Employability-related activities beyond the curriculum: how participation and impact vary across diverse student cohorts

Denise Jackson[1] · Bonnie Amelia Dean[2]

Abstract

Higher education is increasingly concerned with providing students with experiences that enhance employability. Sitting outside the curriculum, extra- or co-curricular activities that focus on career development, leadership, service or recognition can lead to positive employability and employment outcomes. The extent to which different student groups have access to and participate in these employability-related activities (ERAs) is underexplored, along with their relative gains in the labour market. This research surveyed 84,000 graduates in Australia on their participation in various activity types and the impact on their sense of preparedness for work and labour force outcomes. Findings demonstrate that over one-half of respondents participated in an ERA with groups tending to favour different activity types. Overall, the greatest differences in participation were observed by age, gender, disability, citizenship and socio-economic background. Activities impacted differently on employment outcomes with graduates from regional areas, of low socio-economic status and with disability garnering strong benefits. Club/society roles, leadership/award and mentoring programmes offered valuable development opportunities for most graduates, with less favourable outcomes reported for volunteering and micro-credentials. The study provides important information for designing ERAs that can be more easily accessed by increasingly diverse cohorts and that better support lifelong learning and transition to work for all students.

✉ Denise Jackson
d.jackson@ecu.edu.au

Bonnie Amelia Dean
Bonnie_dean@uow.edu.au

[1] School of Business and Law, Edith Cowan University, 270 Joondalup Drive, Joondalup, WA 6027, Australia

[2] Learning, Teaching & Curriculum, University of Wollongong, Wollongong, NSW 2522, Australia

Introduction

As the HE sector becomes increasingly competitive, graduate outcomes have become a measure of success and the focus of strategic university priorities (Jackson & Bridgstock, 2021). Government incentives escalate strategic directives, with funding contingent on employment and employability outcomes, such as the Teaching Excellence Framework in the UK and the Job Ready Package in Australia (Australian Government, 2019). Consequently, a range of strategies are increasingly implemented by universities to develop student employability. Some embed relevant learning and assessment into curricular structures, such as work-integrated learning (see Smith et al., 2019), and others focus on activities that sit outside curriculum (Buckley & Lee, 2021; Jackson & Bridgstock, 2021; Thompson et al., 2013), such as networking, membership of professional associations, volunteering, mentoring, clubs and societies, and leadership programmes (Kinash et al., 2016).

This paper focuses on activities beyond curriculum which are broadly considered to enhance aspects of student employability, such as developing the skills prioritised by employers, building networks, heightening self-perceptions of employability, and helping to signal a strong personal narrative during recruitment (e.g. Clark et al., 2015; Stevenson & Clegg, 2012). These can be facilitated by the university as a co-curricular activity (centrally or via schools and faculties), recognising that they contribute to the wider strategic agenda to enhance students' career readiness and graduate outcomes (Jackson & Tomlinson, 2021). Unlike those in the curriculum, co-curricular activities are not a formal component of a student's degree and therefore not assessed or mapped to degree learning outcomes (Seow & Pan, 2014). Alternatively, they may be organised independently from the university by students seeking to build their marketability and further employment prospects (Bartkus et al., 2012; Pegg et al., 2012), constituting an extra-curricular activity. There are discussions on the nomenclature of co-curricular and extra-curricular activities, some acknowledging blurring and overlap (Clegg et al., 2010), others advocating there are clear differences between the two, such as the former being more aligned to degree-based learning (see Gleeson et al., 2022). In this paper, we recognise the intersection between co- and extra-curricular activities yet do not make distinctions, referring to career-focused pursuits beyond the curriculum as employability-related activities (ERAs).

Given that ERAs sit outside the formal study, concerns have been raised as to whether all student groups have access and capacity to participate (e.g. Winstone et al., 2022). Furthermore, while there are various reported benefits from taking part in ERAs, such as quicker adjustment to learning environments (Tieu et al., 2010) and increased self-efficacy, career exploration, and skill development (Green et al., 2019; Kanar & Bouckenooghe, 2021), not all students garner the same value from engagement (Dickinson et al., 2021; Winstone et al., 2022). Although various studies explore the challenges and barriers to student engagement in ERAs (e.g. Buckley & Lee, 2021; Dickinson et al., 2021), literature lacks a deeper examination of the impact of students' backgrounds on participation, experiences and outcomes. This could provide important information for designing ERAs to improve access and participation for increasingly diverse cohorts.

This study draws on over 84,000 responses to the Australian Graduate Outcomes Survey (GOS) to investigate participation in ERAs across known equity student groups in higher education (HE), including regional/remote, Indigenous, low socioeconomic status (SES), those with disability, or from non-English-speaking backgrounds (NESB) (Dawkins, 1990), along with cohorts with other defining characteristics. We address three research

questions: (RQ1) to what extent do students of different backgrounds participate in ERAs; (RQ2) how do ERAs influence the labour force outcomes of recent graduates from different groups; and (RQ3) how do ERAs influence preparedness for work among recent graduates of different backgrounds? This study contributes empirical evidence on the participation of different student groups in ERAs and bridges the dearth of research on the relationship between ERAs, preparedness for work and employment outcomes for different student groups (Tchibozo, 2007). These valuable insights are interpreted through the lens of cultural and social capital, developing our understanding of how social background, ties and personal resources can influence student engagement in and the acquired benefits from ERAs, with important implications for HE policy and practice.

The paper next reviews literature on ERAs and outlines social and cultural capital theory from which the data are analysed, and findings are distilled. It discusses access and variability in ERAs, and their relationship with employment outcomes, before closing with implications for stakeholders and directions for future research.

Background

Activities targeting graduate employability

This study focuses on six types of ERAs: volunteering, club/society roles, leadership/award programmes, micro-credential/digital badge programmes, industry-student mentoring, and enterprise incubator/start-up activities. Volunteering describes individual or group activities for community benefit, undertaken for professional development and public concern (Fényes et al., 2021; Geng et al., 2022), and common to diverse industries, particularly health and community services (Evans & Yusof, 2022). Holmes et al. (2021) observe how university student volunteering is growing organically in Australia with an evidenced shift towards centralised models, some with formal recognition for student participants. Volunteering is considered to enhance individuals' self-efficacy, improve mental health, and develop social awareness and civic understanding (see Halfon, 2022).

Clubs and societies have long histories in HE and participation can foster strong social ties, reduce stress, increase affinity with the institution (Brereton & Mistry, 2019), build self-confidence and develop teamwork and leadership skills (Buckley & Lee, 2021). They are often campus-based and may be formally structured, such as sporting clubs, or informal in nature, focusing on social interaction or academic interests (Foley et al., 2022). Leadership programmes also come in many forms, such as one-off experiences or extended offerings, yet should share clear learning goals which encompass building self-awareness and identity formation (Maia, 2021). Programmes typically intend to help students understand and enhance leadership skills and knowledge, with associated recognition or awards for reflection and engagement in leadership activities (Green et al., 2019).

Digital badges, ePortfolios or micro-credentials typically supplement degree awards and often require students to demonstrate certain skills or outcomes against established criteria, providing a novel way for students to develop and showcase their transferable skills to future employers (Maina et al., 2022). We recognise that badges, ePortfolios and micro-credentials may differ in scope, focus and level of formality yet they share similarities in terms of strengthening students' employability narrative during recruitment processes.

Industry mentoring can be informal or formal, part of a wider programme (e.g. scholarship) and can vary in length and structure yet typically enable students (mentees) to engage

with industry partners (mentors) and reflect on their professional learning and gain clarity on career pathways (e.g. Baxter & Waldock 2012; Jackson & Bridgstock, 2021; Jackson et al., 2019). Finally, enterprise incubator/start-up activities (including hackathons) have become popular mediums for both curriculum-based and external activities due to the rapid growth of entrepreneurial education (Kay et al., 2019). Here, students typically partner with local start-ups in supported workspaces to progress new business ideas, growing awareness of and capabilities in enterprise skills and entrepreneurship (Eisenstein et al., 2021).

Theoretical framing

This paper draws on Bourdieu's (1986) conceptualisations of social and cultural capital to develop understanding of why participation in ERAs may vary across student groups. Bourdieu considered social capital to be connections and networks which individuals can develop and leverage to create advantage and advancement and, importantly, recognised that access to social capital is aligned to social stratification and may reinforce social inequalities. Later conceptualisations of social capital (e.g. Putnam 2000) clarify different forms as bridging capital (weaker ties, such as professional contacts, which may traverse social divisions) and bonding capital (existing relationships within your social circle, such as close friends and family). Supporting students in learning how to connect with others to build bridging social capital is critical given the role of networks for advancing careers (e.g., Batistic & Tymon, 2017; Bridgstock, 2019). This is particularly important for students from less advantaged backgrounds (Clarke, 2018; Parutis & Howson, 2020) who may not have established professional networks prior to university. Evidence suggests ERAs are valuable for learning how to network and for developing bridging social capital for job attainment or the creation of future work through new business endeavours (e.g. English et al., 2021; Jackson & Tomlinson, 2021).

Cultural capital refers to the social assets held by an individual, such as their language, behaviour and skills. These align to a social group and may be passed down through generations and can be leveraged for social mobility or may perpetuate further social inequalities. Bourdieu (1986) specified three forms of cultural capital: embodied (knowledge and skills developed from socialisation and education, strongly associated with social background), institutionalised (resources acquired through education or work, such as a degree qualification or credential), and objectified (assets or actions that reflect status and societal standing). Many recognise the critical role that cultural capital plays with respect to students' ability to engage confidently with prospective graduate employers (e.g., Burke et al., 2020; Tomlinson, 2017). Different types of ERAs are considered important vehicles for developing cultural capital, providing students with valuable insights into professional culture and developing their understanding of diverse career opportunities (e.g. Gleeson et al., 2022; Jackson et al., 2022a).

This study's analysis of differences in student participation in ERAs and their resultant labour market rewards was considered in the context of their developed social and cultural capital. This approach recognises that the resources students bring to HE may affect their engagement, learning and experiences in ERAs, and the translation of accrued benefits into positive employment outcomes. This is important for designing and implementing ERAs that will engage diverse cohorts with varying capital resources, enabling them to garner the known benefits for employability, empowering all students' transitions to work.

Global attention to student participation in ERAs reveals different motivations for involvement, including intrinsic interest and strengthening resumes (Brown et al., 2004; Roulin et al., 2011). One Dutch study reported more than 90% of HE students claimed interest and/or experience in ERAs, with internships considered the most career-relevant and club/society membership the least (Nuijten et al., 2017). In China, three-quarters of almost 2000 HE students regularly engaged in volunteering (Geng et al., 2022), while one-half of UK and Australian students only occasionally took part in ERAs (Jackson & Tomlinson, 2021).

Research shows engagement in ERAs varies among diverse student groups (Stuart et al., 2009). Low SES students are less likely to participate (Kezar et al., 2015; Kuh, 2009), as are NESB and Indigenous students, and those with disability (Harvey et al., 2017). Stuart et al. found that white, middle-class males participate more in ERAs compared to students who are mature-aged, of low SES or who have caring commitments. Barriers include financial pressure (Walpole, 2003) with less affluent students tending to use discretionary time for part-time work rather than ERAs (Brereton & Mistry, 2019; Dyson et al., 2017; Fényes & Pusztai, 2012). Students with less developed cultural capital are often less confident and feel like they do not belong (Rubin, 2012), both inhibitors to ERA engagement (Dickinson et al., 2021). Caring and family responsibilities, and prioritising existing support networks, can reduce female involvement in ERAs (Stevenson & Clegg, 2012), also impacting on mature-age students who can be concerned about the suitability of activities (Wyatt, 2011).

Such constraints on student participation in ERAs can limit their capacity for career exploration, ability to make informed career choices, and potential for labour market appeal, reinforcing existing inequalities and perpetuating further disadvantage (Hórdosy et al., 2018). There are proven links between ERAs and stronger job attainment (Brewis et al., 2010; Kinash et al., 2016), network building (Jackson & Tomlinson, 2021; Stuart et al., 2009), and elevated occupational status (Tchibozo, 2007). ERA participation may develop important employability skills, signal characteristics such as prosocial behaviour and strong motivation to future employers and build social capital which augments graduate employment outcomes (Baert & Verhaest, 2021). ERAs are considered to 'provide unique opportunities for identifying preference and fit for potential occupations' (Kim & Bastedo, 2017, p.259). Therefore, employers recommend that all graduates communicate their ERAs in career profiles and interviews (Stuart et al., 2009; Tchibozo, 2007).

There is, however, a paucity of empirical research on the relative labour market gains from ERAs among student groups. This requires a deeper exploration of the impact of ERAs on preparedness for work and post-graduation employment outcomes, specifically job attainment and perceived overqualification (alignment between job roles and skills and knowledge acquired during study), among diverse groups.

Methodology

Participants

In total, 84,427 Bachelor graduates of Australian degree courses participated in the study (see Table 1). Bachelor graduates include those completing a thesis component of their course (termed Honours). Given the GOS' response rate, the sample is considered broadly representative of Bachelor graduates in Australia.

Table 1 Participant characteristics

Variable	Sub-groups	2020 (n=43,384)		2021 (n=41,043)		Total (n=84,427)	
		Count	%	Count	%	Count	%
Age	0–24 years	31,513	72.6	29,417	71.7	60,930	72.2
	25 + years	11,871	27.4	11,626	28.3	23,497	27.8
Gender	Male	15,962	36.9	15,018	36.7	30,980	36.8
	Female	27,338	63.1	25,956	63.3	53,294	63.2
Citizenship	Domestic	36,336	83.8	34,006	82.9	70,342	83.3
	International	7048	16.2	7036	17.1	14,084	16.7
Disability	No disability	40,376	93.2	37,052	90.3	77,428	91.8
	Disability	2967	6.8	3974	9.7	6941	8.2
Socio-economic status	Low	5721	15.9	5400	16.0	11,121	15.9
	Medium	18,328	50.8	17,147	50.8	35,475	50.8
	High	12,003	33.3	11,202	33.2	23,205	33.2
Indigenous	Not Indigenous	42,908	98.9	40,530	98.8	83,438	98.8
	Indigenous	476	1.1	513	1.2	989	1.2
NESB	ESB	37,983	87.6	35,741	87.1	73,724	87.3
	NESB	5401	12.4	5302	12.9	10,703	12.7
Regionality	Not Regional/Remote	28,588	65.9	27,441	66.9	56,029	66.4
	Regional/Remote	14,796	34.1	13,602	33.1	28,398	33.6
Labour market status	Employed	31,478	72.6	30,172	73.5	61,650	73.0
	Unemployed	7426	17.1	6917	16.9	14,343	17.0
	Not in labour force	4480	10.3	3954	9.6	8434	10.0
Discipline area	Natural/Physical Science	4769	11.0	4516	11.0	9285	11.0
	Information Technology	1939	4.5	2093	5.1	4032	4.8
	Engineering/related fields	2649	6.1	2779	6.8	5428	6.4
	Architecture/Building	1113	2.6	1116	2.7	2229	2.6
	Agriculture/Environment	705	1.6	661	1.6	1366	1.6
	Health	8870	20.4	8172	19.9	17,042	20.2
	Education	2464	5.7	2204	5.4	4668	5.5
	Management/Commerce	7012	16.2	6470	15.8	13,482	16.0
	Society/Culture	10,056	23.2	9711	23.7	19,767	23.4
	Creative Arts	3780	8.7	3302	8.0	7082	8.4

Procedures

The GOS gathers data on the employment destinations of Bachelor graduates from 41 Australian universities who completed their degree courses 4-to-6 months earlier. Commissioned by the Australian government, the survey is administered online and bi-annually by the Social Research Centre (SRC). Graduate response rates were 42.3% and 40.4% for 2020 and 2021 respectively (SRC, 2020; 2021). This study draws on items examining participation in ERAs during study years, introduced in 2020 by the Australian Collaborative Education Network (ACEN), the professional association for work-integrated learning in Australia. Thirty universities opted into these items in 2020,

increasing to 31 in 2021, with 43,384 and 41,043 graduate responses in each respective year.

Measures

Government data are used to populate individual and study-related characteristics in the GOS, including for SES (low/medium/high, based on residential postcode), Indigenous, with disability, NESB (domestic student who arrived in Australia < 10 years prior to survey and speaks a language other than English at home); regional/remote (residential postcode classed as ≥ 50% a regional/remote location), citizenship (domestic/international at enrolment); and mature-age (aged ≥ 25 years when commencing study). Graduates are asked to indicate their participation in different not-for-academic credit ERAs during their course: selecting multiple options from 'position of responsibility in a club/society', 'industry-based mentoring arrangement', 'enterprise incubator/start-up activity', 'leadership/award program' or 'micro-credentialing/digital badge program'.

We draw on two measures of employment: (i) the proportion of graduates that secure full-time employment (≥ 35 h/weekly) of those available for full-time work; and (ii) perceptions of overqualification among those in full-time employment, measured by Maynard et al.'s (2006) eight-item Scale of Perceived Overqualification (strongly disagree [1] to strongly agree [5]). For overqualification, in addition to mean item ratings, the SRC classifies graduates as those perceiving themselves as overqualified, or not, using an average score. For preparedness for work, graduates are asked 'overall, how well did your qualification prepare you for your job', ('not at all' [1] to 'very well' [4], with an 'unsure' option).

Analysis

Survey data were analysed in SPSS 26.0. Data from 2020 to 2021 were combined to optimise group sample sizes. For RQ1, counts and percentages were computed for domestic/international graduate participation in ERAs, and for different groups. Pearson Chi-square test ($\alpha = 0.05$) identified significant differences in participation across groups (e.g. low SES versus high SES), noting its sensitivity to large samples (Lin et al., 2013).

Analysis on the influence of ERAs on employment (RQ2) was confined to domestic graduates, in accordance with national GOS reporting (except for comparisons by citizenship). The proportion of graduates who had secured full-time employment and who considered themselves overqualified were calculated for each group. At group level, Pearson chi-square tests ($\alpha = 0.05$) detected significant differences between the employment outcomes for those who participated in each ERA, with those who had not.

For RQ3, two-way analysis of variance (ANOVA) ($\alpha = 0.05$) examined variations in perceived preparedness for work by group membership and participation in any ERA. Again, analysis was limited to domestic graduates, except for comparisons by citizenship. Given the research question, only interaction effects were explored (e.g. any activity participation*regionality). Normality for preparedness was indicated by low skewness and kurtosis measures, −0.754 and −0.289 respectively.

Limitations

While the GOS dataset provides a large, national sample for examining the posed research questions, it has limitations. First, data are self-reported by graduates and therefore potentially subject to recall and desirability bias. Second, the GOS' timing means that it realistically explores graduates' transition to work and very early career experiences, rather than longer-term labour market achievements. The survey only allows graduates to report on their participation in the six outlined ERAs, while they may have engaged in others. There are also likely to be nuances within the six activity groups (e.g. with respect to payment, length and structure), potentially influencing impact on their labour market outcomes and therefore limiting our understanding of their precise effect regarding perpetuating (or alleviating) inequality. Finally, our focus on the labour market returns from ERAs means results are discussed only in instrumental terms; yet, we recognise the value of exploring students' complex motivations for engaging in ERAs and the ensuant personal and social gains from their experiences.

Results

Participation in activities

Table 2 summarises domestic and international graduate participation in each activity by group. Significant differences within each group are emboldened. Significant results are marked against females (compared to males) and low/medium SES groups are compared to high SES. Results indicated variation in activity engagement by gender, females reporting proportionately greater participation in any activity, and more specifically in volunteering and (to a lesser extent) mentoring. Although males recorded less participation overall, proportionately more engaged in club/society roles, enterprise/incubator and micro-credential programmes, albeit only marginally. International and mature-age graduates reported consistently higher participation across all activity types, and overall.

Interestingly, those with disability participated more than those without for all activities, other than incubator/enterprise activities. Meanwhile high SES graduates reported greater participation than low/medium SES students. Participation among non-Indigenous and Indigenous graduates was reasonably uniform, although the latter reported marginally higher engagement in mentoring and lower in micro-credentials. There was greater participation observed among NESB graduates in micro-credentials, mentoring, incubator, and award programmes. Finally, there were some differences between metro-based and remote/regional graduates, with greater participation observed in the latter for all activities other than volunteering and micro-credentials.

Activity impact on full-time employment

Table 3 summarises the impact of the different activities on domestic graduates' full-time employment across groups. Results show the proportion of graduates who secured full-time employment who participated in an activity, compared with those who did not participate. Significant differences are emboldened for groups of interest. Both

Table 2 Activity participation by group

		Any %	Any N	Volunteer %	Volunteer N	Club %	Club N	Mentor %	Mentor N	Incubator %	Incubator N	Award %	Award N	Micro %	Micro N	None %	None N
Gender	Male	53.0	16,420	39.8	12,330	23.1	7151	7.0	2184	3.6	1105	6.0	1863	3.2	985	47.0	14,560
	Female	57.2*	30,495	47.6*	25,387	19.5*	10,381	7.9*	4194	1.7*	891	5.8	3117	2.0*	1065	42.8*	22,799
Citizenship	Domestic	55.2	38,802	44.8	31,529	20.4	14,338	7.3	5138	1.8	1301	5.6	3942	2.2	1558	44.8	31,540
	International	58.3*	8206	44.5	6261	22.9*	3227	8.9*	1258	4.9*	696	7.5*	1052	3.5*	498	41.7*	5878
Mature-age	24/under	47.4	11,136	37.6	8830	14.5	3412	5.9	1395	1.8	429	3.3	768	2.0	464	52.6	12,361
	25/over	58.9*	35,872	47.5*	28,960	23.2*	14,153	8.2*	5001	2.6*	1568	6.9*	4226	2.6*	1592	41.1*	25,058
Disability	No disability	55.3	42,829	44.3	34,286	20.6	15,986	7.5	5809	2.4	1836	5.8	4526	2.4	1858	44.7	34,599
	Disability	59.7*	4146	50.1*	3475	22.7*	1573	8.4*	581	2.3	161	6.7*	463	2.9*	198	40.3*	2795
Socio-economic status	Low	52.3*	5817	43.1*	4793	17.5*	1943	7.0*	774	1.2*	136	4.8*	531	1.9*	210	47.7*	5304
	Medium	54.6*	19,363	44.4*	15,764	19.4*	6875	7.1*	2509	1.6*	572	5.1*	1795	2.1*	762	45.4*	16,112
	High	57.4	13,316	46.1	10,709	23.1	5365	7.9	1823	2.5	591	6.8	1576	2.5	588	42.6	9889
Indigenous	Non-indigenous	55.7	46,478	44.8	37,363	20.8	17,365	7.6	6304	2.4	1975	5.9	4930	2.4	2043	44.3	36,960
	Indigenous	53.6	530	43.2	427	20.2	200	9.3*	92	2.2	22	6.5	64	1.3*	13	46.4	459
NESB	ESB	55.4	40,850	44.9	33,092	20.8	15,361	7.3	5405	2.0	1448	5.8	4244	2.2	1609	44.6	32,874
	NESB	57.5*	6158	43.9	4698	20.6	2204	9.3*	991	5.1*	549	7.0*	750	4.2*	447	42.5*	4545
Regionality	Non-Regional	54.9	30,785	44.6	25,002	20.0	11,205	7.4	4133	2.0	1109	5.7	3217	2.4	1344	45.1	25,244
	Regional	57.1*	16,223	45.0	12,788	22.4*	6360	8.0*	2263	3.1*	888	6.3*	1777	2.5	712	42.9*	12,175
All graduates		55.7	47,008	44.8	37,790	20.8	17,565	7.6	4096	2.4	1997	5.9	4994	2.4	2056	44.3	37,419

* $p < .05$

Table 3 Impact of activities on full-time employment

			Any	Volunteer Yes	Volunteer No	Club Yes	Club No	Mentor Yes	Mentor No	Incubator Yes	Incubator No	Award Yes	Award No	Micro Yes	Micro No	None
Gender	Male	%	66.9	65.6*	67.8	69.8*	66.1	73.4*	66.4	73.2*	66.7	73.5*	66.5	64.3	67.0	67.0
		N	6411	4736	7456	2981	9211	943	11,249	420	11,772	781	11,411	361	11,831	5781
	Female	%	67.5*	66.7*	69.7	72.1*	67.4	74.1*	67.7	70.5	68.2	75.2*	67.8	64.5	68.3	69.3
		N	11,376	9418	10,687	4119	15,986	1817	18,288	279	19,826	1304	18,801	364	19,741	8729
Citizenship	Domestic	%	67.2	66.3	68.9	71.0	66.9	73.8	67.2	72.0	67.6	74.5	67.3	64.3	67.8	68.4
		N	17,802	14,164	18,160	7107	25,217	2764	29,560	699	31,625	2089	30,235	725	31,599	14,522
	International	%	42.3	41.8	42.0	44.6*	41.0	47.6*	41.3	46.5	41.7	44.6	41.7	38.3	42.0	41.2
		N	2088	1605	1760	907	2458	367	2998	178	3187	303	3062	103	3262	1277
Mature-age	24/under	%	66.9	66.2	65.7	70.5	64.5	73.8	65.2	72.8	65.8	74.7	65.3	63.9	66.0	64.5
		N	13,204	10,588	11,345	5544	16,389	2123	19,810	530	21,403	1751	20,182	545	21,388	8729
	25/over	%	68.2*	66.8*	74.9	73.1	71.7	73.9	71.8	69.5	72.0	73.6	71.9	65.7*	72.0	75.2
		N	4598	3576	6815	1563	8828	641	9750	169	10,222	338	10,053	180	10,211	5793
Disability	No disability	%	68.2	67.3	69.7	71.9	67.8	74.9	68.1	73.4	68.5	75.0	68.2	65.6	68.7	69.2
		N	16,425	13,025	17,014	6537	23,502	2543	27,496	648	29,391	1899	28,140	659	29,380	13,614
	Disability	%	57.5	57.3	58.3	62.3*	56.4	63.5*	57.2	58.0	57.8	70.0*	56.9	54.1	57.9	58.1
		N	1373	1136	1142	568	1710	219	2059	51	2227	189	2089	66	2212	905
Socio-economic status	Low	%	65.1	64.1*	66.4	69.7*	64.4	72.6*	64.8	72.4	65.3	69.0	65.2	67.3	65.3	65.6
		N	2652	2150	2835	982	4003	411	4574	71	4914	269	4716	101	4884	2333
	High	%	69.1	68.2	70.5	72.1	68.7	75.4	68.9	74.9	69.3	76.4	68.9	67.2	69.5	70.0
		N	6141	4810	5939	2637	8112	998	9751	325	10,424	855	9894	289	10,460	4608
Indigenous	Non-indigenous	%	67.1	66.2	68.7	70.9	66.7	73.7	67.1	72.0	67.5	74.3	67.2	64.2	67.7	75.8
		N	17,518	13,941	17,855	6996	24,800	2706	29,090	689	31,107	2049	29,747	718	31,078	244
	Indigenous	%	75.3	73.8	76.8	78.2	74.9	84.1	74.6	71.4	75.6	83.3	75.0	77.8	75.5	68.3
		N	284	223	305	111	417	58	470	10	518	40	488	7	521	14,278

Table 3 (continued)

			Any	Volunteer		Club		Mentor		Incubator		Award		Micro		None
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
NESB	ESB	%	67.7	71.5	67.3	74.3	67.7	72.6	68.1	74.8	67.8	65.1	68.3	68.3	68.2	68.8
		N	17,432	13,883	17,819	6960	24,742	2677	29,025	674	31,028	2029	29,673	702	31,000	14,270
	NESB	%	50.5	49.1	52.1	54.0	49.7	61.7*	49.3	59.5	50.4	64.5*	49.6	46.9	50.8	50.9
		N	370	281	341	147	475	87	535	25	597	60	562	23	599	252
Regionality	Non-Regional	%	66.0	65.1	67.7	70.0	65.6	72.5	66.0	72.0	66.4	73.8	66.1	64.4	66.6	67.1
		N	13,840	10,983	14,299	5443	19,839	2186	23,096	598	24,684	1687	23,595	625	24,657	11,442
	Regional	%	71.7	71.0*	73.7	74.9*	71.7	79.5*	71.9	72.1	72.5	77.5*	72.2	64.1*	72.6	73.4
		N	3962	3181	3861	1664	5378	578	6464	101	6941	402	6640	100	6942	3080
All graduates		%	67.2*	66.3*	68.9	71.0*	66.9	73.8*	67.2	72.0*	67.6	74.5*	67.3	64.3*	67.8	68.4
		N	17,802	14,164	18,160	7107	25,217	2764	29,560	699	31,625	2089	30,235	725	31,599	14,522

* $p < .05$

international and domestic graduates are included only for citizenship. Findings are presented for both males and females, and only low SES. Results for all domestic graduates are presented as a benchmark.

Both male and female graduates reported mixed full-time employment effects. Mentoring and award programmes made a considerable difference for both groups (more than 5% points). Positive impact extended to club/society roles for females, and incubator/enterprise programmes for males, while volunteering and micro-credentials negatively impacted both groups in a marginal way. International graduates reported full-time employment gains from all activities, other than micro-credentials and, only very marginally, volunteering. Despite their higher levels of participation compared with younger counterparts, mature-age graduates reported negative impacts on full-time employment for volunteering, micro-credentials and, to a lesser extent, incubator/enterprise activities.

Employment gains varied by activity type for graduates with disability. For example, engaging in club/society roles, mentoring and award programmes enhanced employment, particularly the latter, while others made little difference. Employment benefits were evident for low SES graduates, particularly club/society roles, mentoring, and incubator/enterprise programmes, although volunteering recorded a significant, negative impact. Indigenous graduates reported higher employment rates for mentoring and award programmes and lower for volunteering and incubator/enterprise programmes, albeit not significant. There were marked employment gains for NESB graduates from mentoring, incubator/enterprise and award programmes, and relatively lower rates for those that participated in volunteering and micro-credentials. A similar pattern was evident in regional/remote graduates although incubator/enterprise programmes had little effect.

Activity impact on perceived overqualification

Table 4 presents the impact of activities on perceived overqualification for domestic graduates working in full-time roles, except for citizenship which includes international graduates. Lower levels of perceived overqualification were evident among females and males who had participated in all activity types, other than incubator/enterprise programmes for females and micro-credentials for males. Positive effects were greatest for mentoring and award programmes. Similarly, mature-age graduates reported lesser, albeit marginally, perceptions of overqualification for all activities, with a 6% difference for mentoring. The impact of activities was mixed for international graduates, most recording marginal differences other than micro-credentials which negatively impacted on perceived overqualification. There were also mixed, marginal effects for graduates with disability although award programmes recorded a sizeable positive impact on perceived overqualification.

Low SES graduates observed lower levels of perceived overqualification for all activities, other than micro-credentials. There were mixed results for Indigenous graduates who reported both lower and higher levels of perceived overqualification, depending on the activity. There were some marked differences for NESB graduates' perceived overqualification from activity participation, other than volunteering and award programmes. Activities also made a difference for regional/remote graduates who consistently reported lower perceived overqualification across all types, with a particularly strong impact for mentoring.

Table 4 Impact of activities on perceived overqualification

			Any	Volunteer Yes	Volunteer No	Club Yes	Club No	Mentor Yes	Mentor No	Incubator Yes	Incubator No	Award Yes	Award No	Micro Yes	Micro No	None
Gender	Male	%	28.9	29	31.8	27.2	31.9	23.8*	31.3	29.2	30.8	23.4*	31.2	34.5	30.6	32.8
		N	1847	1370	2370	810	2930	224	3516	122	3618	182	3558	124	3616	1893
	Female	%	26.7*	26.9*	29.5	25.4*	29.0	22.4*	28.9	29.6	28.3	22.5*	28.7	27.5	28.3	30.4
		N	3030	2531	3146	1046	4631	406	5271	82	5595	293	5384	100	5577	2647
Citizenship	Domestic	%	27.5	27.6	30.4	26.2	30.1	22.9	29.8	29.4	29.2	22.9	29.7	31	29.2	31.3
		N	4882	3905	5520	1859	7566	632	8793	204	9221	477	8948	224	9201	4543
	International	%	30.3	29.9	31.9	31.6	30.7	28.8	31.2	34.1	30.7	32.3	30.8	38.8	30.7	31.9
		N	630	478	559	286	751	105	932	60	977	97	940	40	997	407
Mature-age	24/under	%	26.7	26.8	29.7	25.3	29.3	22.2	29.0	29.2	28.3	22.0	28.8	31.0	28.2	30.7
		N	3514	2830	3365	1399	4796	469	5726	154	6041	384	5811	169	6026	2681
	25/over	%	29.8*	30.1	31.7	29.5	31.4	25.5*	31.5	29.8	31.2	27.6	31.3	30.9	31.2	32.2
		N	1368	1075	2155	460	2770	163	3067	50	3180	93	3137	55	3175	1862
Disability	No disability	%	27.2	27.3	30.4	26.0	30.0	22.5	29.7	29.0	29.1	22.8	29.5	30.7	29.1	31.3
		N	4463	3552	5170	1695	7027	571	8151	187	8535	431	8291	202	8520	4259
	Disability	%	30.4	31.1	30.6	28.7	31.5	27.4	31.2	33.3	30.8	24.3*	31.4	33.3	30.7	31.4
		N	417	352	349	163	538	60	641	17	684	46	655	22	679	284
Socio-economic status	Low	%	27.0*	26.9*	30.8	26.5*	29.7	23.8*	29.6	27.1	29.1	22.0*	29.5	32.7	29.0	31.5
		N	713	576	871	259	1188	98	1349	19	1428	59	1388	33	1414	734
	High	%	27.2	27.4	29.5	25.1	29.7	21.6	29.3	28.5	28.6	21.7	29.2	26.0	28.7	30.4
		N	1666	1315	1751	660	2406	215	2851	92	2974	185	2881	75	2991	1400
Indigenous	Non-indigenous	%	27.5	27.7	30.5	26.2	30.2	23.0	29.9	29.5	29.3	22.8	29.8	31.0	29.3	31.5
		N	4814	3856	5445	1827	7474	621	8680	202	9099	465	8836	222	9079	4487
	Indigenous	%	23.9	22.0	24.6	28.8	22.1	19.0	24.0	20.0	23.6	30.0	23.0	28.6	23.4	23.0
		N	68	49	75	32	92	11	113	2	122	12	112	2	122	56

Table 4 (continued)

		Any	Volunteer		Club		Mentor		Incubator		Award		Micro		None
			Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
NESB															
ESB	%	27.5	27.6	30.5	26.3	30.1	23.2	29.8	30.0	29.2	22.8	29.7	31.3	29.2	31.4
	N	4783	3828	5431	1827	7432	618	8641	201	9058	461	8798	219	9040	4476
NESB	%	26.9	27.5	26.3	21.9	28.3	16.1*	28.6	12.0	27.4	26.7	26.8	21.7	27.0	26.7
	N	99	77	89	32	134	14	152	3	163	16	150	5	161	67
Regionality															
Non-Regional	%	27.9	28.1	30.9	26.6	30.5	23.5	30.3	30.6	29.7	23.3	30.1	31.7	29.6	31.9
	N	3851	3076	4416	1447	6045	512	6980	182	7310	392	7100	198	7294	3641
Regional	%	26.1*	26.1*	28.6	24.8*	28.3	20.8*	28.1	21.8	27.6	21.2*	27.9	26.3	27.5	29.3
	N	1031	829	1104	412	1521	120	1813	22	1911	85	1848	26	1907	902
All graduates	%	27.5*	27.6*	30.4	26.2*	30.1	22.9*	29.8	29.4	29.2	22.9*	29.7	31.0	29.2	31.3
	N	4882	3905	5520	1859	7566	632	8793	204	9221	477	8948	224	9201	4543

*$p < .05$

Table 5 Two-way ANOVA for activity participation, group membership and perceived preparedness for work

Group	Activity participation*group and perceived preparedness for work (interaction effect)		
	df	F	p
Gender	1	18.816	< 0.001*
Citizenship	1	24.927	< 0.001*
Mature-age	1	11.448	< 0.001*
Disability	1	3.338	0.068
SES	2	0.720	0.487
Indigenous	1	0.564	0.453
NESB	1	0.177	0.674
Regionality	1	2.045	0.153

*$p < .05$

Activity impact on preparedness for work

Two-way ANOVA results (see Table 5) indicate a significant interaction between activity participation and certain groups (gender/citizenship/age) with perceived preparedness for work. Males who participated in any activity reported a slightly higher mean (M = 2.92, SD = 0.946) than those who did not participate (M = 2.75, SD = 1.012). Similar results were observed for females although mean differences were marginally smaller, M = 2.98 (SD = 0.940) and 2.89 (SD = 0.996). Mature-age graduates engaging in any activity made little difference to perceived preparedness. A positive effect was reported for younger graduates, their mean preparedness rating being 2.95 (SD = 0.931) compared to 2.79 (SD = 1.002) for those who did not participate. Finally, there was no difference in the average preparedness of international graduates who did/did not engage in activities, and only a small gain for domestic graduates.

Discussion

Findings indicated that over one-half of graduates from each group participated in an ERA, with a consistent preference for volunteering aligning to earlier work (e.g. Franke et al., 2010), followed by club/society roles. Mentoring, enterprise/incubator activities, leadership/award programmes, and micro-credentials were less popular with below 10% of each group taking part. Findings suggest some differences across groups' participation in ERAs, the greatest observed by age, gender, disability, citizenship and socio-economic background. Females' greater participation in volunteering and mentoring could reflect their innate propensity for caring (Stevenson & Clegg, 2012) while males engaged more in club/society roles, tending to nurture leadership and self-confidence (Buckley & Lee, 2021). Greater take-up among mature-age students contravenes earlier research which reported higher take up among their younger counterparts (e.g. Wyatt, 2011). This could reflect a greater confidence in engaging in ERAs, or better access to self-sourced opportunities, from more developed social and cultural capital. Their life experience may also mean they better understand the value of ERAs for extending connections and fostering personal growth.

High SES graduates' greater activity participation than their less affluent peers resonates with extant research (Stuart et al., 2009). Bourdieu's (1986) conceptualisations of social capital may explain these behaviours, noting that more advantaged graduates with higher social capital are better able to leverage their networks to create career advantage. Both bridging and bonding social capital could influence student ability to self-source ERA opportunities and limited embodied cultural capital could mean underprivileged students may consider the activities less suited to them, or they feel less inclined to 'play the game' (Bathmaker et al., 2016). Burke et al.'s (2020) work echoes our findings to reveal the classed nature of successful navigation of the graduate labour market. He highlights how *Naïve* (low SES) students may avoid ERAs in preference for building educational capital and resources while *Knowing* students — high SES students with greater social capital, resources and confidence in completing HE — further enhance their social capital through these additional opportunities. Findings may also reflect the deterrents of cost and time for less privileged students (Bathmaker et al., 2016; Stuart et al., 2009).

Greater activity participation among regional/remote graduates and those with disability was unexpected. Despite distance being a reported barrier for regional-based students, with ERAs largely facilitated from metro-based campuses, and students with disability often inhibited by concerns for physical access and psychological wellbeing (Clarke & Harvey, 2019; Dickinson et al., 2021) these cohorts of students are taking up ERAs during their studies. These positive results may perhaps be attributed to calls to improve these groups' HE experience and build their confidence, sense of belonging and social ties (Harvey et al., 2017) and/or could reflect increased personal appetite and awareness of building their capital resources and developing employability for labour market competitiveness. International students' higher engagement in ERAs may reflect strategies to accrue additional social capital and institutionalised cultural capital to be competitive in their unfamiliar host country's labour market (Tran, 2016). Findings align with their strong commitment to developing employability, not only to enable them to secure work in their study destination country but also when they return home (Pham, 2021).

As observed by Pinto and Ramalheira (2017), the gains from taking part in ERAs varied by activity type. There were clear patterns of positive and negative effects of activity participation on job attainment. Volunteering, and to a lesser extent micro-credentials, negatively impacted on the full-time employment outcomes of several groups. This may conflict with expectations, given that participating students believe volunteering enhances their employment prospects (Barton et al., 2019; Kinash et al., 2016) and it is considered to develop social capital through building ties and can signal ability to prospective employers (see Wilson et al., 2020). However, volunteering can adversely affect academic success, given it typically involves activities outside of students' discipline or intended career (Dickinson et al., 2021; Fényes et al., 2021) and may cause employers to question professional commitment (see Green et al., 2019). The negative result for micro-credentials/ digital badges was also surprising given their role in developing institutional cultural capital which evidences and communicates skills and knowledge acquisition to prospective employers. Findings may resonate with Miller et al.'s (2022) assertion of graduate employers' 'reluctance to rely on micro-credentials that they are not familiar with' (p.13). This supports Bean & Dawkins (2021) advocation for a unified credentials framework/platform that enables a common language for students, educators and employers on requisite skills.

The positive employment effects for club/society roles for multiple groups affirm the value employers place on activities that indicate responsibility, maturity and leadership (Stuart et al., 2009; Tchibozo, 2007). Participation can also foster social capital through developing connections and belonging among students in their discipline/area of interest (Brereton & Mistry,

2019; Buckley & Lee, 2021). Mentoring's known benefits for building professional connections and providing career clarity (Kinash et al., 2016) were evident for many groups, enabling students to understand and assess their cultural fit for a chosen profession/organisation. Mentoring is particularly valued by students with lower social capital who may be new to career-based conversations in their family/peer circles and when addressed contextually rather from a deficit lens (Colley, 2003). The modest, positive effects for incubator/enterprise activities are also encouraging, their growing popularity promising unique opportunities to engage in co-working spaces that can build confidence and expand students' social capital (Jackson et al., 2022b, 2022a). Findings indicate the value of mentoring and award programmes for lowering feelings of overqualification among multiple groups while club/society roles also had a positive impact for females, low SES and regional graduates. This may indicate how these activities build participants' awareness of the need to, and understanding of how to, effectively mobilise and leverage their acquired institutional cultural capital for recruitment into graduate roles, more inherent to privileged students (Bathmaker et al., 2016). Despite volunteering's association with inferior job attainment rates, it also led to significantly lower levels of perceived overqualification for these three groups, supporting Tchibozo's (2007) finding that ERAs can create an occupational status advantage even if participating graduates were unemployed for a longer time post-graduation.

Regarding specific groups, mature-age graduates' lack of job attainment gains from ERAs aligns with earlier work (see Stuart et al., 2009). This may be due to an over-commitment of responsibilities and limited capacity to effectively leverage potential benefits (Winstone et al., 2022), or their existing life/work experience and developed social and cultural capital mean that ERAs are simply less beneficial in instrumental terms. Indigenous graduates report relatively strong employment outcomes (Jackson & Li, 2021) and ERAs may benefit Indigenous students more for building their sense of belonging and social networks, rather than employment rates. Employment gains for international and NESB graduates were also not overwhelming although the evidenced value of mentoring could relate to opportunities for developing professional communication skills (Jackson et al., 2019). In contrast, males, females, low SES and regional graduates, and to a lesser extent those with disability, garnered significant employment benefits from ERAs, with club/society roles, leadership/award and mentoring programmes offering valuable development opportunities. Further investigation may help to identify the nuances of how each activity developed bridging social capital and institutionalised cultural capital, and for which groups.

The experienced gains in preparedness for future work among males, younger and domestic graduates, align with the evidenced value of ERAs on perceptions of work-preparedness (Buckley & Lee, 2021; Jackson & Bridgstock, 2021; Thompson et al., 2013). Improvements, however, were not apparent among any of the equity groups, contrasting with earlier evidence that external ERAs are positively associated with perceptions of job suitability and skill mastery (Pinto & Ramalheira, 2017) and supporting assertions that they are not predictors of subjective employability (e.g. Swingler et al., 2022). There is, therefore, a lack of consensus among empirical studies on the alignment of ERAs and employability.

Conclusions and implications

This study highlights how participation in ERAs beyond the curriculum varies among different student groups. Bourdieu's (1986) theory of social and cultural capital helps to illuminate how some groups may lack the networks, confidence and circumstances to engage

in ERAs. While ERAs have demonstrated links to graduate employment (Kinash et al., 2016), findings emphasised that different groups vary in their ability to leverage the benefits for career purposes, with certain activities more effective than others for enhancing employability and signalling achievements and capabilities to prospective employers. The study bridges the empirical limitations of earlier work investigating the impact of ERAs on graduate outcomes and advances a much-needed understanding of how gains may vary across diverse HE cohorts (Kim & Bastedo, 2017).

The study has some key implications for HE policy and practice. First, there is a need for more inclusive ERAs that are flexibly designed to cater for all students' varying needs and circumstances. This includes careful consideration of current uptake and participation gaps, and encouraging more diversity, such as in society/club leadership roles (Dickinson et al., 2021). Second, universities need to find ways to encourage all students to participate in ERAs, overcoming any feelings of not belonging and low self-confidence levels, the latter closely tied to social and cultural capital and a key barrier to participating in and leveraging benefits from ERAs (Dickinson et al., 2021). Third, university-supported ERAs should intentionally build students' social and cultural capital resources, embedding networking and insights into professional/work culture to prepare for future culture.

Furthermore, university-supported ERAs should incorporate reflection and evidencing of achievements as part of activities, explicitly linking to graduate selection criteria to help students understand and demonstrate their skills, achievements and cultural fit to recruiting organisations. This is critical given participation in ERAs does not guarantee employment, graduates must also be able to communicate their learning and its relevance for advertised roles (Stuart et al., 2009). ERAs which facilitate reflection, such as mentoring and award programmes, appear to better position those with less developed social and cultural capital to market themselves effectively. Reflective activities can help students to make closer links between ERAs and their own employability, understanding how activities have prepared them for future work and what more is needed. Collectively, these changes may support more equal access for all students, enabling all to experience their profound benefits and critical for avoiding the reproduction of structural inequalities in HE (Hórdosy & Clark, 2018). They do, however, come with cost and manpower implications, requiring universities to reconsider their inadequate resourcing of employability strategies (Healy et al., 2022).

The findings provide an important foundation for future study which could investigate activity access and outcomes within different disciplines, as well as at postgraduate level. Furthermore, exploring motivations for activity engagement through qualitative inquiry, such as Stevenson and Clegg's (2012) purported gendered differences with females placing less value on ERAs for employability and career, could inform ways to increase engagement among groups.

Data availability Not available

Code availability Not available

Declarations

Ethics approval The research was approved by the human ethicscommittee of the lead author's institution.

Consent to participate All participants provided appropriate consent toparticipate in the study.

Consent for publication All authors provide consent forpublication.

Conflict of interest The authors are on the board of directors for theAustralian Collaborative Education Network. They receive no compensation asmembers of the board of directors.

References

Australian Government. (2019). *Performance-based funding for the Commonwealth Grant Scheme*. Australian Government.

Baert, S., & Verhaest, D. (2021). Work hard or play hard? Degree class, student leadership and employment opportunities. *Oxford Bulletin of Economics and Statistics, 83*(4), 1024–1047. https://doi.org/10.1111/obes.12424

Bartkus, K., Nemelka, B., Nemelka, M., & Gardner, P. (2012). Clarifying the meaning of extracurricular activity: a literature review of definitions. *American Journal of Business Education, 5*(6), 693–703. https://doi.org/10.19030/ajbe.v5i6.7391

Barton, E., Bates, E., & O'Donovan, R. (2019). 'That extra sparkle': Students' experiences of volunteering and the impact on satisfaction and employability in higher education. *Journal of Further and Higher Education, 43*(4), 453–466. https://doi.org/10.1080/0309877x.2017.1365827

Bathmaker, A., Ingram, N., Abrahams, J., Hoare, A., Waller, R., & Bradley, H. (2016). *Higher education, social class and social mobility - The degree generation*. Palgrave Macmillan UK.

Batistic, S., & Tymon, A. (2017). Networking behaviour, graduate employability: A social capital perspective. *Education + Training, 59*(4), 374–388. https://doi.org/10.1108/ET-06-2016-0100

Baxter, A., & Waldock, J. (2012). *Developing employer engagement in STEM through career mentoring*. Higher Education Academy.

Bean, M., & Dawkins, P. (2021). *University-industry collaboration in teaching and learning*. Australian Government.

Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood Press.

Brereton, F., & Mistry, V. (2019). Barriers to student engagement in clubs and societies: a social capital perspective. *Innovations in Practice, 13*(2), 24–45. https://doi.org/10.24377/LJMU.iip.vol13iss2article319

Brewis, G., Russell, J., & Holdsworth, C. (2010). *Bursting the bubble - Students volunteering and the community*. National Co-ordinating Centre for Public Engagement.

Bridgstock, R. (2019). Graduate employability 2.0: Learning for life and work in a socially networked world. In J. Higgs, G. Crisp, & W. Letts (Eds.), *Education for employability (volume 1)* (pp. 97–106). Brill.

Brown, P., Hesketh, A., & Williams, S. (2004). *The mismanagement of talent: Employability and jobs in the knowledge economy*. Oxford University Press.

Buckley, P., & Lee, P. (2021). The impact of extra-curricular activity on the student experience. *Active Learning in Higher Education, 22*(1), 37–48. https://doi.org/10.1177/1469787418808988

Burke, C., Scurry, T., & Blenkinsopp, J. (2020). Navigating the graduate labour market: the impact of social class on student understandings of graduate careers and the graduate labour market. *Studies in Higher Education, 45*(8), 1711–1722. https://doi.org/10.1080/03075079.2019.1702014

Clark, G., Marsden, R., Whyatt, J., Thompson, L., & Walker, M. (2015). 'It's everything else you do… alumni views on extracurricular activities and employability. *Active Learning in Higher Education, 16*(2), 133–147. https://doi.org/10.1177/1469787415574050

Clarke, M. (2018). Rethinking graduate employability: The role of capital, individual attributes and context. *Studies in Higher Education, 43*(11), 1923–1937. https://doi.org/10.1080/03075079.2017.1294152

Clarke, J., & Harvey, A. (2019). De-valuing 'alternative extra-curricular activities': The symbolic reproduction of extra-curricular activities as status distinctions. Proceedings of the Society for Research in Higher Education, UK. https://srhe.ac.uk/arc/conference2019/abstracts/0422.pdf

Clegg, S., Stevenson, J., & Willott, J. (2010). Staff conceptions of curricular and EC activities in higher education. *Higher Education, 59*(5), 615–626. https://doi.org/10.1007/s10734-009-9269-y

Colley, H. (2003). Engagement mentoring for socially excluded youth: Problematising an 'holistic' approach to creating employability through the transformation of habitus. *British Journal of Guidance & Counselling, 31*(1), 77–99. https://doi.org/10.1080/0306988031000086189

Dawkins, J. (1990). *Higher education: The challenge ahead*. Australian Government.

Dickinson, J., Griffiths, T., & Bredice, A. (2021). 'It's just another thing to think about': Encouraging students' engagement in extracurricular activities. *Journal of Further and Higher Education, 45*(6), 744–757. https://doi.org/10.1080/0309877x.2020.1813263

Dyson, S., Liu, L., van den Akker, O., & O'Driscoll, M. (2017). The extent, variability, and attitudes towards volunteering among undergraduate nursing students: Implications for pedagogy in nurse education. *Nurse Education in Practice, 23*, 15–22. https://doi.org/10.1016/j.nepr.2017.01.004

Eisenstein, A., Goh, C., & Istrate, E. (2021). Supervised entrepreneurial work-integrated learning. *International Journal of Work-Integrated Learning, 22*(3), 413–422. https://doi.org/10.4018/978-1-7998-6440-0.ch006

English, P., de Villiers Scheepers, M., Fleischman, D., Burgess, J., & Crimmins, G. (2021). Developing professional networks: The missing link to graduate employability. *Education + Training, 63*(4), 647–661. https://doi.org/10.1108/ET-10-2020-0309

Evans, C., & Yusof, Z. (2022). Volunteering: A viable alternative work experience for university students? *Industry and higher education*. https://doi.org/10.1177/09504222221093180

Fényes, H., Markos, V., & Mohachi, M. (2021). Volunteering among higher education students as part of individual career management. *Corvinus Journal of Sociology and Social Policy, 12*(2), 3–22. https://doi.org/10.14267/cjssp.2021.2.1

Fényes, H., & Pusztai, G. (2012). Volunteering among higher education students. Focusing on the micro-level factors. *Journal of Social Research and Policy, 3*(1), 73–95. https://doi.org/10.14267/cjssp.2021.2.1

Foley, C., Darcy, S., Hergesell, A., Almond, B., McDonald, M., & Brett, E. (2022). University-based sport and social clubs and their contribution to the development of graduate attributes. *Active Learning in Higher Education*. https://doi.org/10.1177/14697874221127692

Franke, R., Ruiz, S., Sharkness, J., DeAngelo, L., & Pryor, J. (2010). *2009 administration of the College Senior Survey*. Higher Education Research Institute.

Geng, Y., Cheung, S., Huang, C., & Liao, J. (2022). Volunteering among chinese college students during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health, 19*(9), 5154. https://doi.org/10.3390/ijerph19095154

Gleeson, J., Black, R., Keddie, A., & Charles, C. (2022). Graduate capitals and employability: Insights from an australian university co-curricular scholarship program. *Pedagogy Culture & Society*, 1–19. https://doi.org/10.1080/14681366.2022.2038251.

Green, J., Carbone, A., & Rayner, G. (2019). Employability pursuits beyond the formal curriculum: Extra and co-curricular activities. In J. Higgs, G. Crisp, & W. Letts (Eds.), *Education for employability (volume 1)* (pp. 165–176). Brill.

Halfon, E. (2022). Socially active volunteering students: The case of student councils. *Children & Society*. https://doi.org/10.1111/chso.12636

Harvey, A., Andrewartha, L., Edwards, D., Clarke, J., & Reyes, K. (2017). *Student equity and employability in higher education*. Centre for Higher Education Equity and Diversity Research.

Healy, M., Brown, J. L., & Ho, C. (2022). Graduate employability as a professional proto-jurisdiction in higher education. *Higher Education, 83*(5), 1125–1142. https://doi.org/10.1007/s10734-021-00733-4

Holmes, K., Paull, M., Haski-Leventhal, D., MacCallum, J., Omari, M., Walker, G., & Maher, A. (2021). A continuum of university student volunteer programme models. *Journal of Higher Education Policy and Management, 43*(3), 281–297. https://doi.org/10.1080/1360080X.2020.1804658

Hordósy, R., Clark, T., & Vickers, D. (2018). Lower income students and the 'double deficit' of part-time work: undergraduate experiences of finance, studying and employability. *Journal of Education and Work, 31*(4), 353–365. https://doi.org/10.1080/13639080.2018.1498068

Jackson, C., Milos, D., & Kerr, J. (2019). Mentoring for employability: A state-level impact study. *Studies in Graduate and Postdoctoral Education, 10*(3), 180–188. https://doi.org/10.1108/SGPE-04-2019-0047

Jackson, D., & Bridgstock, R. (2021). What actually works to enhance graduate employability? The relative value of curricular, co-curricular, and extra-curricular learning and paid work. *Higher Education, 81*(4), 723–739. https://doi.org/10.1007/s10734-020-00570-x

Jackson, D., & Li, I. (2021). Transition to work, mismatch, and underemployment among graduates: an australian longitudinal study. *International Journal of Manpower*. https://doi.org/10.1108/IJM-03-2021-0195

Jackson, D., Riebe, L., & Macau, F. (2022a). Determining factors in graduate recruitment and preparing students for success. *Education + Training*. https://doi.org/10.1108/ET-11-2020-0348

Jackson, D., Shan, H., & Meek, S. (2022b). Developing graduate capabilities to meet the demands of future work: optimising workplace learning. *International Journal of Management Education*. https://doi.org/10.1016/j.ijme.2022.100692

Jackson, D., & Tomlinson, M. (2021). The relative importance of work experience, extra-curricular and university-based activities on student employability. *Higher Education Research & Development, 41*(4), 1119–1135. https://doi.org/10.1080/07294360.2021.1901663

Kanar, A., & Bouckenooghe, D. (2021). The role of extracurricular activities in shaping university students' employment self-efficacy perceptions. *Career Development International, 26*(2), 158–173. https://doi.org/10.1108/CDI-02-2020-0036

Kay, J., Ferns, S., Russell, L., Smith, J., & Winchester-Seeto, T. (2019). The emerging future: Innovative models of work-integrated learning. *International Journal of Work-Integrated Learning, 20*(4), 401–413. https://doi.org/10.4324/9781003021049-28

Kezar, A., Walpole, M., & Perna, L. (2015). Engaging low-income students. In S. Quaye, & S. Harper (Eds.), *Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations* (pp. 237–255). Routledge.

Kim, J., & Bastedo, M. (2017). Athletics, clubs, or music? The influence of college extra-curricular activities on job prestige and satisfaction. *Journal of Education and Work, 30*(3), 249–269. https://doi.org/10.1080/13639080.2016.1165341

Kinash, S., Crane, L., Judd, M., & Knight, C. (2016). Discrepant stakeholder perspectives on graduate employability strategies. *Higher Education Research & Development, 35*(5), 951–967. https://doi.org/10.1080/07294360.2016.1139555

Kuh, G. (2009). What student affairs professionals need to know about student engagement. *Journal of College Student Development, 50*(6), 683–706. https://doi.org/10.1353/csd.0.0099

Lin, M., Lucas, H., & Shmueli, G. (2013). Too big to fail: Large samples and the *p*-value problem. *Information Systems Research, 24*(4), 906–917. https://doi.org/10.1287/isre.2013.0480

Maia, A. (2021). Co-curricular leadership tools: The use of inventories outside of the college classroom. *New Directions for Student Leadership, 2021*(170), 77–85. https://doi.org/10.1002/yd.20444

Maina, M., Guàrdia Ortiz, L., Mancini, F., & Melo, M. (2022). A micro-credentialing methodology for improved recognition of HE employability skills. *International Journal of education Technology in Higher Education, 19*(1), 1–22. https://doi.org/10.1186/s41239-021-00315-5

Maynard, D., Joseph, T., & Maynard, A. (2006). Underemployment, job attitudes, and turnover intentions. *Journal of Organizational Behavior, 27*(4), 509–536. https://doi.org/10.1002/job.389

Miller, K., de Jorre, S., & Jorre, T. (2022). Digital micro-credentials in environmental science: An employer perspective on valued evidence of skills. *Teaching in Higher Education*, 1–17. https://doi.org/10.1080/13562517.2022.2053953.

Nuijten, M., Poell, R., & Alfes, K. (2017). Extracurricular activities of dutch university students and their effect on employment opportunities as perceived by both students and organizations. *International Journal of Selection and Assessment, 25*(4), 360–370. https://doi.org/10.1111/ijsa.12190

Parutis, V., & Howson, C. (2020). Failing to level the playing field: Student discourses on graduate employability. *Research in Post-Compulsory Education, 25*(4), 373–393. https://doi.org/10.1080/13596748.2020.1846312

Pegg, A., Waldock, J., Hendy-Isaac, S., & Lawton, R. (2012). *Pedagogy for employability*. Higher Education Academy.

Pham, T. (2021). Reconceptualising employability of returnees: What really matters and strategic navigating approaches. *Higher education, 81*(6), 1329–1345. https://doi.org/10.1007/s10734-020-00614-2

Pinto, L., & Ramalheira, D. (2017). Perceived employability of business graduates: The effect of academic performance and extracurricular activities. *Journal of Vocational Behavior, 99*, 165–178. https://doi.org/10.1016/j.jvb.2017.01.005

Putnam, R. (2000). *Bowling alone*. Simon and Schuster.

Roulin, N., Bangerter, A., & Yerly, E. (2011). The uniqueness effect in selection interviews. *Journal of Personnel Psychology, 10*(1), 43–47. https://doi.org/10.1037/e518392013-786

Rubin, M. (2012). Social class differences in social integration among students in higher education: A meta-analysis and recommendations for future research. *Journal of Diversity in Higher Education, 5*(1), 22–38. https://doi.org/10.1037/a0026162

Seow, P. S., & Pan, G. (2014). A literature review of the impact of extracurricular activities participation on students' academic performance. *Journal of Education for Business, 89*(7), 361–366. https://doi.org/10.1080/08832323.2014.912195

Smith, M., Bell, K., Bennett, D., & McAlphine, A. (2019). *Employability in a global context*. Graduate Career Australia.

Social Research Centre. (2020). *2020 Graduate Outcomes Survey*. SRC.

Social Research Centre. (2021). *2021 Graduate Outcomes Survey*. SRC.

Stevenson, J., & Clegg, S. (2012). Who cares? Gender dynamics in the valuing of extra-curricular activities in higher education. *Gender and education, 24*(1), 41–55. https://doi.org/10.1080/09540253.2011.565039

Stuart, M., Lido, C., Morgan, J., & May, S. (2009). *Student diversity, extra-curricular activities and perceptions of graduate outcomes*. Higher Education Academy.

Swingler, M., Roy, A., Manoli, A., Hasty, W., Macfarlane, D., Kapoor, A., & Kokkinidis, G. (2022). Bridging the gap: Skill development in curricular, co-curricular and extra-curricular activities and the impact on readiness for employment. *EdArXiv*. https://doi.org/10.35542/osf.io/dvhmf

Tchibozo, G. (2007). Extra-curricular activity and the transition from higher education to work: A survey of graduates in the UK. *Higher Education Quarterly, 61*(1), 37–56. https://doi.org/10.1111/j.1468-2273.2006.00337.x

Thompson, L., Clark, G., Walker, M., & Whyatt, J. (2013). 'It's just like an extra string to your bow': Exploring higher education students' perceptions and experiences of extracurricular activity and employability. *Active Learning in Higher Education, 14*(2), 135–147. https://doi.org/10.1177/1469787413481129

Tieu, T., Pancer, S., Pratt, M., Wintre, M., Birnie-Lefcovitch, S., Polivy, J., & Adams, G. (2010). Helping out or hanging out: the features of involvement and how it relates to university adjustment. *Higher Education, 60*(3), 343–355. https://doi.org/10.1007/s10734-009-9303-0

Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Education + Training, 59*(4), 338–352. https://doi.org/10.1108/ET-05-2016-0090

Tran, L. (2016). Mobility as 'becoming': a bourdieuian analysis of the factors shaping international student mobility. *British Journal of Sociology of Education, 37*(8), 1268–1289. https://doi.org/10.1080/01425692.2015.1044070

Walpole, M. (2003). Socioeconomic status and college: How SES affects college experiences and outcomes. *Review of Higher Education, 27*(1), 45–73. https://doi.org/10.1353/rhe.2003.0044

Wilson, J., Mantovan, N., & Sauer, R. (2020). The economic benefits of volunteering and social class. *Social Science Research, 85*, 102368. https://doi.org/10.1016/j.ssresearch.2019.102368

Winstone, N., Balloo, K., Gravett, K., Jacobs, D., & Keen, H. (2022). Who stands to benefit? Wellbeing, belonging and challenges to equity in engagement in extra-curricular activities at university. *Active Learning in Higher Education, 23*(2), 81–96. https://doi.org/10.1177/1469787420908209

Wyatt, L. (2011). Non-traditional student engagement: Increasing adult student success and retention. *The Journal of Continuing Higher Education, 59*(1), 10–20. https://doi.org/10.1080/07377363.2011.544977