

<http://revped.ise.ro>

Print ISSN 0034-8678; Online ISSN: 2559 - 639X

DOES THE ACADEMIC ENVIRONMENT DEVELOP TEAMWORK EFFICIENCY AMONG STUDENTS?

Dezvoltă mediul academic eficiența muncii în echipă în rândul studenților?

Florentina Ionela LINCĂ, Florentina Lavinia MATEI

Journal of Pedagogy, 2023 (2), 141 - 160

<https://doi.org/10.26755/RevPed/2023.2/141>

The online version of this article can be found at: <https://revped.ise.ro/category/2023/>



This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.
To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Published by:

**CENTRUL NAȚIONAL DE POLITICI ȘI EVALUARE ÎN EDUCAȚIE
UNITATEA DE CERCETARE ÎN EDUCAȚIE**

<http://www.ise.ro/>
<https://rocnee.eu/>

Further information about *Revista de Pedagogie* – *Journal of Pedagogy* can be found at:

Editorial Policy: <http://revped.ise.ro/editorial-policy/>

Author Guidelines: <http://revped.ise.ro/en/author-guidelines/>

DOES THE ACADEMIC ENVIRONMENT DEVELOP TEAMWORK EFFICIENCY AMONG STUDENTS?

Florentina Ionela Lincă*

University of Bucharest,
Faculty of Psychology and Educational Sciences,
Bucharest, Romania
florentina-ionela.linca@fpse.unibuc.ro

Florentina Lavinia Matei**

“Valahia” University of Târgoviște,
Faculty of Orthodox Theology and Educational Sciences,
Târgoviște, Romania
lavinia.matei@valahia.ro

Abstract

Teamwork skills are considered essential for all areas of a person's life, so universities take them into account when designing their curricula. These skills are especially important if we are talking about humanities fields. However, little is known about how students' factors can affect the process of developing teamwork skills. Consequently, our study proposes to fill this gap and to analyze the mastery of teamwork skills by higher education students, measured by the efficiency of working in a team, in relation to teamwork styles, but also with the number of courses whose content allows the development of these skills. One Hundred Ninety-Five female students participated in this study, with an average age of $M = 31.5$, a standard deviation of $SD = 9.2$. The participants filled out a questionnaire that measured the efficiency of teamwork and the styles of teamwork based on specialized literature. Also, the questionnaires were first applied in a pilot study in which 50 female students participated and the Cronbach's internal consistency index was 0.8 for the first questionnaire and 0.77 for the second. The results showed that there are statistically significant correlations

* Assistant Professor, PhD, Faculty of Psychology and Educational Sciences,
University of Bucharest, Bucharest, Romania.

** Assistant Professor, PhD, Faculty of Orthodox Theology and Educational Sciences,
“Valahia” University of Târgoviște, Târgoviște, Romania.

between teamwork efficiency, teamwork styles, and the number of courses in which the development of these skills is encouraged, $p < 0.01$. Moreover, we also noticed that the number of courses in which the development of these skills is encouraged has a mediating effect on the relationship between working styles in a team and the efficiency of working in a team, $p < 0.01$. These results can support teaching staff in higher education to adopt the most suitable educational methods for the development of teamwork skills, essential skills, especially for students in the humanities domains.

Keywords: courses, students, teamwork efficiency, teamwork style.

Rezumat

Abilitățile de lucru în echipă sunt văzute ca esențiale pentru realizarea personală, academică și profesională, astfel încât universitățile le integrează din ce în ce mai mult în programele lor de studii. Aceste abilități sunt importante mai ales dacă vorbim despre domenii umaniste. Cu toate acestea, se știe puțin despre modul în care unele caracteristici specifice ale studenților pot afecta procesul de dezvoltare a acestor abilități. În consecință, acest studiu își propune să umple acest gol și să analizeze stăpânirea de către studenții din învățământul superior a abilităților de lucru în echipă, măsurate prin eficiența lucrului în echipă, în raport cu stilurile de lucru în echipă, dar și cu numărul de cursuri în care este încurajată dezvoltarea acestor abilități. La acest studiu au participat 195 de studenți, cu vârsta medie $M = 31,5$, abatere standard $SD = 9,2$. Participanții au completat două chestionare care măsoară eficiența muncii în echipă și stilurile de lucru în echipă, acestea fiind realizate pe baza literaturii de specialitate. De asemenea, chestionarele au fost aplicate pentru prima dată într-un studiu pilot la care au participat 50 de studenți, iar indicele de consistență internă Cronbach a fost de 0,8 pentru primul chestionar și de 0,77 pentru al doilea. Rezultatele au arătat că există corelații semnificative statistic între eficiența muncii în echipă, stilurile de lucru în echipă și numărul de cursuri în care este încurajată dezvoltarea acestor abilități, $p < 0,01$. Mai mult, am observat și că numărul de cursuri în care este încurajată dezvoltarea acestor abilități are un efect de mediere asupra relației dintre stilurile de lucru în echipă și eficiența lucrului în echipă, $p < 0,01$. Aceste rezultate pot sprijini cadrele didactice din învățământul superior să adopte cele mai potrivite metode educaționale pentru dezvoltarea abilităților de lucru în echipă, competențe esențiale în special pentru studenții din domeniile umaniste.

Cuvinte-cheie: cursuri, eficiența muncii în echipă, stil de lucru în echipă, studenți.

1. Introduction

1.1. Teamwork efficiency and teamwork styles - definition and characteristics

Higher education in general has an essential role in forming the character and personality of students through a combination of formal learning activities, extracurricular activities, and social interactions (Bañeres & Conesa, 2017; Matei & Lincă, 2019). Thus, higher education contributes to the formation of students' life skills. Experiential learning helps students gain self-confidence, self-awareness, a sense of social responsibility, and a high level of emotional intelligence (Lincă, 2018). The academic environment contributes to the growth and maturation of students and the development of skills for a balanced life (Martínez Clares et al., 2018; Lincă, 2018; Lincă et al., 2022).

One of the essential lessons for students is to effectively learn to work and collaborate in teams. Teamwork is a basic component in all areas of an adult's life. When students work together, they have the opportunity to learn from each other. This can lead to a deeper understanding of the subject matter and the development of a collaborative learning environment (Kvetenska & Myska, 2017; Lincă, 2016; Miulescu & Matei, 2021).

Collaboration with group mates can determine the generation of new ideas and the development of creative thinking. Clear and effective communication is essential to successful teamwork (Elms et al., 2023).

By working together, students can develop the ability to listen to their teammates, and the ability to argue their point of view (Lincă, 2019; Park et al., 2015). They can also learn how to negotiate, resolve conflicts, and provide constructive feedback. These communication skills are valuable not only in the classroom but also in the workplace, where employees must collaborate to achieve a common goal (Matei, 2022; Portela Pino et al., 2022).

In addition, teamwork allows students to form relationships with their peers, which can foster a positive and supportive learning environment. Working together on a lab project can help students develop trust in others, respect, and a sense of belonging to the group. This can be especially beneficial for

students who come from other cultures or who experience socialization problems (Beigi & Shirmohammadi, 2012; Matei, 2021; Park et al., 2015). By forming positive relationships, students can feel included in the group, which leads to higher levels of engagement and performance which can also trigger group cohesion. Each team member is responsible for his or her part of the project when working in a group. Students can benefit from this by being more responsible and learning time management skills and using personal and group resources (Ilias et al., 2012).

Additionally, working within a group can help students develop problem-solving and critical-thinking skills as they work to overcome challenges and meet deadlines. These skills will be valuable in their future careers, where employees must be able to work independently and be responsible for their actions (De Prada et al., 2022; Elms et al., 2023).

In conclusion, teamwork is a crucial aspect of student life that can have a profound impact on academic and personal success.

In order to clearly understand the impact of teamwork on performance, it is necessary to define the concepts of teamwork efficiency and teamwork styles.

Teamwork efficiency, also called team performance, is the ability of a team to achieve its goals and objectives (Cooke & Hilton, 2015).

Rubin, Plovnick, and Fry (1977) argue in their model that there are four parts that teams need to be effective: Goals: Well-defined goals and desired outcomes, plus clearly communicated priorities and expectations; Roles: Well-defined responsibilities and acceptance of a leader; Processes: Clear decision-making processes as well as work procedures; Interpersonal relations: Good communication, trust, and flexibility (Dawn, 2021).

Therefore, the effectiveness of teamwork can be influenced by the organizational structure, i.e., clear tasks with clearly defined roles, adequate resources, relevant members, individual contributions, self-knowledge, flexibility; team process, i.e., coordination, communication, cohesion, conflict management and decision-making, social relations (Eddy et al., 2016; Mickan & Rodger, 2000).

The working style of the team represents the way in which each member of the team solves the problems that arise, manages the conflicts, and relates with the other members of the team.

Four styles of teamwork have been described in the literature, and they are:

- LEADER (Making sure that objectives are clear and agreed and that everyone is involved and committed);
- DOER (Urging the team to get on with the task in hand);
- THINKER (Producing carefully considered ideas and weighing up and improving ideas from other people);
- CARER (Easing tensions and maintaining harmonious working relationships) (Romero-Díaz de la Guardia et al., 2022).

1.2. The relationship between teamwork, personal characteristics, and performance in the academic environment

When it comes to the possible influence of gender on teamwork efficiency, it is essential to consider that differences between men and women are present in all societies, in many spheres (Ellemers, 2018), with degrees of variation created by various cultural influences. Socio-economic development and religion, among others, can cause gender variations (De Prada et al., 2022).

For this reason, providing information about the participants and the contexts in which the studies are conducted is fundamental to the correct interpretation of the results and the advancement of the field.

In this sense, Ilias et al. (2012) revealed significant gender differences in adaptability and leadership, coordination, communication, and interpersonal development, where male students obtained higher average scores. In another study, it was demonstrated that male students score higher in leadership, while female students score higher in adaptability, coordination, interpersonal development, and communication. There are no differences in decision-making. The effect size in the case of this result was very small (De Prada et al., 2022).

In conclusion, the influence of gender can be seen in the given context only from a cultural perspective, there being no study in the literature that objectively illustrates differences with a large effect size index.

On the other hand, Gómez et al. (2018) pointed out significant differences in teamwork depending on the academic year. They observed a substantial increase in teamwork competence from the second year onwards. Final-year students reported the highest degree of teamwork competence development.

Payne and Monk-Turner (2006) found moderate relationships between US students' age and some aspects of their attitudes toward teamwork skills. Specifically, older students considered contributing to the learning of other group members. Something similar happens with the willingness of older students to take on leadership roles.

Academic performance is another aspect taken into account when we talk about the efficiency of working in student teams. This indicator of the level of learning achieved by students is particularly relevant (De Prada et al., 2022), and it is measured by the average of the academic grades obtained by students either during an academic year or during a semester of an academic year.

According to Bullón et al. (2017), our study will measure the academic performance of students through the average score obtained in the first semester of the current academic year.

Regarding the students' attitude towards teamwork, depending on the cultural and educational contexts, the organization and evaluation of teamwork can be done differently. Consequently, students' attitudes may vary depending on the perception that teamwork affects their grades (Burdett & Hastie, 2009) or that teamwork can lead to academic performance.

Research highlights that teamwork exerts a beneficial influence on academic performance (Martínez-Romero et al., 2021). Consequently, specific training on the development of effective teamwork skills can improve students' academic success (Cox & Bobrowski, 2004).

Considering the results mentioned above and the mixed findings for some variables that the previous literature has produced, we will present our objectives and hypotheses below.

2. Research methodology

2.1. Materials and methods

The participants filled out a questionnaire that measures teamwork efficiency based on the literature (The Teamwork Skills Questionnaire; University of South Australia, 2016, as cited in De Prada et al., 2022).

Also, the questionnaire was first applied in a pilot study in which 50 female students participated and the Cronbach's internal consistency index was 0.75. The Cronbach's internal consistency index for our sample was 0.80. This fact does not affect the value of the internal consistency index because the questions aim at generic characteristics of the variables, not particularities by gender.

The questionnaire contains 15 items with predefined answers from 0 - never to 3 - very frequently. A global score can be calculated.

Scores less than or equal to 35 illustrate a low teamwork efficiency, scores between 36 and 55 illustrate an average teamwork efficiency and scores greater than 56 illustrate a high teamwork efficiency.

Academic performance was measured by consulting the grade report from the first semester of the academic year 2022-2023.

Regarding the number of courses, in the group of questionnaires sent there was the following item: What were the courses in which you worked in a team? Depending on the answer, we were able to identify the number of courses where these skills were encouraged.

In addition, a questionnaire was applied to measure working styles in the team based on the literature (Romero-Díaz de la Guardia et al., 2022; *Team Effectiveness Assessment - Get Your Team Working Better Together*, 2016). Also, the questionnaire was first applied in a pilot study in which 50 female students participated and the Cronbach's internal consistency index was 0.85. The Cronbach's internal consistency index for our sample was 0.89.

The inventory contains 40 items with predefined answers from 0 - rarely to 2 - often.

The questionnaire has four scales each with 10 items and they are:

- LEADER (Making sure that objectives are clear and agreed and that everyone is involved and committed);
- DOER (Urging the team to get on with the task in hand);
- THINKER (Producing carefully considered ideas and weighing up and improving ideas from other people);
- CARER (Easing tensions and maintaining harmonious working relationships).

2.2. Objectives of the study

This study aimed to investigate the relationship between the number of courses whose content allows the development of teamwork skills and teamwork efficiency and teamwork styles.

Also, the current study aims to investigate the relationship between the efficiency of teamwork, the number of courses whose content allows the development of these skills, and the general average score of the last semester of teaching activity.

2.3. Hypotheses

H1. There are statistically significant correlations between the efficiency of teamwork, the number of courses whose content allows the development of these skills, the general average of the first semester of teaching activity from 2022-2023, and teamwork styles.

H2. The number of courses whose content allows the development of these skills is encouraged has a mediating effect on the relationship between working styles in a team and the efficiency of working in a team.

2.4. Procedure

The questionnaires were distributed to the students on the Google Forms platform. Student participation was voluntary. Concerning ethical considerations, we took into account best practices in research with human subjects. Specifically, participants were not allowed to follow the survey without agreeing to the terms outlined in the informed consent form, which contains their rights and obligations, including the possibility to refuse participation or renouncing at any point in the research.

Two hundred and sixty-two invitations were sent through email to students who registered voluntarily; the online submissions were collected using questionnaires. Only 195 of them responded and met the eligibility criteria (74.28%). Participants were asked to fill in the questionnaire according to the instructions. For this type of data collection, submission of the answers was not possible without giving all the answers. Consequently, there was no missing data in the present database.

The participants were only female because, in the field of special psychopedagogy and pedagogy, only female students are enrolled. In addition, the gender differences appearing in the literature have a very small effect size, with the culture from which the participants come being the relevant one (De Prada et al., 2022).

A possible limitation of the study could be the fact that the volunteer participants would have teamwork skills, and would be inclined towards cooperation. Another limitation is that we cannot generalize to other areas than those mentioned (pedagogy and special psychopedagogy).

The statistical analysis of the data was carried out with the R Studio software. A descriptive analysis of the central tendency indicators was carried out (Hopkins et al., 2018), as well as an inferential analysis that included the Pearson correlation (Mukaka, 2012) and a mediation model to identify the relationships between the research variables (independent variable = working styles in a team; dependent variable = the efficiency of working in a team; mediator = the number of courses whose content allows the development of these skills) (Rijnhart et al., 2021) (Fig. no. 1).

2.5. Sample

One hundred and ninety-five female students participated in this study, with an average age $M = 31.5$ years, a standard deviation $SD = 9.2$. 96 of the participants follow an undergraduate study program and 99 a master's

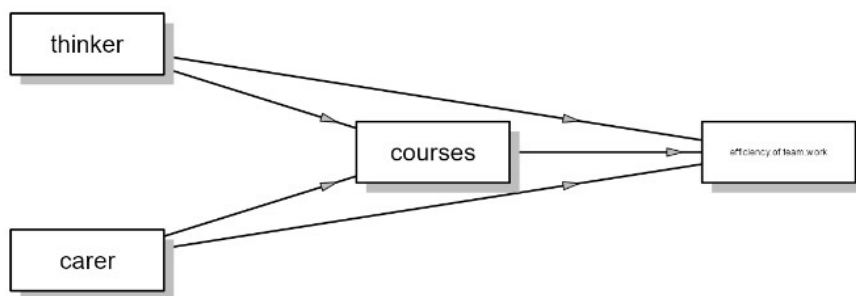


Figure no. 1. *The mediation model*

program in the field of pedagogy and special psychopedagogy (Table no. 1). Both categories of students have an approximatively equal number of participants from the two fields. Thus, the differences in academic level are only due to this fact and not to the field they come from. In addition, the two fields are complementary.

One hundred and one of the participants are between 18 and 25 years old, 44 of the participants are between 26 and 35 years old, 27 are between 36 and 45 years old and 23 are between 46 and 55 years old. 56.9% of the students claim that they had only one course where teamwork was encouraged, and 85% of the students have a high efficiency in teamwork (Table no. 1).

Table no. 1. Demographic data

	Frequency	Percent
undergraduate studies	96	49,2
undergraduate studies - pedagogy	48	50
undergraduate studies - special psychopedagogy	48	50
masters	99	50,8
masters - pedagogy	50	50,5
masters - special psychopedagogy	49	49,5
18-25 years	101	51,8
26-35 years	44	22,6
36-45 years	27	13,8
46-55 years	23	11,8
1 Course	111	56,9
2 Courses	42	21,5
3 Courses	18	9,2
4 Courses	24	12,3
poor teamwork efficiency	3	1,5
average teamwork efficiency	9	13,5
high teamwork efficiency	182	85
Total	195	100,0

In Table no. 2 we can see that the thinker and carer styles are characteristic of the master's students: they have higher averages than the undergraduate students. In the case of the other working styles in the team, the students from the master's program have higher averages than the students from the bachelor's program. At the same time, we can notice that the students from the master's programs have defined styles, as evidenced by the high averages, compared to the students from the bachelor's programs.

Table no. 2. Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
leader	undergraduate studies	96	15.750	3.569	0.364	0.227
	masters	99	16.818	2.111	0.212	0.126
doer	undergraduate studies	96	14.656	3.791	0.387	0.259
	masters	99	16.121	2.545	0.256	0.158
thinker	undergraduate studies	96	14.667	3.439	0.351	0.234
	masters	99	17.202	2.665	0.268	0.155
carer	undergraduate studies	96	15.781	3.534	0.361	0.224
	masters	99	17.273	2.258	0.227	0.131

2. Results

Regarding the use of the parametric tests, we verified the conditions of normality and homogeneity assumptions (Hopkins et al., 2018). Related to the normality condition, the distribution satisfied this one in terms of the descriptors of shape (skewness and kurtosis) and Shapiro Wilk, test of normality justified this conclusion, $p > .05$ (Table no. 3). Also, the homogeneity of variance was fulfilled, through the Levene test ($p > .05$). The descriptive statistics for the variables included in the study are presented in Table no. 4.

Table no. 3. Descriptives

	courses	General average	Efficiency of teamwork	leader	doer	thinker	carer
M	1.77	8.04	67.8	16.3	15.4	16.0	16.5
SD	1.05	1.1	9.03	2.96	3.29	3.32	3.04
Skewness	1.12	2.44	2.07	2.76	1.83	3.50	1.06
Kurtosis	3.36	5.13	5.81	6.30	4.77	6.53	3.39
Shapiro-Wilk W	0.718	0.792	0.755	0.896	0.925	0.919	0.892
p	0.061	0.054	0.056	0.051	0.087	0.058	0.067

Table no. 4. Homogeneity of Variances Tests

		Statistic	df	df2	p
teamwork efficiency	Levene's	12.94	3	191	0.066
general average	Levene's	9.62	3	191	0.079
leader	Levene's	13.83	3	191	0.052
doer	Levene's	15.49	3	191	0.067
thinker	Levene's	5.93	3	191	0.081
carer	Levene's	16.96	3	191	0.100
courses	Levene's	15.86	3	191	0.074

In the table below we can see that there is a statistically significant relationship only between the thinker and carer style and the number of courses in which teamwork is encouraged, but also a statistically significant relationship between the number of courses and work efficiency, general average and leader although this is very small ($p < 0.01$).

Table no. 5. Correlation Matrix

		1	2	3	4	5	6	7
1. teamwork efficiency	Pearson's r	—						
	p-value	—						
2. courses	Pearson's r	0.188	—					
	p-value	0.008	—					
3. leader	Pearson's r	0.704	0.073	—				
	p-value	<.001	0.314	—				
4. doer	Pearson's r	0.635	0.107	0.833	—			
	p-value	<.001	0.136	<.001	—			
5. thinker	Pearson's r	0.614	0.498	0.789	0.728	—		
	p-value	<.001	0.005	<.001	<.001	—		
6. carer	Pearson's r	0.736	0.388	0.820	0.770	0.742	—	
	p-value	<.001	0.006	<.001	<.001	<.001	—	
7. general average	Pearson's r	0.163	0.188	0.399	0.072	0.089	0.310	—
	p-value	0.125	0.222	0.044	0.202	0.211	0.059	—

Also, the current study aims to investigate the relationship between teamwork efficiency, the number of courses in which the development of these skills is encouraged, and the average students' score for the last semester of teaching activity/the first part of the current academic year, until the Winter exams. The general average of the first semester of teaching activity from 2022-2023 was not entered into the model because it only correlated with the leader style.

In the mediation model, we introduced only two teamwork styles, because only these correlated with the dependent variable, in our case, efficiency in teamwork. Thus, in detail, we can see an indirect effect of the number of courses in which teamwork is encouraged (mediating effect) on the relationship between thinker and carer teamwork styles and efficiency in teamwork, $p < 0.05$.

Coefficient B is negative for all levels of teamwork styles, which means that the interactions between team members are not always harmonious, and it influences the efficiency of their work in the team, as the effective level of growth, the interactions are minimal between team members. The number of courses where students are encouraged to work in teams helps to restore balance.

Conclusions and discussion

In conclusion, the objectives were achieved and our results are supported by the literature. Thus, we set out to investigate the relationship between the number of courses in which teamwork is encouraged, teamwork efficiency, and teamwork styles. We also saw that a number of courses have a mediating effect on the relationship between teamwork styles and teamwork effectiveness. In the case of our sample, we could see that the level of teamwork efficiency increases when the number of courses increases. A possible explanation for these results would be that the students in our sample have not formed group cohesion, and efficiency is not yet developed at the chronological age level (Ilias et al., 2012). These constitute the basis of the formation of social skills (Beigi & Shirmohammadi, 2012; DeRUE et al., 2010; Felekođlu et al., 2021; Hackman & Vidmar, 1970; Portela Pino et al., 2022).

Producing thoughtful ideas and weighing and creating other people's ideas, but also easing tensions and maintaining harmonious working relationships are encouraged by the student teachers in our sample through a large number of courses. All these represent the characteristics of formal education. University education forms both competence specific to the educational environment, but also competence for life, such as maintaining harmonious working relationships (Park et al., 2015). If harmonious interactions between members of the team are encouraged during the courses, the level of efficiency in teamwork increases. It is important to promote in the academic environment qualities such as the trust of each member in the entire group s/he is a part of, in order to increase the level of teamwork efficiency (Elms et al., 2023; Rapp et al., 2021).

De Prada et al. (2022) found in their study a positive relationship between students' teamwork skills and average academic grades, with the exception of interpersonal development. In addition, these researchers assumed that the academic year and the general average of the last completed academic year influence teamwork skills. They applied a multinomial regression model for both genders, male and female. The results confirm that both academic variables (GPA of the last completed academic year and academic year) influence the mastery of teamwork skills in the case of women, while no influence is found in the model for men. Furthermore, in the model for women, all variables have the expected sign coefficient, there is a statistically significant relationship between the dependent variable (general teamwork competence) and academic year and GPA at 1%, and the overall average of the last academic year completed is the variable with the highest weight in relation to the dependent variable (teamwork) ($\beta = .152$).

One of the directions in future research is to expand it into several higher education fields. Teamwork skills are essential in all fields and it is important to see what the teamwork pattern is for humanities and technical fields.

Regarding the relationship between the general average of the last academic semester and teamwork skills, the results of our research are consistent with other studies. Depending on the culture, academic performance is related to teamwork efficiency or not. If individualism is encouraged, teamwork will not be effective (De Prada et al., 2022).

Universities provide ideal environments for the development of teamwork skills, as these skills can be fostered from formal training, curriculum design, and non-formal perspectives. From a formal perspective, educational institutions can promote the organization and implementation of team training programs. Specifically, teachers can include these skills in their subject design. Some research has emphasized the role of specific innovative teaching techniques in the classroom, such as the micro flip teaching model (Fidalgo-Blanco et al., 2019), project-based learning (Vogler et al., 2018) or experiential activities (Marasi, 2019).

The introduction, in future studies, of a more appropriate measure of the manner in which courses/seminars stimulate teamwork, beyond the basic number of such academic opportunities (such as courses/seminars) could bring more objectivity.

NOTES

1. The contribution of the authors to this paper is equal.

References

- Bañeres, D., & Conesa, J. (2017). A Life-long Learning Recommender System to Promote Employability. *International Journal of Emerging Technologies in Learning*, 12(6), 77-93. <https://doi.org/10.3991/ijet.v12i06.7166>
- Beigi, M., & Shirmohammadi, M. (2012). Attitudes toward teamwork: Are Iranian university students ready for the workplace? *Team Performance Management: An International Journal*, 18(5/6), 295-311. <https://doi.org/10.1108/13527591211251087>
- Bullón, F. F., Campos, M. M., Castaño, E. F., del Barco, B. L., & del Río, M. I. P. (2017). Análisis del rendimiento académico de los alumnos de educación secundaria obligatoria según las variables familiares. *Educación XX1*, 20(1), 209-232. <https://doi.org/10.5944/educxx1.17509>
- Burdett, J., & Hastie, B. (2009). Predicting Satisfaction with Group Work Assignments. *Journal of University Teaching & Learning Practice*, 6(1), 70-81. <https://doi.org/10.53761/1.6.1.7>
- Cooke, N. J., & Hilton, M. L. (2015). Overview of the Research on Team Effectiveness. In N. J. Cooke & M. L. Hilton (Eds.), *Enhancing the Effectiveness of Team Science*. National Academies Press (US).
- Cox, P. L., & Bobrowski, P. E. (2004). Power Tools for Teams: A Model for

Improving the Teamwork Skills of First-Year Business Students. *Journal of Behavioral and Applied Management*, 5(3), 204-227.

- Dawn. (2021, March 16). *Frameworks for team effectiveness*. Alchemy Research & Consultancy.
<https://alchemyresearch-consultancy.com/frameworks-for-team-effectiveness/>
- De Prada, E., Mareque, M., & Pino-Juste, M. (2022). Teamwork skills in higher education: Is university training contributing to their mastery? *Psicologia: Reflexão e Crítica*, 35(5), 1-13. <https://doi.org/10.1186/s41155-022-00207-1>
- DeRUE, D. S., Hollenbeck, J., Ilgen, D., & Feltz, D. (2010). Efficacy Dispersion in Teams: Moving Beyond Agreement and Aggregation. *Personnel Psychology*, 63(1), 1-40. <https://doi.org/10.1111/j.1744-6570.2009.01161.x>
- Eddy, K., Jordan, Z., & Stephenson, M. (2016). Health professionals' experience of teamwork education in acute hospital settings: A systematic review of qualitative literature. *JBIS Database of Systematic Reviews and Implementation Reports*, 14(4), 96-137. <https://doi.org/10.1112/JBISRIR-2016-1843>
- Ellemers, N. (2018). Gender Stereotypes. *Annual Review of Psychology*, 69, 275-298. <https://doi.org/10.1146/annurev-psych-122216-011719>
- Elms, A. K., Gill, H., & Gonzalez-Morales, M. G. (2023). Confidence Is Key: Collective Efficacy, Team Processes, and Team Effectiveness. *Small Group Research*, 54(2), 191-218. <https://doi.org/10.1177/10464964221104218>
- Felekođlu, E., Özalevli, S., Yakut, H., Aktan, R., & Yener, G. (2021). Investigation of the Factors Affecting Quality of Life in Patients with Mild to Moderate Alzheimer's Disease in Terms of Patients and Caregivers. *Medicina*, 57(10), 1-8. <https://doi.org/10.3390/medicina57101067>
- Fidalgo-Blanco, Á., Sein-Echaluce, M. L., & García-Peñalvo, F. J. (2019). Enhancing the main characteristics of active methodologies: A case with Micro Flip Teaching and Teamwork. *International Journal of Engineering Education (IJEE)*, 35(1B), 397-408.
- Gómez, G. R., Saiz, M. S. I., & Ibáñez, J. C. (2018). Competencias básicas relacionadas con la evaluación. Un estudio sobre la percepción de los estudiantes universitarios. *Educación XXI*, 21(1), 181-208.
<https://doi.org/10.5944/educxx1.20184>
- Hackman, J. R., & Vidmar, N. (1970). Effects of Size and Task Type on Group Performance and Member Reactions. *Sociometry*, 33(1), 37-54.
<https://doi.org/10.2307/2786271>
- Hopkins, S., Dettori, J. R., & Chapman, J. R. (2018). Parametric and Nonparametric Tests in Spine Research: Why Do They Matter? *Global Spine Journal*, 8(6), 652-654. <https://doi.org/10.1177/2192568218782679>
- Ilias, A., Yunus, N. K. Y., & Razak, S. F. F. A. (2012). How Accounting Students Perceived Towards Teamwork Skills. *Journal of Education and Vocational*

- Research*, 3(12), 387-398. <https://doi.org/10.22610/jevr.v3i12.94>
- Kvetenska, D., & Myska, K. (2017). Multidisciplinary Cooperation For The Benefit Of Endangered Child. In A. Sandu, T. Ciulei, & A. Frunza (Eds.), *Multidimensional Education and Professional Development: Ethical Values*, vol 27. *European Proceedings of Social and Behavioural Sciences* (pp. 351-363). Future Academy. <https://doi.org/10.15405/epsbs.2017.07.03.43>
 - Lincă, F. I. (2016). The relationship between the risk decision making and framing effect. *Romanian Journal of Cognitive Behavioral Therapy and Hypnosis*, 3(2), 16-28.
 - Lincă, F. I. (2018). Solutions for improving the symptomatology of the child with attention- deficit/hyperactivity disorder (ADHD). *Romanian Journal of Cognitive Behavioral Therapy and Hypnosis*, 3(4), 1–24.
 - Lincă, F. (2019). Teachers' attitudes toward the inclusion of students with attention deficit/hyperactivity disorder (ADHD). *Revista de Pedagogie*, 67(2), 47-63. <https://doi.org/10.26755/RevPed/2019.2/47>
 - Lincă, F. I., Budişteanu, M., Popovici, D. V., & Cucu, N. (2022). The Moderating Role of Emotional Regulation on the Relationship between School Results and Personal Characteristics of Pupils with Attention Deficit/Hyperactivity Disorder. *Children*, 9, 1-15.
 - Marasi, S. (2019). Team-building: Developing Teamwork Skills in College Students Using Experiential Activities in a Classroom Setting. *Organization Management Journal*, 16(4), 324-337. <https://doi.org/10.1080/15416518.2019.1662761>
 - Martínez Clares, P., González Lorente, C., & Rebollo Quintela, N. (2018). Competencias para la empleabilidad: un modelo de ecuaciones estructurales en la Facultad de Educación. *Revista de Investigación Educativa*, 37(1), 57-73. <https://doi.org/10.6018/rie.37.1.343891>
 - Martínez-Romero, M. J., de la Cruz, A. M. P., Ferrer-García, C., & Casado-Belmonte, M. P. (2021). The effect of previous experience with working in groups on students' academic performance in the accounting discipline: El efecto de la experiencia previa de trabajo en grupo sobre el rendimiento académico de los estudiantes en la disciplina de contabilidad. *Revista de Contabilidad - Spanish Accounting Review*, 24(2), 153-167. <https://doi.org/10.6018/rcsar.359561>
 - Matei, F. L. (2021). The importance of intercultural competence in the context of academic mobility. Training needs. *International Journal of Social and Educational Innovation*, 8(15), 38-52.
 - Matei, F. L. (2022). Online learning in university education: perceptions and difficulties. *Journal of Education, Society & Multiculturalism*, 3(2), 117-128. <https://doi.org/10.2478/jesm-2022-0021>
 - Matei, F.-L., & Lincă, F.-I. (2019). Training Needs of Military Students on Intercultural Competence. *Land Forces Academy Review*, 24(4), 291-296.

<https://doi.org/10.2478/raft-2019-0036>

- Mickan, S., & Rodger, S. (2000). Characteristics of effective teams: A literature review. *Australian Health Review*, 23(3), 201-208.
<https://doi.org/10.1071/ah000201>
 - Miulescu, M. L., & Matei, F.-L. (2021). “Distanced” times: investigating pre-service music teachers’ experiences on online teaching and learning during the Covid-19 pandemic. *Revista de Pedagogie*, 69(1), 111-124.
<https://doi.org/10.26755/RevPed/2021.1/111>
 - Mukaka, M. (2012). A guide to appropriate use of Correlation coefficient in medical research. *Malawi Medical Journal: The Journal of Medical Association of Malawi*, 24(3), 69-71.
 - Park, H.-R., Kim, C.-J., Park, J.-W., & Park, E. (2015). Effects of team-based learning on perceived teamwork and academic performance in a health assessment subject. *Collegian*, 22(3), 299-305. <https://doi.org/10.1016/j.colegn.2014.05.001>
 - Payne, B., & Monk-Turner, E. (2006). Students’ perceptions of group projects: The role of race, age, and slacking. *College Student Journal*, 40, 132-139.
 - Portela Pino, I., Domínguez Alonso, J., & Pino Juste, M. (2022). Propiedades Psicométricas de la Versión Española del Teamwork Skills Questionnaire (TSQ). *Revista Iberoamericana de Diagnóstico y Evaluación – e Avaliação Psicológica*, 62(1), 155-165. <https://doi.org/10.21865/RIDEP62.1.12>
 - Rapp, T., Maynard, T., Domingo, M., & Klock, E. (2021). Team Emergent States: What Has Emerged in The Literature Over 20 Years. *Small Group Research*, 52(1), 68-102. <https://doi.org/10.1177/1046496420956715>
 - Rijnhart, J. J. M., Lamp, S. J., Valente, M. J., MacKinnon, D. P., Twisk, J. W. R., & Heymans, M. W. (2021). Mediation analysis methods used in observational research: A scoping review and recommendations. *BMC Medical Research Methodology*, 21(1), 226. <https://doi.org/10.1186/s12874-021-01426-3>
 - Romero-Díaz de la Guardia, J. J., García-Garnica, M., Chacón-Cuberos, R., & Expósito-López, J. (2022). Psychometric Validation of a Teamwork Skills Scale in a Vocational Training Context. *SAGE Open*, 12(2).
<https://doi.org/10.1177/21582440221103256>
 - Rubin, I. M., Plovnick, M. S., & Fry, R. E. (1977). *Task oriented team development*. McGraw-Hill.
 - *Team Effectiveness Assessment—Get Your Team Working Better Together*. (n.d.). <https://www.mindtools.com/ab0p0t5/team-effectiveness-assessment>
 - Vogler, J. S., Thompson, P., Davis, D. W., Mayfield, B. E., Finley, P. M., & Yasseri, D. (2018). The hard work of soft skills: Augmenting the project-based learning experience with interdisciplinary teamwork. *Instructional Science*, 46(3), 457-488. <https://doi.org/10.1007/s11251-017-9438-9>
-

The online version of this article can be found at:
<http://revped.ise.ro/category/2023-en/>



*This work is licensed under the Creative Commons
Attribution-NonCommercial-ShareAlike 4.0
International License.*

*To view a copy of this license, visit
<http://creativecommons.org/licenses/by-nc-sa/4.0/>
or send a letter to Creative Commons,
PO Box 1866, Mountain View, CA 94042, USA.*

Versiunea online a acestui articol poate fi găsită la:
<http://revped.ise.ro/category/2023-ro/>



*Această lucrare este licențiată sub Creative
Commons Attribution-NonCommercial-ShareAlike
4.0 International License.*

*Pentru a vedea o copie a acestei licențe, vizitați
<http://creativecommons.org/licenses/by-nc-sa/4.0/>
sau trimiteți o scrisoare către Creative Commons,
PO Box 1866, Mountain View, CA 94042, SUA.*