 we observe that students perceived greater changes in this order, in: positive interdependence, enforcement personnel, and interpersonal and group skills, followed in a less extent- by the improvements in their abilities to manage emotions, group self-analysis and positive interaction.

When we looked at gender, the data show (see Figure 4) that students are especially demanding of themselves when working in groups (especially men). In his view, each member should be aware that "transfer the work to other is not valid" and must be able to contribute with their knowledge to the group and to learn what their peers will provide.

**EXIGIBILIDAD PERSONAL**

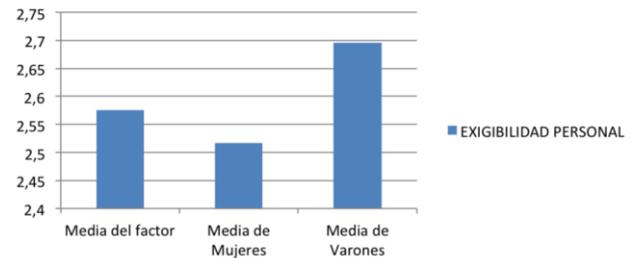


Figure 4. Means scores, total and by gender, skill "enforcement personnel" cooperative work

In Figure 5 we see that students (especially women) are satisfied working "face to face" with colleagues, share knowledge, discuss with different points of view, and help others to solve their difficulties.

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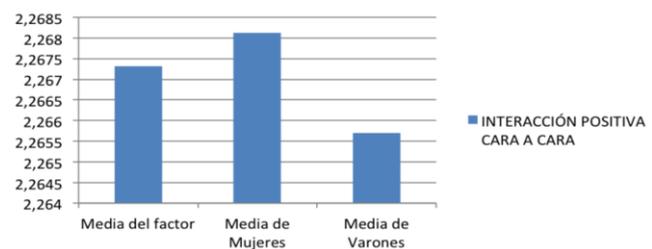


Figure 5. Means scores, total and by gender, skill positive interaction "face to face" cooperative work

In Figure 6 we observe that positive interdependence is the lowest of all evaluated factor on average. Students hard to believe (especially women) that the success of the group affect individual outcomes, and viceversa.

**INTERDEPENDENCIA POSITIVA**

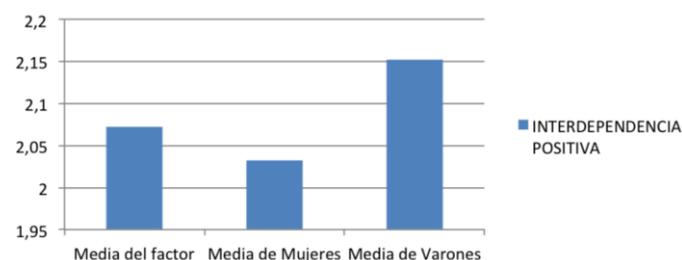


Figure 6. Mean total and by gender, skill "positive interdependence" cooperative work

In general, students in our study -see Figure 7- considered they developed good interpersonal and teamwork skills, and rated their previous experiences working in groups as positive (especially men).



Figure 7. Mean scores, total and by gender, skill "group and interpersonal abilities" cooperative work

In Figure 8 we see that men have better opinion than women regarding the group's ability to self-analysis to see if your work is being effective, the goals are achieved and are working in the right environment. This allows group members to strengthen their job skills and encourages the commitment of all with the common objectives.



Figure 8. Mean scores, total and by gender, skill "self-assessment of group" cooperative work

On an emotional level, they say they have been aware of their feelings and consequences, especially women, compared with men (Figure 9).

**En el trabajo colaborativo hemos sido conscientes de nuestros sentimientos y sus consecuencias**

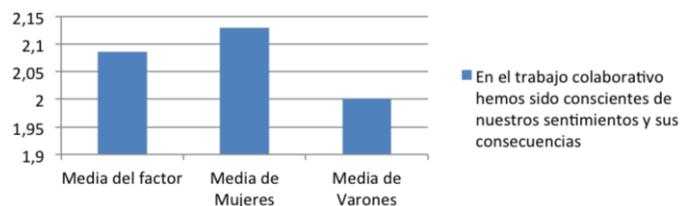


Figure 9. Mean scores, total and by gender, skill "emotional self-knowledge"

In stressful situations they have been able to handle their emotions. This perception was higher in women than in men (see Figure 10):

**En situaciones tensas hemos controlado y sabido canalizar las emociones de manera adecuada**

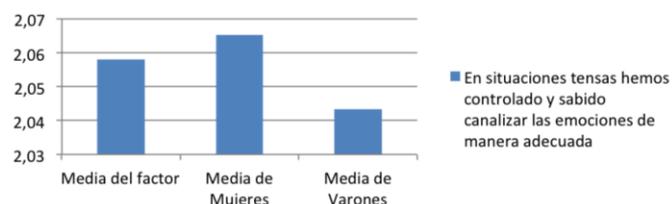


Figure 10. Mean scores, total and by gender, skill "emotional self-control"

The men stand in front of women, in their perception of having learned to set goals and motivated themselves by the goal, instead of focusing on setbacks (see Figure 11):

**Hemos sabido fijarnos metas y motivarnos por el objetivo en lugar de centrarnos en los contratiempos**



Figure 11. Mean scores, total and by gender, skill "emotional motivation"

Also noteworthy men versus women, in their view that they have improved their social skills and their relationships with others, as shown in the figure below:

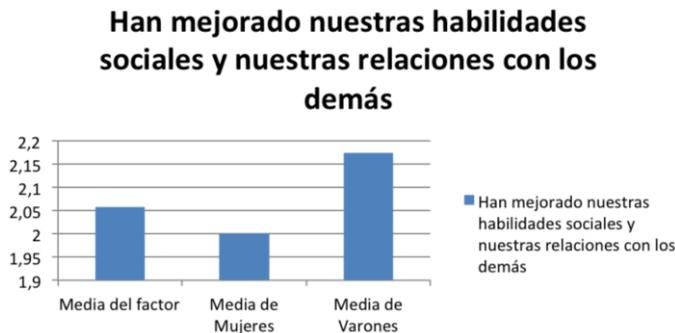


Figure 12. Mean scores, total and by gender, skill "social abilities"

The data are very similar by gender, regarding the opinion about your empathy skills (see Figure 13). Our students improved their ability to recognize the others emotions and put themselves in the place of others and the means are equal in men and women.

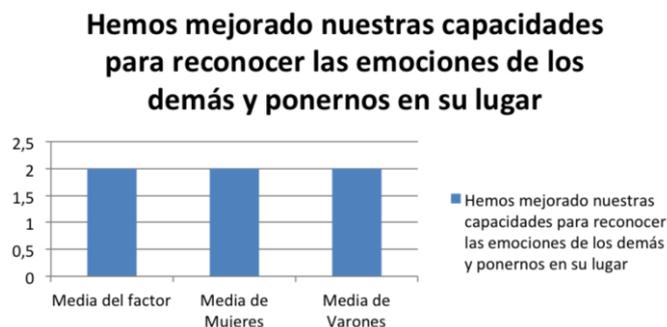


Figure 13. Mean scores, total and by gender, skill "empathy"

When openly asked about collaborative work as a teaching and learning strategy, students made positive statements such as: "The cooperative work is an essential pillar in education but I think a key point for success is that all group members have the same goal" "Emotional intelligence is essential to develop and grow as individuals and cooperative work is an essential element to help us to improve".

Negative sentences like: "Group work can be negative in some way: in the past I had to do all the work myself and figured as it was done by the whole group". Or even ambivalent as: "I learn more when I work in groups. However, regarding my efficiency, I think it's similar in both ways", "In my opinion, I learn more in a group but I think I'm more effective working alone".

## CONCLUSIONS

In summary and conclusion, we emphasize the great satisfaction of all involved in this educational experience based on the cooperative work. Teachers could observe motivation and involvement in the learning of students, improving the classroom environment and performance in the practical activities of each of his subjects. In general, students are inclined to cooperation, regardless of gender attitudes. In line with the results found by Gonzalez and Garcia [6], it could be interpreted that interpersonal relationships established between students are more stable, deep and engaged in cooperative learning than in traditional learning. Also the relationships between teachers and students are closer, stimulating and enriching for both. A satisfactory management of emotions was also done during teamwork. However, women tend to give more importance than their male counterparts to the expression of emotions and are better able to control and channel them. Men say, however, improve their social skills and relationships with others, after his experiences working in groups. Students valued the active learning methodology, over traditional education, and saw on it their advantages in terms of classroom environment and achievement of personal, social and emotional skills, essential for their personal, social and professional development. Basic skills necessary for the formation of the citizen of the XXI century, like Leon et al. [14] claim, cannot be missed in the initial training of teachers.

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