

The acquisition of teamwork skills in university students through extra-curricular activities

The acquisition
of teamwork
skills

Elena de Prada Creo

Department of English, French and German, University of Vigo, Vigo, Spain

Mercedes Mareque

*Department of Financial Economics and Accountancy, University of Vigo,
Vigo, Spain, and*

Iago Portela-Pino

Isabel I of Castile International University, Burgos, Spain

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Abstract

Purpose – This study aims to determine whether university students are successfully acquiring or improving skills related to teamwork through a variety of extra-curricular activities, such as sports, music, volunteering, international group work experiences and professional practices.

Design/methodology/approach – Descriptive statistics have been calculated to evaluate the normal behaviour of the variables. Accidental sampling was used via a cross-curricular study with a quasi-experimental design. An analysis of means was performed using the Student's *t*-test.

Findings – The results show the students to have highly developed interpersonal and communication skills, followed by adaptation and decision-making skills. The lowest scores corresponded to coordination and leadership skills. On the other hand, a significant correlation was established between extra-curricular activities and the acquisition of essential teamwork skills.

Originality/value – This study can confirm the important relation between extra-curricular activities and the acquisition of the teamwork skills that play a vital role in the overall development of our students, as well as for their integration into the job market, with particular emphasis on the acquisition of leadership skills which students are most lacking in, but which have shown to improve with any of the proposed activities. The promotion of the extra-curricular activities by the University, could greatly support our students' soft skills acquisition and complement their education.

Keywords Soft skills, Teamwork, University students, Extra-curricular activities

Paper type Research paper

Introduction

Over the past few years, there has been mounting evidence supporting the importance of soft skills in preparing students for their future careers and helping them to perform both work and academic tasks more efficiently. From a work perspective, the need for young people to have soft skills has been emphasised, and these skills are now included as a requirement in job adverts (Cinque, 2016; Clares *et al.*, 2019).

In the academic sphere, the European Higher Education Area has highlighted the importance of the acquisition of soft skills by university students. These should complement the acquisition of hard skills, and thus need to be included in the curriculum. Universities are aware of the increasing demand for soft skills on the part of companies; over the past years, the importance of mastering soft skills has been voiced in this arena, specifically those skills related to teamwork, thanks to their relation with employability (Volkov and Volkov, 2015) and some universities have integrated them as part of the core units of bachelor degrees (Riebe *et al.*, 2010). Previous studies have indicated high satisfaction levels in both students and employers regarding the mastery of teamwork skills at the end of university studies (Mareque *et al.*, 2018). However, the absence of any specific program for the



acquisition of teamwork skills, and the lack of training of most university professors, imply that students must acquire these skills through other types of experiences during their university years.

In this sense, [Arat \(2014\)](#) points out that university students also acquire soft skills when carrying out other activities such as long-term apprenticeships, sports, voluntary work and projects, art and design projects, long-term workshops and classes, travels or learning to play an instrument. These activities are known as extra-curricular activities and although research is limited, some studies have demonstrated their positive impact ([Sherrod et al., 2002](#); [Zaff et al., 2003](#)).

With this in mind, the aim of this study is to establish whether or not students successfully acquire or improve teamwork skills through extra-curricular activities. To achieve this objective, two types of activity available to students have been identified: Activities carried out by students in their free time and complementary activities organised by the faculties themselves, such as participation in international groups or work experience.

Theoretical background and hypotheses

Teamwork and soft skills

Teamwork skills are a set of behaviours, knowledge and attitudes that contribute towards a team's efforts to achieve specific common objectives ([Stout et al., 1996](#)). [McIntyre and Salas \(1995\)](#) define team work as various interrelated actions such as performance monitoring, giving and getting feedback, close-loop communication, back-up behaviours, adaptability, and coordination of action, these being the very competences often equated with soft skills. Additionally, [Brungardt \(2011\)](#) relates teamwork skills with leadership skills, describing teamwork skills as those needed by an individual in order to work with others to achieve an objective or promote a positive change.

The literature offers us a significant link between soft skills and the skills needed for effective teamwork ([Brungardt, 2011](#)). In this sense, Dr Harry O'Neil was a pioneer in this field, and together with his colleagues Chung and Brown, they compared the mastery of soft skills with teamwork skills, observing that there were considerable similarities ([O'Neil et al., 1999](#)). These researchers have provided us with information regarding the nature of those individual teamwork skills needed to participate effectively in a team. Team members are efficient when they have been trained to be so; they know how to coordinate tasks, how to communicate with the other team members, and how to react to the changing conditions in their environment. These researchers concluded that there are six soft skills related to individual work that are essential in order to work efficiently in a team: adaptability, communication, coordination, decision making, interpersonal skills and leadership.

There are different instruments for measuring teamwork skills, although for this study the "Teamwork Skills Questionnaire (TSQ)" drawn up by [O'Neil et al. \(1999\)](#) has been used. There are numerous and broad-ranging examples of this test being applied in education ([Al-Alawneh et al., 2011](#); [Ilias et al., 2012](#)) with a high level of reliability.

Activities carried out by students in their free time

Sport. Sports have proven to be an excellent means for developing soft skills ([Mizrak et al., 2017](#)), enabling both types of skills – life and sports – to be combined and acquired simultaneously ([Danish and Nellen, 1997](#)). This significant interaction occurs in both children and young adults, with an especially positive impact on leadership and teamwork ([Holt et al., 2013](#)).

In accordance with the research carried out by the latter author, the fact that these skills are acquired naturally – and without any direct teaching – by doing sport, is particularly relevant. In the same way, these skills are transferred to other life experiences beyond the realm of sport without the participants requiring any specific training to this effect (Larson, 2000).

The important connection and impact that sport can end up having on the development of skills related to teamwork has also been brought to light in the context of students' eventual assimilation into the work force. According to the research carried out by Berret (2006), a high percentage of Alberta's top 100 corporate Chief Executive Officers (CEOs) and Members of the Legislative Assembly (MLAs) indicated that they had taken part in sports at high school, while more than half manifested that their participation in sporting activities (high school sport) had a significant impact on the development of their careers, especially in the case of teamwork.

Bearing these results in mind, we can pose the following hypothesis:

H1. Students who do sports will have greater teamwork skills.

Music-related activities. Music teaches cooperative participation, establishes social connections, enables observation of a student's ability to meet proposed goals, develops healthy competition and fosters teamwork. Participation in musical activities requiring cooperative work, such as forming part of a music group or choir, can boost the acquisition of teamwork skills, since each member needs to value the others, coordinate their own actions with the rest of the group and take responsibility for individual objectives becoming collective ones in order to achieve a common goal (Conejo, 2012).

Oirola (2017) states that being a member of a music group implies coordinated teamwork in order to successfully meet a collective goal such as the joint performance of a piece of music. Colson (2012, p. 146) indicates that "there is probably no other activity requiring as much teamwork and cooperation as a music group". Chung (2010) points out that participating in music involves highly important social skills such as cooperation (a noteworthy characteristic of teamwork), since a group of musicians have to learn to work together, listen to each other and understand one another in order to achieve a common goal.

Several studies have examined how music helps the development of interpersonal skills, including teamwork (Hallam and Prince, 2000; Oirola, 2017). In their study, O'Reilly and Duque (2015) indicate how the elements of teamwork are present in the way in which choirs organise and manage themselves. They draw the conclusion that choirs can be a good way of fostering teamwork skills, and believe that thanks to their effectiveness, they represent a strategy worth considering when managing human resources within organisations. Sward (1989) observes that participation in musical group activities helps students learn the importance of mutual support, respecting commitments and coming together to achieve common objectives.

These results lead us to pose the following hypothesis:

H2. Students who carry out music-related activities will have greater teamwork skills.

Multi-disciplinary experiences in groups of volunteers. The research has corroborated that volunteering represents the perfect framework for both personal and professional growth; in personal terms, it has been noted that participation in volunteering activities increases self-confidence and feelings of self-fulfilment and satisfaction. Furthermore, teamwork experiences provide students with a positive feeling of belonging and identity, thus better equipping them for the future (Profiroiu and Păceșilă, 2017), as well as with a more ethical and favourable conduct towards those less fortunate (Spiller, 2017).

Several studies have highlighted how volunteering provides the ideal context for the development of the skills needed to work efficiently and productively in a team, as well as being a highly valuable tool for learning about group dynamics and teamwork (Perić, 2011). This significant interrelation between volunteering and improvement of teamwork skills is evidenced in a variety of contexts and fields.

In the business sphere, not only has volunteering proven to bring benefits to the social organisations involved, but also for the companies and workers themselves; the latter are given the chance to develop other skills such as leadership, initiative or creativity, that are needed to build more solid work groups (Sajardo and Ribas, 2014).

In the domain of universities, several studies concluded that volunteering is the perfect vehicle for personal and professional development, especially in terms of improving the skills needed for teamwork. This link between volunteering and teamwork is evidenced both in the motivation behind student involvement in this type of activity (Khasanzyanova, 2011) and the results of their experiences which lead to improved teamwork abilities, among other benefits (Howell, 2013; Profiroiu and Păceșilă, 2017).

This important interrelation leads us to pose the following hypothesis:

H3. Students who have participated as volunteers have greater teamwork skills.

Complementary activities organised by centres

International group work experiences. Another important factor related with the acquisition of the most relevant soft skills when working in teams is rooted in students' international – and therefore multicultural – experiences.

In an increasingly global world, having the knowledge and skills to be able to overcome potential communication and interpersonal barriers is essential in order to succeed in moving from multiculturalism to interculturality. Both multinationals as well as companies aiming to break into the international market are clear about this need, and thus both have been working towards optimising multicultural teamwork.

Although working in multicultural groups may give rise to conflicts due to varying approaches and ingrained ideas about social interaction, the most salient point here is that, when carried out in optimal conditions, the experience can greatly enrich the acquisition of different soft skills (Stahl *et al.*, 2010).

While there is significant evidence in favour of the effectiveness of international and multicultural experience, one should bear in mind the potential sources of conflict; one of the most obvious is the use of a common language (English normally being the lingua franca) as a means of communication within the group. Having a good command of this common language will therefore facilitate interaction within the group and improve the chances of developing the different skills related to teamwork (Kondakci *et al.*, 2008).

Therefore, basing ourselves on the results of the existing literature described above, we put forward the following hypotheses:

H4a. Students with experience in international groups will have greater teamwork skills.

H4b. Students with a higher L2 (English) level will have greater teamwork skills.

Professional practices. The great importance of the inclusion of professional practices in academic programmes has been highlighted; these provide students with the comprehensive training they need and prepare them to be fully integrated into the job market and progress competently in their career. The need to complement academic education with contextual learning has been emphasised by different national and international educational committees such as DEST in Australia or the Bologna Process in Europe (Kohler, 2004), as well as various

studies carried out within the field of WIL (Work-Integrated Learning) (Eames and Call, 2006; Murphy and Calway, 2008).

Within the set of skills with the greatest relevance for students, new graduates, professors and employers alike, we can highlight those related to teamwork; in fact, it is these which both employers and students value most positively in our context (Mareque *et al.*, 2018). Additionally, research such as that done by Coll and Eames (2004) underscores the importance of bearing in mind factors such as duration if the professional practices are to be truly effective; an adequate length of time can contribute to target levels of interaction and integration and the possibility of witnessing a positive change in interns' skills performance.

Therefore, we can conclude from these studies that professional practices (WIL) can represent an excellent context for developing and applying skills related to effective teamwork.

These results lead us to pose the following hypotheses:

H5a. Students who have done professional practices have greater teamwork skills.

H5b. Students who have longer professional practices will get better results than those with less experience.

Methodology

Sample and Procedure

The study was carried out with 615 Social Science students from a Spanish university (Universidad de Vigo), of which 203 are male (33%) and 412 females (67%). 31% are first-year students, 26% second-year students, 25.5% in their third year and 17.1% in their fourth year. The average age of the participants is 21.52. Students received no specific curricular training on teamwork skills.

Accidental, as opposed to random, sampling was used via a cross-curricular study with a quasi-experimental design. The survey was administered to all the students present in the classroom on various days in May 2019. While a random sample was not used, the population size is adequately broad and therefore representative.

The questionnaire was administered by means of a form, where it was made clear that participation was anonymous, voluntary and the information confidential. Ethical research protocols were met, with particular emphasis on confidentiality, in line with the ethical guidelines from the Declaration of Helsinki (AMM, 2017).

All the analyses were carried out with a confidence level of 95% by means of the statistical package SPSS 21.0.

Measures

Teamwork. The Teamwork Skills Questionnaire (TSQ) which measures an individual's ability to be efficient in teamwork, was used as an instrument to measure the mastery of cross-curricular competences. The questionnaire included 36 questions measuring six factors defined by O'Neil *et al.* (1999): (1) Adaptability: Recognizing problems and responding appropriately; (2) Communication: Clear and accurate exchange of information; (3) Coordination: Organizing team activities to complete a task on time; (4) Decision making: Using available information to make decisions; (5) Interpersonal skill: Interacting cooperatively with other team members; (6) Leadership: Providing direction for the team. The answers were given via a Likert scale with 4 alternatives: (1) hardly ever, (2) sometimes, (3) often, and (4) almost always.

Table 1 shows that the reliability of the scale is 0.939, and that of its factors according to Cronbach's alpha range from 0.695 to 0.868.

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Activities carried out by students in their free time. The participants in this study had to indicate in the questionnaire whether they usually carried out certain activities in their free time: activities related to music (being a member of a choir, a music group/band) or sports, or if they had any multidisciplinary experiences in volunteering.

Complementary activities organised within the university. Students were asked whether they had participated in any of the complementary activities usually organised in the faculties, such as: international group work experiences (joint seminars, international student exchanges, international weeks) or professional practices.

Results

Competence levels of the factors

As can be seen in [Table 2](#), the students obtained the following scores for mastery of teamwork skills: the highest scores were for interpersonal skills ($\bar{x} = 3.47$) and communication skills ($\bar{x} = 3.31$). Adaptability ($\bar{x} = 3.08$) and decision-making skills ($\bar{x} = 3.06$) obtained intermediate scores, while the lowest scoring factors were coordination ($\bar{x} = 2.99$) and leadership ($\bar{x} = 2.71$).

Activities carried out by students in their free time

Regarding the first three hypotheses, [Table 3](#) presents the results between the different factors for mastery of teamwork skills and the independent variables related to activities carried out by students in their free time. Thus, 19.3% of the students participate in music-related activities, 56.9% do sports and 46.7% have had some multidisciplinary teamwork experience.

In relation to the students who do sports, they have greater leadership skills ($p = 0.000$), as well as greater interpersonal development ($p = 0.047$).

Table 1.
Cronbach's alpha test results, for the scale and each factor

Factors	Alpha	No. of items
Adaptability	0.767	5
Coordination	0.695	5
Decision making	0.762	6
Leadership	0.868	7
Interpersonal skills	0.814	6
Communication	0.800	7
TSQ	0.939	36

Note(s): $N = 615$

Table 2.
Competence level in each of the factors and overall

Factors	Mean	SD	Min	Max
Adaptability	3.08	0.525	1.00	4.00
Coordination	2.99	0.551	1.00	4.00
Decision making	3.06	0.517	1.00	4.00
Leadership	2.71	0.638	1.00	4.00
Interpersonal skills	3.47	0.507	1.00	4.00
Communication	3.31	0.481	1.00	4.00
Overall	3.0994	0.43214	1.28	4.00

Note(s): $N = 615$

		Adaptability		Coordination		Decision making		Leadership		Interpersonal skills		Communication		Overall	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Sports	<i>N</i>	350	265	350	265	350	265	350	265	350	265	350	265	350	265
	Mean	3.10	3.05	3.00	2.98	3.09	3.01	2.79	2.60	3.51	3.43	3.32	3.29	3.12	3.07
	S.D.	0.516	0.535	0.538	0.569	0.492	0.547	0.611	0.659	0.517	0.491	0.477	0.487	0.422	0.444
Activities related to music	<i>t</i> -value/Sig	1.274/0.203		0.335/0.737		1.878/0.061		3.660/0.000**		-1.970/0.047*		0.751/0.453		1.467/0.143	
	<i>N</i>	119	496	119	496	119	496	119	496	119	496	119	496	119	496
	Mean	3.18	3.05	3.07	2.97	3.12	3.04	2.79	2.69	3.56	3.44	3.36	3.29	3.17	3.08
Multidisciplinary experiences in volunteering	S.D.	0.540	0.518	0.549	0.551	0.532	0.513	0.651	0.634	0.484	0.511	0.488	0.478	0.443	0.427
	<i>t</i> -value/Sig	2.438/0.015*		1.640/0.102		1.505/0.133		1.464/0.144		2.239/0.026*		1.498/0.135		2.187/0.029*	
	<i>N</i>	287	328	287	328	287	328	287	328	287	328	287	328	287	328
Multidisciplinary experiences in volunteering	Mean	3.12	3.00	3.01	2.98	3.09	3.00	2.78	2.70	3.44	3.50	3.33	3.30	3.128	3.074
	S.D.	0.491	0.550	0.552	0.552	0.503	0.529	0.604	0.661	0.526	0.491	0.478	0.483	0.420	0.441
	<i>t</i> -value/Sig	1.820/0.068		0.604/0.546		1.650/0.098		2.630/0.009**		-1.020/0.317		1.050/0.293		1.530/0.126	

Note(s): *, ***p* < 0.05, 0.01; *N*: 615

Table 3.
Results of student's
t-test between the
different factors and
independent variables
related to free time
activities

With regards to students who participate in musical activities, they have greater adaptability ($p = 0.015$) and interpersonal development ($p = 0.026$), and therefore a higher competence level ($p = 0.029$).

As we can see, students' multidisciplinary experiences in volunteering do not seem to have impacted their mastery of different skills, with the exception of leadership ($p = 0.009$), which is higher in students with volunteering experience.

Complementary activities organised by the faculties

Regarding [hypotheses 4a](#) and [5a](#), [Table 4](#) presents the results for the different teamwork skills factors and complementary activities organised by the faculties. Thus, 31.7% were involved in professional practices during their studies, and 53.3% worked in international groups.

It would seem that having collaborative experiences with people of different nationalities is important, given that an improvement was noted in adaptability ($p = 0.016$), decision-making ($p = 0.009$), leadership ($p = 0.015$) and communication ($p = 0.030$), thus leading to a higher competence level ($p = 0.009$).

No differences were observed with regards to students carrying out professional practices.

[Table 5](#) presents the results for [hypothesis 4b](#) which poses that those students with greater proficiency in English will show greater teamwork skills. Thus, we can see that students' level of English has a positive impact on both leadership ($p = 0.045$) and decision-making ($p = 0.045$).

[Table 6](#) present the results between the different teamwork skills factors and time spent by students on professional practices, with the aim of responding to [hypothesis 5b](#). As we can see, those students who spent the longest in professional practices (over 3 months) show greater leadership skills ($p = 0.023$).

Conclusions and discussion

Given the reality of new working environments, soft skills such as teamwork, communication, leadership and problem-solving have become essential ([Ritter et al., 2018](#)). In fact, in recent years, soft skills have become a more important requirement on the part of companies than hard skills ([Hasbullah and Sulaiman, 2002](#)); equally, students' soft skills are increasingly required to complement the hard skills ([Yan et al., 2019](#)) which have traditionally been taught at university.

While most university students believe that they have a high level of soft skills ([Stewart et al., 2016](#)), companies contradict this by stating that their new employees are lacking in such skills ([Murray et al., 2018](#); [Žnidaršič and Zupan, 2019](#)). For this reason, universities need to reinforce the acquisition of soft skills ([Itani and Srour, 2015](#)) and include them in their syllabuses ([Riebe et al., 2010](#)). It is imperative that educators hold themselves especially responsible for the inclusion of soft skills among the competences to be developed in their subjects, and that these complement the hard skills. Nevertheless, as we have seen in this study, one needs to take into account the fact that students are not limited to acquiring and developing soft skills in a purely academic context, but also through other types of activities, such as activities in their free time or faculty-organised activities that complement the formal syllabus.

Thus, on the one hand, this study has corroborated that students can develop teamwork skills through extra-curricular activities. They have shown to have a high level of interpersonal development and communication skills, followed by adaptability and decision-making skills, while the lowest scores correspond to coordination and leadership. These results contrast with those obtained in the research carried out by [Ilias et al. \(2012\)](#) with a

		Adaptability		Coordination		Decision making		Leadership		Interpersonal skills		Communication		Overall	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
International work groups	N	328	287	328	287	328	287	328	287	328	287	328	287	328	287
	Mean	3.13	3.00	3.01	2.97	3.11	3.00	2.77	2.60	3.50	3.40	3.34	3.30	3.14	3.05
	S.D.	0.494	0.553	0.532	0.573	0.492	0.540	0.593	0.682	0.490	0.525	0.445	0.516	0.396	0.465
Professional practices	t-value/Sig	2.407/0.016*		0.950/0.343		2.640/0.009**		2.430/0.015*		1.860/0.064		2.170/0.030*		2.635/0.009**	
	N	195	420	195	420	195	420	195	420	195	420	195	420	195	420
	Mean	3.10	3.10	3.03	2.97	3.07	3.10	2.70	2.70	3.47	3.50	3.29	3.30	3.10	3.09
S.D.	0.479	0.545	0.518	0.566	0.494	0.528	0.616	0.649	0.522	0.501	0.468	0.487	0.403	0.445	
t-value/Sig	0.760/0.448		1.307/0.192		0.631/0.528		-0.208/0.835		0.121/0.903		-0.573/0.567		0.325/0.745		

Note(s): *, ***p* < 0.05, 0.01; N: 615

Table 4.
Results of student's
t-test between the
different factors and
independent variables
related to
complementary
activities organised by
the faculties

	English proficiency	N	Mean	S.D.	t-value	Sig
Adaptability	A1 + A2 + B1	490	3.06	0.524	-1.684	0.093
	B2 + C1 + C2	125	3.15	0.523		
Coordination	A1 + A2 + B1	490	2.99	0.561	-0.090	0.928
	B2 + C1 + C2	125	3.00	0.514		
Decision making	A1 + A2 + B1	490	3.03	0.523	-1.932	0.045*
	B2 + C1 + C2	125	3.13	0.488		
Leadership	A1 + A2 + B1	490	2.68	0.642	-1.962	0.045*
	B2 + C1 + C2	125	2.81	0.615		
Interpersonal skills	A1 + A2 + B1	490	3.46	0.505	-0.981	0.327
	B2 + C1 + C2	125	3.51	0.516		
Communication	A1 + A2 + B1	490	3.30	0.482	-0.194	0.846
	B2 + C1 + C2	125	3.31	0.478		
Overall	A1 + A2 + B1	490	3.0863	0.43451	-1.482	0.139
	B2 + C1 + C2	125	3.1504	0.42052		

Table 5. Calculation of student's *t*-test between the different factors and the independent variable of language level

Note(s): *, ** $p < 0.05, 0.01$; $N: 615$

sample of Malaysian university students, in which the highest scores corresponded to coordination and decision-making, followed by communication and leadership skills, and finally adaptability and interpersonal skills.

On the other hand, if we focus specifically on those activities carried out by students beyond the purely academic syllabus, and which could lend support to the development of teamwork skills, we could come to the following conclusions:

Activities carried out by students in their free time

Sport. Doing sports has shown to have a positive influence on soft skills, specifically interpersonal and leadership skills, the latter highlighted in the research carried out by [Holt et al. \(2013\)](#).

Sports have come to be a highly recommendable activity for boosting soft skills, especially in the case of leadership, given that this skill obtained the lowest score among students; in this way, establishing that this skill can be improved through sports is highly valuable.

It is equally relevant that this skill has proved to be transferable from sports to other life experiences, including the area of work ([Danish and Nellen, 1997](#); [Larson, 2000](#)). It is precisely in this sphere where sports have shown to contribute to considerable professional achievements ([Berret, 2006](#)).

Music activities. Music activities have shown to be a useful tool for developing teamwork skills among students, adaptability and interpersonal skills being the most significant factors. The importance of participating in music activities has already been highlighted in previous studies, such as that by [Hallam and Prince \(2000\)](#) in the UK, where teachers have reported the considerable benefits of learning an instrument to the development of social skills like teamwork, a sense of achievement, self-confidence, self-discipline and physical coordination. In Spain, [Oirola \(2017\)](#) conducted a study to discover the socio-emotional profile of teenage musicians who were members of youth bands and choirs. The results obtained show that, apart from musical knowledge, the teenagers also acquired socio-emotional skills related to feelings of belonging, social cohesion, respect, social harmony, self-motivation, responsibility, emotional self-regulation, teamwork, leadership, personal identity, experimentation and the appreciation of aesthetic emotions, etc.

Multidisciplinary experiences in volunteering. The previous literature and the results of this study corroborate the important link between volunteering experience and the acquisition of

	Adaptability		Coordination		Decision making		Leadership		Interpersonal skills		Communication		Overall	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Professional practices	119	76	119	76	119	76	119	76	119	76	119	76	119	76
Mean	3.08	3.14	2.99	3.11	3.03	3.14	2.62	2.83	3.44	3.51	3.25	3.35	3.06	3.18
SD	0.504	0.437	0.528	0.496	0.525	0.435	0.643	0.553	0.506	0.547	0.481	0.443	0.421	0.367
<i>t</i> -value/Sig	-0.898/0.370		-1.545/0.124		-1.596/0.112		-2.285/0.023*		-0.938/0.349		-1.442/0.151		-1.956/0.052	

Note(s): 1: Up to 3 months; 2: More than 3 months
*, ***p* < 0.05, 0.01; *N*: 615

Table 6.
Results of student's
t-test between the
different factors and
the independent
variable of time spent
on professional
practices

the skills needed for effective and enriching teamwork, specifically in the area of leadership. As we mentioned earlier, this is the skill with the lowest scores, and therefore students with volunteering experience under their belts would find integration into the job market easier. To this aim, promoting volunteering in academic and business contexts should be a priority (Profiroiu and Păceșilă, 2017).

The involvement of higher education centres may be central to raising awareness among the student body and promoting and developing actions that offer them the opportunity of complementing their training both personally and professionally. Additionally, the structures needed to guarantee an effective overlap of academic training with volunteer programmes (both as extra-curricular activities and as actions integrated into the syllabi themselves, Learning-Service, already implemented by numerous universities) are already in place in these centres.

It is important to bear in mind the fact that while volunteering can be carried out in a variety of situations and contexts, the university setting itself is an excellent base for setting up volunteering actions by using the needs and services of the institution itself for students to carry out support and integration tasks, interacting with university personnel and collaborating with their fellow students. In this way, teamwork skills can be acquired and developed in a controlled manner in order to be applied to both the community and the working environment at a later stage (Frederick, 2009).

Complementary activities organised by centres

International teamwork experiences. Participating in international groups has shown to greatly contribute to an overall improvement in teamwork skills, especially adaptability and leadership. In order for international work groups to be fully effective, studies such as that by Matveev and Milter (2004) underscore the importance of intercultural competences in improving teamwork.

In order to optimise interactions in international groups, it is therefore essential to keep in mind the mechanisms associated with cultural diversity so that the necessary means are provided, and the groups are impacted in an effective way (Stahl *et al.*, 2010).

The results obtained by Tung (2008) and Stahl *et al.* (2010) are especially relevant; in an ambitious study on multicultural work groups by means of a meta-analysis of research, they suggested that promoting “at home” university-level work teams made up of members from different cultures and nationalities, within a controlled environment, could boost the positive effects to the maximum while minimising potential conflicts. In order to achieve this, both the foreign and local students need to have a positive attitude, thus favouring mutual understanding and cooperation (Kondakci *et al.*, 2008).

Exploiting the increasingly great multicultural variability in classrooms and numerous exchange programmes with the aim of harnessing this potential for developing highly demanded soft skills, is a task that may lead to significant changes in students’ overall education. To this aim, teachers need to be aware of these advantages and organise work groups whilst bearing in mind the potential advantages our results have shown, namely that international work group experiences are the most relevant in the acquisition of teamwork skills.

Professional practices. With regards to professional practices, it is worth pointing out that they did not have any impact on the acquisition of the soft skills needed for teamwork, as long as the duration of the professional practice is not taken into account.

This result puts forward an interesting point that questions the character and implementation of professional practices at university, since it generically contradicts the broad evidence supporting the relation between internships and teamwork skills (Mareque *et al.*, 2018). In this respect, several studies highlight the importance of professional practice

programmes – also referred to in the literature as cooperative education (co-op) and work-integrated learning (WIL) – not limiting themselves to being “mere add-on work-experience programs” that are simply layered onto academic education without being adequately integrated, but rather assuming that the work experience itself will be enough to capitalise on all the benefits associated to co-op and WIL (Coll and Zegwaard, 2012; Eames and Cates, 2011).

This is true of what our study has brought to light, wherein the practices normally undertaken by students and developed over a short period of time do not usually have the recommended integration of interaction between the different parties involved; thus, their impact on the acquisition of the skills studied here have shown to be minimal. Nevertheless, if we take the time factor into consideration, significant differences do show up in the acquisition of leadership skills. This result is especially significant in the context of our study, as it is precisely this skill which obtained the lowest scores in the test results. Having longer professional practices would therefore allow for higher levels of interaction, another of the factors pointed out by Coll and Eames (2004) as maximising positive effects.

Therefore, these results suggest that professional practices are an ideal and essential complement in the acquisition of leadership skills in teamwork, as long as their duration is adequate. Equally, it seems very likely that an improvement in all these skills would be seen if the internships are integrated with the academic syllabus contents in an appropriate way.

It should also be noted that while the results of our study do not corroborate the extensive positive influence of professional practices on soft skills that other studies have highlighted (Ilias *et al.*, 2012), they do represent a wakeup call regarding the need to consider better ways of implementing and integrating internships.

In short, this study can confirm the important relation between extra-curricular activities and the acquisition of the teamwork skills that play a vital role in the overall development of our students, as well as for their integration into the job market, with particular emphasis on the acquisition of leadership skills which students are most lacking in, but which have shown to improve with any of the proposed activities.

Fostering this type of extra-curricular activities is especially significant when official syllabuses do not include teamwork skills as core units.

To this respect, it is important to take into account that most universities have independent services that deal with sports and cultural activities, volunteering and foreign languages. Consequently, coordinating these services and the activities that they program with university academic boards will be fundamental for planning specific actions aiming at the acquisition and improvement of teamwork skills.

Many universities offer the option to gain credits by participating in different activities such as university sports teams, music, foreign language learning, or volunteering. As we saw, these activities are deeply connected to teamwork skills. However, both organisers and students seem to view them as mere leisure activities, without any further consideration. All the implied agents seem to be unaware of the crucial benefits that students can obtain thanks to their participation in these types of activities. Accordingly, university authorities, professors and extra-academic services staff should be aware of this relationship and promote, foster and enhance their practice. Likewise, students should be informed about this indirect way to acquire teamwork skills, something fundamental for their future professional life and workforce integration and promotion.

In addition, some extra-academic activities that are usually carried out by students' own initiative can also be fostered and facilitated within the academic environment. Integrating volunteer tasks in the academic curriculum by means of dedicating a part of the subject to these type of actions is an initiative that is taking place within the area of service-learning, which some universities have been implementing in recent times. This interaction is likely to produce very positive effects for the improvement of teamwork skills.

Fostering international teamwork experiences can be fundamental for students' training. Being part of intercultural groups both at home and abroad can make a very significant difference to acquire intercultural competence and effective teamwork skills. It is fundamental that both students and professors are aware of the importance of this valuable interplay. On the one hand, professors should contribute to organise, form and supervise multicultural teams in order to facilitate the acquisition of multicultural and teamwork skills. On the other, students should be made aware that leaving their comfort zone and becoming part of international groups instead of those formed by their friends and classmates can open up a world of new stimulus, perspectives and approaches that will make them reconsider old schemas and preconceptions.

Regarding professional practices, it would be advisable for academic supervisors to exercise more control over the quality of the internships by establishing better coordination between both supervisors (university and company). This cooperation would allow detecting possible shortcomings in key competencies. Likewise, increasing the duration of the practices and fostering their international scope can be useful actions for the improvement of students' teamwork skills and their better integration in the work market.

English communication skills also demonstrated to play a significant role in teamwork skills. English proficiency can be determinant to be better integrated with a multicultural team and have more opportunities to participate in volunteering activities and internships abroad. In this way, English proficiency can have a multiplying beneficial effect, as it would allow students to take part in other activities that have proved to improve teamwork skills as well. Accordingly, making students and the university community aware of the importance of this skill is highly advisable, as it is very often taken for granted and in consequence, not sufficiently developed at the required level.

In conclusion, the fact that the activities under study are practised during students' free time does not mean that learning has stopped. On the contrary, if they are well planned, coordinated and fostered, extra-curricular and leisure activities can serve as great complements for students to acquire teamwork skills in a natural, meaningful and effective way. Their promotion by the corresponding university services, together with the recommendations outlined here, could greatly support our students' soft skills acquisition and complement their education.

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About the authors

Elena de Prada Creo is PhD in applied linguistics, University of Santiago, Spain; specialist in TESOL, Trinity College London, England and professor at the University of Vigo. Her publications and research guidelines are focused on foreign language learning, teacher training, innovative teaching, learning methods, multilingualism, interculturality and creativity.

Mercedes Mareque is PhD in financial economics and accounting and professor at the University of Vigo. Her publications and research guidelines focus on the fields of financial audit, accounting and recently in the fields of creativity and educational innovation. Mercedes Mareque is the corresponding author and can be contacted at: chedesmareque@uvigo.es

Iago Portela-Pino is PhD in sport sciences and physical education and professor at Isabel I University. His publications and research guidelines are focused on the fields of variables that influence health and educational innovation.

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