

THE IMPACT OF EXTRACURRICULAR ACTIVITIES AT THE UNIVERSITY LEVEL. A SYSTEMATIC REVIEW

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ABSTRACT. *Introduction:* The holistic approach to the educational process involves, in addition to the transmission of theoretical notions, the development of students' social, emotional and physical skills. These dimensions are fundamental for a healthy and balanced development. In this context, extracurricular activities (EA) at the university level create the premises of an extended framework, in which students explore, cooperate, improve their self-image and achieve better results in exams. In a competence-oriented educational system, EA provide relevant contexts for experiential learning, for character formation and for the development of transversal skills: teamwork, responsibility, communication skills. Unlike curricular activities, which have clearly defined objectives, EA offer students a greater degree of freedom, choice and voluntary involvement, which favors intrinsic motivation and the assumption of an active role in the learning process. *Objective:* to present the relationship between students' involvement in EA and different aspects of their lives. *Materials and methods:* A systematic review of the scientific literature was conducted for 21 articles, selected from the Google Scholar platform, in which the impact/effect of EA on students was presented. *Results:* Following the analysis, positive correlations were found between the participation of students from different fields in EA and the improvement of indicators such as self-confidence, collaboration, academic performance, etc. *Conclusions:* The involvement of students in EA is not only a goal of international forums in terms of education, but also represents a way to improve the academic, physical and emotional situation of students.

Keywords: extracurricular activities; academic success; personality development; collaboration; sport.

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INTRODUCTION

The factors that contribute to students' academic performance are numerous (Lumely et al., 2015): previous academic performance, study skills, attitude, behavior and motivation, time management, physical activity and coping strategies. Therefore, it is necessary for students to establish a balance between study, relaxation and other commitments, because this has an impact on the quality of life (Zhang et al., 2012). Balance can also be achieved through EA which, unlike the mandatory activities included in the curriculum of higher education degree programs, are voluntary, non-academic activities, in which students make new friends, have fun, have new experiences and challenges, participate in different cultural, social and sports activities. Each club or sport is different, so students meet different people in all the different groups. But they also meet people with the same experiences, with whom they share common interests and passions. EA take place outside the classroom, either within the educational institution or in clubs, workshops, gyms, religious structures, etc. (Stuart et al., 2011).

EA emerged in the United States in the 19th century, as an additional part of the normal academic program, having some practical or vocational interest. The first EA began at Harvard and Yale Universities. They were literacy clubs, which consisted of various debates. American students were the first to initiate sports clubs (Casing, 2024).

Lunnenburg (2010) believes that EA serve the same objectives and functions as compulsory and optional courses in the school curriculum, allowing students to apply the knowledge learned in other courses. Among the benefits of EA, we mention: improving academic performance (Freeman, 2017), developing social skills (Jahan, 2024), leadership qualities, reducing stress (Zeidan et al., 2025) and building a healthy and balanced life in general. There are many forms of EA, such as sports, clubs, student newspapers, music, art and theater (Massoni, 2011). Participation in EA contributes to professional development, to the comprehensive and harmonious fulfillment of the human being (Darling et al., 2017). By engaging in such activities, students make stronger connections with their colleagues, administrators and communities to which they belong (Feraco et al., 2023), which have numerous positive consequences on their learning and behavior (Juma, 2015). Involvement in EA is considered part of the total social experience in students' lives (Behtoui, 2019), reduces stress, improves the interpersonal skills of young people and has a positive academic impact. Wilson (2009) believes that participants in EA are less likely to engage in problematic behaviors. Olson (2008), in his study, shows that students who enrolled in fine arts activities had significantly lower absenteeism rates than

those who did not participate in such activities, and Behtoui (2019) concludes that participation in EA reduces school dropout in higher education institutions and increases student self-esteem. It is also worth mentioning the importance of these activities for good health and for the development of the body, mind and soul of young people. Thus, sports games, such as badminton, provide them with good health, develop team spirit and competition, strong characters and a sense of belonging to a community or idea, build healthy moral values and create elites (Prodea et al., 2018). Participation in athletics, for example, leads to higher self-esteem and improved status among peers, which some argue is a deterrent to antisocial behavior (Brown, 2000). Gynosian et al. (2020) believes that the purpose of EA is to capitalize on the individual talents, skills, and abilities of participants to provide them with a unique and multifaceted identity. Language and cultural exchanges open doors to learning new languages, experiencing different cultures, and building international friendships (Sandal et al., 2020). Students involved in EA meet new people, learn about teamwork, and sometimes end up conforming less to gender stereotypes.

The purpose of this systematic review of the scientific literature is to determine the relationship between students' involvement in EA and various aspects of their lives by formulating an answer to the question: "What is the impact of EA on students?" The objective of this study is to present the relationship between students' involvement in EA and different aspects of their lives.

MATERIAL AND METHODS

This systematic review was conducted according to the Prisma Statement (Page et al., 2020).

Search strategy

We performed a detailed search on the Google Scholar platform to identify original studies that present the impact/effect of EA on students. Search criteria included terms such as "impact", "effect", "extracurricular activities", "students", "university", "higher education", but a combined search of these keywords was also performed, along with the option to identify them in the abstract.

Study selection and eligibility criteria

Studies were considered eligible for inclusion if they met the following criteria: (a) published in English; (b) available in full version; (c) articles/theses that respect the research topic.

The exclusion criteria were as follows: (a) the word “student” is used, but the meaning is “pupil”; (b) they are reviews, editorials, cross-sectional studies or conference abstracts; (c) articles that do not refer to higher education.

21 articles published between 2006-2025 were retained.

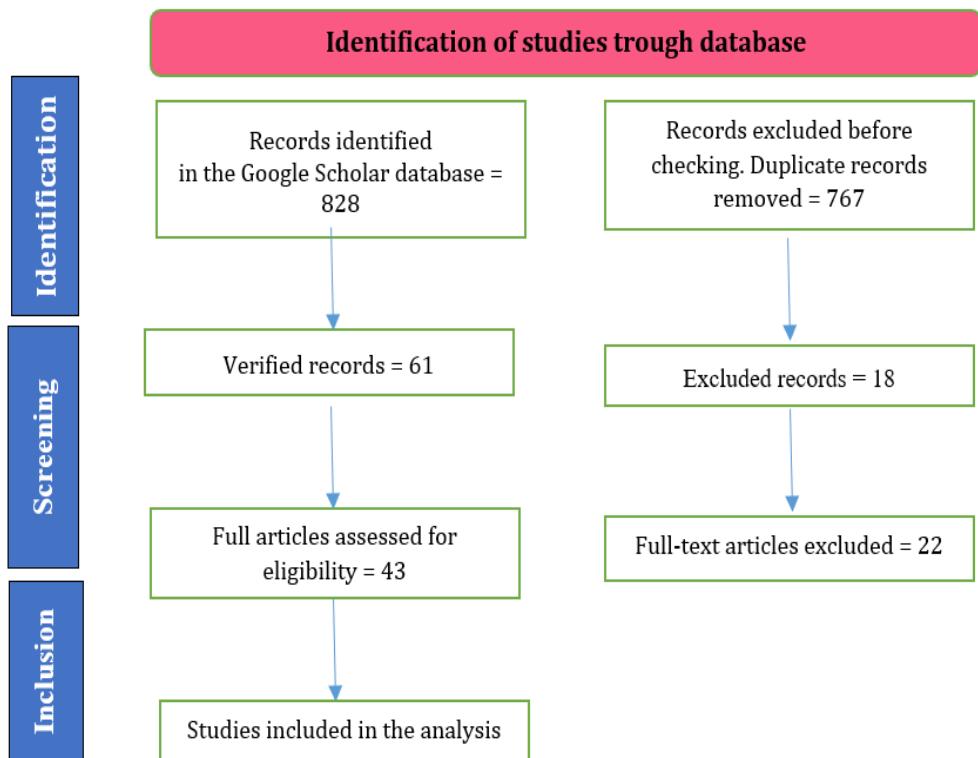


Figure 1. PRISMA diagram

RESULTS

The PRISMA flow chart (Fig. 1) shows the literature search process. 828 potentially suitable studies were identified to analyze the impact of extracurricular activities on students. After performing title screening and full eligibility analysis, 21 articles were retained. These articles were published between 2006 and 2024, as shown in Figure 2.

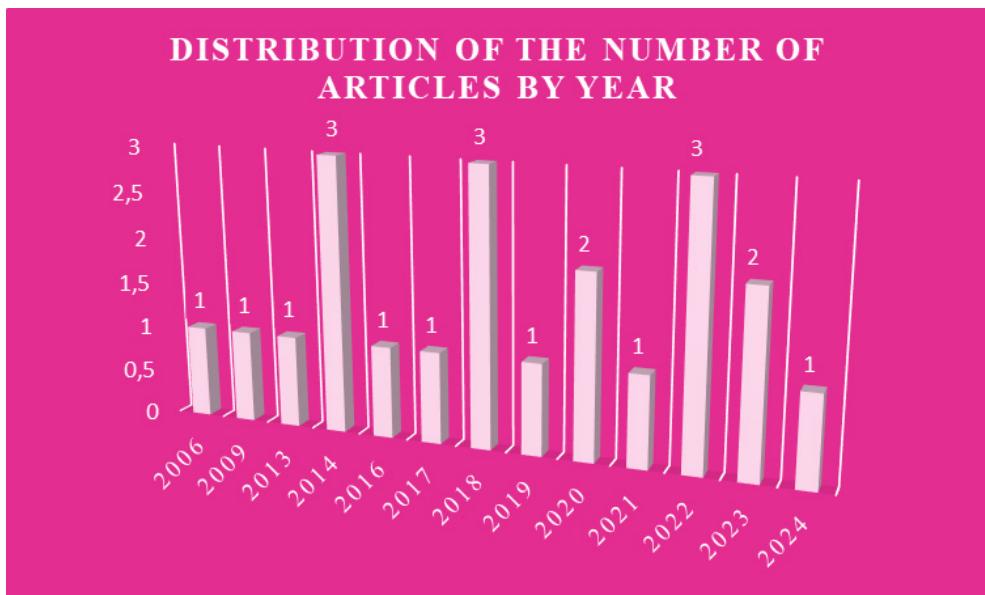


Figure 2. Distribution of the number of articles by year

The 21 articles analyzed target students from various universities around the world, with the research method used predominantly for data collection being the questionnaire (16). Interviews, cross-sectional surveys and case studies were also used. One of the studies systematically analyzed 39 articles published between 2010 and 2021, which address the impact of EA on students' academic success and employability.

DISCUSSIONS

The impact of EA is evident in several aspects of students' lives, with the selected articles testifying to this. We have structured these aspects into several categories, which we present below.

Academic performance

Eight of the selected articles highlight the impact of EA on students' academic performance. Rafiullah & Khan (2017), Zaki (2022), Nguyen (2022), Guilmette & al. (2019), Wang & Shiveley (2009) and Sathiyanesan et al. (2020) present the positive impact of EA on improving students' academic performance. On the contrary, the results of Sabuj's et al. (2018) study indicate the existence of a

negative, but insignificant, association between students' involvement in general EA and academic performance. Specifically, involvement in social activities has a significant negative impact on academic performance. Syafiq et al. (2014) concludes that there is no significant positive association between participation in EA and students' academic achievements. Following the synthesis carried out, Ribeiro et al. (2023) finds that the vast majority of EA have a positive impact on students' academic success. Those that show a negative impact are residual.

Employability and business creation/entrepreneurship

Regarding the impact of EA on students' success in getting a job, creating a business, seven studies refer to this aspect. Ribeiro et al. (2023) indicates the positive impact that EA represent on the employability of university students, and the results of Kanar's & Bouckenoghe (2021) study suggest that EA play an important role in shaping the job search process of university students, influencing their confidence in finding a job. Arranz et al.'s (2016) analysis demonstrates that extracurricular activities generate positive attitudes towards entrepreneurship, but reduce the intention and ability to start a business. The study presents the effects of EA on entrepreneurial skills and their strategic and methodological implications. Mishra's & Aithal (2023) study findings reveal that engaging, well-structured EA are effective in developing holistic, industry-ready individuals, while Cordea's (2024) study findings suggest that EA equip students with the skills needed to engage in new business creation. Buckley & Lee (2018) finds that respondents attributed participation in EA to the positive development of a range of skills and abilities associated with employability, and Ward & Yates (2013) argues for a cocurricular transcript that could track, document, and communicate the types of activities that employers value.

Collaboration, cohesion, team spirit and communication

Mishra & Aithal (2023) recalls, among the results of the study, that in addition to developing communication skills and team spirit, students who participate in EA learn task-oriented roles and relationship-oriented roles, which promote cohesion and collaboration in the team and make students independent and confident. The same results are also indicated by Buckley & Lee (2018): involvement in EA contributes to the development of a range of skills and abilities associated with teamwork, problem solving and communication. Sathiyasenan et al. (2020) mentions that EA contributed to the enhancement of interpersonal skills. In the same vein, Bahdi (2014) believes that there is a positive relationship between extracurricular involvement and oral competence. The findings also show that a well-planned and organized EA is an effective way to improve the oral production of foreign language learners.

Self-confidence and improved health

Buckley and Lee (2018) list several benefits of extracurricular activities: reducing stress, improving physical health, developing attachment to the institution, involvement in the campus and in the community, offering new opportunities and challenges to explore. All of these are considered to contribute positively to the overall student experience in higher education (Gherman et al., 2021). For Cordea (2014), EA have real learning benefits for students and there is certainly evidence that they increase self-confidence, Higgins (2006) demonstrates that participation in EA has significant effects on students' psychological development, and Guilmette et al. (2019) positively associated EA with self-goal-setting strategies, which in turn were linked to higher levels of emotional well-being.

Creativity, originality, behavior

The results of Sabuj's et al. (2018) study show that while involvement in social activities has a significant negative impact on academic performance, other EA, such as sports, cultural activities, and political activities, do not have a significant impact on student performance, and Higgins' (2006) study demonstrates that participation in EA has significant effects on students' psychological development. Sports, clubs, and volunteering affected students in different ways. In fact, Saqib et al. (2018) highlights that for Indian and Pakistani students, sports are the most frequently adopted type of EA, being less inclined towards activities related to fine arts and literature. Participation in activities predicted changes in identity status scores over time. Yongshuma's & Fernandob (2024) study adds new information to the existing body of knowledge on how students' EA influence their levels of innovation, creativity and originality, Mishra's & Aithal (2023) study confirms that participation in EA helps in character development and social skills development, and Khanna et al. (2020) highlights that most students agree that there is a positive impact of EA on their individual skills and that steps should be taken to implement them in more colleges and universities. Rafiullah et al. (2017) however finds that there is a minor change in the behavior of students who participated in EA. Unfortunately, not all students benefit equally from involvement in EA. Providing a wide range of accessible opportunities for students can promote equity in participation in this type of activities (Winstone et al., 2022).

Table 1. Results of selected studies

Study no	Target group	Methods	Results
[1]	150 students	Questionnaire	The results show that there is no significant positive association between students' academic performance and participation in EA.
[2]	39 articles published between 2010–2021 in the Scopus and WoS databases	Narrative synthesis	The results indicate a positive impact of most EA on students' academic success. EA with negative impact are residual.
[3]	1475 students	Questionnaire	EA generate positive attitudes towards entrepreneurship, but reduce the intention and ability to start a business. The study presents the effects of EA on entrepreneurial skills and their strategic and methodological implications.
[4]	200 students	Cross-sectional survey	The results of the current study showed that university students in Lahore who participated in EA improved their academic performance and self-concept. The study indicated changes in the behavior of students participating in EA.
[5]	306 students	Questionnaire	The results emphasize the importance of EA in students' job search and their confidence in finding one.
[6]	507 students	Questionnaire	The results of the study increase the information regarding the influence of EA on student performance in terms of innovation, creativity and originality.
[7]	24 students	Case study	The results indicate positive influences on the academic and social skills of students who participate in EA, motivating them to participate in such activities in the future.
[8]	100 students	Questionnaire	The analysis shows that extracurricular and co-curricular activities improve academic and social performance, help in character development and social skills development, students have better experiential learning, develop their communication skills and team spirit, learn task-oriented roles and relationship-oriented roles. Such activities promote team cohesion and collaboration, develop independence and confidence. EA proves their effectiveness in the holistic training of students preparing for the industry.
[9]	285 students	Questionnaire	Participating in EA gives students the opportunity to "learn by doing," through action and experience (68% of respondents). EA have benefits in terms of learning, increasing self-confidence and providing skills for creating businesses.

Study no	Target group	Methods	Results
[10]	270 students	Interview/ Questionnaire	The results indicate a negative but non-significant association between involvement in general EA and academic performance. A significant negative impact on academic performance, as measured by cumulative grade point average (GPA), is found only following involvement in social activities, while EA such as sports, cultural activities, and political activities do not have a significant impact on a student's GPA.
[11]	300 students	Questionnaire	The positive effects that these activities have on students' academic performance are undeniable.
[12]	655 students	Questionnaire	This study demonstrated that participation in EA has significant effects on students' psychological development. Sports, clubs, and volunteering affected students in different ways. Participation in activities predicted changes in identity status scores over time.
[13]	72 students	Questionnaire	Most students agree about the positive impact of EA on their individual skills and their implementation in colleges and universities.
[14]	401 students	Questionnaire	The results showed that there is a positive association between past and present EA of university students and self-goal-setting strategies. The latter influenced academic success and emotional well-being. Universities and colleges can encourage students to participate in EA for a positive adaptation.
[15]	227 students	Questionnaire	Students are not equally involved in EA. Providing multiple accessible opportunities for students can promote equity in participation in EA.
[16]	42 students	Questionnaire	The study highlights the positive association between EA and oral proficiency. The findings also show that a well-planned and organized EA is an effective way to improve the oral production of foreign language learners.
[17]	28 workforce recruiters	Questionnaire	The authors emphasize the importance of having a varied offering of EA to enhance the curriculum, as well as a framework for the potential development of a cocurricular transcript that tracks, documents, and communicates the types of activities valued by employers.
[18]	5078 students	Questionnaire	Respondents believed that participation in EA contributed to the positive development of skills and competencies associated with employability, such as communication, teamwork, and problem-

Study no	Target group	Methods	Results
[19]	922 students	Comparative analysis	solving. Participants indicated that by managing their time effectively and improving their prioritization skills, they improved their self-management.
[20]	250 students	Questionnaire	Benefits to the student experience: EA reducing stress, improving physical health, developing attachment to the institution, involvement in the campus and in the community, offering new opportunities and challenges to explore. Students achieved much higher retention and graduation rates, maintained better overall averages, and had higher achievement rates when engaging in any of the proposed EA.
[21]	200 students	Structured interviews	The analysis showed that most students do not engage in EA. Some relax in their free time, motivating the traditional perception that involvement in such activities will distract them from their studies, others do not participate in AE due to the responsibilities they have towards their families. The most common types of EA adopted by students are sports activities, they are less inclined towards activities related to literature and fine arts. The results and responses to the structured interviews showed that EA contributed to improving students' grades and enhanced their interpersonal skills.

CONCLUSIONS

The findings of this systematic review, based on 21 studies published between 2006 and 2024, confirm that university students' participation in EA has a significant impact on their academic, professional, and personal development. Engagement in sports, cultural, artistic, or volunteer activities enhances academic performance, fosters the development of transversal competences-such as communication, teamwork, leadership, and critical thinking-and contributes to the formation of a balanced personal and professional identity. Moreover, extracurricular involvement supports self-regulated learning, intrinsic motivation, and adaptability to professional environments.

From a psychological perspective, EA reduce stress, strengthen self-confidence, and promote well-being and social inclusion. To maximize these benefits, universities should integrate diverse and accessible extracurricular programs that complement formal education. Overall, EA represent a strategic instrument for holistic student development and for strengthening a competence-oriented, balanced, and human-centered model of higher education.

AUTHOR CONTRIBUTIONS

All authors contributed equally. All authors have read and agree to the publication version of the manuscript.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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