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RESEARCH ARTICLE

The impact of extracurricular activities on university students' academic success and employability

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ABSTRACT

This study provides a *narrative synthesis* of the findings published in journal articles from a broad range of scientific fields about the impact of extracurricular activities (ECAs) on the academic success and employability of university students. The analysis included 39 articles from the Scopus and Web of Science databases, published over the period 2010–2021. Results show that the vast majority of ECAs have a positive impact on the academic success and employability of university students. ECAs showing a negative impact are residual. In light of these results, higher education institutions should promote activities with an educational purpose outside the strictly curricular objectives and beyond the classroom, fostering a more holistic development of students that combines academic success with a better capacity/preparation to enter the labour market.

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1. Introduction

Are university students learning enough? Is higher education really teaching the essential skills for an increasingly globalized and volatile world? These are some of the questions raised by academic and political actors, who voice growing concern about the way higher education institutions are promoting effective student development in order to face global challenges that increasingly demand highly skilled and socially engaged people (e.g. European Commission 2017; Kilgo, Sheets, and Pascarella 2015; National Leadership Council for Liberal Education and America's Promise [NLCLEAP] 2007). Regarding this widespread concern in responding to contemporary challenges, the European Commission (2017) states that higher education plays a unique role:

> Demand for highly skilled, socially engaged people is both increasing and changing. In the period up to 2025, half of all jobs are projected to require high-level qualifications. High-level skill gaps already exist. Driven by digital technology, jobs are becoming more flexible and complex. People's capacities to be entrepreneurial, manage complex information, think autonomously and creatively, use resources, including digital ones, smartly, communicate effectively and be resilient are more crucial than ever. (2)

This concern is neither new, nor restricted to the European context. In the previous decade, for instance, the Association of American Colleges and Universities (AAC&U)

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had already drawn attention toward the need 'to give new priority to a set of educational outcomes that all students need from higher learning, outcomes that are closely calibrated with the challenges of a complex and volatile world' (NLCLEAP 2007, 2). An education was recommended that intentionally promotes a 'wide-ranging knowledge of science, cultures, and society; high-level intellectual and practical skills; an active commitment to personal and social responsibility; and the demonstrated ability to apply learning to complex problems and challenges' (2007, 4). This is a concern that has become even more prominent in the last decade with the '"great disruption" brought about by a host of interrelated factors including the global economic recession of 2008, rising income inequality, rapidly shifting demographics, and the changes associated with the Internet age' (Roberts 2018, 3). Pointing out a mismatch between the offer and demand of European skills, the European Commission (2017) considers that higher education should enable students 'to acquire skills and experiences through activities based around real-world problems, include work-based learning and, where possible, offer international mobility' (5).

Over recent decades, as a consequence of a general conviction that student success 'cannot be documented – as it usually is – only in terms of enrollment, persistence, and degree attainment' (NLCLEAP 2007, 1), there has been growing academic interest in the impact of ECAs on promoting both academic outcomes and the development of university students' personal and professional skills. In fact, numerous studies have found that ECAs have positive benefits for students, concerning their enrolment and persistence in graduation (e.g. Astin 1993; Kuh 2008; Pascarella and Terenzini 2005), as well as a positive correlation with gains in active and critical thinking skills, civic values, and cognitive development (e.g. Inkelas et al. 2006; Pascarella et al. 2014; Pike, Kuh, and McCormick 2010), and also with academic performance such as high GPA (grade point average) and the acquisition of knowledge (e.g. Bergen-Cico and Viscomi 2012; Webber, Krylow, and Zhang 2013; Zhao and Kuh 2004; Zhu and Arnold 2013). The study by Webber, Krylow, and Zhang (2013), for instance, shows that 'higher levels of engagement in a variety of curricular and co-curricular activities significantly contribute to cumulative GPA and students' perception of the overall academic experience' (591). In addition, research on student success in higher education also indicates that involvement in ECAs is perceived as important because it helps students learn practical skills that they might not grasp in the classroom. According to José Sá (2020), ECAs are seen.

> not as a waste of time that could be used in academic activities, but, on the contrary, as a complementary means of acquiring a set of competencies that are seen by students as critical. It is this balance between the work in the classroom context and the involvement in non-teaching, but educational activities that, according to several students, characterises a successful higher education student. (429)

However, studies also show that participation in ECAs may have the exact opposite effect. For instance, Brint and Cantwell (2010) found that 'time spent participating in extracurricular student clubs and organizations did not strongly reinforce academics, and indeed showed a modest negative net association with academic conscientiousness and higher grades' (2463). Specifically analyzing Greek organizations (i.e. social fraternities and sororities), the studies by Pascarella, Flowers, and Whitt (2009) and DeBard, Lake, and Binder (2006) show a negative effect on cognitive development and

GPA during college. Similarly, Yin and Lei (2007) reveal that students who regularly participated in campus activities 'had a lower overall GPA compared to students who were not participated in campus activities and that more campus involvement did not increase an overall student satisfaction in campus activities' (282). In fact, research undertaken over the past twenty years has been challenging the idea that 'participation is always good', arguing that experiences with lower developmental quality (i.e. experiences that do not promote real opportunities for action and reflection within pluralistic and open contexts) may have detrimental effects on young people (e.g. Ferreira, Azevedo, and Menezes 2012; Fredricks and Eccles 2006; Lopes 2015; Ribeiro, Neves, and Menezes 2017; Veiga 2008). Moreover, although precollege studies on the role of ECAs have demonstrated clear benefits for students, evidence linking these activities and academic outcomes in college/university is mixed or inconclusive (Wilson et al. 2014).

As has been made clear, the positive effects of ECAs for student development cannot be taken for granted, nor are the links between ECAs and positive academic outcomes evident in college literature. Therefore, this study intends to provide a *narrative synthesis* (Popay et al. 2006) in order to conduct a systematic review and summary of the findings published in journal articles about the impact of ECAs on the academic success and employability of university students. ECAs are considered in this study according to the definition proposed by Simmons, Van Mullekom, and Ohland (2018), which is presented in contrast with curricular-related and co-curricular activities:

> Curricular-related activities, though directly connected to a particular academic course that is part of a student's plan of study, occur outside of class time, while co-curricular activities are not linked to a particular academic course but somehow complement the student's academic curriculum. Extracurricular activities, on the other hand, capture activities that are not directly or indirectly connected to the academic curriculum. (612–613)

This definition includes, for instance, activities such as athletics (intercollegiate and intramural), fraternities and sororities, student government, and jobs (off-campus or on-campus).

Moreover, this study will consider *academic success* as something that goes beyond GPA and includes several elements that are integral to a broad understanding of students' academic experience, such as satisfaction with the college/university, acquisition of knowledge, and cognitive development (e.g. Bergen-Cico and Viscomi 2012; Pascarella et al. 2014; Webber, Krylow, and Zhang 2013; Yin and Lei 2007). In turn, *employability* means 'the potential to obtain and retain a job' (Griffiths et al. 2017). In others words, *employability* is understood here as 'a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy' (Yorke and Knight 2006, 3). Thus, this dimension will be measured considering the students' actual entry into the labour market, as well as the personal and professional benefits of participating in ECAs such as leadership, self-assertiveness, decision-making, problem solving and teamwork, among others skills. We decided to consider the employability dimension bearing in mind, on the one hand, the level of concern expressed by political authorities regarding an increasingly demanding job market (see European Commission 2017; NLCLEAP 2007), and, on the other hand, the lack of research conducted and reported to higher education institutions on the

impact of ECAs in this domain (see Lau et al. 2014). In sum, the purpose of this study is to contribute to building knowledge on the impact of ECAs on the academic success and employability of university students. With this aim in mind, the use of narrative synthesis sought to address the following main research questions:

(1) What kind of impact do different ECAs have on the academic success of university students?
(2) What kind of impact do different ECAs have on the employability of university students?

2. Methodology

This study adopted principles of *narrative synthesis*, advocated by Popay et al. (2006), who define it as:

> an approach to the systematic review and synthesis of findings from multiple studies that relies primarily on the use of words and text to summarize and explain the findings of the synthesis. Whilst narrative synthesis can involve the manipulation of statistical data, the defining characteristic is that it adopts a textual approach to the process of synthesis to 'tell the story' of the findings from the included studies. (5)

Among other aspects, the authors consider that narrative synthesis can be used '[w]here the review question dictates the inclusion of a wide range of research designs, producing qualitative and/or quantitative findings for which other approaches to synthesis are inappropriate' (Popay et al. 2006, 6–7). This defining feature, as explained later in the eligibility criteria for selecting the studies to be included in the analysis, reinforced our decision to follow the approach of the narrative synthesis since our intention was never to exclude studies based on their methodological approach. In addition, this study also follows the Preferred Reporting Items for Systematic Reviews (PRISMA), in order to provide a transparent reporting of the revision process, contributing to its quality assurance and replicability (e.g. Moher et al. 2015). The following subsections present a detailed description of the procedures of data collection.

2.1. Search strategy

The criteria adopted to search for the studies to be included in the narrative synthesis were: (i) international online databases; (ii) articles available in full-text online format, excluding results that contained only metadata and abstracts; (iii) search conducted in all fields (e.g. article title, abstract, keywords, etc.); (iv) only peer-reviewed scientific articles, since these sources are considered the most useful for literature reviews (see Saunders, Lewis, and Thornhill 2009); and (v) only articles in the English language.

2.2. International databases selected

In order to account for the inter-disciplinary nature of the topic under review, queries were carried out in international databases covering a broad range of scientific research areas (e.g. education, psychology and social sciences). The search was conducted in

March 2022 and performed in the following databases: Web of Science (WoS) (www.webofknowledge.com); and Scopus (www.scopus.com).

2.3. Period of analysis and keywords

The literature search was limited to articles published between 2010 and 2021. The search words selected as keywords for the review were: ('academic* achievement' OR 'academic* performance' OR 'academic* success' OR 'academic* outcomes' OR 'employ*' OR 'job*' OR 'labour market' OR 'labour market'). These keywords were used in conjunction with the following combination of words: ('extracurricular' OR 'extra-curricular') AND ('university student*' OR 'higher education student*' OR 'college student*' OR 'undergraduate student*'). We chose these 'keywords' and 'combination of words' to cover, as well as possible, all the published articles that address, to a greater or lesser extent, the relationships between ECAs and university students' academic success or employability. The word 'work' was not included because it is too generic and subject to multiple interpretations. Expressions such as 'experiential learning' and 'service learning' were also not included in the search. The former because it is not an ECA itself, being used to describe a theoretical-philosophical perspective on the learning process 'whereby knowledge is created through the transformation of experience' (Kolb 2015, 49); the latter because it describes a teaching methodology 'that promotes students' learning through active participation in experiences of community service' (Folgueiras et al. 2018, 162), being therefore directly or indirectly connected to the academic curriculum (see Simmons, Van Mullekom, and Ohland 2018), which is not the scope of this study. Thus, for this analysis, we chose to focus the search procedure on ECAs – even if they often are a part of wider methodological and theoretical learning models.

2.4. Selection procedure of included articles

The search conducted in databases yielded 821 records: WoS (114), Scopus (707). The software EndNote X9 was used to find and remove step-by-step duplicate publications (39), non-articles (e.g. books, chapters, conference proceedings) (181), records with no full-text available because of their restricted access (journal subscription) (62), and non-English-language studies (18). As a result of this process, 300 records were removed. From a total of 521 articles, all abstracts (and relevant sections of the article when the abstract was not clear) were manually read for their applicability to the following exclusion criteria: (i) not focused on the scope of the present study; (ii) not empirical studies: including reviews and descriptive, theoretical and conceptual studies; (iii) not focused on university students' perceptions or outcomes (i.e. GPA, acquisition of knowledge, and personal and professional skills that enhance university students' employability); (iv) not focused on ECAs – curricular-related activities (e.g. homework assignments, studying for an exam, group projects) and co-curricular activities (e.g. undergraduate research, internships, co-ops) were excluded (see Simmons, Van Mullekom, and Ohland 2018); (v) and not explicitly showing academic outcomes and/or results in terms of the university students' employability according to the definition proposed by Yorke and Knight (2006).

In addition to these specific exclusion criteria, it was also decided not to exclude any study based on its supposed quality, assuming that unprompted judgement, in this phase,

produces similar levels of agreements to those reached by structured approaches, such as the Quality Framework (QF) and the Critical Appraisal Skills Program (CASP) (see Dixon-Woods et al. 2007). As Sandelowski and Barroso (2007) argue,

> [e]ven when ostensibly the same criteria are used, reviewers will not use them the same way, agree on whether a study has met them, or, if they agree, have the same reasons for agreeing. Indeed, we recognized from our own and our consultants' efforts to appraise studies how infrequently any one set of criteria for evaluating qualitative studies was used and how much intra-reviewer inconsistency exists. (137–138)

Although Sandelowski and Barroso (2007) report only on qualitative research, their insights can be regarded as valuable for both qualitative and quantitative studies, in order 'to prevent the exclusion of findings important to practice for reasons that do not diminish their importance' (138). This phase (*Eligibility*) involved two reviewers (the first two authors of this study), who undertook independent assessments of each article. The articles with no agreement were discussed by the two reviewers until a consensus about their inclusion or exclusion from the final database was achieved. This process resulted in the exclusion of 482 articles. Thus, 39 articles were included in the final database. The selection procedure is summarized in Figure 1.

Appendix A presents all the articles included in the narrative synthesis organized by alphabetical order of the first author's name and year of publication, journal, country, method and sample, type of ECA, measures and analysis, academic success impact, and employability impact.

2.5. Characteristics of included articles

As presented in Table 1, our search shows a significant increase in the number of articles published in the second half of the period under review: 2010–2015 ($n = 11$), 2016–2021 ($n = 28$). This fact suggests a growing interest and investment of the research community in understanding the impacts of ECAs on both the academic success and employability of university students in recent years. The year with most articles included in the search is 2021 ($n = 6$).

Regarding the *country/region* of publication, the EU is the most represented region ($n = 8$), followed by the United States of America (USA) ($n = 7$), and the United Kingdom (UK) ($n = 5$), representing more than half (20 of 39 articles) of the final database.

Our database shows the diversity of journals in which these articles were published – 29 journals from different areas were the object of analysis, which reveals the relevance of this topic across different scientific fields. The journals with most articles are the following: *Active Learning in Higher Education* ($n = 4$), *Higher Education, Skills & Work-based Learning* ($n = 3$), *and Journal of Education and Work* ($n = 3$).

Regarding the *method*, there is a clear predominance of quantitative studies ($n = 32$) over qualitative ($n = 5$) and mixed studies ($n = 2$).

In terms of *number of participants* involved, most of the studies (19 of 30) have more than 500 participants. The ones with larger samples are the following: Lau et al. (2014) ($n = 28{,}768$, Taiwan), De Luca et al. (2016) ($n = 26{,}451$, USA), Zhu and Arnold (2013) ($n = 18{,}607$, China), and Baek and Cho (2018) ($n = 15{,}180$, South Korea). There are only six studies with samples involving less than 100 participants (Bilsland, Carter, and Wood

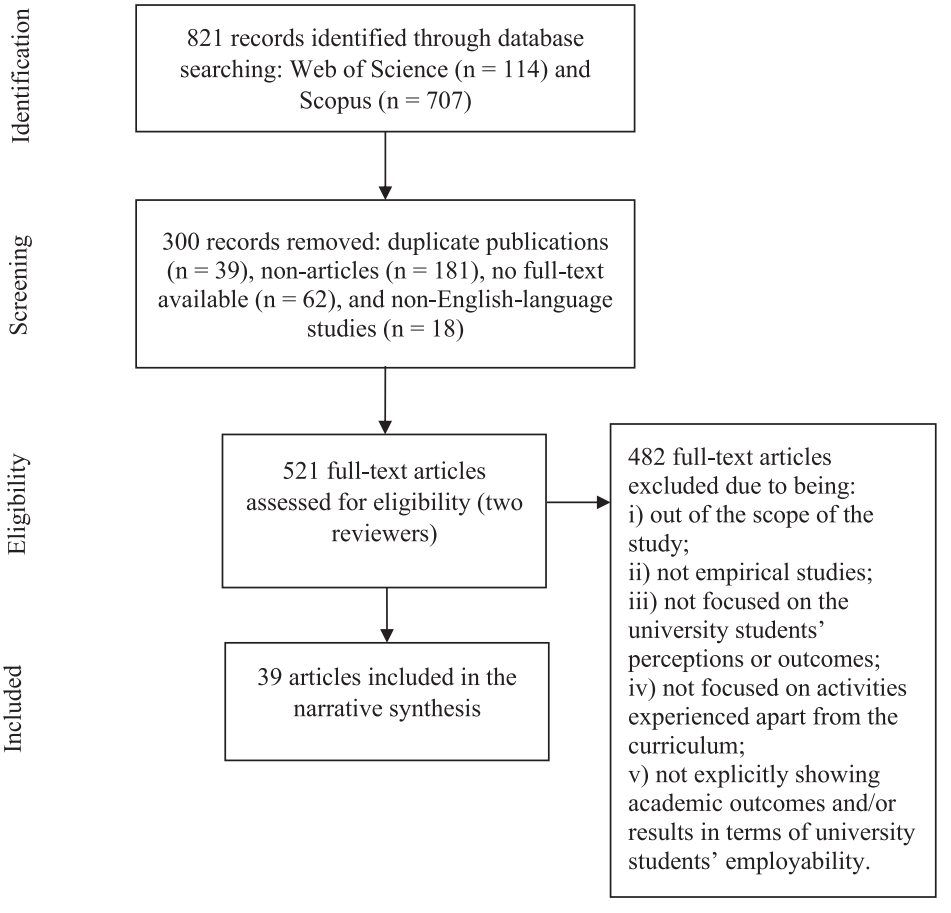

Figure 1. Flow diagram of the selection procedure (adapted from the PRISMA statement).

2020; Bodolica, Spraggon, and Badi 2021; De Prada Creo, Mareque, and Portela-Pino 2021; McFadden and Smeaton 2017; Stiwne and Jungert 2010; Thompson et al. 2013). All of them are qualitative studies, except the article by Thompson et al. (2013), which is a mixed study involving a questionnaire and in-depth semi-structured interviews.

3. Findings

This section presents the findings from the aforementioned search process, according to the research questions that guided our study.

3.1. What kind of impacts do different ECAs have on the academic success of university students?

The majority of the studies presenting data in the category of *academic success impact* (10 of 18) show, as depicted in Table 2, that ECAs have a positive impact (Billingsley and

Table 1. Synthesis of the included articles.

Characteristics	No. of articles
YEAR	
2010–2015	11
2016–2021	28
2021	6
COUNTRY	
European Union (27)	8
USA	7
UK	5
Australia	3
Canada	3
China	2
Vietnam	2
Other countries	9
JOURNAL	
Active Learning in Higher Education	4
Higher Education, Skills & Work-based Learning	3
Journal of Education and Work	3
Education and Training	2
Higher Education	2
Journal of Engineering Education	2
Anales De Psicologia	1
Career Development International	1
Community Mental Health Journal	1
Economics of Education Review	1
Educational Studies	1
Frontiers in Education	1
International Journal of Chinese Education	1
International Journal of Management Education	1
International Journal of Selection and Assessment	1
International Journal of Sport Policy	1
Journal of Asian Finance, Economics and Business	1
Journal of College Student Retention: Research, Theory & Practice	1
Journal of Human Resources	1
Journal of International Students	1
Journal of Management in Engineering	1
Journal of University Teaching & Learning Practice	1
Journal of Vocational Behaviour	1
Learning and Individual Differences	1
Monitoring of Public Opinion: Economic & Social Changes	1
Saudi Dental Journal	1
Social Psychology of Education	1
Sustainability	1
Teachers College Record	1
METHOD	
Quantitative	32
Qualitative	5
Mixed	2
NUMBER OF PARTICIPANTS	
< 100	6
101–500	14
> 500	19

Hurd 2019; De Luca et al. 2016; Guilmette et al. 2019; Haverila, Haverila, and McLaughlin 2020; Lattuca et al. 2017; McFadden and Smeaton 2017; Nguyen, Than, and Nguyen 2020; Pfeifer and Cornelißen 2010; Winstone et al. 2022; Zhu and Arnold 2013).

Aiming to explore the potential of involvement in ECAs (e.g. intramural sports, community service, sorority or fraternity, cultural/racial/ethnic organization) among underrepresented college students, the results of the article by Billingsley and Hurd (2019)

Table 2. Impact of extracurricular activities on academic success and employability.

Characteristics	No. of articles
ACADEMIC SUCCESS IMPACT	
Positive	10
Negative	4
Ambivalent	2
No impact	2
Not applicable	21
EMPLOYABILITY IMPACT	
Positive	16
Negative	1
Ambivalent	6
Not applicable	16

suggest that it 'may be an effective strategy to facilitate academic success by countering negative psychological health outcomes stemming from underrepresented students' experiences of discrimination' (421). The results of the article by De Luca et al. (2016), involving one of the largest samples of this study, indicate that participation in ECAs (i.e. organizations or teams) was positively associated with higher grades and prevented suicide attempts among college students. Also reporting benefits for mental health, the findings of the article by Guilmette et al. (2019) show a positive association between ECAs (i.e. sports and arts) and self-regulation strategies, 'which, in turn, were related to higher levels of academic success and emotional wellbeing' (8). Similarly, the article by Winstone et al. (2022) reports that ECAs (i.e. sports teams/clubs, music, dance or theatre groups, other clubs and societies) can play a significant role in the development of a student's identity, as well as a greater sense of belonging and well-being. These are dimensions that enable a broad understanding of the students' academic experiences, and are typically associated to positive outcomes (e.g. Bowman and Felix 2017; Kahu and Nelson 2018).

ECAs (in general, not specified) also appear to be important for international students who, according to Haverila, Haverila, and McLaughlin (2020), are more willing to persist in college 'if they feel they have had rewarding encounters with a college's social and academic systems' (373). The article by Lattuca et al. (2017) found that ECAs (e.g. hobbies, civic or church organizations, campus publications, student government, Greek life, sports) are significantly positive regarding students' development of interdisciplinary competence. The article by Zhu and Arnold (2013), in turn, mentions that extracurricular engagement (i.e. student clubs, internships, part-time jobs, civic community services, and school arts performance) brings about more significant (behavioural and emotional) impacts on students – including their knowledge and cognitive development – than academic engagement. However, the article also draws attention to the fact that it would be a mistake to draw conclusions because of one sole form of engagement, arguing that students' college experience is an 'integrated experience', in which all forms of campus engagement are mutually reinforcing.

Regarding articles considering one specific ECA: McFadden and Smeaton (2017) show that the experience of a volunteer programme was beneficial for authentic learning and more sophisticated and amplified student knowledge and experiences; Nguyen, Than, and Nguyen (2020) found that work experience influences positively students' GPA: 'For each more year of working experience, students' GPA will increase by 0.516%'

(1065); and Pfeifer and Cornelißen (2010) show that sports increase the chances of attaining a university degree 'by about 5.3 percentage points for men and 4.7 percentage points for women' (99).

Notwithstanding, there are also some studies revealing a *negative* impact of ECAs on students' academic success (Almeida, Guisande, and Paisana 2012; Chan 2016; Hordósy, Clark, and Vickers 2018; Wilson et al. 2014). The results obtained in the article by Almeida, Guisande, and Paisana (2012) show that students with no involvement in student union functions 'exhibited higher academic achievements, as well as higher self-evaluations of "Physical well-being"' (864). It is argued that the involvement diminishes the investment in curricular activities and interaction with other students. Although, this article also adds that, the experience in student union functions indicates better adaptation to university, a better relationship with the professors, and better-defined vocational goals.

Similarly, the article by Chan (2016) shows a negative impact of ECAs (school-based out-of-class activities such as school societies, sports competitions and musical events) on academic outcomes. However, it also found a positive link between ECAs and a deep approach to learning – characterized as striving for enhanced understanding, in which students are interested in learning and understanding the meaning of what is learned – which is, in turn, positively related to academic performance. Considering these contrasting results, the article concludes that individual difference variables and academic outcomes might be associated 'with a complex interrelationship rather than a single direct correlation' (Chan 2016, 231), and that there is a need to know more about the specific mechanism that explains the relationship between ECAs, learning approach and academic performance. Specifically analyzing the effects of part-time work experience, the article by Hordósy, Clark, and Vickers (2018) argues that.

> the pressures of the employability agenda may actually serve to further disadvantage the lower income groups in the form of a 'double deficit'. Not only are discrepancies between income and expenditure likely to mean that additional monies are necessary to study for a degree, the resulting need for part-time employment is also likely to constrain both degree outcome and capacity to enhance skills necessary for 'employability'. (353)

Finally, the article by Wilson et al. (2014) shows that non-academic co-curricular activities (e.g. international groups, music, online communities, religious activities, shared living groups, sorority or fraternity, sports teams) – which fall within the definition of ECA that we adopted here (see Simmons, Van Mullekom, and Ohland 2018) – interacted negatively with self-efficacy and academic engagement of engineering and computer science undergraduates.

Furthermore, there are also two articles showing an *ambivalent* impact of ECAs on academic success. In the article by Brint and Cantwell (2010), the impact depends on the time-use category:

> "activating" uses of time, such as physical exercise and volunteering, are associated with higher levels of academic conscientiousness, but not directly to higher grade point averages. Time spent on "passive" entertainments show negative associations on academic conscientiousness. Uses of time that connect students to campus life showed relatively weak and inconsistent effects, as did uses of time that separate students from campus life. Off-campus work was an exception. It showed a strong net association with lower grade point averages. (2441–2442)

In the article by Kulp, Pascale, and Grandstaff (2021), the impact depends on the type of activity. Analyzing specific campus-sponsored ECAs, the results show no impact for the 'week of welcome' (i.e. block parties, informational sessions, receptions, concerts, and tabling events) and 'predictable' events (i.e. Monday trivia nights, Tuesday crafting nights, and Friday food truck nights), and a positive impact for 'signature' events (e.g. festival-style events, e.g. Oktoberfest).

Lastly, two articles present results with *no impact* on academic success. The article by Al-Ansari et al. (2016), considering ECAs mostly in community service, sports and social activities, states that 'most students did not think that ECAs affected their grades or conflicted with their studies' (42). Exploring the influence of work experience, the article by Monteiro, Almeida, and Aracil (2016) shows that there is no difference in perceived development of (scientific, practical, transversal and career) competencies between students with and with no work experience.

3.2. What kind of impacts do different ECAs have on the employability of university students?

Presenting the same pattern of the previous research question, the vast majority of the articles considered in the analysis of the category of *employability success impact* (16 of 23) show that ECAs have a positive impact.

Most of these articles consider ECAs in general, e.g. student associations, sports, volunteering, work experience, religious activities, arts and music. For instance, Attri and Kushwaha (2018), aiming to discuss how companies are looking for certain employability attributes and personality traits, found that co-curricular activities (cultural events, club activities, sports, college fests, organizing guest sessions and workshops and undertaking industrial tours) helped the students to become industry ready and employable. Bodolica, Spraggon, and Badi (2021), which conducted a narrative inquiry into the journey of an undergraduate student, concluded that ECAs at university could help students to develop employability skills and to provide opportunities to experience social entrepreneurship and innovation in a safe environment. De Prada Creo, Mareque, and Portela-Pino (2021) confirm that students who participated in ECAs were more likely to develop teamwork skills, which are important for students' development and for their ability to get a job. This article also found that these activities could help students develop leadership skills, which many students lack. Jackson (2014), whose study involved 1008 business students, found that students who were involved in activities outside of their classes, including experiences like networking, volunteering, and being part of social groups or sports clubs, felt more prepared to join the workforce.

Looking at undergraduate civil engineering students belonging to both underrepresented (female; African American, Hispanic, American Indian, and multiracial; and first-generation college) and overrepresented (male; White and Asian; and continuing generation in college) populations, the results of the article by Polmear, Chau, and Simmons (2021) highlight the importance of out-of-class activities to attain *The Engineer of 2020* (E2020) attributes, such as communication and leadership. Despite results showing that all students expressed agreement that out-of-class activities supported the development of their attributes, this was particularly more salient for underrepresented students. In terms of the most impactful activities, 'Jobs and sports were the

most common settings for overrepresented students while underrepresented students also cited engineering design competition, professional experience, and music/dance' (Polmear, Chau, and Simmons 2021, 8). Adopting a quantitative design, Nuijten, Poell, and Alfes (2017) report that among Dutch students who were asked to indicate whether they thought that participating in ECAs improves employment opportunities, a total of 235 (70.6%) answered yes, 91 (27.3%) no, and seven (2.1%) maybe. 'As motivation for answering 'yes,' many students stated that in case of equal suitability for a job, participation in ECAs would be the decisive factor' (Nuijten, Poell, and Alfes 2017, 365). The article by Stuart et al. (2011), involving a survey of diverse undergraduate students, along with alumni and potential employer interviews, shows that ECAs were beneficial to alumni's initial job searches and that social networks built at university were either directly or indirectly linked to their current career paths. It concludes that 'ECAs such as voluntary work, and particularly university-linked ECAs (such as team sports and committees), help to distinguish graduates in the job market' (Stuart et al. 2011, 211).

Among the articles showing a positive impact of ECAs on employability, there are several considering specific rather than general types of ECAs in the studies. By means of a secondary data analysis involving 15,180 graduated students, the article by Baek and Cho (2018) found that.

> employment is positively affected by not only grades but also ECAs related to humanities, such as completion of an education and practice course on etiquette and social service activities. These findings are significant in verifying that the level of refinement of university students and their participation in social volunteering can have positive effects on employment. (1)

The article by Griffiths et al. (2017), which also conducts a secondary analysis of a survey with 5838 students, shows that engagement in sport provided 'added value' beyond subject-specific qualifications. 'This finding was particularly prominent where graduates demonstrated experience of voluntary roles through the leadership and management of sport and could articulate how this had a positive impact on the development of additional employability attributes' (Griffiths et al. 2017, 431). The article by Jackson and Collings (2018), which explores the influence of practical experience on graduate employment outcomes, argues that paid employment during the final year of undergraduate study 'produced higher full-time employment rates' (403). The article by Lundin, Skans, and Zetterberg (2019), which analyzes a survey of 5154 candidates, found that students who are elected in student unions 'are much more likely to have a rapid transition into employment. Effects are not confined to establishments, organizations or industries where previous candidates are employed, suggesting that the benefits are general in nature' (abstract). Moreover, the article by Shcheglova (2019), which also analyzes a survey with 3344 students, reports a statistically significant difference between the distributions of gains in interpersonal and teamwork skills in favour of those students who were involved in student organizations, community service, and volunteer activities. The development of these soft skills is considered by the author as an important key to success in the job market.

Among the articles included in the category of *employability success impact*, there is only one study, already mentioned above in the academic success category, reporting *negative* results. Drawing on a three-year longitudinal study that followed the progress

of a group of 40 students, this article demonstrates that part-time work experience constrains both degree outcome and capacity to enhance necessary competencies for employability of lower income-students (Hordósy, Clark, and Vickers 2018).

There are six further articles mentioning *ambivalent* impact (Lau et al. 2014; Monteiro and Almeida 2015; Monteiro, Almeida, and Aracil 2016; Pitan 2016; Pitan and Muller 2020; Thompson et al. 2013). In the article by Lau et al. (2014), which analyzes a survey of 28,768 business graduate students, the impact depends on the type of activity. Results suggest that different ECAs could unequally influence students' employability:

> Leadership skills benefited most from involvement in sports clubs, while creativity skills benefited most from involvement in music clubs. Communication and self-promotion skills benefited moderately from all extra-curricular activities. Unlike other employability skills, the time management skills of students hardly benefited from extra-curricular activities. (Lau et al. 2014, 26)

In the article by Monteiro, Almeida, and Aracil (2016), the impact of work experience on students' perceptions regarding their preparation for transition to the labour market depends on gender. Within male participants, perception of preparedness for transition to the labour market increases as the length of work experience increases (no work experience; work experience up to 24 months duration; work experience for longer than 24 months duration). Within female participants, there is a decrease in the perception for the group with no work experience and the group with work experience up to 24 months. These results suggest that the first working experiences could have a negative impact on the self-beliefs of women, which may be a consequence of the increasing awareness of gender disparities in the labour market by women. The article by Monteiro and Almeida (2015) found a positive impact of work experience on employability: 'The results enhance the association between work experience during higher education and career adaptability resources. In the case of student status, student workers expressed higher levels of control than regular students' (Monteiro and Almeida 2015, 110). Regarding extracurricular experiences (in general, not specified), the results do not show any significant difference between students with and without this experience, which might have been be expected. A possible explanation advanced by the article for this is that 'the benefits may depend on several aspects, such as the activity being related or not to the course taken, the duration of that work experience, or even the ability to learn from and reflect on those experiences' (Monteiro and Almeida 2015). In the articles by Pitan (2016) and by Pitan and Muller (2020), the results are similar, despite being carried out in different countries (Nigeria and South Africa). Drawing on students' perceptions of their engagement with EDOs (i.e. real-world activities, reflection and evaluation, career education, work experience and ECAs), both studies found a positive impact of work experience on employability, and no impact of ECAs in general. Finally, in the article by Thompson et al. (2013), the findings show that students who are actively engaged in ECAs recognize their value for employability. Notwithstanding, it also reveals that engagement alone in ECAs does not assure employability benefits, suggesting that structured institutional schemes should be encouraged to 'facilitate reflection, enabling students to make best use of their experiences for their future careers' (Thompson et al. 2013, 135).

4. Conclusion

The results of the narrative synthesis have led us to some main conclusions. First, the vast majority of ECAs have a positive impact on the academic success and employability of university students (26 of 39). The ECAs presented in the narrative synthesis showing negative results are residual. In our analysis, only five of the 39 articles reported negative impacts on university students' academic success ($n = 4$) and employability ($n = 1$). There is no specific type of ECA associated with the negative impact observed. The experiences showing negative results include, for instance, involvement in student unions, school societies, sports competitions and musical events, and part-time work experience. There are also two articles presenting no impact, and eight showing an ambivalent impact of ECAs. Regarding the latter group, results suggest that different ECAs unequally influence students' academic success and employability. Gender and time-use variables are also mentioned as having an influence on the results. Concerning the impacts on employability, work experience is the ECA most associated with a positive impact compared to other ECAs. Second, the majority of the articles included here consider ECAs in general, lacking information about which types of experiences are more effective. Third, there is a lack of studies adopting qualitative and mixed methods (six of 39). Fourth, it is important to inform academic scholars and political decision makers that there is a strong evidence base supporting the positive impact of ECAs on the academic success and employability of university students. In that sense, it is of paramount importance to promote these experiences inside and outside higher education institutions, in order to face the global challenges that increasingly demand highly skilled and socially engaged people (see European Commission 2017; Kilgo, Sheets, and Pascarella 2015; NLCLEAP 2007).

In conclusion, in order to improve the quality of education that university students receive, universities need to take a close look at the way they promote and assess learning and development, bridging the gap between academic and non-academic educational experiences. Higher education institutions should create conditions to promote activities with an educational purpose outside the strictly curricular objectives and beyond the classroom, promoting more holistic development of students combining academic success with a better capacity/preparation to enter the labour market.

Based on the results put forward in this article, several practical recommendations can be considered to help HE institutions to achieve that outcome, such as: (i) choosing extracurricular activities that align with university students' interests and career goals, as these will be most meaningful and beneficial to them; (ii) balancing their commitments: it is important to find a balance between academic work and other commitments so that the students don't become overwhelmed; (iii) seeking out leadership opportunities in ECAs, as these can help students to develop valuable skills such as teamwork, communication, and problem-solving; (iv) using ECAs as an opportunity to network with professionals in the field, in order to help students to build relationships and learn about potential job opportunities; and (v) taking time to reflect on what students have learned and accomplished through ECAs: this will help them to better understand the value of these experiences and how they can benefit from them in the future.

5. Limitations and further research

This narrative synthesis, like any other research, has its limitations. The first one has to do with the choice to include only peer-reviewed scientific articles written in English. This choice was made in order to avoid the overwhelming amount of work and time taken in translations, as well as the likelihood of conceptual misunderstandings; it also enabled the definition of clearer criteria for the search words, and facilitated the contrast between documents and, hence, the content analysis of them.

Second, this literature review does not cover all the international databases available online (e.g. EBSCO, Cambridge Journals, Oxford Journals, etc.). However, we are convinced that the transversal nature of the databases selected enabled us to produce a broad review of the literature covering diverse scientific domains and contexts.

Third, as a consequence of its transversal nature, it does not consider the socio-economic and cultural differences between countries where ECAs and broader learning environments can be structured in many different ways.

Fourth, the methodological decision to adopt the definition of ECAs proposed by Simmons, Van Mullekom, and Ohland (2018) leaves outside the final database a considerable number of studies that consider curricular-related and co-curricular activities. These activities also go beyond the strict on-campus experience and could make an important contribution to deepening the understanding of the phenomenon under analysis, such as internships, co-ops, and service-learning activities.

Fifth, the vast majority of the articles included in this literature review is based on self-report studies, therefore on students' perceptions. Despite providing valuable insights into individuals' experiences, there are several limitations to these methods. For instance, self-report studies are subject to bias and may not accurately reflect individuals' true feelings or experiences. Additionally, self-reports may not provide objective measures of the effectiveness of ECAs. As a result, further research should include other methods to provide a more comprehensive exploration of the students' actual participation in ECAs and the underlying impact of those experiences in their lives.

Finally, the articles showing null impact might be underrepresented due to the already known difficulties for publishing manuscripts with null or no results (see Rosenthal 1979).

Besides the limitations pointed out in the search procedure, further research should also be encouraged to consider two important issues raised in the conclusions. The first one is about the suggested tendency to analyze ECAs in general. This lack of differentiation does not provide the necessary information to identify which type of experience and/or which variables within each experience are more or less effective for students' academic success and employability. Therefore, the assessment of the effectiveness of each type of ECAs requires a more nuanced approach that could consider not only the nature of the activity, but also the contextual elements that enhance individual development and academic success. This is because, as a growing body of research has been highlighting, some experiences have a higher potential in terms of promoting developmental quality than others, which may even have a detrimental effect (e.g. Ferreira, Azevedo, and Menezes 2012; Ribeiro, Neves, and Menezes 2017). In other words, only through a context-sensitive and in-depth analysis of each experience would it be possible to grasp, for instance, the different levels of positive and negative effects (i.e. if some activities are better than others), which specific variables might affect students' outcomes (e.g.

socio-economic background, cultural capital, and level of engagement), and how these effects operate (e.g. is it the student's engagement that predicts the academic success, or the opposite?). In sum, although it is important to explore the different types of experience, it is also important to analyze the different kinds of developmental quality promoted by each experience to consider their impact on students.

The second issue is the lack of qualitative and mixed studies analyzing ECAs. In our view, the development of studies adopting these methodological approaches could provide an important contribution to explore, precisely, quality ECAs, in order to achieve a more comprehensive understanding of the conditions that promote developmental impact on university students.

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