Team tutorial action program for the development of teamwork competencies in university students

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Abstract

This article presents an innovative teaching experience aimed at promoting university students' self-learning and the development of prosocial behaviors and teamwork. This program is a team-based mentoring program, mediated by faculty, centered around a collaborative project to design, develop, and implement a proposal for social improvement based on the professional profile of the degree program. To evaluate the impact of the mentoring program, a sample of 222 first-year students from the Early Childhood Education, Primary Education, Psychology, and Nursing programs at Francisco de Vitoria University was selected. The results show significant differences in the development of teamwork skills between students who received the mentoring program and those who did not. We can conclude that the scheduled tutoring program is suitable for developing intrapersonal and interpersonal teamwork skills in university students, serving as a space for teaching and learning the prosocial behaviors (mindfulness, active listening, assertive communication, and respect) necessary for teamwork and, therefore, for interpersonal relationships. Likewise, the teacher's mediating role is key to enabling students to discover the opportunities of working with others and to decide individually and collaboratively to take the necessary actions based on these discoveries.

Keywords: teamwork; prosocial behavior; team tutoring, university; teacher mediation.

1. Introduction

The Conference of Rectors of Spanish Universities (CRUE) points out that tutoring is defined as a teaching accompaniment with a formative nature, which seeks to "provide students with all the tools and help necessary to successfully achieve all the academic, as

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well as personal and professional, objectives that the university sets for them" (in Solaguren -Beascoa and Moreno 2016: 60).

In this sense, Grey and Osborne (2020) point out that it is a key challenge for the university to contribute to the satisfaction of the personal, professional and academic needs of university students. As Amor and Dios (2017) indicate, tutoring is an excellent strategy to contribute to the comprehensive training of university students.

For his part, Cano (2009) states that it is necessary to develop models of tutoring action that promote the development of self-learning strategies in university students, thereby enhancing their ability to face the challenges of professional life: their labor and professional integration. As Gairin et al. (2015) point out, tutoring is necessary that goes beyond resolving academic doubts, and that is oriented towards accompanying the student in their comprehensive training.

In this way, tutoring comes to be considered a learning strategy that, being integrated into the study plans, is useful for evaluating, individualizing and supervising the work that students have to do independently, as Solaguren -Beascoa and Moreno point out (2016). They are a fundamental tool in the university that, in addition, enjoys recognition among students for its value in facing work and for its usefulness in optimizing study time, among other issues (Gargallo et al. 2019) while feeling guided and motivated (Rodríguez, 2008) .

With all this in mind, and in line with fostering university students' ability to face the challenges of professional life, we cannot forget that professional life takes place in a context of collaboration and teamwork, which is essential for organizations to achieve their goals. West and Markiewicz (2004) point out that the need for innovation demands an evolution from a work structure traditionally configured around the individual to one structured in organizational designs based on work teams. In this sense, promoting teamwork skills and prosocial attitudes in university students that facilitate this work with others favors their incorporation into the labor market and their improved professional performance. This encourages students to become capable of facing the challenges of professional life, contributing to the development and success of the organization in which they work, and therefore to the social development and well-being of individuals.

Now, as Collado and Fachelli (2019) point out, "knowing how to work collaboratively requires a process. Learning it is not natural or improvised" (Collado and Fachelli 2019: 4); and in this process, they indicate that teaching intervention is necessary. In this sense, Green and Bowden (2012) propose, with respect to the accompaniment of doctoral students, group tutoring. This promotes the student's recognition of the value of sharing perspectives when facing the tasks or problems they face, a key aspect when working collaboratively with others. For their part, Fleming et al. (2010) point out the suitability of group tutoring due to the feedback from peers, the support, and the learning to work as a team that it entails.

In this regard, Francisco de Vitoria University has proposed a team mentoring program, mediated by teaching staff, with the aim of promoting student self-learning and the development of prosocial behaviors and teamwork, which will enable them to face the challenges of professional life.

2. Team Mentoring Program. A mediated learning experience

Dewey (1925) explained that not all experience is educationally valuable. Continuity is necessary, "that every experience draws on something from what has gone before and modifies in some way the quality of what comes after" (Dewey 1925: 79), and the

direction of the experience. This is where the role of the mediator plays a key role, since it is not always easy for the learner to actively assume the direction of their own learning experience or to appropriately choose the importance of its objectives. Therefore, the role of the teacher, as a mediator and generator of learning scenarios, is key in guiding and directing the student's work in achieving the learning that results from the experience, providing feedback on their competency development.

The Mediated Learning Experience theory, formulated by Feuerstein (2002), is based on the idea that every human being is modifiable, requiring active interaction between the individual and the sources of stimulation. It explains that a person's predisposition, curiosity, and need are created, guiding them in the development of their own learning process and orienting them toward important learning outcomes. It sensitizes the learner to lived experience as a source of improvement and learning.

In this research, and within the context of a mediated learning experience, a program of three formal team mentoring sessions is carried out. These mentoring sessions take place within the framework of a course included in the curricula for bachelor's and dual bachelor's programs at Francisco de Vitoria University. In this course, students are presented with a collaborative project consisting of the design, development, and implementation of a proposal for social improvement based on the professional profile of the degree.

In these formal team mentoring sessions, the teacher acts as a mediator in the students' reflection on the development of communication skills and prosocial behaviors within each work team. They also encourage students to implement improvement actions based on consensus, aiming to consolidate acquired skills and develop those the team lacks.

To this end, and with the aim of establishing the starting point at which each team is located and its subsequent evolution in the development of competencies, a questionnaire is designed ad hoc using the Jotform application, where attitudes considered key to good teamwork performance are collected.

Table no. 1 Self-assessment questionnaire for teamwork skills

Competence	Behavior
INTERDEPENDENCE POSITIVE	General interest and motivation of team members in completing each of the team project tasks.
EFFECTIVE COMMUNICATION	Participation in contributing ideas on the completion of the task. Active listening to all ideas from all team members
COOPERATIVE RESPECT	Commitment and responsibility in the performance of individual tasks. Proactive behavior: • Completion of tasks without having to remember to

do them.

- Availability to carry out the most complicated tasks, without always having to rely on the same person or people.

Mutual aid: attention among team members in case a teammate needs help

Assertive behavior: Difficulties or lack of agreement are dealt with in a frank and friendly manner and within the team itself.

Respect: all team members are valued by the rest of their teammates

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Each team member is asked, individually and anonymously, to rate on a Likert scale of 1 to 6 the degree to which they consider these behaviors to be present in their work team, with 1 being the lowest value of behavioral development and 6 the highest.

2.1. **Program objectives**

The overall objective of the program is to promote the development of teamwork skills in university students.

The specific objectives include:

- To foster student commitment and co-responsibility for improvement within the team of which they are a part.
- Develop in the student a sense of belonging and team identity.

2.2. **Development and work plan**

-First tutorial:

In this first tutorial, which takes place once the team has begun its project, each team member is asked to anonymously complete the questionnaire in the table above. During this session, each student will assess the team's development status in the identified behaviors.

After sharing the results of the questionnaire, everyone must agree on at least two improvement measures for those areas where they have identified a need and which they feel hinder their work as a team. The teacher acts as a mediator and guide so that the improvement actions are respectfully, realistically, and concretely tailored to the identified need.

-Second tutoring:

The purpose of this second team mentoring session is to monitor the process undertaken for the team. The team's progress on the project is reviewed to assess whether what they are doing is in line with the request. This allows for identifying the level of understanding of the assigned work, as well as the adequacy of the team's progress.

The improvement actions agreed upon in the first mentoring session are also reviewed to assess the team's progress and commitment to achieving them. New improvement actions are adjusted or proposed based on the team's performance.

-Third tutorial:

In this third team mentoring session, each team member is again asked to complete the questionnaire. These results are compared with those obtained in the first mentoring session, and team members are asked to assess their progress and draw conclusions. They are encouraged to agree on what they must do to successfully complete the project they must undertake as a team. In this regard, Herold et al. (2007) point out that awareness of progress encourages individuals to repeat the behavior that is yielding positive results.

3. Methodology

3.1. Participants

To evaluate the impact of the tutoring program, a sample of 222 students was selected using pseudo-random convenience sampling, based on the availability of students enrolled in the first year of early childhood education, primary education, psychology, and nursing programs at Francisco de Vitoria University.

3.2. Measuring instruments and procedure

The instrument used for the evaluation of the program was the COMPLIZ instrument (Gambarini, 2025). This instrument has a high reliability index ($\alpha = 0.917$) and is composed of 27 items that reflect the students' perception of the development of leadership competencies for the common good in its two aspects: intrapersonal (personal knowledge that allows self-management and that enables social awareness and to manage relationships with others) and interpersonal (prosocial attitudes that favor adequate relationships with others and that challenge the moral responsibility of ensuring the development and improvement of the people who make up a human society) .

The use of this scale is considered appropriate because it is understood that by considering leadership for the common good as "a personal and autobiographical way of being that is revealed in action and that, by putting into play the best version of oneself, influences or inspires others to in turn display their best version" (Gambarini 2025: 3), it is in line with the objectives of the mentoring program.

The questionnaire was administered online via the Jot-form application during class time, with pre- and post-test measurements. Prior to their participation, the students were informed of the project's objectives and purpose. Their anonymity and the confidentiality of their responses were guaranteed at all times, and their consent for the use of their data for research was requested.

The experimental group was composed of the student groups who had received the tutoring program (early childhood education and primary education degrees), and the control group was composed of the student groups who had not received the tutoring program (psychology and nursing degrees). Both the control and experimental groups were taking the same course and were required to carry out a collaborative project proposing social improvement based on the professional profile of the university degree.

Table no. 2 Research sample

GROUPS	DEGREES	N	TOTAL
Experimental	Early Childhood Education	46	67
	Primary Education	21	

Control	Psychology	56	104
	Nursing	48	

Parametric tests were used to analyze the results, using the mean score for each group (Student's t test) as the representative statistic. Cohen's statistics were used to estimate the effect size. The author's recommendations were used for interpretation: small effects ranged from 0.1 to 0.29, medium from 0.3 to 0.49, large from 0.5 to 0.69, and very large ≥ 0.7.

The program used to perform data analysis was IBM SPSS STATISTICS version 29.

4. Results and discussion

Results

This section presents the results of the analysis of the impact of the formal mentoring program on participants' self-perceptions of leadership skills for the common good and, consequently, their perceptions of teamwork-related skills.

Tables 3 and 4 show the results of the analyses in their pre-test and post-test measurements.

Table no. 3 Pretest measurement results

YOU	Tutorial	N	M	D	t	gl	p	d
D. INTRAPERSONAL	YEAH	67	4.57	,59834	3,076	142,854	,001	,60524
	NO	104	4.28	,60962				
D. INTERPERSONAL	YEAH	67	4.79	,58414	1,554	141,729	,061	-
	NO	104	4.65	,58862				
COMMON GOOD LEADERSHIP	YEAH	67	4.68	,51462	2,614	169	,005	,52880
	NO	104	4.46	,53770				

Table no. 4 Post-test measurement results.

YOU	Tutorial	N	M	D	t	gl	p	d
D. INTRAPERSONAL	YEAH	67	4.62	,58517	2,284	101,586	,012	,60461
	NO	104	4.41	,61145				
D. INTERPERSONAL	YEAH	67	4.97	,61688	1,647	99,863	,05	,62850
	NO	104	4.81	,63263				
COMMON GOOD LEADERSHIP	YEAH	67	4.79	,54700	2,154	208	,016	,55266
	NO	104	4.61	,55468				

During the post-test assessment, students were asked, through an open-ended question, to assess the extent to which the tutoring program had contributed to their development of the competencies listed in the questionnaire, specifying which ones. Table 5 summarizes the students' responses for each of the aspects assessed.

Table no. 5 Responses to the open question about the mentoring program

Aspect	Summary of student assessments
INTERDEPENDENCE POSITIVE	- Planning and organization of work. - The importance of learning. - Motivation. - Personal involvement. - Improvement plans within the team.
EFFECTIVE COMMUNICATION	- Mindfulness. - Listen. - Assertive communication within the team. - Personal attitude toward the team. Flexibility and acceptance of others.
COOPERATIVE RESPECT	- Respect among members. - Sense of belonging and cohesion among members. - Mutual aid. - Commitment to the task. - Commitment to one's role and function within the team. - Conflict resolution. - Personal knowledge - Personal development and growth.
GENERAL EVALUATION	- Closeness to the teacher - Constructive feedback on the work. - Accompaniment. - The teacher is involved and cares about the student. - The teacher inspires the student to bring out their best version. - Greater interest in the subject. - Understanding work as a learning process, not just a requirement to be fulfilled.

Our results suggest that there are significant differences in the development of teamwork competencies at both the intrapersonal and interpersonal levels of "leadership for the common good" between students who participated in the formal tutoring program and those who did not. We found that this difference favored those students who did participate in the tutoring program. In all cases, the effect size of these differences was large ($>.5$).

These results are supported by the responses given by these students regarding the impact of the program on the development of teamwork skills, as shown in Table 5.

Discussion

We consider that our results coincide with the research by Rodriguez (2008) who pointed out the importance given by students to tutoring with respect to their motivation towards work.

Likewise, as indicated by Solaguren -Beascoa and Moreno (2016), the feedback on the work done that the teacher offers during the tutorials has favored the student's self-learning and their development in an integral way, not only academically, but also at the level of self-knowledge and personal management skills, but also at the level of development of effective communication between the team members.

We also understand that our results coincide with those reported by Collado and Fachelli (2019), who highlight the effect of mentoring on students' awareness of learning as a process that requires their involvement. In this sense, students also recognize the value of teacher mediation in their motivation toward the learning process.

The results achieved by Fleming et al. (2010) regarding group tutoring as a space for support and feedback among peers coincide with the perception of the students in our research on how it contributes to mutual help among team members and to an attitude of respect and acceptance of the other person.

5. Conclusions

Based on the results of our research, we believe that the formal team mentoring program meets our overall objective: to promote the development of teamwork skills in university students.

Furthermore, we understand that the team mentoring program helps students deepen their understanding of their strengths and areas for improvement in the context of teamwork and helps them address the need to work on self-management on a personal level.

We also believe that the mentoring program has been proven to promote individual and collaborative reflection and action (commitment and co-responsibility) for the personal development and growth of team members, generating a sense of belonging and team identity among them.

Likewise, we believe they are a space for teaching and learning prosocial behaviors (mindfulness, active listening, assertive communication, and respect) necessary for teamwork and, therefore, for interpersonal relationships.

Furthermore, we believe that for the team mentoring program to be a true learning experience, the facilitator's role is key, motivating students to discover the opportunities available through working with others and to decide individually and collaboratively to take the necessary actions based on those discoveries.

As a limitation to our research, it should be noted that the number of students enrolled in the Primary Education degree has limited the sample of the experimental group.

On the other hand, the study groups are natural groups, so the levels of randomization typical of an experimental design could not be included.

In this sense, and as a prospective approach, we propose applying this training program to other undergraduate programs at Francisco de Vitoria University, using it as an experimental group, and using undergraduate programs from other private and public universities as a control group, to ensure comparability between the groups and test the effectiveness of the intervention in different sociocultural contexts.

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Marian Queiruga Dios. Cum Laude from the Pontifical University of Salamanca, and currently a professor and mentor for the subject "Skills and Competencies of the Person" and Research Manager at the Institute for Accompaniment. She has published several articles in the fields of social responsibility, service learning, and personal skills through educational innovation. Her most recent articles include: "Project-Based Learning (PBL) and its Impact on the Development of Interpersonal Competencies in Higher Education" (2022), which presents a comparative study of the impact and acquisition of skills through

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Tasio Pérez Salido. He holds a degree in Psychology with a clinical specialty from the Complutense University of Madrid. He completed postgraduate training in the master's degree in Bioethics from the Catholic University of San Antonio de Murcia and the Specialist Degree in Family and Couple Therapy from the Pontifical University of Comillas. He has been a university professor at the Pontifical University of Salamanca and currently at the UFV. Since 2006, he has taught various subjects in nursing, physiotherapy, medicine, psychology, criminology, and design, among others, providing over 16 years of teaching experience. He teaches classes in the master's degree in Bioethics and in the master's degree in Coloproctology and Stomatherapy Nursing, as well as in the expert course on comprehensive care for intestinal dysfunction. He works as a lecturer, providing training to various groups (schools, associations, institutions, etc.). He is currently a researcher in a permanent research group on the Gamification of the Subject of Personal Skills and Competencies. His research career has also been reflected in his participation in international conferences and the publication of scientific articles and book chapters with SPI publishing houses. He also combines his clinical psychology practice with his university work, providing a comprehensive field of research and training in the soft skills he pursues in both fields. He is currently a doctoral candidate at the University of Salamanca in the "Training in the Knowledge Society" program. He is a member of various innovation and research groups on competence-related topics and is a researcher at the Center for Family Studies at the Institute of Economic and Social Activities and at the Institute of Bioethics, both at Francisco de Vitoria University (UFV). He also collaborates with the CEU Family Studies Institute.