Improving Teamwork Competence Applied in the Building and Construction Engineering Final Degree Project*

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In Building and Construction Engineering field, one of the most needed and valued skills by the professional sector is the teamwork ability. The affirmation is based on previous researches that have demonstrated how such competence is not only required in this sector, and identified as key by the professional world, but also necessary in academic processes. Based on this premise, the present work focuses its research on the design, implementation and assessment of a methodological change applied in the Final Degree Project (FDP) of Building and Construction Engineering degree, going from being an individual work to a teamwork. It has been demonstrated, how main specific competences required by professional sector are properly worked and validated in the design of the current curricula and in the FDP development. However, the same researches have allowed us to identify transversal or generic competence as teamwork that should be improved. Starting from current FDP development, traditionally based on the PBL (Project Based Learning) method, this work is focused on evolving FDP towards a CBLI approach (Challenge Based Learning Initiatives), through a collaborative work between student's teams, assessing what happens during the different stages of the learning activity and what each team member has done. For the proposal assessment, we focused on a mixed study (quantitative and qualitative), which will allow us to analyze in a specific way the relationship between the research variables such as motivation, competency requirements and academic results. This approach bases its effectiveness on previous researches that demonstrate its usefulness when study sample is reduced, as the case in question.

Keywords: teamwork; generic competences; mixed assessment; building and construction learning

1. Introduction

In Building and Construction Engineering field, one of the most needed and valued skills by the professional sector is the teamwork ability. The affirmation is based on previous researches that have demonstrated how such competence is not only required in this sector, and identified as key by the professional world, but also necessary in academic processes [1]. Based on this premise, the present work focuses its research on the design, implementation and assessment of a methodological change applied in the Final Degree Project (FDP) of Building and Construction Engineering degree, going from being an individual work to a teamwork.

It has been demonstrated [2], how main specific competences required by professional sector are properly worked and validated in the design of the current curricula and in the FDP development. However, the same researches have allowed us to identify transversal or generic competence as teamwork that should be improved. Starting from current FDP development, traditionally based on the PBL (Project Based Learning) method, this work is focused on evolving FDP towards a CBLI approach (Challenge Based Learning Initiatives), through a collaborative work between student's teams, assessing what happens during the different stages of the learning activity and what each team member has done.

The task is not trivial. The experience has been designed as a consequence of previous mentioned targets [1, 2]. The purpose is a revision of the methodology and content of the FDP that, while maintaining the specific learning objectives, continues adapting to the sector requirements and deepens more in the transversal student's capacities, both those that have already been developed and those that should be improved or acquired. In 2018–2019 Academic Year, work weeks for individual and team self-knowledge have been included and collaborative team works have been set up. It has been demonstrated by the exercise developed by students and teachers, that the motivation factor, beyond the individual aim for a passing grade, constitutes by itself the key for a better assimilation and understanding of competences.

For the proposal assessment, we focused on a mixed study (quantitative and qualitative), which will allow us to analyze in a specific way the relationship between the research variables such as motivation, competency requirements and academic results [3]. This approach bases its effectiveness on previous researches that demonstrate its usefulness when study sample is reduced, as the case in question [4].

2. Presentation

Nowadays, students' preparation for incorporation into labor market need to go beyond their academic training. Regardless of education (with an intermediate or high level formative cycle, Bachelor's degree, University's or Master's degree), and the specific skills acquired. Companies increasingly demand new, more transversal skills, which are commonly called "soft skills", such as: knowing how to communicate, motivating, innovating, working and / or managing a group with efficiency and tact; solving conflicts, joying, adding value to company, etc. . . . [5]

To what extent student is able to adapt to company's needs from an emotional point of view (the so-called "personal fit" or psychological profile), is an increasingly important aspect, gaining ground to specific training, that it's even defined as a "cold list of knowledge and technical skills" [5]. Thus, we can affirm that the student record is the one that gets interviews . . . , while soft skills are the ones that get the job.

Competences related to the personality of a person should be strengthened transversally and longitudinally as the specific skills of each degree are worked on. Attitude, critical thinking, capacity for analysis and synthesis, strategic planning, leadership and adaptation to teamwork, motivation, or communication are, among many, an increasingly priority objective of employers, since they keep ahead and train workers in a changing environment, giving added value over curricular results.

If we focus on university education, we cannot forget the recent restructuring that has affected all levels for its adaptation to the so-called European Higher Education Area (EEES) [6]. According to this new perspective, the main goal of learning is to acquire knowledge while developing a series of competencies based on the academic profiles and professional outputs of each study [7]. Based on this perspective, the literature on studies that investigate the relationship between competences acquired, usually specific, and the employability and / or professional skills required is very extensive and profuse, usually differentiated by university / location [8–11] or by educational / professional field [12–17].

As can be seen, the evolution of the labor market has been marked by the dynamics of technical change in the so-called knowledge society. As a result, both organization and work methods and therefore training requirements have changed, linking in a complex way university training with increasingly broad and flexible profiles [18]. In this regard, the importance of generic or transversal competences has been increased, especially to certify job training of university graduates, since they widely respond to current jobs requirements [19]. Establishing how the most demanded professional competences of each sector (both specific and generic) are linked to teaching methods and how their training can be enhanced is undoubtedly a current goal, in the vast majority of both teaching and professional fields [20–24].

In this line of investigation, we can also find studies related to the educational / professional field of the article: Building Engineering (BE) / Quantity Surveyor professional competences. Overall, the research carried out in this sector has focused on analyzing the evolution of professional competencies that technical architect must have both at the state level [25], as in other European settings [26, 27] even globally [28–30]. However, given the heterogeneity of professional tasks and regulations depending on each country, most of investigations have focused on assessing the degree of importance and knowledge that graduates have in a range of competencies required by profession [31], always randomly identified. To this end, it's easy to recognize the weighs on how important is for the professional to know about legislation and regulations, to size, to calculate costs, to budget control, etc. . . . , but not as much as he can achieve them in his formative stage and if there are differences between methods [28, 29].

Leaving aside the certification of specific competences in referenced studies, the main general ones, also recognized as professional skills and identified at a professional level, are:

- Leadership.
- Communication.
- Teamwork.
- Organization.
- Ability to observe, learn, create, adapt, apply, identify problems, changes, opportunities, etc.

General competences are grouped into instrumental, interpersonal and systemic by some studies [27], are directly associated to economic and / or organizational issues [26], are integrated with specific ones of the sector or are differentiated into Basic, Core or Optional by others [28–30].

Among them, the ability to work as a team is identified as a competence where all the others may be transversally included, generating the substrate and the space for their development and learning. In fact, the following statement may be easily verified: to work as a team it is necessary to know how to lead the assigned role, be able to communicate effectively, organize the assigned work and be able to foresee, identify, observe and adapt to problems,

create, learn, propose and evaluate potential solutions.

Teamwork competence is a relatively recent concept, a multidimensional construct and its definition may depend on the perspective from which it is studied [32]. This interpersonal competence includes other instrumental (decision making, problem solving, information management capacity), interpersonal (interpersonal relationship skills, recognition of diversity, critical reasoning, ethical commitment), systemic (adaptation to new situations, initiative and entrepreneurial spirit, leadership, motivation for quality) [33].

To work as a team, own and external resources are needed, being necessary to enhance knowledge, skills and aptitudes that enable people to adapt and reach the proposed goals. It is not enough to know the team (a team is generally understood as the willingness of a group of people to work together to achieve a common aim), but it is necessary to have acquired knowledge that identifies this competence. This includes, inter alia, principles and concepts of tasks and of effective team functioning, the set of skills and behaviors necessary to perform tasks, without forgetting the appropriate or pertinent attitudes of each team member that promote team's functioning [34].

Therefore, we can argue that teamwork competence is an essential component in achieving a high reliability of professional environment, in any sector [35]. Likewise, this competence is an important part in companies' innovation and organizations since it can effectively integrate factors such as communication, support among members, correct balancing of tasks and communication between members, improving team cohesion and thus company and projects developing [36].

Today's companies, due in part to fierce global competition, need to consolidate business models in dynamic, uncertain and complex environments [37]. These needs oblige a constant innovation and require modifying the structure of work, traditionally built around individuals, and adopting organizational designs change-oriented and team based [38]. Teamwork satisfies these requirements by providing diversity in knowledge, skills and experiences that allow prompt, flexible and innovative responses to problems and challenges. Thus, the success of organizations and the global production of knowledge depends to a large extent on team effectiveness [39].

We can find numerous proposals for skills and competences evaluation related to teamwork [33, 40–46]. This should be, without a doubt, a first step to improve both the educational activities of degree level, as well as the professional requirements related to this competence, especially to improve teaching and methodologies that allow its effective integration.

As teamwork competence is identified by reflection and analysis as a unifying one, so we develop the present study on it, identifying a subject, without prejudice to others, as representative and suitable for methodological developments of the present investigation. For this reason, we cannot forget how such important subject, as the Final Degree Project, is structured in student's academic life. The Final Degree Project (FDP), especially in the studies of BE, is articulated as a practice that unify the main knowledge that students, future and upcoming professionals, should be able to carry out in professional practice [1].

In conclusion, how the FDP's scope of work is structured and how teamwork is integrated to improve student preparation are key aspects in the potential improving of this activity. There are studies [2], close to the proposal scope of investigation, that present results already identifying how the teamwork competence is valued as the most important professionally demanded, even with a higher interest and assessment to any of the specific ones, but with a degree training far from those expectations. In this regard, the present study aims to take the next step and evaluate the FDP restructuring, including teamwork within its activities, in order to bring students preparation closer to job world requirements.

3. Discussion

The case study has been developed with a group of 8 students, out of the 23 enrolled in the FDP subject during 2017/18 academic year (June-October). In June 2018, 12 students remains for the call of September. Among these 12, we found 8 that had followed continuous and constant teachers' corrections and that, for different reasons (professional, etc.), needed to take advantage of this last opportunity to pass the last call. One month before (in May 2018), during students' corrections, a series of circumstances led to a redefinition of the subject submission:

- On the one hand, students showed a high knowledge of the degree specific competences, but a huge lack of transversal competences assimilation.
- On the other hand, students displayed a not receptive attitude to teachers and follow-up criteria, generating a work collapse and stagnation.

In the FDP process, all the students had (in June 2018) the project blocks previously developed in other works in different stages: block 1 finished, block 2 in various degrees of development and block

3 started [2]. The results of personal interviews with students, revealed a certain impasse in the progression of their FDP, with works in progress in first call (course 17–18), in second call (16–17), even in third (15–16).

For this reason, in order to unblock the situation and to search for a methodological change in the FDP, that will help students to improve not only the FDP but also their abilities, teamwork is proposed as a learning strategy and its acceptance is requested by each one of them. The premises were:

- In case of passing, all students would have the same grade, the highest one of the individual works. Otherwise, all students would suspend the subject.
- We aim is to identify a clear and stimulating objective for the participants based on collaboration, support and companionship.
- None of the students had previously worked in team with a similar approach, significance and temporal development, so they could not benefit from prior competence learning.

The first process was a previous work of self-knowledge and knowledge of people through work in pairs. The purpose of the process was auditing the individual work done up to the time of each partner. Then, the group was posed the distribution of different roles, considered necessary for the team's functioning, that students assumed individually. To clarify these roles, personal interviews were performed where team's needs were clarified. Thus, the defined roles were useful both for the work development and from a point of view of acquiring transversal competences requested by companies.

From that moment, team dynamics has been established in the PBL: the group makes all the corrections of individual works and student's participation in resolution of doubts and problems is encouraged. Likewise, several learning activities related to the evaluation rubric are clearly identified for promoting group work dynamics:

- A. Peer instructions: students search information individually and then share it with the rest of the team.
- B. Seminars: spaces for reflection and deepening where are introduced texts, motivational videos for stimulating teamwork, as well as the importance and meaning of roles. In our case it has been realized when teamwork intensifies (as the final work submission approaches) producing a team cohesion, but also conflicts that need to be managed.
- C: Peer evaluation: audit requested to students (in the middle of September) to identify sections that are pending completion, individually and by pairs

(a partner has been assigned avoiding personal affinities).
- D: CBLI (Change Based Learning Initiative): Students are informed by an individual e-mail that works are not suitable, since some of them do not satisfy the necessary requirements. The options to pass are to leave the group or to work as a team and present the corrections mentioned in the e-mail. Prior to this submission, a non-academic activity has been organized to strengthen personal links between team members, in order to better support the ability to take risks.

Since we have discussed the evaluation aspect of teamwork competence, in our case we chose to adapt the indicated learning activities to one of the available teamwork rubrics. Given the enormous amount of possible solutions in this process, [33, 40–42, 44–47] we finally opted for the Torrelles's proposal [33, 48], because of the extension of its compilation work and of the multidimensional coverage that allows a wide adaptation.

As seen in Table 1, we have added to the Rubrics Dimensions defined in [48], the learning activities that we have previously identified in our method. Thus, the FDP teaching team will be able to evaluate levels of dimensions, components and elements of rubric, both previous and acquired during work progress, data that we can analyze in the results section.

Regarding the competence evaluation, the development of teamwork leaves evidences not only related to the final result of the given assignment, but also individual (participation, cooperation, monitoring, leadership, efficiency, etc.) and "groupal" (mission and objectives, standards, map of responsibilities, etc. [49].

4. Results

To analyze the experience we have used two approaches: the first one based on the assessment of the extent to which the skills linked to teamwork have been achieved, according to the proposal previously designed by the team of teachers and based on [48]; and the second one based on the survey results performed by students. In the survey, in addition to evaluating the experience and identifying its strengths and weaknesses, they have also carried out cross-evaluations of the rest of peers, both for their technical and teamwork contributions.

Based on the proposed rubric, the FDP coordinators made a first assessment of the students' level before the beginning of teamwork (identified in Table 1 and Figs. 1, 2, and 3, as a Pre or Initial

Table 1. FDP teamwork evaluation rubric incorporating learning activities of our case study

Team work competence			
Dimensions	**Learning activity**	**Components**	**Elements**
Identity	B. seminar C. Peer evaluation D. CBLI	1.1. Goals 1.2. Belongingness 1.3. Role 1.4. Adaptability 1.5. Work environment 1.6. Compromise	1.1.1. Goals identification 1.1.2. Goals knowledge 1.1.3. Action according to goals 1.2.1. Team integration 1.3.1. Adoption 1.3.2. Exercise 1.4.1. Proposal for adaptation 1.4.2. Activity adaptation 1.5.1. Relationship 1.5.2. Working conditions 1.6.1. Team implication
Communication	A. Peer instructions B. Peer evaluation	2.1. Information 2.2. Personal interaction	2.1.1. External search for information 2.1.2. Internal information request 2.1.3. Information transmission 2.2.1. Personal attitude
Execution	A. Peer instructions C. Peer evaluations D. CBLI	3.1. Planning 3.2. Decisions making 3.3. Task performance 3.4. Follow up	3.1.1. Tasks identification 3.1.2. Tasks sequence 3.1.3. Tasks distribution 3.1.4. Forecasting of necessary resources 3.2.1. Analysis of decision making 3.2.2. Participation 3.2.3. Consensus 3.3.1. Fulfillment od assigned tasks 3.3.2. Exchange of information about the difficulties emerged 3.3.3. Participation in the contingencies resolution 3.4.1. Team coordination 3.4.2. Self-clearance of tasks
Regulation	B. Seminar D. CBLI	4.1. Conflicts resolutions 4.2. Negotiations 4.3. Improvement	4.1.1. Conflict detection 4.1.2. Alternative proposal 4.1.3. Conflict resolution 4.2.1. Use of strategies 4.2.2. Archive of agreements 4.3.1. Improvement proposals 4.3.2. Implementation of improvement processes

Average value). This initial assessment (Pre) was made after evaluating the personal situation and knowledge of each student. Using the evaluation made by the FDP coordinators of the 4 dimensions of conceptual systems that shape teamwork competence [48], the same individual evaluation was performed once the FDP (October 2018: Post) was completed, whose comparison (Pre vs. Post) we can see in Table 2:

In Table 2, we can see grouped the averages obtained by each student for the 4 dimensions / conceptual systems that make up the teamwork competence. As expected, in a global way a significant increase in dimensions is perceived once they have worked in a coordinated way. Evaluating the average increase obtained by all students in the 4 main dimensions (see Fig. 1), we can check that the highest increase is obtained by the Execution dimension (with a positive differential of 1.74 and an increase of 120% of improvement) followed by the

Table 2. Comparison of the initial and final values of the 8 students for the 4 main dimensions and their arithmetic average

| Student	S1		S2		S3		S4		S5		S6		S7		S8	
Pre-assessment vs. Post (by faculty) / Dimensions	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1. Identity	1.91	3.30	1.73	3.55	1.82	3.73	1.73	2.82	1.55	2.36	1.64	2.55	1.36	2.27	1.45	2.36
2. Communication	2.50	3.50	2.50	3.75	2.50	3.75	2.25	3.25	2.00	3.25	2.25	3.50	2.00	3.25	2.00	2.50
3. Execution	1.67	3.67	1.67	3.67	1.50	3.92	1.58	3.25	1.50	3.08	1.67	3.17	1.33	2.75	1.50	2.83
4. Regulation	1.86	3.43	2.29	3.43	2.00	3.86	2.00	3.29	1.43	3.29	1.71	3.29	1.43	2.71	1.71	2.86
Global Average Section 1-4	**1.98**	**3.47**	**2.04**	**3.60**	**1.95**	**3.81**	**1.89**	**3.15**	**1.62**	**3.00**	**1.82**	**3.12**	**1.53**	**2.75**	**1.67**	**2.64**
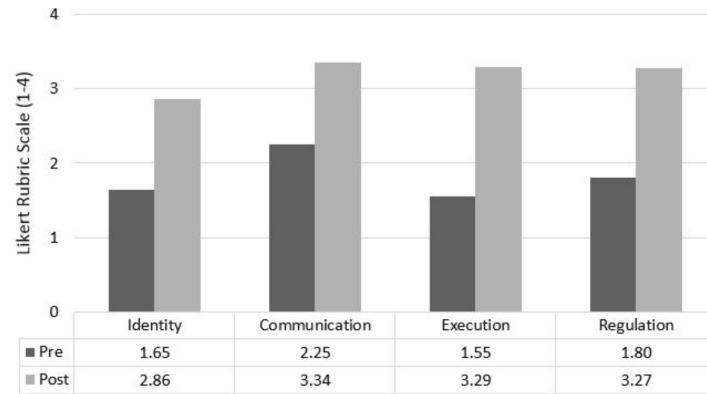
Fig. 1. Average of the main dimensions obtained by the total number of students (Pre vs. Post).

Regulation one (with a differential of 1.46 and an increase of 81%).

Since an average of the components that form the dimensions may not adequately fit the competence assessment (not all have the same number of components or the assigned weight could vary), in Fig. 2, we have disaggregated the results of the 16 components that define the competence:

From Fig. 3 we can extract the differences between the average students' level before and after the experience, we have shown in a segregated way in Table 2. All components have increased, as

expected, standing out respectively for their increases the components 3.1, 3.3 and 3.4 (Planning, Task performance, Follow up) and especially the 3.3 whose overall assessment is the highest (3.54 / 4). In the opposite ends, the components with a lower evolution have been the 1.2 (Belongingness, with an evolution of 3 to 3.38 over 4) and the 1.5 (Work Environment, with an evolution of 1.88 to 2.88), followed closely by the components 2.1 and 2.2 that integrate the dimension of communication, as we can see in Table 3.

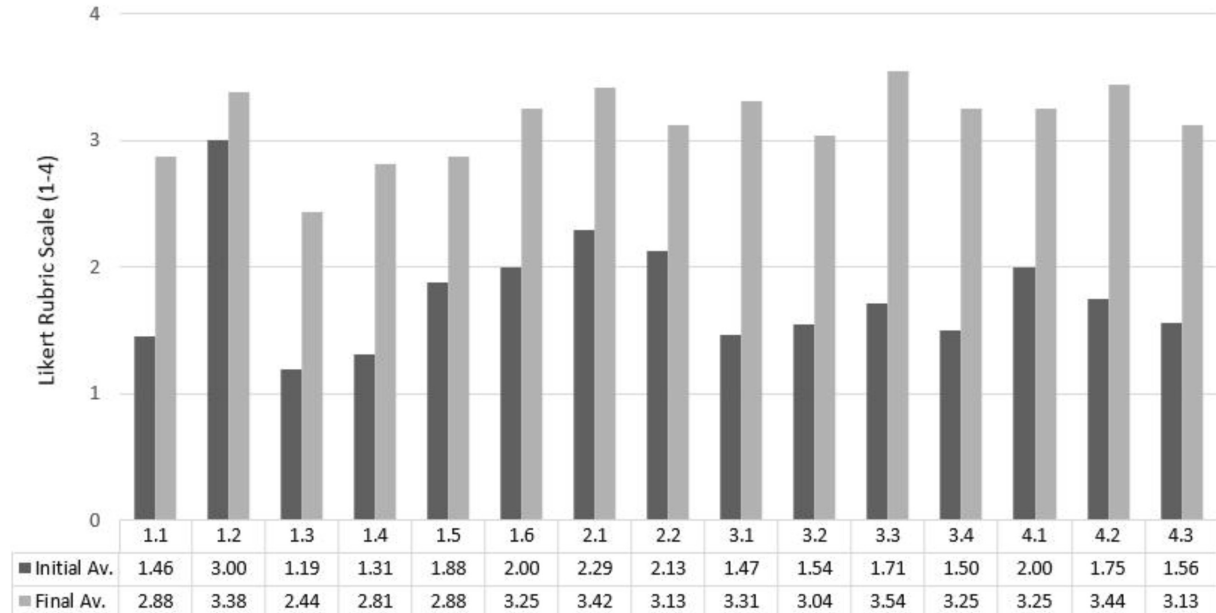These results reflect the students' evolution in the

Fig. 2. Value (Pre vs. Post) of the 16 components of the rubric for all students.

Table 3. Difference between Pre y Post values by Components

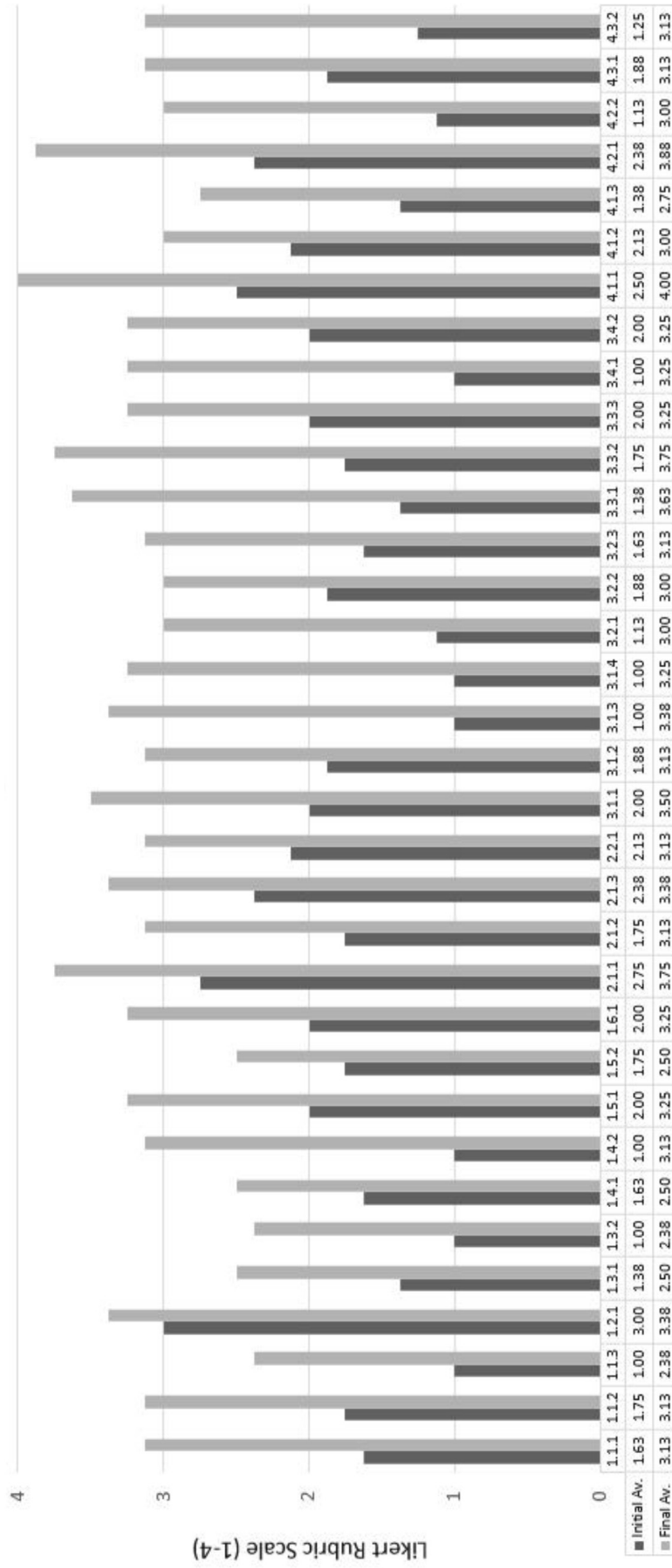| Dimensions	Identity						Communication		Execution				Regulation		
Components	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	3.1	3.2	3.3	3.4	4.1	4.2	4.3
Difference (Pre vs. Post)	1.42	0.38	1.25	1.50	1.00	1.29	1.13	1.00	1.84	1.50	1.83	1.75	1.25	1.69	1.56

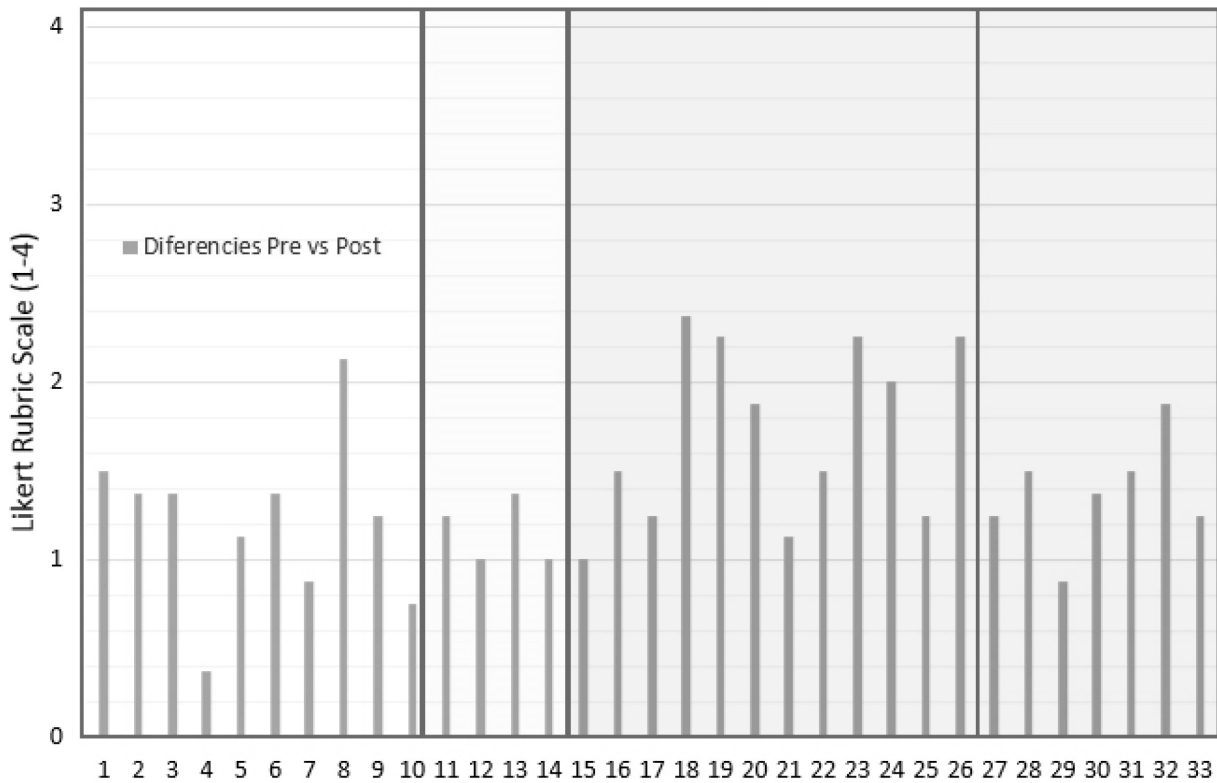**Fig. 3.** Values (Pre vs. Post) of the rubric indicators.

Fig. 4. Difference (Pre vs. Post) of the rubric indicators, separated by dimensions.

pilot experience of performing the FDP through collaborative teamwork. The most evident competence improvement has been obtained for the Execution dimension of the work (as we have already mentioned, with an improvement of 1.74 on average), followed by Regulation with a 1.46, Identity with a 1.22, and finally the Communication one with a 1.09. According to these results, based on the challenge proposed by the FDP coordination (forming the group, all students will pass or suspend, and regardless of the work and tasks distribution, they will have the same grade), students opted for a pragmatic approach to solve the individual and group problems of work (aspects that we could affirm are included within the Execution and Regulation dimensions), leaving aside the improvement in their management and communication skills with the group (aspects included within the dimensions of Identity and Communication).

The results in the Communication dimension are high, but they also start from high values in the Pretest, which mitigates their growth, while Execution and Regulation dimensions include both the highest values and the most accentuated increases in the identified indicators (see Fig. 3 and 4):

To corroborate statements based on the competence study realized, we will now analyze the results of evaluating the students' answers about the FDP experience realized through teamwork. At this point, it should be remembered that students started from a very heterogeneous initial state (with block 1 of the project completed, but 2 in various stages of development). Based on the individual starting point, coordinators established an Initial Mark for each student, and their objective of final grade according to the tasks to be performed (Objective Mark). Once the work was finished, although the grade was the same for everyone (specifically a Notable – 8), both teachers (Final Mark), and students (Personal Mark), valued the note they had had of the personal work done (Fig. 5):

As can be seen from Fig. 5, 6 of the 7 team members achieved or exceeded the target grade, while only S7 (who started from the lowest score), did not succeed in obtaining the grade target set by FDP coordinators. Curiously, the same student is the only one who graded himself (Personal Mark), more than teachers had done (Final Mark), being the personal grade furthest away from the team grade obtained. Another important aspect reflected from the analysis of Fig. 5, is that, thanks to teamwork, all initial grades have improved, and that the 3 students in more complicated situation (an initial failure, S4, S5 and S7), not only would have approved for the quality of the individual work, but in the case of S4 and S5 have obtained overall "good" grade.

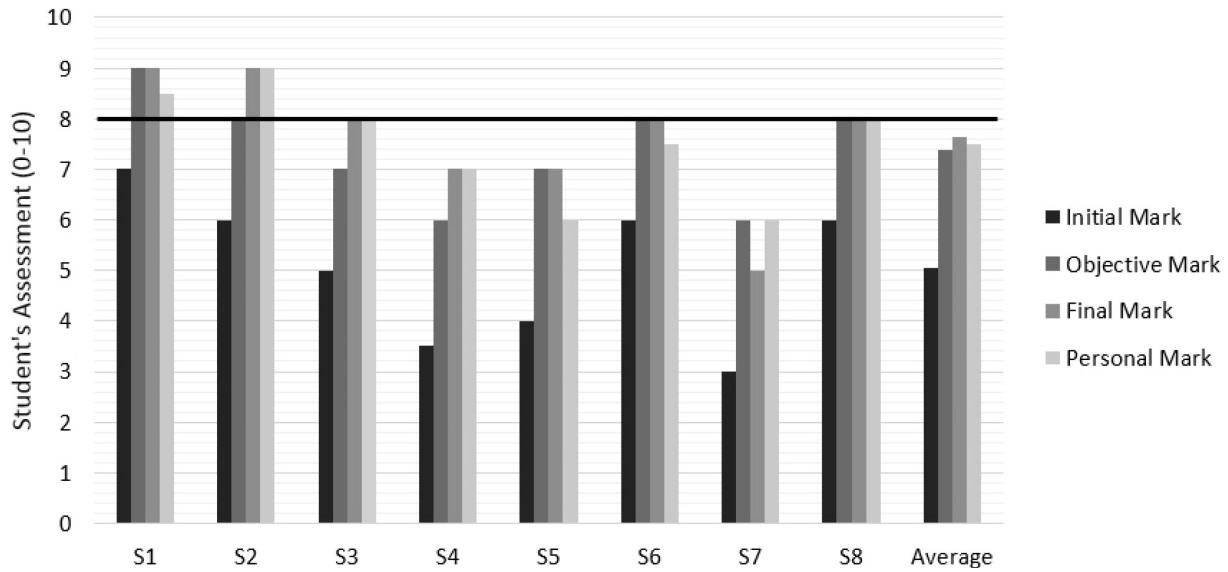Following with the grade based analysis; we

Fig. 5. Comparison between student's initial grade, objective grade, final grade if the work had been individual and the grade perceived by student.

could initially identify 4 students with a high profile (S1, S2, S6 and S8), two students of medium profile S3 and S5, and finally two of low profile S4 and S7. Based on this differentiation and asked about the degree of involvement that each one has given to their fellows and the average received by them, we can see it in Fig. 6.

It is clearly stated, as the students of low profile S4 and S7, who started from the most critical situations, have highly valued the teamwork involvement of the rest of peers (Av: 10.00 and 8.71), being the only ones who have valued the team

above all, regarding the assessment they have received from it (Av: 5.71 and 7.86 respectively). Students of medium profile (S3 and S5), interestingly, have granted a relatively low average to the implication degree of peers (7.71 and 7.29 respectively, and below the overall average of 8.13), but their involvement degree of has been highly valued by teamwork, standing above the global average. Finally, among the students identified as high profile, only S2 has had different assessments and more distant from the global average, identifying on the one hand little involvement of their peers, with
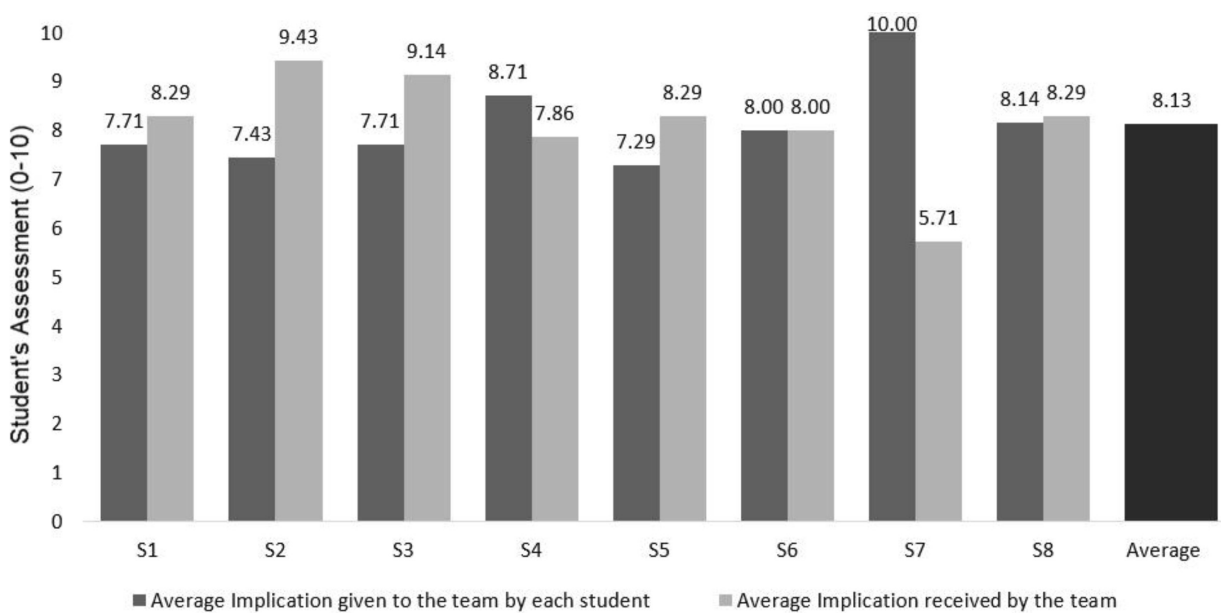

Fig. 6. Team implication perceived by students and their own one perceived by the group in teamwork experience.
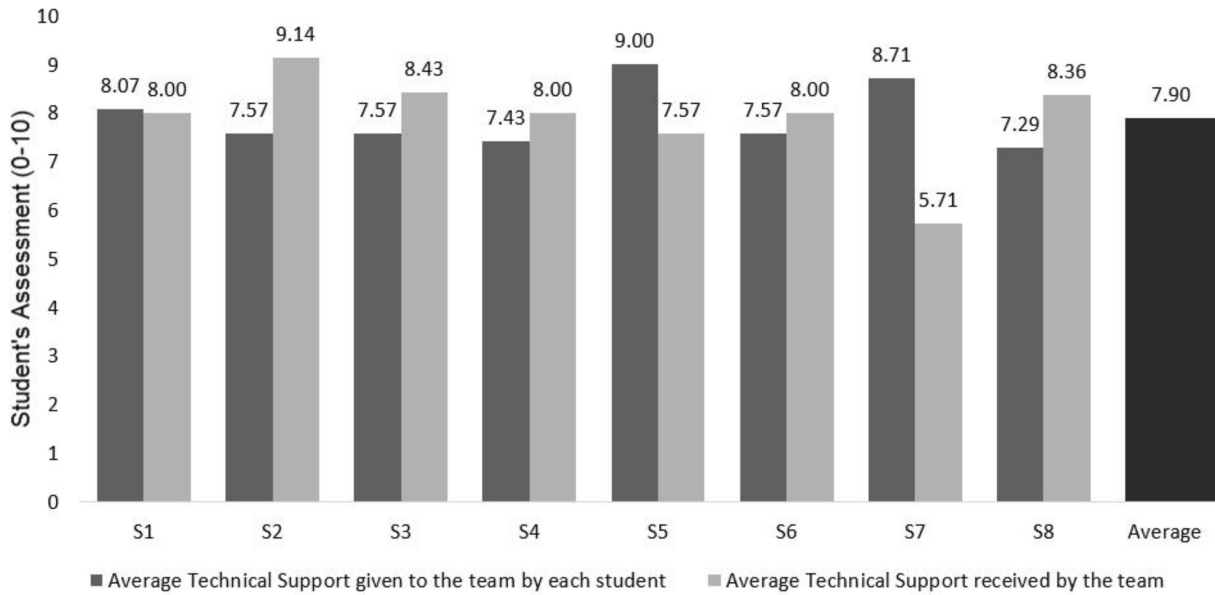
Fig. 7. Technical Support received by the team perceived by students and their own one perceived by the group in teamwork experience.

respect to his own one, that is located at the highest level identified by the group.

Based on the cross-examination of the perception of student involvement, a first basic conclusion would be that S2, S3 and S5 have been strongly involved with the teamwork experience, clearly helping their peers, especially those with a complex initial situation like S4 and S7. To assess whether the involvement of teamwork is related to the contributions and the technical assistance provided, in Fig. 7 we can see the perception of the specific support to the tasks in progress perceived by the students:

As noted, S5 and S7 highly value the technical support received by their peers, identifying S2, S3 and S8 as those students who have provided the greatest help to develop teamwork. Except for S7, which is well below average, all students highly value the contributions of peers, regardless of the initial profile that we have identified. This aspect is very important since it would allow us to affirm that teamwork improves the specific competences of the students and their technical capacities, allowing the joint improvement of works developed in a group. The results of the other students identified with low and medium profile (S4, S3 and S5 respectively), which have obtained homogeneous and high assessments of the technical contribution made to teamwork are remarkable.

Finally, and based on an open interview with students for the experience assessment, the main comments obtained were:

- One third of them agreed that teamwork should have been done since the beginning of the FDP, that is, since the beginning of the same block 1.
- Another third, however, commented that per-

forming FDP block 1 individually is already correct, and that teamwork must start from the beginning of block 2.

- Half of students discussed the necessity of an initial explanation in order to clarify the goals of each submission, their relationship to learning activities and what is expected from teamwork. Specifically, the definition of team roles, and how to adjust submissions to clearly identified blocks are needs that should help coordinate tasks and reduce the effort expended.

These qualitative comments were endorsed with a global evaluation of the experience of 8.19 / 10 (SD: 1.13), having highly valued the teaching staff implication (Av: 9.25 / 10, SD: 1.75), their preparation (Av: 8.38 and SD: 1.30), and recommended to re-use the teamwork method instead of the FDP in personal mode with a grade of 9.25 (SD: 0.89).

5. Conclusions

After the global analysis of results in the acquisition of teamwork competence, as well as the assessment made of the individual FDP grade, we can affirm that both the applied methodology and the learning activities, incorporated in the FDP development through a work by roles and as a team, improve the academic results, as well as the graduates' preparation for their labor incorporation.

Setting acceptable and shared goals has enable us to increase factors of belonging and commitment, aspects that facilitate knowledge through their traceability. Solving doubts immediately, both as issuer and as receiver and making compatible own tasks with the circumstantial team have facilitated

and improved the assimilation of knowledge, especially of an activity as important, transcendental and transverse as the FDP.

Sharing research methodology and its practical application, areas in which FDP subject is structured, leads students to a real recreation of professional development, consolidating communication, understanding and collaborative skills that at the same time improve preparation for the next labor incorporation. The present study should be pursued in such a way that its application methodology should be questioned in other subjects of the degree, of other grades, as well as its assessment parameters beyond the quantitative linearity of the elements that configure teamwork competence.

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