



# COOPERATIVE LEARNING IN BUSINESS DEGREES AT THE UNIVERSITY JAUME I. ANALYSIS AND PROPOSAL FOR THEIR IMPLEMENTATION

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## **ABSTRACT**

The increasing importance of teamwork in the business and academic environment demands a built-in training that prepares students for specific knowledge and interpersonal skills for their professional performance and the ability of managing teams in an effective way, in this context cooperative learning can be seen as an effective strategy that can allow the achievement of these objectives.

The proposal of this research is helping to understand teachers and students the importance of cooperative learning and the results of its implementation in the subjects since it carried out in the correct manner, results improve satisfactorily when implying all members of a team to develop their project or task due to the techniques used in this kind of learning. On the other hand, cooperative learning develops other important competences for the professional performance in the future.

Regarding the empirical contribution an analysis has been carried out of the different group learning techniques that teachers use and how it has been carried out in the classrooms of the Faculty of Legal and Economics Science of the Jaume I University, carrying out a diagnosis and a cooperative learning proposal in the faculty.

**Keywords:** cooperative learning, competences, teamwork, cooperative learning environments and professional development.

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# INTRODUCTION

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Nowadays higher education is governed by set out objectives in the European Higher Education Area (EHEA), which has an educational model that focuses on common regulations for all students of the European Union in which is suggested a change in the concept of learning that is very different from the traditional one carried out, based on the acquisition of knowledge, to another in which the skills and generic, specific and transversal competences should be develop throughout the student training, being complementary both styles. This allows the student to have a more active and integral role in his/her training, which allows him/her to be more responsible and independent in his/her training. As a result of this methodology, the student finds more possibilities of accessing to the labour market, since the different university degrees' profiles have been design with the purpose of developing these competences in their university performance. (Ministry of education, 2003).

In this context, the cooperative learning is one of the techniques that fosters this change, since it suggests new manners of learning with work methods that characterize them, aimed to form more participative and cooperative structures of transmitting and acquiring knowledge, in which teamwork is prioritized and the student no longer works in an individual way, but he/she is a part of a whole, fostering the cognitive and social development that allows him/her interact with the other members of a team in which he/her is a member of, also stimulating the critical thinking, making more motivating his/her experience in the training period, implicating his/her own learning, so the students assimilates the contents of the subjects in a pragmatic way and therefore pass the subject.

On the other hand, in the organizational context, teamwork play an important role for the corporate functioning, in the current complex and uncertain environment, that requires a structure of work more dynamic, flexible and oriented to change, promoting attitudes towards teamwork, communication and troubleshooting. In this way, the companies respond rapidly to set out challenges and problems that may be occasioned in the development of their activities, making the most of their members' potential in order to the organizational success. However, teamwork brings some difficulties that prevent its success and therefore, the set out objectives are not achieved.

The objective of this research is to carry out a diagnosis of cooperative learning in the economics faculty and to analyse the possibility of introducing in the university, especially in the Legal and Economics Science Faculty a Cooperative Learning subject in order to make students aware of the importance of cooperative learning.

The present project is structured in this manner in which antecedents carry out this research, the cooperative learning definition, its techniques and characteristics, the empirical analysis and last but not least a proposal for the implementation of cooperative learning subject in a designed space for it.

## CHAPTER 1: Antecedents

### 1.1 The ignorance about of cooperative learning, its implementation in the academic training and results obtained.

In economics and business degrees exist a high level of absenteeism and lack of interest as lessons go on (Vallet, Vallet, Vallet, Rivera, 2013). Contrary to the European Higher Education Area (EHEA), guidelines, which claim the student to become an active subject in the learning process, giving more autonomy to the way of assimilating knowledge that are taught at University. In fact, lack of interest and of motivation are the factors that can be observed, students' lack of knowledge of what is intend with the European framework of teaching which implemented could be beneficial for future professional challenges. Besides there is an individual and competitive desire of achieving their own objectives, in which many times occasions frustration.

In this context, the cooperative learning could minimize negative effects in education, teaching teamwork techniques and methodologies that allow assimilating contents of any field with more effectiveness. In the meta-analysis carried out by Johnson, et al. (1981, cited in University Polytechnic), demonstrated that it is more productive and better results are given at an academic level by cooperation than competition in different fields of knowledge in which a student is involved in throughout his/her academic training. This type of learning enables the assimilation of concepts, troubleshooting and retention of contents. In this context the information is processed so that the student builds his/her own learning, developing social skills such as communication, leadership and cooperation. The results are very positive in comparison with individual learning ones in which there is lack of critical and reflective thinking, since the tasks that are carried out individually in which there is only one point of view, there is no discussion, and there is little participation in lecture rooms by students.

Cooperative learning techniques go beyond, since they foster students' intellectual development. When cognitive tasks are carried out by group works information, ideas and thoughts are transmitted among members of the team that favour to individual and group work learning improving their results producing critical thinking, personal and social development as main source of this type of learning (Alcover and Hill, 1999 cited for article University Polytechnic of Madrid). Their application to the educational and professional environment can stimulate self-esteem,



motivation and social skills as communication, leadership and troubleshooting (Stevens and Campion, 1994).

For Slavin (1993), there are two theories that try to explain cooperative learning superiority against traditional learning: motivational and cognitive theory.

The motivational perspective concerning cooperative learning focuses on students working under a structure of reward or objectives. When the rewards are based on group work performance, the members of a group will try to help and encourage each other in order to achieve those objectives, making the maximum effort possible. According to Slavin and Madden (1983) research, it was tested that students participating in cooperative learning lessons had the impression that their workmate were worried about their learning, in addition to increase their social skills in the class, contrary to traditional learning that are taught in lessons where there are reward systems at individual level or competitive evaluations, according to these authors goes against academic efforts. This methodology helps to learn among peer groups (Slavin, 1975), besides regulations are created that favour academic activities within the group.

Regarding the cognitive perspective, it shows the effects that joint work has in itself (Slavin, 1993 p.24) this theory is divided in two categories, the evolutionary and cognitive elaboration. The evolutionary claims a theory that depending on the interaction that children have when carrying out academic task, there is an increase of concept dominance that are being studied (Slavin, 1993). Just as Piaget (1926 cited in Slavin, 1993), who claims that the different disciplines are learnt in peer group learning. The interaction process produce enriching opinions to the group members as tasks are developed and better quality knowledge arises.

Another of the concepts that is exposed in Vygotsky's theory of proximal development (PDZ), is that there is a real development zone that this the one in which the child behaves in an independent manner resolving problems and there is the potential development that is determined by the ability of resolving problems with the aid of and adult or the cooperation of peer group with more knowledge.

Regarding the cognitive elaboration theory (Slavin, 1990 p.25), which disagree with the evolutionary theory since it expresses that for information to be retained and assimilated, students must prepare their own cognitive material, one that expresses this author that is more effective is when a student explains something to other student, in this way it is remembered what have been studied in class and with his/her own

words explains to other partner something that has been assimilated previously reinforcing his/her own knowledge.

Within the university context when student groups are formed, there is a variety of knowledge and skills that possess each one of them, which will help to carry out the tasks suggested by the teacher in a better way. The cooperative work allows each member of the team to contribute all his/her potential at service of the team in order to achieve the goals. The structure of the tasks allows interacting between students and professors in order to support and solve difficult situations that often occur in classroom, when cognitive activities are carried out.

Therefore, when tools of cooperative learning are used, this ranges from an unidirectional communication between professor and student to a multidirectional communication that occurs when students communicate among them and the professor, occurring a socio-cognitive process that will strengthen the individual process. (Poveda, 2006:28).

## **1.2 The importance given to team work by organizations.**

Nowadays, organizations are facing many difficult, fluctuating and dynamic environments with uncertainty where their concern for adapting to these changes grows, they suggest the necessity of relying on a more qualified and motivated personnel in order to carry out the different tasks and roles with organizational structures that adopt different perspective based on team (West and Markiewicz, 2004; Gil et al. 2008). In this way it is possible to give solutions faster managing that complexity instead of reducing it.

Teamwork contributes to satisfy those necessities, since it combines a series of skills of the people working in an organization as a competitive advantage source that helps to achieve the business success. Teamwork creates a perfect environment in order to produce and share knowledge, fostering efficiency, improvement of satisfaction and motivation of the members of the group. A positive effect for companies is to contribute these competences and skills by employers, allows responding in a flexible and innovative manner to problems and challenges that are faced by companies (Gil, Rico and Sanchez, 2008). When work is structured to be carried out in teamwork what is meant is to find with this diversity is an effective and efficient solution that allows them achieving their objectives.

Gil et al. (2008) suggest a model that tries to explain the efficiency of teams by means of a set of variables like the inputs (the knowledge, skills, organization rewards, etc.), processes (that allows members of the team using the success resources of the task by means of tools such as communication, coordination, etc.) and last but not least, the outputs (achieved objectives, measured in quantitative and qualitative terms), such as basic antecedents for the understanding of the teamwork's formation and their success in the business field. Some of these variables will be used later as a part of this analysis.

Traditionally, the jobs in the organizations have been designed in a static manner, where there was high specialization of the tasks in which the employee that performed the aforesaid workstation had a qualification that only allowed him/her to carry out tasks in accordance with the design of that workplace (Murphy, 1996 cited in Poveda, 2006). Nowadays, workplaces are being designed for those who occupying it can have several skills and competences that adapt to any workplace (a polyvalent worker). According to Alcover et al. (1999), these competences, technical as social, must be developed in teamwork, hence the importance of designing training programmes focus on acquiring these knowledge for the current circumstances of the environment.

### **1.3 Students' refusal to cooperative work when grouped together according to their individual profile and their contribution to the group.**

There are many authors who think that the best learning occurs when there is a cooperative social interaction. But there are some risks when working in group, that is the reason why students express their reluctance when grouped together in order to develop any task. Over the process of students' learning in different stages of education, they have been through any type of teamwork. Some experiences may have been positive because cooperative learning goals were achieved. But, other experiences may have been unpleasant, creating feelings of demotivation, tediousness and frustration because the objective was not achieved. According to Slavin (1993), when teamwork is not well-structured there is the risk that the learning is not efficient, because it may occur the necessary conditions so only few of the members work. There will always be one or two members of the group concerned for finishing the tasks; therefore these persons will make minimum effort, just to pass the course. This author also expresses that when the activity is very specialized, that is to say, the work is not well-structured so all team participation is needed in order to achieve their aim,

there is the risk of students who are more skilled, doing the task and removing those students who do not have much knowledge about the task at hand. This author defines it as “responsibility dispersion” (Slavin, 1983), which goes against the cooperative learning success. Hence, there is the importance of structure of work in order to avoid these issues that may happen when working only few members and the other ones contribute little or nothing to teamwork.

In order to understand the differences that make cooperative learning more effective, we will comment on which are the differences between group work, which is the one carried out by students and teamwork which is the base of cooperative learning.

According to Daniel Cassany (2009), a team is a group of people that are formed during a period of time in order to learn together, while a group are just persons that group together in order to solve some exercise, in which mutual knowledge is not produced, since there is no information and they meet occasionally. This author expresses that people were not born with the ability of teamwork, and hence the importance of training in these techniques in order to make the most of cooperation in teamwork.

Differences between team and group:

**Table 1. 1 Differences between work group and teamwork**

Team	Group
<ul style="list-style-type: none"> <li>✚ Heterogeneous, diversity is sought. Participation of the teacher.</li> </ul>	<ul style="list-style-type: none"> <li>✚ Homogeneous, they are formed among friends or with same interests</li> </ul>
<ul style="list-style-type: none"> <li>✚ Leadership is shared, the individuals assume their role and task responsibility</li> </ul>	<ul style="list-style-type: none"> <li>✚ Autocratic leadership and without control of individual contributions to the activity</li> </ul>
<ul style="list-style-type: none"> <li>✚ There is self-assessment of the process of learning</li> </ul>	<ul style="list-style-type: none"> <li>✚ They are short-lived</li> </ul>
<ul style="list-style-type: none"> <li>✚ There is previous training and practice in order to become a team.</li> </ul>	<ul style="list-style-type: none"> <li>✚ No information, monitoring, no training</li> </ul>

Source: Casanny (2009)

The factors mentioned above are one of the most important bases of teamwork: the diversity of team members provides more abilities and knowledge, unlike homogeneous teams; these make possible a better performance in difficult resolution tasks. When a team works in the terms according to the cooperative learning,

confidence and conviction are created that make easier for people to be motivated for getting the suggested objectives, when these conditions do not occur, students only carry out tasks rapidly and they do not wish to deepen in learning with their partners, because they are not comfortable and they change teams constantly.

Other important factor is organization and the control of tasks so positive interdependence occurs, if each member complies with his/her roles and functions, learning will be beneficial. All this will be reinforced by teamwork self-assessment because a feedback process is produced that keeps the team attentive to possible deviations that may occur, heading again for an expected result.

Before starting any cooperative task, it is important to form and train students on the different work techniques and especially on the competences that they will need in order to face any kind of issue that may occur in the process of the task.

#### **1.4 The relationship between the different competences that are develop in the cooperative learning and the professional performance.**

As mentioned above, teamwork develops a series of beneficial competences for the academic and professional performance of students. There are a series of personal and social factors that are being developed as when interacting with others (Goleman, 2005). Teamwork in labour environment are each time more appreciated due to the great results that are obtained when working in this way, but many times relations that are produced in itself are difficult and the role of future professionals will consist of managing these conflicts with the social skills that they acquired in their training.

Competences can be defined as the group of skills, knowledge and attitudes that a person possesses and that it can affect in a positive or negative way to the effectiveness of an organization (Boyazti, 1992 cited in Aguado, 2011). Most of these models think that the competences are not specific of a job but they can adapt to any organizational context. These models also show that most of behaviours is develop when teamwork (Aguado, Arranz, Valera and Marin, 2011). Hence the importance and the interest of companies to get with employees that have these skills for effectiveness of group works. These authors suggest that these skills can be acquired in programmes of training companies or through methodologies of e-learning for the development of these skills, but due to this training is carried out when starting to wok, there is not enough time to carry it out. In that context is more productive to be trained in these competences while they are being trained academically, as at university.

Stevens and Campions (1994) identify interpersonal and self-management competences necessary for carrying out teamwork cooperation tasks so it is efficient in the organizational environment and it can be extrapolated also to the academic environment.

### **A. Interpersonal competences**

- I. **Conflict resolution:** conflict resolution is one of the important skills that has success in groups that conflict accept as a fundamental part in order to keep growing and making the task more productive and effective. According to Stevens and Campions (1994) teams that avoid conflicts are not very efficient and they are demotivated. When problems are avoided there is more stress, dissatisfaction and there is no communication. The effects are negative for the team creating tensions, which makes the group less efficient and possibly leading to its dissolution. These authors suggest that effective teams identify problems and they search for strategies in order to solve them reasonably so they become strengths for the teams.
- II. **Problem resolution in a cooperative way:** when problems are presented, team members should have the ability of identifying the real problem and involving all members so they give their opinion in order to resolve it, then they should consider all proposals and come to an agreement that enables team stability so it could be the most satisfactory one for everybody. Sometimes, it is thought that it is best not to involve all the team in order to solve any problem or issue, since it is only needed one member of the team, but when all the team is involved and their opinions and proposals of how to improve any type of solutions are taken into account, positive interdependence and commitment are reinforced achieving objectives in the most correct way (Stevens and Campion 1994).
- III. **Communicative skills;** the communication process is a fundamental part of the teams, when it is clear and effective results are more positive. Communication channels and styles should be developed in order to facilitate it, also to develop skills as the active listening, non-verbal communication that are part of the manner of expressing that people have.

### **B. Self-managements competences**

When companies choose a style of work made by objectives in teamwork, they often have an autonomy degree necessary in order to carry out work (Stevens and Campion, 1994). Teams that have autonomy to establish their objectives and how to carry them

out, they feel more motivated in order to work in groups, although it is required a series of competences to achieve success. Stevens and Campions (1994), they suggest these self-management skills as requirements to teamwork:

- IV. **Setting and achieving of group objectives:** in order to carry out a task, it is important to establish objectives that are achieved and well defined, at the same time that are challenging and with a certain degree of difficulty according to task resolution and shared by all members of the team. Many times, groups establish several objectives that are difficult to achieve, which result is frustration because the result is not achieved and therefore demotivation is produced that prevent going on.
- V. **Planning and coordination of tasks:** so a team integrates the functions and roles, it must be a previous planning and therefore, there have to be coordination of tasks and activities that the team must follow that allows an appropriate self-management. Defining tasks, the time needed to carry them out, the means that are going to be used (books, internet, etc.), establishing roles for each member of the teams that are going to be performed.

These competences can be extrapolated to any field, both educative as professional or personal, we are by nature social beings and we are interacting constantly with people. Learning in-group is a process in which the members of a team build new knowledge in a collective way concerning any theme that is being worked, contributing each of them their own experience or know-how at service o the group (Gil, Rico and Sánchez, 2008).

## CHAPTER 2: Theoretical framework

### 2.1 Definition of cooperative learning

Cooperative learning can be defined as the learning occurring in teamwork, in which all students search for achieving objectives that closely linked, in a way that only can be achieved if each of the members can achieve their owns, so that all tasks are linked among them and there is individual responsibility of students carrying them out so there is a result that lead them to the success of the tasks being carried out.

According to Pujolas, et al. (2013), when students learn in a cooperative way they have a double responsibility in which they learn what the teacher teaches and at the same time, they contribute to their team partners learning academic

contents and learning to teamwork. This, therefore, is not the traditional way of team working in which a common task is carried out, but a more structured, organized and permanent way of team working in order to learn together, in which students are the active part of this learning.

Johnson and Johnson (1991) affirm, the cooperative learning “is the instructive use of small groups for students to work together and make the most of their own learning and the one that is produced in interrelation”, this learning can be considered as a pedagogical resource that makes the most of communication and the exchange of knowledge for learning in a cooperative way, making easier the assimilation of contents of any field. Besides this kind of learning is appreciated because it enables the developing of social and cognitive skills beneficial for themselves. Hence the importance that all parts of the group being highly involved, interacting and cooperating in an affective manner.

There are ways of traditional learning as individualistic learning, in which students achieve their objectives by themselves without the interaction of their partners, the results and their rewards are at an individual level and it does not influence in no one, in which they only think in their own benefit removing their partners.

In a competitive context, there is a bigger reward for the person or group that achieve set out objectives, this means that success is only achieved if others fail, therefore, it is also searched for its own benefit without thinking in other people. A student will achieve an objective if the others do not achieve it (Traver and Candela, 2001; Prieto, 2007). This methodology of winning losing does not put into practice cooperative and social skills for learning but it is appreciated the reward at expense of students who did not achieve objective, causing demotivation quite detrimental in the academic field.

In cooperative learning a way of learning working in groups is presented, in which their members are committed to carrying out tasks and projects that can be achieved if any person achieves their own goals, this kind of learning structures tasks in a way that each part is essential for others, making that everybody is involved in order to achieved the et out objectives, in which objectives are only achieved if other people achieve their goals and all members are rewarded depending on their contribution to the task. (Deutsch, 1949, cited in Leon and Latas, 2007).



## 2.2 Characteristics and techniques of cooperative learning

### 2.2.1 Cooperative learning characteristics

There are five keys characteristics in cooperative learning that allow us understanding its meaning and the way in which students learn this technique.

According to Johnson et al. (1999, cited in article of University Polytechnic of Madrid), the groups must have as base these characteristics for learning to be of quality and achieve objectives.

1. **The positive interdependence among the members of the teams.** Students must act responsibly carrying out the assigned tasks, since they have to be aware that their work is closely linked to other partners' work and they are interdependent, so if any partner do not carry out his/her work, the work is not completed and results expected by teachers are not achieved, hence the importance of working cooperatively in order to achieve objectives.
2. **The interaction among members of the team “face-to-face”.** It is important that there is interaction among members of the group in order to share ideas, resources and feedback concerning the work that is being carried out about the possible doubts or issues that may appear throughout the fulfilment of tasks or reports in which it is being worked on. In this way the activity is enriched, since other perspectives or beneficial ideas are contributed in order to achieve a good result.
3. **The responsibility assumed by each member of the team when one decides to be part of itself.** When a student acquires this commitment, he/she must be aware of the responsibility that he/she has when doing the assigned work since as mentioned before, his/her work is linked to the other partners and his/her contribution depends on the final result of the group, besides there he/she have to be responsible for his/her partners to understand and assimilated it easily.
4. **The use of social and interpersonal skills:** there are a series of skills that are the base of work and team learning and their success will depend on the way that it is carried out: the conflict resolution and collaboration are the cornerstone of cooperative learning, competences are needed for the team to work properly and for affective cooperation to occur among members.
5. **The self-assessment of the team members and the contribution to the task carried out, besides the process of learning of the group:** as the

objectives achieved, if the decisions made were the correct ones, behaviour adopted, what could be changed, etc. A feedback process is linked to assessment, in this way teams are experiencing a specialization in each project developed, because they learn from rights and wrongs that were presented previously.

## 2.2.2 Cooperative learning techniques

There are several techniques of cooperative learning that are detailed below.

A. **Jigsaw** (Aronson): it is one of the most known techniques in the academic field. A task is structured to be worked by heterogeneous teams of 5 or 6 students, so they interact among them in order to achieve their goals.

a. The professor divides the topic to be worked into five or six parts so each student researches about it. He will give to groups a estimated time depending on the necessities of each topic and the structure of the task (either to carry it out in class or to bring it in the next lesson). Each part is needed to be worked together.

b. Then, to each member of the group is assigned a number from 1 to 5 or 6. To the other students with number one, it is handed over the same part of the work to be solved and so successively to each member of the team.

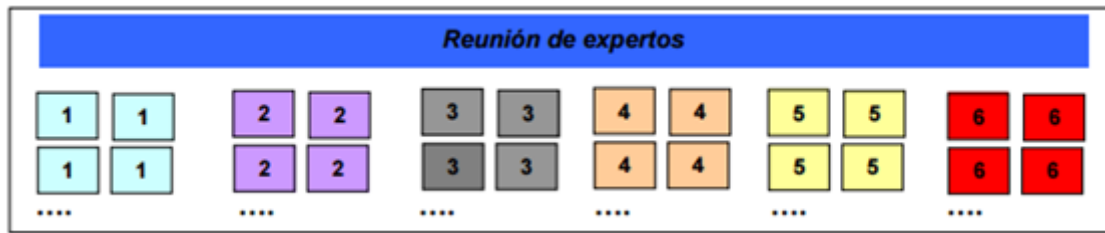
Image1. 1 Original groups in the Jigsaw technique



Source: University Polytechnic of Madrid (2008)

Once time is finished for the preparation of the topic, a “group of experts” is designated, all students with the same number assigned are gathered with other students of other groups in order to discuss, give explanations or opinions about the topic that have been researched.

Image1. 1 Expert groups



Source: University Polytechnic of Madrid (2008)

The information consulted is shared with others, contributing ideas, explanations and giving feedback to his/her part of the work so he/she explains it to his/her team. When the meeting of experts is finished, students return with their original group and they will explain in order what they have been working and a report will be carried out.

Image1. 2 Return to the original groups



Source: University Polytechnic of Madrid (2008)

**B. Teams-Games-Tournaments (TGT);** (De Vries, Slavin and Edwards, 1978 cited in Goikoetxea 2002): these techniques consist in carrying out an academic tournament that substitutes the individual exam and the mark of the team. Students ask questions about the topics seen in class, and then questions are deposited in a box and they are chosen at random so each student of a team brings face to face in the tournament with students of other team. The students who answers more questions wins 6 points, the following 4 and the following 2, in this way each student contributes scoring to his/her team. The reward is for the group work and the sum of the points that each student won in the tournament.

**C. Group investigation;** (Sharan and Sharan, 1976 cited in Goikoetxea 2002): students themselves form groups of 3 or 6 members in which they will work on the topics presented by the professor for research. They have to organize themselves in order to divide tasks: search for information, organizing data, informing partners about

the information found, discussing and analysing what have been found and then carrying out a final report with the proposed research and the presentation of other teams. The teacher evaluates the result and rewards in a global way.

D. **Learning together (LT)**; (Johnson & Johnson, 1994 cited in Goikoetxea 2002): it is the learning that is used in classrooms. Heterogeneous groups of 4-6 persons are formed. The professor gives the topics by means of master lesson and then students work as a team on the activities proposed. The objective is that students put into practice the theory studied and they master the topic. This type of learning is useful for students so they can help each other and to make easier the assimilation of contents, since they are reinforced by means of practice. The teacher makes the evaluation in groups.

E. **Team-Assisted Individualization (TAI)**; (Slavin, Leavey, 1984 cited in Goikoetxea 2002). This technique consist of forming groups of 4-5 members of different academic levels that will work on a topic or dynamic designed by the teacher and the teacher will monitoring each group in an individual way, while other groups keep working with their group partners. When there are doubts, groups try to solve them before resorting to the teacher. Reward is given in a group way.

In this techniques of cooperative learning it is required a great task structuring and dedication by the teacher. In addition to the characteristics mentioned above on the part of students in order to be successful and effective in their learning. Also, techniques less structured can be carried out so they favour cooperative learning, which could be developed in less time and in classrooms where the number of students is higher. Activities in which students could learn among them and to be active part in the search, analysis, fulfilment and setting up of the proposed activities, can be part of cooperative learning. (Prieto, 2007).

## CHAPTER 3: Method/Diagnostic

### 3.1 Objectives

1. Make a map of the methodologies of cooperative learning in the Faculty of Law and Economic Sciences of the University Jaume I, specifically in Business Administration, Economics, Tourism and Finance and Accounting degrees.
2. Whether there is a relationship between cooperative learning methodologies and the rate of success and performance of the subjects of these degrees.

3. Analyze the level of satisfaction with the use of these methodologies.
4. Makes a proposal for cooperative learning.

### 3.2 Procedures and instruments in order to collection of information

The questionnaire was developed to those responsible for the degrees' subjects and some professors who taught them. The procedures for collection the information was the following one:

My tutor and I made an analysis of the variables that we should include in the questionnaire important for its design and the subsequent collection of information. These questions were based on researches that have been carried out concerning cooperative learning and the corresponding analysis. Next, it was designed the questionnaire with questions that intend to know what type of group learning was carried out, how it was carried out, how it was assessed and its assessment concerning the satisfaction level of the obtained results and its experience.

#### 3.2.1 Design of the questionnaire

##### 3.2.1.1 Parts of the questionnaire

**Table 1. 2 Structure of the questionnaire**

<b>1. General information of the subject</b>	<ul style="list-style-type: none"> <li>• Code and name of the subject</li> <li>• Compulsory or optional</li> <li>• Year, responsible professor</li> <li>• Degree department and field of knowledge.</li> </ul>
<b>2. Planning activities</b>	<ul style="list-style-type: none"> <li>• Number of hours devoted to classroom activity</li> <li>• Training of the teams</li> <li>• Carrying out tasks</li> <li>• Learning method</li> <li>• Method of evaluation</li> </ul>
<b>3. Cooperative learning assessment</b>	<ul style="list-style-type: none"> <li>• Questions in which satisfaction is marked from 0 to 10 in this type of learning,</li> <li>• The competences acquired</li> <li>• And the obtained results by students with this learning.</li> </ul> <p>In addition to an observation section in which the most common ones will be taken into account informally.</p>

### 3.2.1.2 Secondary sources

- The rates of performance and success of the subjects, we furnished by the Vice Deans of the respective qualifications, upon request.
- Educational guides of the subjects of the LLeu.

### 3.2.2 Definition of the sample and the sample element

1. **Sampling unit:** 134 subjects in four degrees, referred to the year 2013 / 2014. Not were considered the subject final work and external practices, because we are working on an individual basis.

**Table 1. 3 Sample size**

Degree	Business Administration	Economic	Finance and Account	Tourism	Total
Compulsory Subjects	34	11	10	32	87
Optional Subjects	13	11	13	10	47
<b>Total</b>	<b>47</b>	<b>22</b>	<b>23</b>	<b>42</b>	<b>134</b>
<b>Common (BA-ECO-FIAC)</b>	23 subjects are common a Business administration, Economic, Finance and Account.				
<b>Common (BA-FIAC)</b>	1 subject is common to Business administration and Finance and Account.				

2. **Sample item:** 101 professors responsible for the subjects of four degrees.

#### 3. Scope of the study:

- Subjects that were worked as teamwork.
- Subjects which teachers expressed that were not carried out nor assessed, as teamwork the questionnaire was not filled in, but it was taken into account for other analysis related to the academic performance achieved by students.

4. **Date of fieldwork:** April/May 2015.

### 3.2.3 Collection method

- Dual

- Interview subjects teachers and/or professors who taught classes in these subjects.

101 responsible for the subjects was sent an email to 77 teachers and the other 24, asked directly the information and/or remove information of course syllabus (this in the case that is not working as a team).

Next, with my tutor we wrote a letter that we would send by e-mail to the teacher in order to arrange a meeting in their tutoring. Also, given the possibility to reply by email, since the questionnaire attached.

**Table 1. 4 Information about sample**

Send mails	77
Reply received	37
Personal meeting	43
Non-responders	40
Questionnaires answered by internet	2
Duration of interview	Approximately 15 minutes

### 3.3 Information analysis

From the 134 proposed subjects in order to carry out the research, a 33.1% of the teachers expressed that they made teamwork and therefore, the questionnaire was fulfilled. Regarding the subjects that did not carry out nor assessed teamwork in internship obtained a 41.4% of the answers. There is a 25.6% corresponding to subjects in which teachers did not respond to the request of information for participating in the study (table 1.5).

**Table 1. 5 Frequency Teamwork**

Group	Frequency	%
Cooperative Learning	44	33.1
Non Cooperative Learning	55	41.4
No data	35	25.6
Total	134	100

#### 3.3.1 General information of the subject

Now, it will be proceed to analyse the corresponding 44 questionnaires fulfilled.

The first block of the questionnaire has to do with general information of the subject in the chart (1.6) in which we can observe that a 54.5% belongs to obligatory subjects and the 45.5% belong to optional subjects.

**Table 1. 6 Subjects Type**

Group	Frequency	%
Compulsory Subjects	24	54.5
Optional Subjects	20	45.5
Total	44	100

Regarding the course that is being taught, we can observe in the chart (1.7), that most of subjects belong to the fourth year with a 52,3%, straightaway the ones that are taught in the third year with a 22.7% and a 18.2% in the second year and having the lowest percentage for those that are taught in the first year with a 6.8%. As it is shown in the results, it seems that in most of the optional subjects that are taught in the four degrees, students work as a team in relation to other courses. From the second year and third year, teamwork becomes more common.

**Table 1. 7 Academic year of subjects work together**

Group	Frequency	%
First academic year	3	6.8
Second academic year	8	18.2
Third academic year	10	22.7
Fourth academic year	23	52.3
Total	44	100

Regarding the degree that is being taught as it shows the chart (1.8), the highest percentage of subjects in which cooperative learning is carried out are taught in business, with a 34.1%. Next to this degree, there is tourism with a 27.3% and finances with a 22.7%. For the rest of the study group, corresponding to common subjects to the three degrees (BA, FICO, Tourism and Economic) and at least two degrees with a percentage of 13.6 and 2.3% respectively. These are obligatory subjects.



**Table 1. 8 Degree in which the subject is taught**

<b>Group</b>	<b>Frequency</b>	<b>%</b>
Degree in Business Administration	15	34.1
Degree in Tourism	12	27.3
Degree in Finance and Accounting	10	22.7
Common Subjects three Degree	6	13.6
Common Business Administration & Finance	1	2.3
<b>Total</b>	<b>44</b>	<b>100</b>

The following chart (1.9) shows that the average of activities in classroom hours with a range of 45 to 60 is approximately of 56.16. On the other hand, the hours devoted to theoretical teaching have an average of 28.8 in which there is at least a subject that do not have hours devoted to theory, the reason may be that contents are totally practical and they are developed in laboratories. Next, there is the practical learning that scores with a 24.38. Regarding evaluation, it has an average of 3.03 in a range of 1 to 5 hours.

**Table 1. 9 Classroom activity average**

<b>Classroom activity</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
Number of hours devoted to classroom activity	44	45	60	56.16
Theoretical teaching	44	0	40	28.80
Practical teaching	44	15	55	24.38
Evaluation	44	1	5	3.03

Regarding the formation of teams, we can observe the table (1.10) in which the 81.8% of the cases, the teacher allow to students to choose how to be grouped. Only 18.2% of the cases, the professor group students according to certain guidelines. One of the important factors that cooperative learning applies is the variety of team member, for the activity to be more enriching, if it is allowed to students to be grouped by

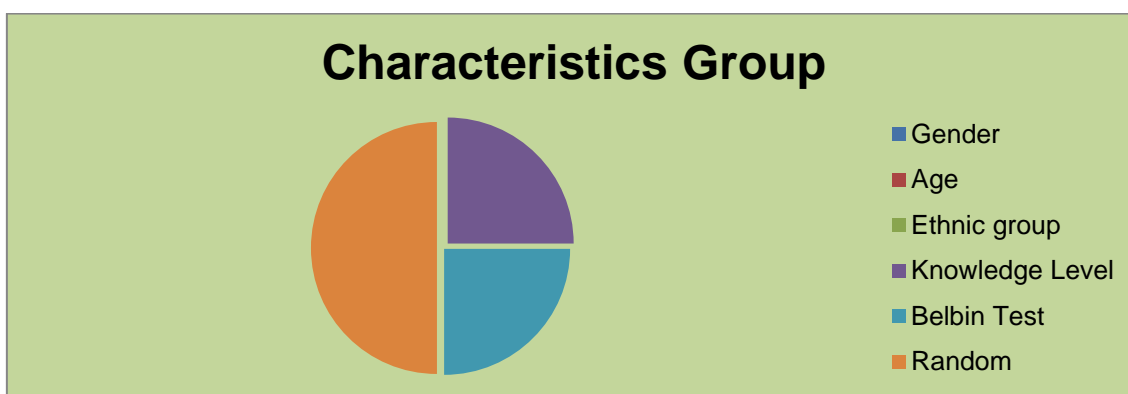
themselves, they will do it with people that is alike to them in terms of personality or with those that have similarity, preventing to have different resolution guidelines of the activities and the results will be homogeneous. Hence, the importance of the teacher deciding how students have to be grouped to form teams.

**Table 1. 10 Team formation**

Group	Frequency	%
Students	36	81.8
Professor	8	18.2
<b>Total</b>	<b>44</b>	<b>100</b>

In the following graphic (2.1) we can observe that the guidelines used by teacher to form the teams belong to a 25% in both cases for the Belbin test (cited by Gareth, 2013) and the knowledge level, the other 50% belongs to forming groups at random, according to the guidelines that the teacher considers advisable. Some of teachers' opinions is to "group according to gender in some subjects is not always possible", since there is a higher number of women than men in the classroom. Regarding the ethnic group or age, these are characteristics that in any of the observations made by teachers are mentioned.

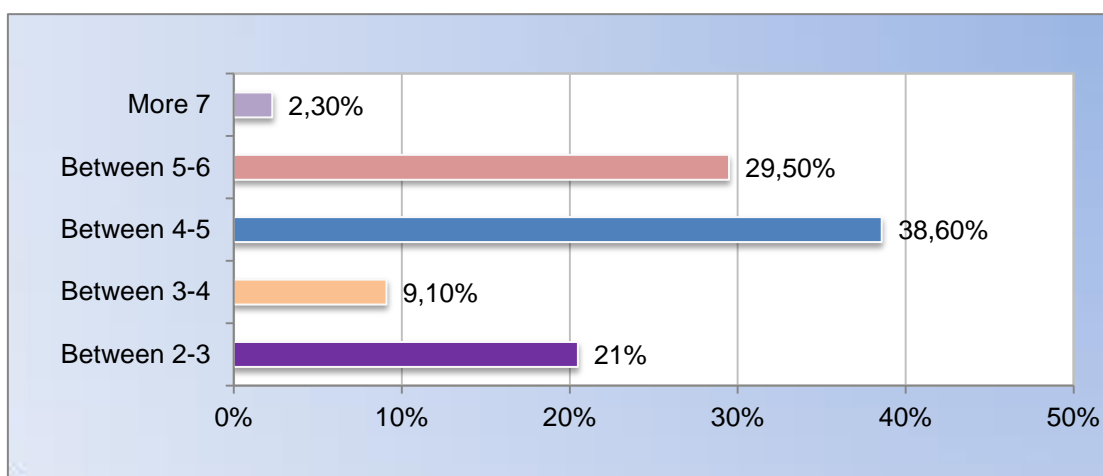
**Graphic 2. 1 Characteristics Group**



As far as group size is concerned, it can be observed in the graphic (2.2), the number of students that form a team with a higher percentage is between 4 and 5 students with a 38.6, straight away groups of 5 and 6 with a 29.5, and 2-3groups with a 21% as the most chosen groups by teachers. The lowest percentage is groups of 7 or more students with a 2.30%. The size of teams is an important factor for teamwork's success, teachers expressed that groups of 3 or 5 students is the most suitable

number, over that number there will be students who do not contribute all necessary for the fulfilment of the task.

**Graphic 2. 2 Group Size**



The following table (1.11) show us how are thought the activities in order to work and develop the academic contents, this questions makes reference to if the activities are designed to be worked in class, out of class or both. A 54.5% of the teachers design activities to work in a mixed way, that is to say, students carry out a research of information out of class, so then they carry out the different activities in the classroom. On the other hand, there are those who carry out activities outside the classroom, a 25% of interviewed people. They work all activities outside the classroom and then in class they make the reports' presentation, by means of a exposition or handing over a report to the teacher so he/she assesses it. Last but not least, there is working in class with a 20.5% that consist of carrying out a collection of information and producing a report in class. For these types of activities the teachers provide students with all the necessary tools in order to carry out the different tasks.

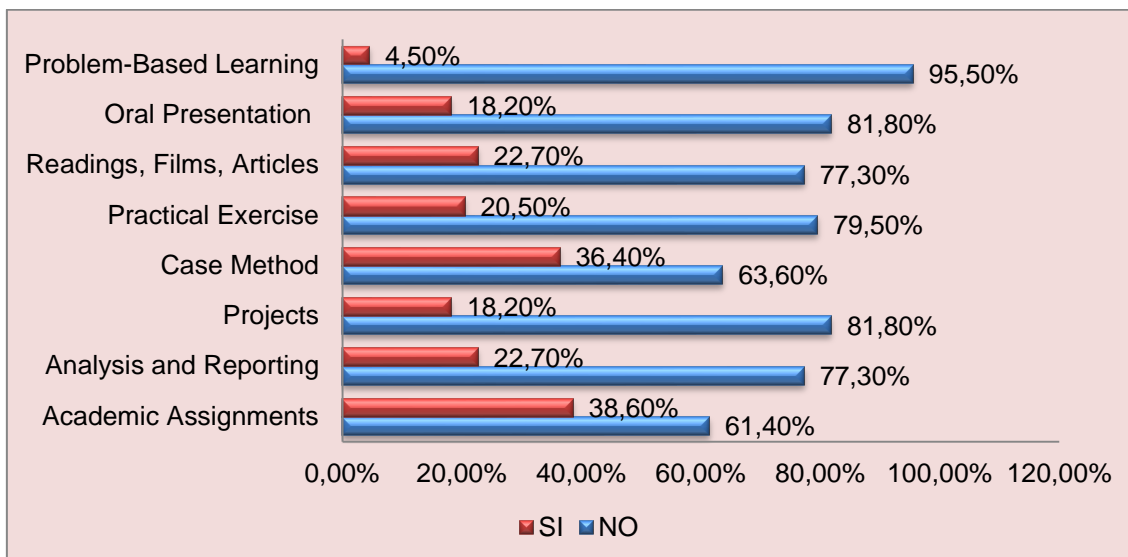
**Table 1. 11 Design of activities in order to work by teams**

Group	Frequency	%
Tasks in Class	9	20.5
Homework	11	25.0
Mix	24	54.5
Total	44	100

Regarding the types of proposed activities so students carry out activities, the following graphic (2.3) shows the variety of tasks that are developed in the different subjects. The producing of final projects is the most representative percentage of this

chart with a 38.6%, straightaway the case method with a 36.4% of teachers carrying out this activity in their group practical exercise. It is important to highlight that only a 4.5% carries out problem-based learning.

**Graphic 2. 3 Type of activities to work by groups**



In the following questions we will analyse the average of sessions devoted to each practical exercise and what is its duration approximately measured in minutes. As it can be observed in the following table (1.12) in a range of 1 to 12, the average of sessions is approximately 5.3 for each practical exercise in classroom. Taking into account each subject can have several different classroom activities.

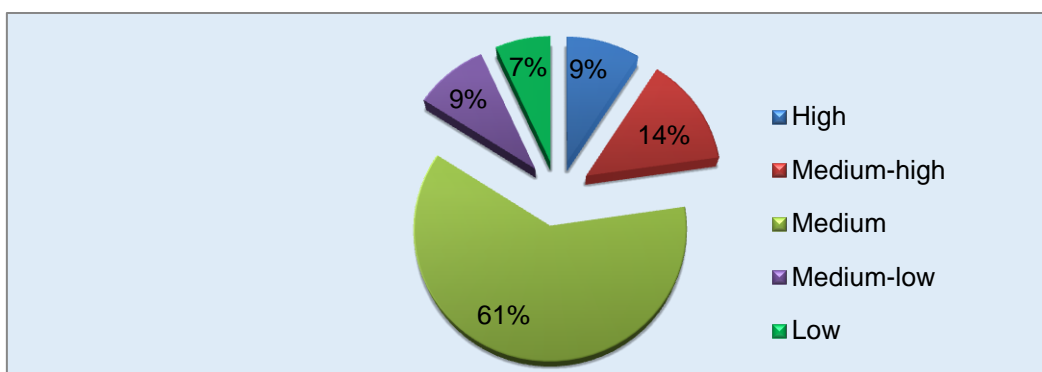
Regarding the duration in a range of 15 minutes at the minimum time and 240 minutes as the maximum, this is due to teachers using in their practical exercises a method of learning similar to groups of individualized learning. In this case the teacher devotes to each group 15-30 minutes approximately, and he/she explains the activity that has to be carried out and continues with the following team. The normal duration of a practical exercise is between one hour or thirty minutes, the maximum duration (240) is due to the content of the subjects are totally practical. In this analysis the duration average of the practical exercise is approximately of 123,4 minutes (2hours).

**Table 1. 12 Duration of team work activities**

<b>Number and N</b>	<b>Duration Tasks</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
Session's Number	44	1.0	12.0	5.318
Duration each session	44	15'	240'	123'.40

In the following graphic (2.4), we can observe the difficulty level that was expressed by the interviewed teachers of the proposed activities in order to carry out the practical exercise. A 61% is for the medium level, more than a half of the subjects, while the other 39% is distributed among other the other levels, being percentages similar. A 14% is for medium-high level, 9% for medium-low and high and also is important to highlight a 7% of teachers expressed that the level was low, as the lowest percentage.

**Graphic 2. 4 Characteristics Group**

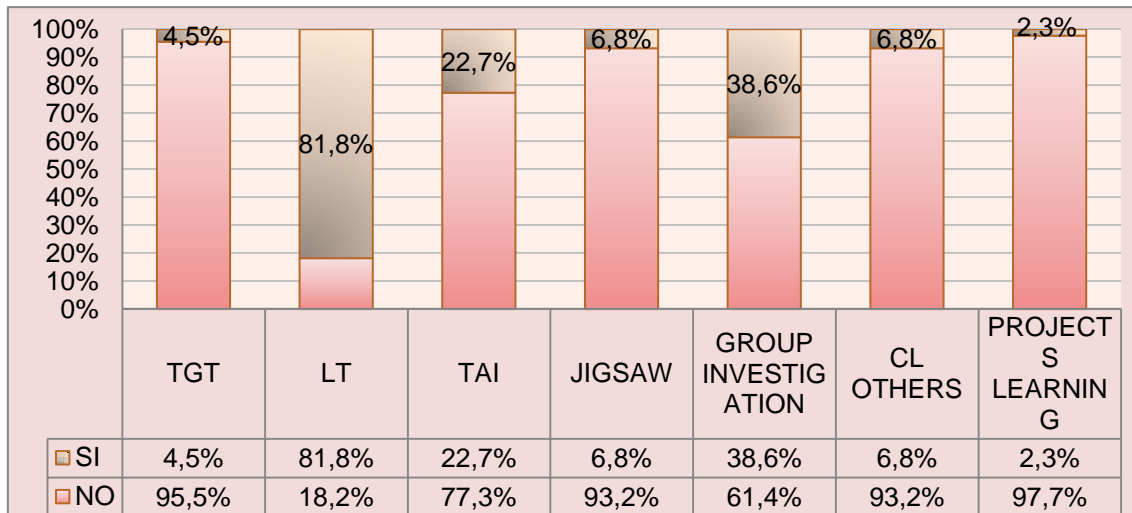


### 3.3.2 Analysis of learning methods

In this section it will be analysed the different learning methods used by teacher in the carrying out of the practical activities. According to the graphic (2.5), the most used method of cooperative learning is Learning Together (LT) with 81.8% of the total. It can be also observed that groups of investigation are other of the learning methods most used with a 38.6%. Regarding the learning methods that are less used there is another type of cooperative learning and learning based on projects with a 6.8% and with a 2.3% respectively. The most used learning methods have the characteristic of not existing a specialization of the task, that is to say, the task is less structured and therefore simpler than other learning methods, this could be one of the preference

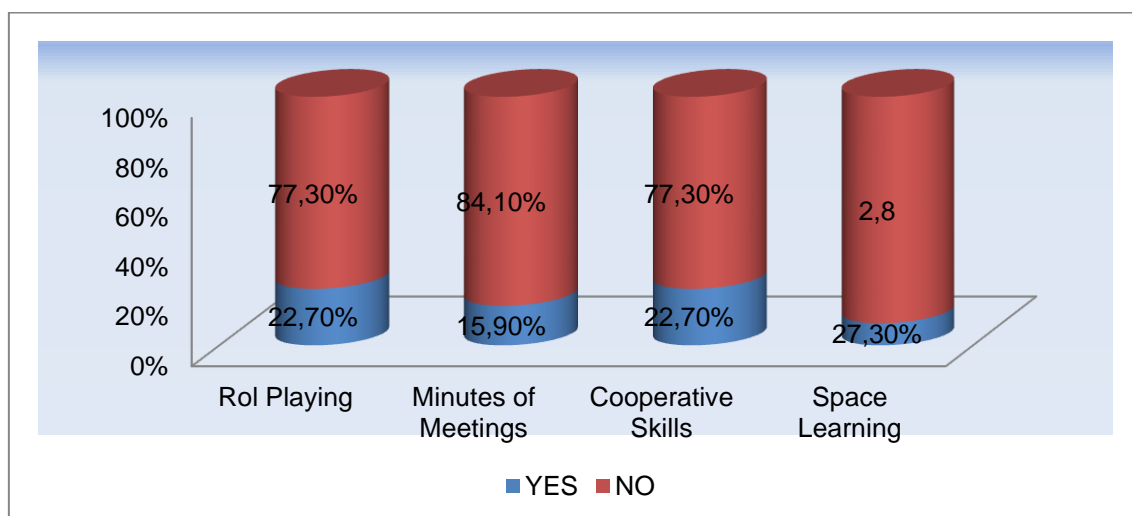
reason of this type of learning. On the other hand, this learning appreciates teamwork at global level and also rewards the group for the global result.

**Graphic 2. 5 Learning Method Used**



Some of the important factors that require cooperative learning are the team roles, minutes of meeting and the classrooms for teamwork, in addition to the previous information in cooperative skills. In this section it will be analysed these factors. In the following graphic (2.6), we can observe that the total of the 44 observations for each question, there is a 22.7% of the subjects where roles are assigned to members of the team just as the previous training of cooperative skills and in a similar way there is the question, if classrooms are designed to work by teams with a 27.3%. As mentioned before, these factors help cooperative learning in a positive way and obtain the expected results and as it can be observed in the four cases the percentage is low.

**Graphic 2. 6 Cooperative learning factors**



### 3.3.3 Assessment Method

In this section, it will be analysed the assessment of the team, who does it, how is it assessed and the structure of rewards.

In the following table (1.13), it can be observed that only the teacher assesses most of cases with a 75%, opposed to the 25% who assesses in a mixed way, taking into account students' assessment and self-assessment, these last one as important factors of cooperative learning, since it allows to not having homogenization in the results and it is clear to see the contribution of students to teamwork.

Regarding how teamwork is assessed when the teacher carries it out, the highest percentage is for "all members having the same mark" with a 68.2% opposed to 31.8% that expresses that each member of the team have a different mark.

**Table 1. 13 Team work assessment**

<b>Who performs the assessment</b>	<b>Frequency</b>	<b>%</b>
Professor	33	75.0
Mix (Students ,Professor and Self-Assessments)	11	25.0
<b>Total</b>	<b>44</b>	<b>100</b>
<b>Who is evaluated</b>	<b>Frequency</b>	<b>%</b>
Each member of the team has a different mark	14	31.8
Team members have the same mark	30	68.2
<b>Total</b>	<b>44</b>	<b>100</b>

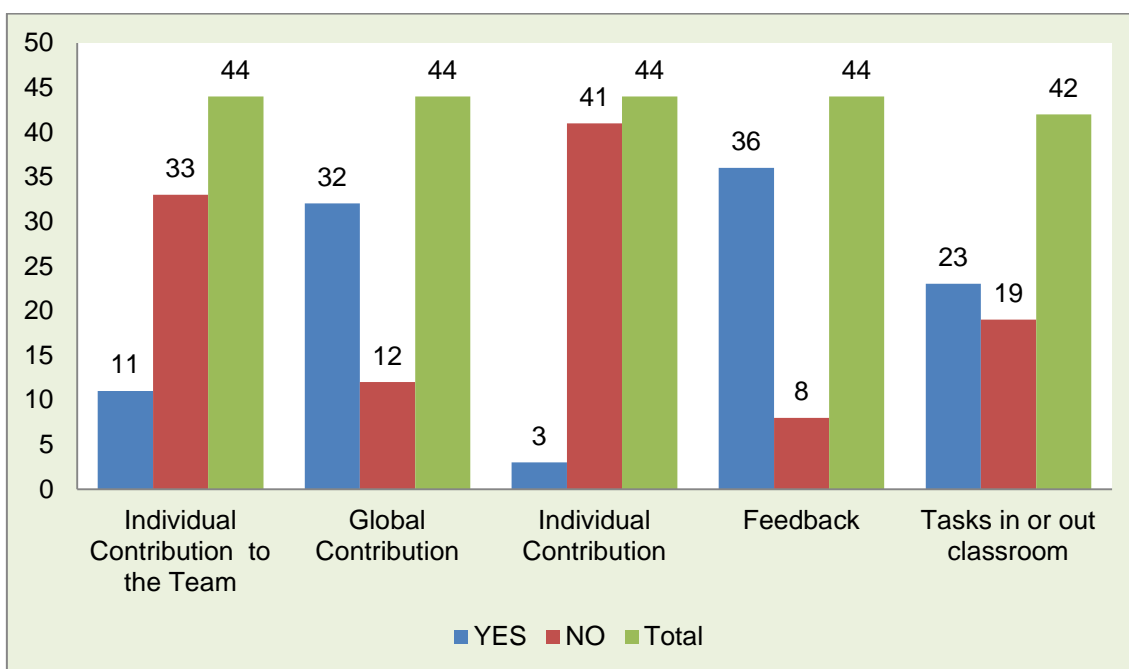
#### 3.3.3.1 Incentive structure

Moving to the incentive structure, how the team is rewarded and what is done with the assessment results. In the graphic (2.7) we observe that in the question, if the group is rewarded for the global result, 32 expressed that it was made in that way. Regarding the question if the group was assessed by individual learning (the individual contribution to the team), 11 teachers carried it out. In addition to these 11, also the group was rewarded by the global result 4 of the interviewed. Last, 3 expressed having rewarded individually.

Regarding if feedback was given to students with assessment results, 36 out of the total expressed that they did it, opposed to 8 that did not carry it out or they just did it when students requested it. It is important to say that this feedback process allows the constant improvement of the teams.

On the other hand, in the question that was made concerning if obtaining better results, activities should be carried out in classroom, 23 professors of the total questioned, answered to this question in a positive way. Regarding to the 19 negatives answers, teachers expressed that according to (EHEA), there is a percentage of the subject that is carried out outside the classrooms, therefore they thought necessary to work outside the classroom part of the activities proposed due to the lack of time to finishing them, on the other hand, this model intends that the student has a more active and complete role for his/her formation, being more responsible and autonomous in his/her learning.

**Graphic 2. 7 Incentive structure and assessment results**



### 3.3.4 Level of satisfaction concerning cooperative learning

In this section teachers made an assessment of cooperative learning. These questions were designed according to the questionnaire taking into account the factors and characteristics that are used in the methods of cooperative learning and their results.

As far as the importance level the survey respondent gives towards the level of satisfaction about the cooperative learning, it can be said that in a range of 0 to 10,



stands out the assessment of “it is a positive experience in students’ learning” with an average of 8.48, straightaway of the assessment of “more time is needed for training in techniques of cooperative learning”, which scores with a 7.61. Cooperative learning assessment is highlighted because it occupies too much time with a 5.2, as the aspect with lower score. (table1.11)

**Table 1. 14 Average level of teachers’ satisfaction about CL**

Satisfaction Level CL				
Teamwork experience assessment	N	Minimum	Maximum	Average
Cooperative learning is a positive experience in students’ learning.	43	5.0	10	8.48
More training in CL techniques is needed	42	0	10	7.61
CL takes too much time	44	0	10	5.20
Students do not know how to work in a cooperative way	43	1	10	6.04
Students prefer working in an individual way	42	1	10	6.31

Regarding the cooperative skills that have been acquired in the learning development and the improvement of the competences planned in the subject, teachers assessed with an average of 7.58 concerning the “improvement of competences”, straightway with a 7.12 of the “improvement of social skills”. As far “conflict resolution” is concerned, teachers assessed with an average of 6.42. Table (1.15).

**Table 1. 15 Assessment average concerning cooperative skills**

Cooperative Skills				
Improvement assessment of the technical and transversal competences.	N	Minimum	Maximum	Average
Students improve in planned competences in the subject.	43	3.0	10	7.58

Social skills have improved with cooperative learning (CL).	40	3.0	10	7.12
When conflicts have been presented, students have learned to solve them in a cooperative way.	40	3.0	10	6.42

Regarding students' learning results, teachers have assessed with a 7.69 that cooperative learning help to improve final evaluations' results. Also, with a similar average of 7.34, there are those who expressed that students learn more in this way than in an individual way. On the other hand, with a lower assessment with 6.90, with relation to this learning in which the student is the active part of his/her learning and he/she does not take advantage of his/her team partners. Table (1.16)

**Table 1. 16 Assessment average of obtained result by students**

Outcomes				
Result assessment of students' learning.	N	Minimum	Maximum	Average
Students learn more with CL than in an individual way.	43	2.0	10	7.34
CL improve results in final evaluations	43	2.0	10	7.69
CL helps the student to be the active part of the learning and not take advantage of other partners.	42	2.0	10	6.90

Next, it will be carried out an anova analysis to decide if there is relationship between the subjects that are carried out with cooperative learning and the success tax and the performance tax of the subjects with these four degrees. As it can be observed in the table (1.17), the performance rate average of the registered (80.4) is noticeably higher to the subjects in which it is not carried out (66.6), in addition it is possible to say that these differences are significant ( $p=0.929<0.05$ ), there is relationship between the type of learning carried out and the performance of registered students. On the other hand, regarding the success rate, the average (83.0) is also noticeably higher in the subjects which cooperative learning is carried out, opposed to those which do not carry

it out with an average of 72.6, but according to this analysis this difference is not significant ( $p=0.06>0.05$ ).

**Table 1. 17 Relationship between success and performance tax for learning type**

Success rate	Group	N	Average	Sig.
Registered students' performance	Cooperative learning	44	80.4	0.029
	Non cooperative learning	54	66.6	
	Nr/Dk	36	78.6	
	Total	134	74.4	
	Group	N	Average	Sig.
Success rate of the presented ones	Cooperative learning	44	83.0	0.06
	Non cooperative learning	54	72.6	
	Nr/Dk	36	85.4	
	Total	134	79.5	

### 3.3.5 Conclusions and suggestions

As seen before in the chart (1.6), it can be observed that the subjects in which cooperative learning is more used are those obligatory ones, but from the third year, this learning is used, in this level students have been through many experiences of teamwork and they have assimilated this competence.

But, has it been learnt to work by teams?

For the question in which students do not know how to work by teams, teachers assessed with an average of (6.04). So it can be said that students learnt something. On the other hand, in the first academic year, basic or obligatory subjects are taught, common to the three of the four degrees; despite of this, these subjects do not carry out cooperative learning.

The first academic year in the university should raise awareness in students about the occupation that they are being prepared to. Some teachers' opinions is that in the first year "students are disoriented and overwhelmed" because despite of coming from an academic context of high school, university demands a high level of responsibility and autonomy. It would be advisable that students were trained in order

to develop these competences that foster cooperative learning, so in this way, the student assimilates and works better the academic contents in the different fields of a group context.

As it has been observed in the assessment results by teachers concerning how positive is cooperative learning for students with an average of 8.48, it would be interesting to take into account adapting study methodology in order to foster this type of learning.

Nevertheless, results show us that students prefer working in an individual way reinforcing the theories that express students' lack of interest of working by groups due to the conflicts that may be presented. This is another factor to take into account since according to the assessment given by the teachers (6.42), concerning if they have known how to solve conflicts in a cooperative way when they were present.

Regarding students' results in the final evaluation, according to the analysis if there were relation between the subjects that were carried out cooperative work and the rate of success and performance, we can observe that the differences were not significant in the success rate despite of its noticeably higher average. This could be because there is a quite important percentage in the individual evaluation, between a 50 and 70%. On the other hand, results' rates are global.

Despite of the study limitations, there are other factors and responsible professors of subjects that did not carry out totally the questionnaire, this analysis helps to understand the importance of cooperative learning in classrooms and the necessity of implementing it correctly with the characteristics that define it in order to be successful.

With this study met the objectives 1, 2 and 3 at the beginning of the chapter. We now, turn to the proposal.

## **CHAPTER 4: Proposal**

In this final stage of university teaching, it is important to have assimilated and internalised all knowledge that have been taught, because its professional performance outside the classroom will carry the institution's name that trained it and prepared it to develop what has been learnt for the benefit of the organization that embraces it. On the other hand, in the classroom not only are formed persons for developing thematic contents related to the different disciplines that are taught, but also other series of contents that prepare students to face other problems related to social and emotional

skills. As mentioned before, the importance of developing transversal competences that favour learning helping the student to be the active part to the extent of deciding what and how he/she wants to learn, depending on his/her partners to achieve common and individual objectives, but without taking advantage of them. The teaching modernization necessary involves using tools that favour these environments in benefit of the society that develop them and should be a educative model according to the current necessities as an alternative to the traditional models.

#### **4.1 Subject implementation of cooperative learning in Jaume I University.**

In the university context, nowadays, students benefiting from key techniques, methods and technologies, it is proposed creating a subjective of cooperative learning that allow working session with multidisciplinary contents that foster cooperative skills, transversal competences training and emotional intelligence.

##### **Objectives**

- Defining pedagogical and technical specifications that must have a subject of these characteristics for students' learning.
- Designing a cooperative learning space that allows training and practising the different teamwork techniques that develop this type of learning.

##### **Key aspects for the implementation of this subject**

- To be a first year obligatory subject
- The topics to develop are transversal and introductory to the various disciplines of knowledge
- Use the five fundamental elements that make up the cooperative learning, as they are positive interdependence, simultaneous interaction between students, individual responsibility, social and interpersonal skills, and the self-assessment of the Group (Johnson et al. 1999).

Along these lines and the necessary tools, students can develop strategies of cooperation that favour the learning of curricular learning of the different subjects that they will study during the degree. Besides, this training makes the student improve in the planned competences of the subject so satisfactory academic results could be obtained. On the other hand, regarding social skills and interpersonal relations, they are social aspects in the professional practice of students. Gil et al. (2008) researched

about the efficiency of teamwork in the organizational environment and they recommend incorporating formative experiences in the academic circle of future professionals with the purpose of answering to labour market necessities and the current companies. "Teamwork and running groups efficiently are competences that can be learnt" (Gil et al. 2008). When it is worked as a team abilities for planning work, making decisions, developing leadership and empathy, resolving of conflicts are acquired, taking into account the contributions made by other members of the group, a series of skills that allow producing new knowledge from this experience.

On the other hand, some of the strategies and action lines of the university are oriented to the employability, developing company traineeship programmes and actions focused on the labour field of students, towards creativity and innovation with investigation and entrepreneur spirit programmes (Marketing Plan of University Jaume I, 2014), in which the use of cooperative and social skills are necessary for the achievement of these objectives.

Teachers' role is another key aspect to be taken into account; their implication and participation give meaning to the implementation of this subject. It is important not to forget that the planning of these cooperative learning activities take time and effort of teachers, as well as students' effort, (Johnson and Johnson, 199), but success will depend mainly on the preparation and structuration of the material so students carry out learning in an appropriate way focusing on the educative process towards cooperating between equals and goodwill of working in this way.

This subject intends to raise awareness in students teaching them to work by teams in a cooperative way, developing the necessary skills to face any challenge that the student could face during his/her university time and to reduce the reluctance and the dissatisfaction that is produced when in some cases it is worked by teams, because of the previous problems seen, in this way cooperation among partners becomes a positive and enriching experience. On the other hand, the multicultural context of universities having students from different nationalities in its classrooms, being student exchanges, or living in this country, it is fundamental fostering interpersonal relation that favour reconciliation between students from different cultures, promoting communication for the process of learning and acceptance by the community in general.

## 4.1.1 Pedagogical and technical specifications

### 4.1.1.1 Cooperative learning approximation:

Before starting to develop academic contents, it is necessary to teach students what is the meaning of cooperative learning, what are its main characteristics and the importance of each one of them for its implementation, also teach the different techniques that exist, the advantages detached from this type of learning for their academic and professional benefit.

There are different methodologies for carrying out an approximation towards these contents, dynamics of the team, in which results obtained by team, are taught in comparison with individual work, in an introductory way students are aware of these ways of work in a unstructured way. Some of them can be the following ones:

- Dynamics of cohesion team
- Cooperative skills workshops
- Role-playing
- Emotional intelligence workshops
- Neurolinguistic programming workshop
- Watching movies, studying articles

Promoting techniques for the orientation and assimilation by students towards cooperative work between equals.

### 4.1.1.2 Team formation

In this stage, the professor plays a very important role in order to design the methodology that wants to implement.

According to Johnson and Johnson (1999) teachers' purposes are:

- Specifying what are the objectives intended to be achieved in the learning, choosing the techniques that are most coordinated with the characteristics of the initial tasks.
- Team sizes, this author proposes that in order to be successful in the activities proposed by the teams, it is necessary to form groups of 4-6 groups. If there are more members it will be more difficult to reach an agreement and it is possible that conflict occur.
- Heterogeneity of teams, important variable that has to be taken into account in the formation of teams, they have to be heterogeneous and they have to be grouped

based on criteria such as gender, age, ethnic group, level of knowledge or personality of students favouring this type of learning, this criteria favour to the enrichment of the tasks contributing different perspectives, creativity and knowledge.

- The time that have to last the team formation. When activities are not very difficult, they can be sporadic and permanent teams for simpler activities in which several sessions of work are required. In this type of teams the heterogeneity of teams is fundamental and positive for the cooperative learning.
- Preparing the classroom where teams will work in way that facilitates their learning.
- Competences that have to be developed and potentiated in the educative environment, as the attitudes expected from students as the team orientation, the shared view, the team cohesion, the confidence and the attitudes related to teamwork (Alcover and Gil, 1999).

#### ***4.1.1.3. Cooperative techniques***

Some of the techniques that were mentioned before were necessary for the carrying out of this learning; cooperation techniques must be introduced in the designed curricular activities in order to explain its functioning, the advantages of carrying them out in the different activities and the objectives that are pursued. Some of them are:

- Jigsaw, puzzle, Aronson Model
- TGT, Vries Model
- Learning Together, Johnson Brothers
- Group Investigation, Sharan Model
- Team-assisted Individualization (TAI), Slavin model

#### ***4.1.1.4 The division of tasks and the positive interdependence***

The explanation and the structure of tasks that are going to be carried out in this part is fundamental so there is an active and equitable participation of all team members. For the team to work correctly must be positive interdependence (Johnson and Johnson, 1999) and this characteristic of cooperative learning must be assimilated from the very beginning so there is success of any type of activity that students develop. In this way it must be established:



- That there is individual responsibility, the contribution of each member of team makes indispensable for the team in order to carry out the task. The cooperative learning is not the amount of individual projects, but the all the work contributed by all members, in which previously it has been listened the opinion of each one of them and they have agreed with the most suitable decision to solve the task.
- The inter-group cooperation, the increase of effort of all members will maximise learning.
- Specify to students which are the behaviours expected, the appropriate and desirable way of working. Establishing a commitment on the part of the student for the achievement of goals that will be established by the member of the team. (Learning agreement).
- Assignment of roles in the team necessities so there is a order and organization of the group and the tasks: coordinator, secretary, spokesperson, etc. All will depend on the type of task that one has and is they can be exchanged.
- The teacher has to act a guide and monitoring the interventions of the teams in order to know their functioning, in this way the teacher can help to direct students towards the objectives of the teams and as an intermediary in the case of students not reaching an agreement or not solving group conflicts.

#### ***4.1.1.5 Assessment and feedback of teamwork learning***

Once finished the cooperative work, it must be established criteria for the assessment of the team and each of their members that allows improving and progressing in their learning. At the beginning, it was thought that this learning being cooperative had to assess and reward in a global way, but it is another of the principles that reflects cooperative learning, admits that its individual contribution by students to teamwork must be rewarded, in addition to all result. One of the distinguished elements that this learning possesses is appreciating individual work as well as teamwork. Some types of assessment are the following ones:

- Initial and group assessment: depending on the activities set out and the techniques used, it will be designed an assessment according to the criteria that teachers specify, the learnt contents and the obtained results.
- Assessment between equals (co-assessment). In this type of assessment it is intended that student's assessment to their own partners. Students have carried out an activity during a period of time and they really know if it has been achieved what was meant to, and how it was done, if all members of the team did their contribution, if work was done in a cooperative way, if an environment that

promotes interpersonal activities was created. All factors these factors are necessary in order to be reflected for a process of improvement and feedback. This can be carried out with questionnaires that structure some criteria that the teacher will design in a proper way so the members of the team assessed it.

- The self-assessment is a manner of evaluation that can be used when students are aware of their learning. It could be thought that when assessing themselves the result will be always positive, but in this case, this learning give to students autonomy and make the student aware so he/she assesses his/her contribution, participation and implication with the objectives proposed by the team.

The assessments help to detect if teams do not work properly, if there is no contribution of ideas or if the team act in a passive way in their learning. Morales (2007:135), expresses that teamwork will be more effective if it is reflected and assessed. This process offers a true information concerning how it is being worked and in which manner can be learning optimized.

**Table 1. 18 planning of the activities of the subject**

<b>Bachelor´s Cooperative Learning</b>	
<b>General Information</b>	
<b>Type: Compulsory</b>	
<b>Year: 1</b>	
<b>Semester: 1</b>	
<b>Credits: 3</b>	
<b>Language: Spanish/Catalan</b>	
<b>Competences of self-management and interpersonal</b>	
<b><u>At individual level</u></b>	
<ul style="list-style-type: none"> <li>• Organization and group task planning ability</li> <li>• Ability of applying knowledge to practical exercises</li> <li>• Planning, managing and directing teamwork in organization</li> </ul>	
<b><u>Teamwork</u></b>	
<ul style="list-style-type: none"> <li>• Ability of organization and planning of group tasks</li> <li>• Ability of setting and achievement of group objectives</li> <li>• Conflict resolution ability</li> <li>• Ability of resolving group problems</li> <li>• Adapting ability to be more effective in changing environments</li> <li>• Ability of commitment for assuming responsibilities and carrying out the work</li> </ul>	

- Ability of listening, developing of communicative skills.
- Adaptability ability: to be effective in a changing environment.

<b>Session</b>	<b>Units</b>
<b>1</b>	<b>1. Cooperative Learning Approximation</b> Introduction and Presentation of subject 1.1. Group cohesion dynamic 1.2. Definition and characteristics of CL 1.3. Main theories and authors of cooperative learning 1.4. Differences between group work and teamwork 1.5. Main benefits 1.6. Manel team dynamic
<b>2</b>	<b>2.1 Cooperative skills workshops</b>
<b>3</b>	<b>3. Team formation</b> 3.1. Objective of this section 3.3. Professor role and tasks' structure 3.4. Formation criteria of the teams (age, gender, ethnic group, knowledge Belbin test, chance, etc.). 3.5. Size and duration of the teams. 3.6. Dynamics related to heterogeneity and multiculturalism. 3.7. Important factors for the functioning of the team (assignment of the roles, minutes meeting).
<b>4</b>	<b>4. Abilities, competences and attitudes of teamwork business.</b>
<b>5</b>	<b>5. Simple cooperative learning methods</b> 5.1. Objective of this section: introduction to cooperative learning methods. 5.2. Learning together and group investigation and other basic methods 5.3. Design a task in context economics and business and presentation.
<b>6</b>	<b>6. Complex cooperative learning methods.</b> 6.1. Objective: development and learning of the most complex methods, with more structuring and specialization of the tasks. Assessing cooperative learning. 6.2. JIGSAW, TGT, Team-Assisted Individualization. 6.3. Task division and positive interdependence. 6.4. Design of an activity with any of these method and assessment.

- 7 7. Assessment and teamwork learning results.
  - 7.1. Objective: assessing cooperative learning and feed backing teamwork with this result.
  - 7.2. Importance of the learning process assessment.
  - 7.3. Assessment, criterion and rubrics for carrying out the team assessment.
  - 7.4. Professor assessment, team assessment and self-assessment in the cooperative learning.
  - 7.5. Design of an activity with Jigsaw method.

Source: Own development based on contents of the Virtual classroom of Jaume I University. 2015.

#### 4.1.2 Learning Spaces

Many studies show the importance of classroom designed to work activities in group and the relation that there is between the designed of the classroom and the academic results.

The teamwork is not a novelty, in fact there is a large history in researches concerning learning, besides it has been carried out in all types of educative environments. According to Ausubel and others (1978) recognised that the discussion is the most effective method in order to foster intellectual development of other topics. In this way, learning should be an open and creative activity that produces ideas, new ways of doing, of thinking, building knowledge from a cooperative discussion.

But, how are used the classrooms at universities in which it is worked by teams?

Nowadays, we can find classrooms designed to work in a traditional way that prevent teamwork since interacting with other partners is impossible. These classrooms are thought for students to be receptors of academic contents and individual learning, hence that tables and chair are in rows secured to the floor. But this project does not intend to deepen in if design is adapted or not to the current requirements of the educative environment, but it does intend to deepen in expressing the fact that is not possible to carry out a cooperative work with the design of these classrooms. This type of furnishing difficult the development of activities that are proposed for teamwork, in this way it is fostered the division in the carrying out of the tasks but not the cooperation and the work. On the other hand, it also prevents students' interaction with the teacher. A recent study carried out in schools by the

university of Salford in the United Kingdom (Barrett, P., Zhang, Y., Davies, F., and Barret, L., 2015), quantified that the classroom's design can influence on the academic progress of a child in a 25% in a positive or negative way, in this study were taken into account a series of characteristics such us the light, the orientation, the noise and other environmental factors in addition to the structural design of the classroom. On the other hand, universities constantly promote innovation and creativity and the use of technological tools but the design and the current methodology of education is not in line with the current requirements.

### 4.1.3 Examined cooperative learning spaces

In order to carry out a proposal of classroom design thought for cooperative learning was studied some projects of "Learning Spaces" that have carried out some universities to analyse advantages and disadvantages of this type of classrooms.

A study of the university of Minesota called "PAIR-UP" published in Educase Quarterly (vol. 32, nº 1, 2009) showed the experimental results that had obtained this university concerning classroom of cooperative learning "Active Learning Classrooms" designed with high technology, innovation and models of learning between equals. The results expressed by this article were quite positive, students developed learning in an effective way, fostering teamwork and cooperation, on the other hand teachers adapted their methodologies of learning to these new classrooms, making learning more interactive. Besides, it was positive assessed the technological and physical environment of the classroom such as computers, screen and round tables on the part of students.

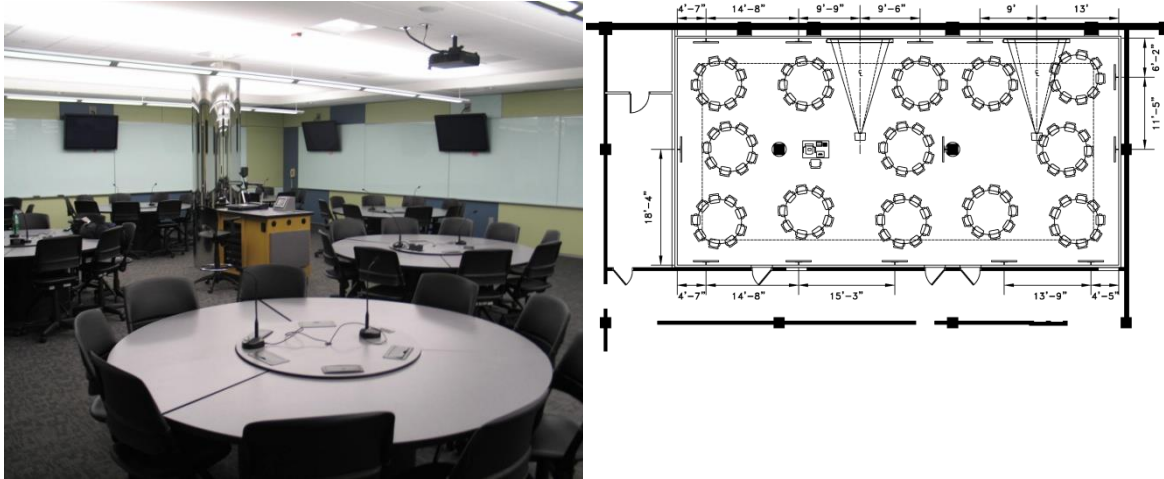
Due to the great acceptance of these classrooms, it was carried out a second research deepener concerning how students learnt in traditional classrooms and in cooperative learning classrooms and the results were more positive.

The research was carried out in the subject of biology. Next, it will be explained in detail the factors that were taken into account for this analysis.

- Two cooperative learning classrooms were designed previously (graphic 2.), with a capacity of 45 students and other with a capacity for 117 students. While for the formal learning was used a traditional designed classroom. These classrooms had big rounded table with a capacity of 9 students each one, with computers, electrical connections, blackboard on the sides and LCD screens that facilitated cooperative learning.

- Instructions for carrying out activities were the same for both classrooms (traditional and cooperative).

**Image 1. 4 Classroom cooperative learning**



Source: University of Minesota 2010

**Image 1. 5 Classroom Traditional**

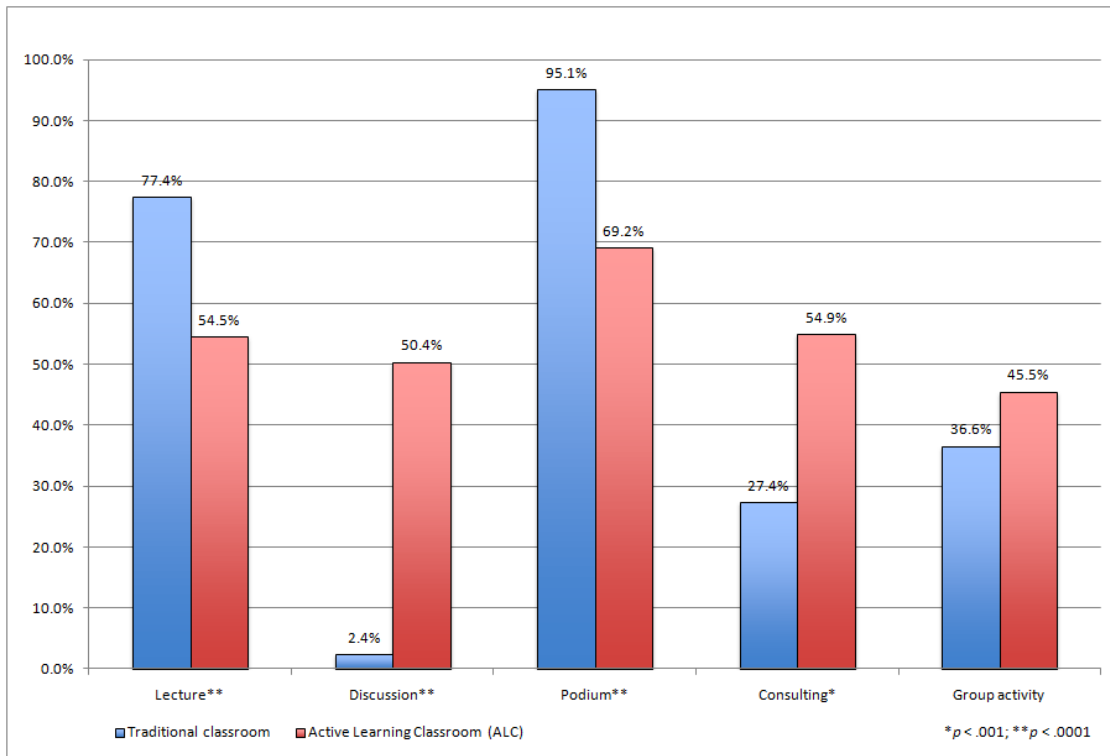


Source: University of Minesota 2010

These are some of the results of the study; cooperative learning obtained a positive effect on the mark results. Besides, there was more interaction of students in cooperative classrooms than in traditional classrooms. According to the traditional classrooms' design the teacher was more time standing next his/her desk and in cooperative classrooms he/she moved around the class constantly, he/she more

information with formed groups and students participated a 9% more in teamwork activity than in the traditional classroom.

**Graphic 2. 8 Cooperative learning vs. Traditional learning**



Source: University of Minnesota 2010

According to the empirical analysis that was carried out with teachers, one of the most common comments in relation to the number of students was “Cooperative learning becomes difficult in subjects with 70-90 registered students per class”, or “The academic content of the topics is for learning in an individual way”. Although, it seems difficult first, these studies show that following an appropriate methodology for cooperative learning, implication of teachers, classrooms’ design, technological tools and especially students’ implication, these learning environments can exist at universities and they can reach positive results. It is not meant to remove individual learning but integrate it to the learning between equals.

The origin of the previous study comes from a project of the University of North Carolina, called Scale-Up published in (2003), thought for creating an environment of interactive learning for the subjects that had more registered students. Nowadays, different researches have allowed improving some factors or characteristic of these environments, through experience throughout of years. This project is carried out by several universities of United States for the subjects of biology, computer science,

physics, engineering, bioelectricity, chemistry and multidisciplinary sciences among others, in which positive results have been obtained. They are classrooms with a capacity of 70-120 students per class, depending on the number of registered students, who have technological tools available for students such as laptops, overhead projectors, blackboards, furnishing adapted to the necessities of cooperative learning. The design is thought for peer learning and having more interaction with the teacher. In some of them, teachers' desk is in the centre of the classroom.

#### **4.1.3.1 Some disadvantages of these Spaces Learning**

The cost of these classrooms according to the university of Minnesota concerning the design is about \$147.000 dollars for classroom of 45 students and \$269.000 dollars for classroom of 117 students, including the construction, implementation, furniture and the technology previously mentioned.

On the other hand, the academic activities design, approximately the 41% of the subject do not carry out nor assess teamwork (chart 1.1). These spaces would not be beneficial for these subjects, due to their individual work design.

On the other hand, the academic culture of some teachers do not see possible these type of learning environments in subjects with a great number of students.

The lack of training of students in cooperative skills will not allow carrying out successful activities.

On the other hand, as it has been mentioned before, the size of groups advisable is between 4-6 students (Johnson et al. 1999). The design of these tables is for 9 students so it could be difficult for learning since problems related to group agreement may occur.

#### **4.1.4 Classroom design**

According to the previous proposal presented for implementing a cooperative learning subject in the faculty of Legal Science, it is also proposed to present a suggestion concerning creating and designing spaces in which is possible to carry out cooperative learning. Previously, also was mentioned the advantages and disadvantages that the design of these classrooms have, but the current education environment is focused on this types of cooperative and technological environments.



## **Objective**

Designing a learning classroom with technological tools and necessary furniture, to teach academic contents of the subject "Cooperative Learning".

## **Methodology**

- Carrying out a research in the faculty concerning the possibilities of construction of this classroom, taking into account the objectives that follow the proposal of the subject of cooperative learning, costs and other factors that are analysed in these type of projects.
- Identifying a space in which the construction of this classroom could be possible.
- Carrying out a project of construction for these types of learning spaces.
- Providing this classroom with all the necessary tools for its functioning.

## **Purpose of this classroom**

Supporting the learning and teaching in order to achieve the implementation success of the subject, making high quality learning spaces according to the mission of Jaume I University.

This proposal only intends to make a recommendation concerning to the creation of a cooperative learning space according to the positive results that have been analysed previously of the different researches that have carried out some of the universities.

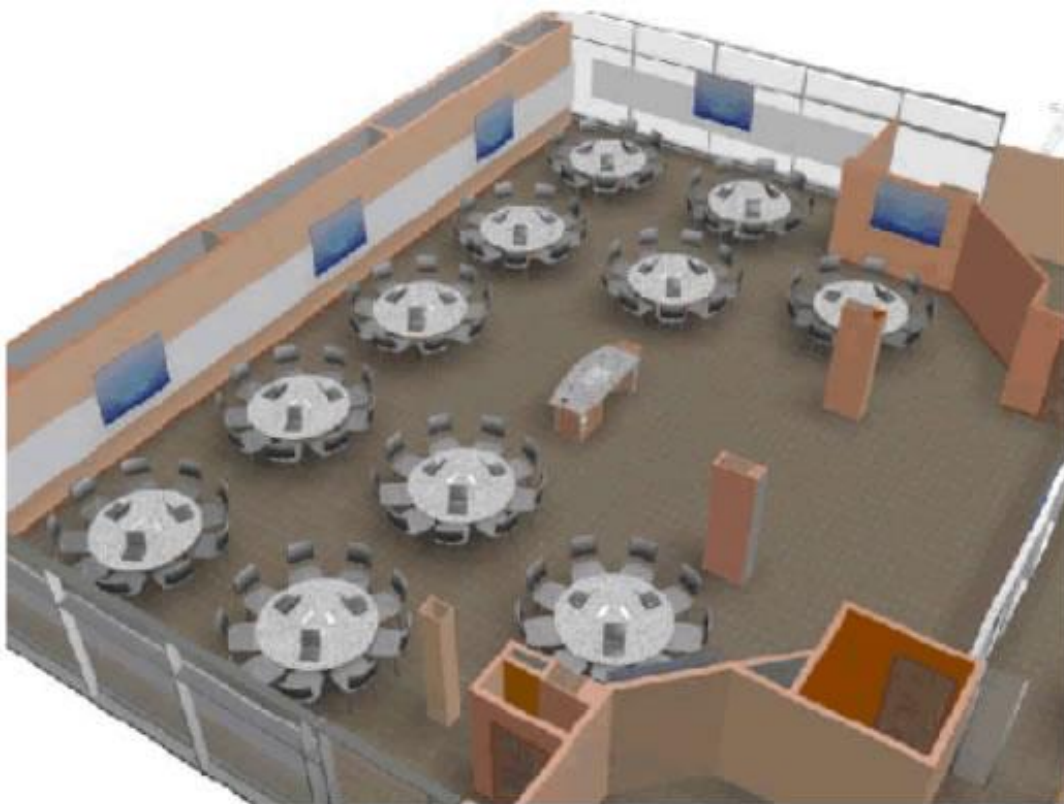
On the other hand, the implementation of a cooperative learning subject is linked to the environment in which these contents will be taught. Classrooms with the current design, this learning would not have the same effect that if it were carried out in teamwork classrooms.

**Image 1. 6 Current design of most of Jaume I University classrooms**



Source: Jaume I University google image

**Image 1. 7 Design proposal of a cooperative learning classroom**



Source: Official page of North Carolina University

## 4.2 Some suggestions for further research

According to the analysis carried out and the limitations of the study, it would be advisable to analyse deeper the design importance of classroom and also fostering teamwork. On the other hand, it should be carried out a research in order to know students' opinion concerning cooperative learning, in which manner they would like to learn and which factors should be taken into account for the classrooms' design among other things.

On the other hand, it is important to consider cooperative learning in virtual environments and techniques so it is effective.

Regarding curricular design of cooperative learning, it should be guaranteed the continuity of these cooperative learning methods in the design of the four degrees' subjects, in this way the objectives that follow the implementation of "Cooperative Learning" are reinforced.

## 5. Personal Reflection about bachelor's degree final project

The realization of this project has meant for me the collection of all the knowledge I have acquired throughout my career. Through this, I have developed many abilities and skills that I learned in the classrooms of this great University, with the different subjects that have placed at our disposal, all content and tools to expand all the knowledge that now have and expect to make it available both in professional and personal.

This experience has been very motivating and satisfying, since it has a dual purpose, on the one hand with the contribution of my proposal on the establishment of a cooperative learning subject developed at project, I hope that it can be taken into account in the future, given the advantages so positive to having this methodology, the professional and personal development of students. My experience about learning in this way and the analysis and the results obtained in the present work, it could benefit on the one hand to students, because they acquire these skills that enhance their academic and labour performance and on the other hand to the University, because that would be putting at the disposal of students, methodologies that promotes these skills, showing as an entity that seeks to improve student learning and employability of future professionals.

On the other hand, I am making this work have developed much of the knowledge I learned during my training, allowing me to structure the way I wanted to make my work, as it should make and which tools would need to be done in the right way and that it could achieve the objectives set. It has been possible to help and support of my tutor, which she has guided me at all times.

Finally, thank each and every one of the teachers who gave us their knowledge and expertise to make all this possible and my family who have supported me at all times.

## 6. References

- Aguado, D., Arranz, V., Valera, A., Marín, S. 2011. Evaluación de un programa blenden-learning para el desarrollo de la competencia trabajar en equipo. *Revista Psicología del Trabajo y las Organizaciones*, 23, pp.356-361.
- Barrett, P., Zhang, Y., Davies, F., and Barret, L., 2015. The impact of classroom design on pupils' learning: Final results of a holistic, multi-level analysis. *Journal Building and Environment*, 89, p.p 118-133. [online] Available at: <<http://www.salford.ac.uk/built-environment/about-us/news-and-events/news/study-proves-classroom-design-really-does-matter>> [01 June 2015]
- Beichner, R., Saul, J., 2013. Introduction to the SCALE-UP (Student-Centered Activities for Large Enrollment Undergraduate Programs). Project Paper submitted to the Proceedings of the International School of Physics. [Online] Available at:<[http://www.ncsu.edu/per/Articles/Varena\\_SCALEUP\\_Paper.pdf](http://www.ncsu.edu/per/Articles/Varena_SCALEUP_Paper.pdf)[Accessed 08 June 2015]>.
- Bell, G., 2013. Teamwork makes the team work. *Human Resource Managment International Digest*, 21 (2), pp. 45-47.
- Goikoetxea , E., Pascual, G.2005. Aprendizaje cooperativo: bases teóricas y hallazgos empíricos que explican su eficacia. [Online] Available at: <[www.uned.es/educacionXX1/pdfs/05-10.pdf](http://www.uned.es/educacionXX1/pdfs/05-10.pdf)> [Accessed 17 February 2015].
- Gillies, R. and Boyle M., 2010. Teachers´reflections on cooperative learning: Issues of implementation. *Journal Teaching and Teacher Education*, 26, pp. 933-940.
- Gil, F., Rico, R., and Sánchez, M., 2008. Eficacia de equipos de trabajo. *Journal Papeles del Psicólogo*, 29 (1), pp.25-31.
- Johnson, D., Johnson R., 2014. Cooperative learning in 21 stcentury. *Journal Anales de Psicología*. 30 (3), pp.841-851. [Online] Available at:<[ucl.dk/wp-content/.../iasce-conference-flyer\\_eng.pdf](http://ucl.dk/wp-content/.../iasce-conference-flyer_eng.pdf)> [Accessed 03 March 2015].
- Laboratory educative innovation, 2012. What –why – how- cooperative learning. [Online]Available at: <[http://www.madrid.org/dat\\_capital/upe/impresos\\_pdf/AprendizajeCooperativo2012.pdf](http://www.madrid.org/dat_capital/upe/impresos_pdf/AprendizajeCooperativo2012.pdf) [Accessed 03 March 2015].
- Lou, Y., Abrami, P., Apollonia, S. 2001. Small group and individual learning with technology: A meta-analysis. *Review of Educational Research*, 71, p.449.

Ministry of Education, Culture and Sports, 2003. La integración del Sistema universitario español en el espacio europeo de enseñanza superior. [online] Available at: <[http://www.eees.es/pdf/Documento-Marco\\_10\\_Febrero.pdf](http://www.eees.es/pdf/Documento-Marco_10_Febrero.pdf)> [Accessed 03 March 2015].

Orengo, V., Peiró, J., Zornosa, A. 2011. Equipos de trabajo en las organizaciones. Aportaciones recientes de la investigación y sus implicaciones para la práctica profesional. *Revista Papeles del Psicólogo*, 32(1), pp.2-6.

Park, E., Choy, B., 2014. Transformation of classroom spaces: traditional versus active learning classroom in colleges. *Journal High Educ.* 68, pp.749-771.

Poveda, P., 2006. Implications type cooperative learning in interpersonal relationships and academic performance. [Online] Available at: <[http://rua.ua.es/dspace/bitstream/10045/4110/1/tesis\\_doctoral\\_patricia\\_poveda.pdf](http://rua.ua.es/dspace/bitstream/10045/4110/1/tesis_doctoral_patricia_poveda.pdf)> [Accessed 20 February 2015]

Pujolás, P., Lago, R. and Naranjo, M., 2013. Aprendizaje cooperativo y apoyo a la mejora de las prácticas inclusivas. *Journal of Research and Education*, 11 (3), pp. 207-218.

Rico, R., Alcover, C., Tavernero, C. 2010, Work team effectiveness, a review of research over the lasdecade (1999-2009). *Journal of Psychology* 26 (1), pp.47-71.[Online] Available at:< [www.redalyc.org/articulo.oa?id=231316501004](http://www.redalyc.org/articulo.oa?id=231316501004)>[Accessed 01 March 2015].

Sitzman, T., Ely, K., Brown, K., Bauer, K., 2010. Self-assessment of knowledge: a cognitive learning or affective measure?.*Academy of Management Learning NS Education*,9 (2), pp.169-191. [Online] Available at:<<http://amle.aom.org/content/9/2/169.short>>[Accessed 03 March 2015].

Slavin, R. 1993. Cooperative learning: Theory, research and practice. [Online] Available at:<[http://iesjsegrelles.edutictac.es/moodle/pluginfile.php/14080/mod\\_resource/content/1/Aprendizaje%20Cooperativo%20\\_%20Investigaci%C3%B3n,%20teor%C3%ADa%20y%20pr%C3%A1ctica%20\(Slavin\).pdf](http://iesjsegrelles.edutictac.es/moodle/pluginfile.php/14080/mod_resource/content/1/Aprendizaje%20Cooperativo%20_%20Investigaci%C3%B3n,%20teor%C3%ADa%20y%20pr%C3%A1ctica%20(Slavin).pdf)> [Accessed 17 February 2015].

Slavin, R. 1983. When does cooperative learning increase student achievement?.*Journal Psychological Bulletin*, 94 (3), pp.429-445.

Stevens, M., Campion, M., 1994. The knowledge, skill, and ability requirements for teamwork: Implications for human resource management. *Journal of Management*, 20 (2), pp.503-530.

Torrelles, C., Coiduras, J., Isus, S. Carrera, X., Paris, G., Cela, J. 2011. Teamwork competence: Definition and categorization. *Journal Profesorado*, 15(3).

Vallet, T., Rivera, P., Vallet, I., Vallet, A. 2013. Cooperative learning, perceived learning and academic achievement in teaching marketing. *Educación XXI*.

Whiteside, A., Brooks, C., Walker, D., 2010. Making the case for space: Three years of empirical research on learning environments. [Online] Available: <<http://www.educause.edu/ero/article/making-case-space-three-years-empirical-research-learning-environments>> [ Accessed 08 June 2015].

University Polytechnic of Madrid., 2008. Aprendizaje cooperativo guías rápidas sobre nuevas metodologías. Service of Innovation Educative [Online] Available at: <[http://innovacioneducativa.upm.es/guias/Aprendizaje\\_coop.pdf](http://innovacioneducativa.upm.es/guias/Aprendizaje_coop.pdf)> Accessed [05 January 2015]

## 7. Annex

Cooperative learning questionnaire.



Buenos días/tardes. AGRADECERÍAMOS MUCHO SU COLABORACIÓN contestando a las preguntas que aparecen a continuación, cuyo objetivo es conocer su opinión sobre el trabajo en equipo que se desarrolla en las practicas de las asignaturas de las titulaciones de **Administración de Empresas, Economía, Finanzas y contabilidad y Turismo en el pasado curso 2013/2014**. Es una investigación realizada desde el Departamento de Administración de Empresas y Marketing de la Universitat JAUME I de Castellón, para la realización del Trabajo Final de Grado.

### 1. Información General de la Asignatura

Código:	Obligatoria :	Optativa:	Curso:
Profesor:		Teléfono:	

### 2. ¿En qué titulación se imparte?

ADE	Economía	FICO	Turismo	Comunes

### 3. ¿A qué departamento pertenece?

FICO	ADE	Economía	Matemáticas	Derecho Privado/ Público	Estudios Ingleses

### 4. ¿Cuál es el área de conocimiento?

1	Economía Financiera y Contabilidad	7	Estadística e Investigación Operativa
2	Organización de Empresas	8	Comercialización e Investiga. de Mercado
3	Fundamentos del Análisis Económico	9	Economía Aplicada
4	Matemáticas Aplicadas	10	Derecho Tributario y Financiero
5	Historia e Instituciones Económicas	11	Filología Inglesa
6	Derecho Mercantil/Derecho Civil	12	Derecho del Trabajo y la Segur. Social

### PLANIFICACIÓN DE ACTIVIDADES

#### 5. ¿Cuál es el número de horas dedicadas a cada actividad presencial?

1	Número total de horas presenciales	
2	Enseñanza teórica	
3	Enseñanza practica (Incluye seminarios y tutorías)	
4	Evaluación	
5	Numero de Créditos	

#### 9. ¿Cuál es el número de estudiantes que componen un equipo?

Realización de las Tareas	
<b>10. Las actividades para trabajar en equipo están propuestas para trabajar</b>	
1	presencial)
2	Fuera de clase (No presencial)
3	Mixta

#### 6. ¿Se realiza trabajo en equipo/grupo o similar al inicio de curso?

1 SI	2 NO
------	------

Solo si hay trabajo en equipo continuar.  
En caso contrario finalizar el cuestionario

#### 11. ¿Qué tipo de actividades practicas se realizan?

1	
2	
3	

#### Formación de los Equipos

#### 7. ¿Cómo se realiza la composición de los equipos?

1	La realiza el profesor	
2	La realizan los alumnos	

#### 12. ¿Cuántas sesiones de la practica se dedican a cada actividad?

13. ¿Cuál es la duración de cada sesión presencial?	
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#### 8. Cuando la realiza el profesor ¿Con qué criterio se forman los equipos?

1	Género	
2	Edad	
3	Etnia	
4	Nivel de Conocimiento /	
5	Test de Belvin o Similar	
6	Al azar	

#### 14. Indique cuál cree que sería el nivel de dificultad de las tareas practicas que se resuelven en

Alto	Medio	Bajo



Método de Aprendizaje																																																																																																																																	
<b>15. Qué tipo de método de aprendizaje utiliza?</b>		<b>23. Se da feedback a los alumnos con los resultados de la evaluación ?</b>																																																																																																																															
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## Subjects work cooperative learning

<b>Subject</b>	<b>Responsible professor of subject or who teacher teach in the subject</b>
AE1018	Teresa María Vallet Bellmunt
AE1033	Teresa María Vallet Bellmunt
AE1041	María Luisa Flor Peris
AE1044	Amparo Fabra Galofre
AE1027	Juan Carlos Fandos Roig
1016	Antonio Vico Martínez
AE1032	Ricardo Chiva Gómez
AE1040	María Ripollés Meliá
1014	Montserrat Boronat Navarro
1024	Montserrat Boronat Navarro
AE1034	Rosa María Rodríguez Artola
1010	Beatriz Forés Julián
AE1042	Miguel Ángel Gimeno Navarro
AE1028	Ricardo Chiva Gómez
AE1025	Luis Jose Callarisa Fiol (Entrevista Antonio Vallet)
AE1038	Inma Beltrán
1002	María de las Mercedes Segarra
FC1034	Maria Jesús Muñoz
FC1028	Vicente Aragó
TU0910	Federico Prat
TU0939	Vicente Roca
TU0924	Fernando Juan Mateu
TU0912	Rosa María Rodríguez Artola
TU0922	Juan Carlos Fandos Roig
TU0913	Francisco Ochando
TU0923	Arturo Aparici Castillo
TU0919	Juaume Llorens
TU0938	Jaume Llorens
TU0940	Jaume Llorens
FC1039	José Joaquín Alcarria
FC1040	Antonio Vico Martínez
FC1042	Belén Gil Albornoz
FC1043	Andres Arnau
FC1013	María Luisa Nieto
FC1029	María Luisa Nieto
TU0933	Juan Bautista Ferrer
TU0934	Juan Bautista Ferrer
FC1031	José David Cabedo
AE1046	Joan Serafín Serrat
AE1031	Marat Estrada

AE1030	Miguel Ángel López
AE1036	Luis Jose Callarisa Fiol (Emilia Casanova)
FC1035	Elena Escrig