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Do employability programmes in higher education improve skills and labour market outcomes? A systematic review of academic literature

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ABSTRACT

We conduct a systematic literature review of the academic literature on activities organised by Higher Education Institutions (HEIs) with the aim of improving skills associated with employability and facilitating labour market outcomes. The search resulted in 87 papers followed by an iterative evaluation of their relevance. Papers in the corpus were analysed using an evaluation research framework and classified in terms of the activities, outputs, and outcomes. The reviewed literature is centred on one of three stakeholders: HEIs, students or employers. It suggests all stakeholders value employability activities for similar reasons. Generally, they are seen as a vital part of HEI education programmes, facilitating the development of diverse skills that are desirable in the labour market as well as de-risking labour market entry for students and appointments for employers by alleviating information asymmetries. The evidence base is dominated by small-scale case studies and evaluations that are not sufficiently robust to infer about causal impacts of employability activities on students' development and labour market outcomes. Moreover, the corpus is skewed towards studies of Work-Related Learning. We set out avenues for future research and argue for a comprehensive evidence base encompassing diverse forms of employability activities, such as larger scale 'embedded employability' activities; a more contextual understanding of employability as an interplay between individual and a particular labour market and education system; and a more robust evidence base tracking students from education into the labour market, allowing for selection effects and identifying heterogeneity of impacts across different activities and demographics.

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Employability; skills development; graduate outcomes; work-based learning; higher education institutions

1. Introduction

The aim of this paper is to examine the current academic understanding of how and to what extent dedicated employability activities in Higher Education Institutions (HEIs) facilitate employability and ultimately graduate labour market outcomes. Employability activities are taken to be any activity organised within HEIs with the purpose of helping students improve their employability and successfully navigate the labour market. As we shall see, the academic literature is weighted towards studies

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of placements and internships. However, in practice, employability activities are much more diverse as can be seen from best practice case studies, such as compiled by Advance-HE in the UK (Norton and Dalrymple 2020) and the National Association of Colleges and Employers (NACE) in the United States.¹ For instance, Norton and Dalrymple (2020) highlight examples of curricular frameworks, specific employability and skills training modules, and assistance with career planning and networking.

Employability has become part of the higher education mainstream globally (Matherly and Tillman 2015) as can be witnessed by publication of higher education rankings based on indicators of employability, such as QS² and THE.³ Employability has been at the centre of labour and educational policies in recent decades with international institutions such as the United Nations and the OECD promoting employability solutions (McQuaid and Lindsay 2005). More recently, the influence of employability in policy debates can be seen through several publications of the European Union (EU), including the 2016 Skills Agenda and the Bologna declaration. In the United Kingdom (UK) the influence of employability thinking can be seen in public policy focus on graduate outcomes, e.g. in the Teaching Excellence Framework (TEF) (DBIS 2016).

The term employability has been criticised as a fuzzy notion, often ill-defined and sometimes not defined at all (Gazier 1998, 298) and being a 'buzz-word' that is more often used than properly understood (Philpott 1999). Several definitions of employability can be found in the literature to date and as Cheng et al. (2022) point out in their review, perceptions vary between different stakeholders. Hillage and Pollard (1998, 1) argue employability is about 'having the capability to gain initial employment, maintain employment and obtain new employment if required'. This is challenged by Brown, Hesketh, and Williams (2003), who argue that employability is not only about the individual but also economic context and job competition. Therefore, they define it as 'the relative chances of acquiring and maintaining different kinds of employment' (111). Similarly, McQuaid and Lindsay (2005) review the use of the term in policy discourse and highlight the risk of reducing employability simply to an individual attribute. Instead, they present a broader framework that also takes account of personal circumstances (e.g. caring responsibilities) and external factors. Yorke (2006, 8), stresses that employability should be seen in probabilistic terms and the conception of skills needs to be broad, defining employability as 'a set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations'. A recent literature review by Peeters et al. (2019) proposes a classification for the different categories of skills that may contribute to employability and be cultivated through employability activities in HEIs. Drawing on a broad literature, with the purpose of explaining the concept, Clarke (2017) proposes an integral model of graduate employability accounting for six dimensions as human capital, social capital, individual attributes, behaviours, perceived employability, and graduate outcomes. Healy, Hammer, and McIlveen (2022) focused on the disciplinary boundaries between graduate employability and career guidance, advocating for interdisciplinary exchange. Römgens, Scoupe, and Beausaert (2020) argue that the understanding and study of employability varies across disciplines and call for a more integrated approach.

A semantic issue that requires clarifying is the use of the term Work-Based Learning (WBL) in employability discussions. Lester and Costley (2010, 562) define it broadly as 'all and any learning that is situated in the workplace or arises directly out of workplace concerns'. We acknowledge a more recent and constricted definition of the UK Standing Committee for Quality Assessment (QAA 2018, 1), where WBL 'consists of authentic structured opportunities for learning which are achieved in a workplace setting or are designed to meet an identified workplace need' and explicitly excludes 'work-related or simulated learning activity that has not been formulated or commissioned by, or in partnership with, employers to address a current workforce need'. Conversely, in the context of the employability studies in the corpus, the WBL term is frequently invoked to describe work-based elements of higher education programmes, such as internships and placements. To avoid confusion, we instead refer to such activities as Work-Related Learning (WRL).

In order to map the current research frontier on the impact of employability activities in HEIs, we conduct a systematic review of academic literature on employability. We adopt an evaluation stance,

seeking to identify evidence on the pathways through which employability activities impact on students and their graduate outcomes and to what extent these activities can be deemed to be effective. This complements previous reviews of employability in higher education by focussing on the activities and practices deployed in the higher education sector and surveying evidence of their effectiveness. Our contribution to the state of the art is twofold: we first explore which are the key challenges for enhancing employability programme and graduate outcomes; second, we assess the robustness of current research on the topic.

To classify findings, we adopt the simple conceptual framework of a logic model (see McLaughlin and Jordan 2015, on the use of logic models in evaluation research) of activities, outputs and outcomes identified separately for each of three stakeholders, (prospective) graduates, HEIs and employers. Our conceptual framework entails analysing the main stakeholders involved in the process. The first is the (prospective) graduates themselves, who need to possess and develop the required set of knowledge, skills, attitudes, attributes, and understandings that allow them (i) to find and retain sustainable employment; (ii) obtain a new one when needed; and (iii) to bring their know-how and skills to the employers to ensure their proper and effective functioning. The second actors are the HEIs, which oversee facilitating appropriate learning to support school-to-work transitions. This coincides with HEIs increasingly combining academic with vocational learning in several fields (Martin, Lord, and Warren-Smith 2020). A development reinforcing the argument of Powell and Solga (2010) that when examining skills formation, higher and vocational education systems should ideally be studied as a nexus rather than stand-alone systems. The third are the employers that are assumed to coordinate with the HEIs to indicate which skills and abilities are mostly required. These three groups of stakeholders are nested within a policy environment shaped by government (Reid 2016, see online supplementary data; Watkins et al. 2018, see online supplementary data).

The corpus consists of 87 academic papers published in the last 2 decades that were identified through a sequence of keyword search followed by an iterative evaluation of the relevance of each paper. The reader should be aware that the review covers employability activities exclusively as part of full-time degrees. Although we are fully aware that under the employability term might fall a very broad spectrum of activities comprising degree apprenticeships and in-service degrees, these were excluded from our corpus in order to delimit the scope of the review.

This literature suggests all stakeholders value employability activities for similar reasons. They are seen as a vital part of HEI education programmes, facilitating the development of diverse skills that are desirable in the labour market as well as de-risking labour market entry for students and appointments for employers by alleviating information asymmetries. However, the evidence base is dominated by small-scale case studies and evaluations, mostly carried out by the providers themselves. These are not sufficiently robust to infer about causal impacts of employability activities on students' development and labour market outcomes. The lack of suitable data is an obvious limitation for any prospective evaluation of employability activities. However, even before an evaluation can be designed and data collected, it is necessary to establish a clear theory of change, i.e. what are employability activities intended to achieve and how? The purpose of employability activities tends to be implicit rather than explicit and one of the contributions of this review is to articulate a theory of change for employability activities based on the evidence extracted from the corpus. Another limitation of the reviewed literature is its lack of comprehensiveness in the coverage of different modality of employability activities. It is skewed towards studies of Work-Related Learning (WRL) activities with a notable gap of work looking at less intensive 'embedded employability' activities in HEIs.

The next section sets out our methods and descriptive findings. The third section provides a thematic discussion of the corpus. In the fourth section, we provide a brief evaluation of the corpus and set out avenues for future research, before concluding. Appendix A contains the extraction form used by authors to summarise the papers read and Appendix B lists all the papers that were included

in the corpus. The reference list contains additional sources that were drawn upon to frame the study.

2. Methods and descriptive findings

The purpose of the literature review is to summarise available evidence on the mechanisms through which employability programmes may support labour market outcomes of graduates and their effectiveness. A systematic review of literature is defined as research that examines rigorous and transparent evidence produced by secondary sources for solving a problem previously conceptualised (Oakley 2012, vii) and providing a ‘short cut to the pool of research knowledge in a given area’ (James 2012, 5).

Table 2 sets out the clusters of search terms used to identify the long list of papers that were then manually screened for inclusion. The papers to be included in the literature review needed to refer to an employability activity of some description (list A), focus on employability, skills or similar (list B) as well as labour market outcomes (list C). A group of terms relating to lifelong learning and adult education terms (list D) was used to exclude articles focussing on such programmes. Moreover, to narrow the search to focus on the higher education level, a range of search terms were included to delimitate higher education (list E). Entrepreneurship and enterprise skills are out of the scope of the current review and consequently not on our list of keywords. However, there is an overlap between enterprise and entrepreneurship education and employability research and therefore Amadi-Echendu et al. (2016, see online supplementary data) were included in the corpus, given that this paper assesses a specific employability activity.

As detailed in Table 1, the successive application of the keyword search terms (see Table 2) identified 156 academic publications listed in the SCOPUS and Journal Citation Report (JCR) databases and published in the period 2002–2022.

These 156 papers were reviewed for inclusion by the research team and non-relevant papers were excluded from the corpus after successive closer examination. This screening process is summarised in Table 3 and resulted in a final corpus of 87 academic articles and peer-reviewed books sections.

All the papers were read from start to finish by the authors. The lead author issued batches of papers to each team member, who then proceeded to read and summarise. To harmonise the examination of each paper, the extraction form was (see Appendix A) based on our logic model. For moderation, the research team met at regular intervals to present and discuss findings reported in the extraction forms.

Data from the extraction forms was analysed using the following steps. First, a deductive classification was undertaken, where publications were categorised in terms of what steps in the logic model (activities, outputs, outcomes) they spoke to and the perspective of what stakeholder they described. Second, we then proceeded to examine the data inductively (Strauss 1987) identifying topics in the publications and examining the relationships between these categories. Finally, we synthesise the findings of selected studies to develop and inform further the logic model (Gough, Oliver, and Thomas 2012) and clarify on aggregate how these might augment our understanding.

Due to the diverse range of studies included in this review, our approach to analysis and synthesis differed from the typical aggregative approach used in meta-analyses (Gough, Oliver, and Thomas 2012). Instead, we employed a configurative approach, which involved conducting a thematic

Table 1. Search by list of keywords.

Search terms	Number of hits
A (EA)	7102
A (EA) + B (competence)	4686
A (EA) + B (competence) + C (outcome)	730
A (EA) + B (competence) + C (outcome) + D (not LLL)	644
A (EA) + B (competence) + C (outcome) + D (not LLL) + E (HE)	156

Table 2. Groups of search terms used to identify the initial corpus of papers.

LIST A	employability activities (EA)	'graduate career guidance' OR 'graduate career planning' OR 'graduate employability skills programme' OR 'graduate employability skills program' OR 'academic employability skills development' OR 'employability skills programme' OR 'employability skills program' OR 'employability skills training' OR 'work-based training' OR 'work-based learning' OR 'work based learning' OR 'on-the-job training' OR 'young graduate programme' OR 'young graduate program' OR 'Employability programme' OR 'Employability program' OR 'Employability initiative' OR 'Workplace learning' OR 'Workplace readiness' OR 'Skills programme' OR 'Skills program' OR 'Work-related learning' OR 'Embedded employability' OR 'Credit-bearing employability' OR 'embedding employability'
LIST B	competence terms	'Capability' OR 'Competence*' OR 'Competence-based' OR 'Competency indicator' OR 'Core skills' OR 'Employability skills' OR 'employability' OR 'Expertise' OR 'Integration of knowledge' OR 'Integration of skills' OR 'Key competencies' OR 'key competences' OR 'Key skills' OR 'Learners' OR 'Learning power' OR 'Proficiency' OR 'Transversal skills' OR 'Vocational' OR 'skills' OR 'practical' OR 'hard skills' OR 'soft skills' OR 'occupational skills' OR 'craft skills' OR 'adaptive skills' OR 'transferable skills' OR 'Talent' OR 'Graduate attributes' OR 'Graduate skills' OR 'Employability skills' OR 'Workplace skills' OR 'Labour market skills' OR 'Embedded skills' OR 'up-skill' OR 'up-skilling' OR 'skills matching' OR 'graduate attributes' OR 'Noncognitive skills' OR 'Cognitive skills'
LIST C	programme outcomes	'employment' OR 'labour market situation' OR 'labor market situation' OR 'labour market integration' OR 'youth labour market' OR 'youth labor market' OR 'wage*' OR 'salary' OR 'earning' OR 'labour market insertion' OR 'job*' OR 'recruitment' OR 'school to work transition' OR 'school-to-work-transition' OR 'work placement' OR 'hiring' OR 'engagement' OR 'labour force' OR 'Global labour market' OR 'Graduate labour market' OR 'Graduate job market' OR 'Graduate success' OR 'Graduate outcomes' OR 'graduate to work transition' OR 'graduate labour market' OR 'graduate careers'
LIST D (not)	LLL terms	'lifelong learning', OR 'CPD' OR 'continued professional development' OR 'professional development', OR 'continuing education' OR 'continuing education' OR 'adult education' OR 'ongoing learning'
LIST E	Tertiary education level terms	'higher education' OR 'college' OR 'university' OR 'university education' OR 'post-compulsory education' OR 'vocational universities' OR 'technical colleges' OR 'higher technical' OR 'university of applied sciences'

Table 3. Overview of the screening process.

Scopus results	=	156
Screening by title	-	37
Screening by abstract	-	31
Full text screening:	-	1
Final corpus	=	87

analysis to establish analytical categories that would address our research questions. Scaffolded with a deductive framework of our logic model, we thoroughly read the studies and allowed codes to emerge organically from the data. Subsequently, we organised the findings into key themes that represented different ways of comprehending the overall meaning conveyed in the text. It is important to note that our thematic analysis did not focus on the frequency of themes appearing in the literature, but rather on their significance in relation to addressing our specific research questions. As a result, we developed a hierarchical coding framework consisting of three overarching meta-categories and seven sub-themes.

Most of the corpus (60 studies out of 87) is made up of similar articles on small case studies evaluating WRL activities at a quasi-atomistic scale (a specific course in a degree programme, a specific faculty, or a specific HEI). As reported in Table 4, these studies share a simple research design, usually qualitative with a limited amount of interviews to students (sometimes connected with a survey), HEIs personnel and, more rarely, employers involved in placement and internship (5). Studies tend to be from Anglo-Saxon institutions, mostly England, Scotland, USA, and Australia, with some notable exceptions for instance from Malaysia, Iran, and India. In terms of disciplines, almost two third of the corpus is related to educational research, followed by business economics

Table 4. Research design.

Qualitative		Quantitative		Mixed Methods		Others	
Case study	25	Survey	9	Convergent parallel design	14	Research overview	2
Interviews/focus groups	10	Descriptive analysis secondary data	12		Literature review	1	
Ethnography	1					Descriptive study	7
Action research	2						
Low/semi structured interviews	4						
Total	42		21		14		10

Table 5. Research design quality evaluation grid.

Design	Scale	Completeness of data	Data quality	Rating
Strong design for research question	Large number of cases per comparison group	Minimal missing data, no evidence of impact on findings	Standardised, independent, pre-specified, accurate	4
Good design for research question	Medium number of cases per comparison group	Some missing data, no evidence of impact on findings	Standardised, independent, not specified, some errors	3
Weak design for research question	Small number of cases per comparison group	Moderate missing data, no evidence of impact on findings	Not standardised, independent, pre-specified, some errors	2
Very weak design for research question	Very small number of cases per comparison group	High level of missing data, no evidence of impact on findings	Weak measures, high level of error, too many outcomes	1
No consideration of design	A trivial scale of study, or number is unclear	Huge amount of missing data, or not reported	Very weak measures, or accuracy not addressed	0

and psychology. A significant portion of the corpus was published in Emerald journals. Several publications are descriptive, and some can best be described as opinion pieces. A minority adopt an explanatory approach (Lim and Lee 2019, see online supplementary data; Tomic and Zilic 2020, see online supplementary data), and 21 out of 87 use quantitative analysis (12 of them are based on surveys). More than half are very recent in fact 56% of the papers were published within the last 7 years.

Moreover, to classify papers in terms of research design we adopted the criteria devised by Gorard et al. (2019). This framework rates the strength of research design across four dimensions, Design, Scale, Completeness of Data and Quality of Data. Each dimension has 5-point scale. This categorisation is summarised in Table 5.

3. Thematic findings

In this section, we summarise the findings of the literature review. This is designed to integrate our findings in an amalgam that is 'greater than the sum of the individual studies' (Gough, Oliver, and Thomas 2012, 283). It reveals that many different employability programmes take different forms such as internships; WRL programmes and project-collaboration with firms. After having systematized the evidence and extracted the information through the literature review extraction form, ascertained the main categories and the relationships among them, thematically, we identify three main categories together with some subcategories to consider when engaging with employability programmes in HE sector. The categories identified are in relation to the actors involved in employability practices: HEIs, students and graduates; and firms. The logic model informed by our survey of the literature is shown in Table 6.

Table 6. Employability activities, outputs, and outcomes by actor.

	Activities	Outputs	Outcomes
Students	• Courses and placements and part-time working opportunities	• Application of existing knowledge	• Competitive advantage in gaining employment
	• Exposure to the workplace	• Work experience	• Gain control and awareness in the development of their working careers
	• Specific skills or careers modules	• Ability to transfer knowledge acquired academically to diverging work contexts	• Increase professional network
	• Project learning	• Informal social networks in the process of selection	• Transversal skills
	• Time commitment for students	• Work practices, feedback, and reflective self-learning	• Improvement of graduates' career adaptability
		• Ability to identify their own skills	• Smoother and successful school-to-work transition experience
			• Gender differences in graduate self-reported skills acquisition
			• Racial barriers in hiring and engaging with international students from other ethnic cultures
			• Competitive employment preparation behaviour
Firms	• Interplay between HEIs and firms and professions in the training of future graduates	• Risk reduction in recruitment	• Reduction of recruitment cost
	• Train students (financial and HR inputs)	• Collecting more accurate information about the capabilities of potential employees	• Reduction of skills mismatch
	• Remuneration for students and HEIs	• Tailored competences adapted to firm needs	
	• Involvement in the design and delivery of training	• Increase cooperation among HR	
	• Time commitment for employers		
HEIs	• Mentoring and support to students	• Long and co-adaptive process between HEIs and firms	• Render the decision making in curriculum development more flexible to labour market needs
	• Application and selection process	• Adaptation of the content of the curriculum	
	• Establishing long-term relationships with employers		

(Continued)

Table 6. Continued.

Activities	Outputs	Outcomes
<ul style="list-style-type: none"> • Setting and governing employability programmes • Time commitment for academics • Resources for administrative staff and academics 		

Through the application of an iterative inductive coding, we proceed to classify our findings in relation to the point the corpus informs about. This was a thematic analysis, and it did not focus strictly on the frequency of themes appearing in the literature rather on their significance in relation to addressing our specific research questions (Dixon-Woods et al. 2005, see online supplementary data). However, the corpus was mostly in relation to student activities and their outputs with less emphasis on their outcomes (see row 1 in Table 6).

3.1. HEIs and characteristics of the programmes

Usually, HEI activities to promote employability include a wide range of activities, going from brief visits to worksites, or job-shadowing to observing the process of work, to school-based enterprise, work-placements, internships, and apprenticeships (Stern 1999, see online supplementary data). HEIs are the initiators and the key players in setting and governing employability programmes. However, involvement and ties with local environment and economy vary by type and historical mission of HEIs. According to Beaven et al. (2009, see online supplementary data), the role of employability programmes is to facilitate success in a specific field, therefore emphasis is on practical measures that HEIs can deploy, such as training in transferable workplace skills through placements, part-time working opportunities, and specific skills or careers modules.

3.1.1. What do employability programmes in HE do?

From the corpus analysed, we find that fostering employability (with various tools and modes) is predominantly seen by HEIs to adapt and improve the curricula offered to students (Beaven et al. 2009, see online supplementary data; Drake et al. 2009, see online supplementary data; Smith et al. 2019, see online supplementary data; Thomson 2010, see online supplementary data). As noted by Saville et al. (2020, see online supplementary data), in the UK the Leitch Review emphasised the importance of raising the attainment of the workforce by providing vocational education beyond ISCED level 5. Work experience is thought to supplement learning, enabling it to see how theory is applied in practice (Little and Harvey 2007, see online supplementary data) and improve personal and transferable skills, such as communication, confidence, perseverance, and empowerment (Helyer and Lee 2014; Lim and Lee 2019, see online supplementary data). Employability activities may enhance students critical thinking and 'encourage them to reach their creative limits to look for new ideas, identify new approaches, and create new solutions' (Soltani et al. 2013, 173, see online supplementary data). Cross-exposure with workplace settings yields valuable experience and helps to improve problem-solving skills (Kasa et al. 2020, see online supplementary data). Moreover, WRL in HE can improve graduates' career adaptability, optimism, and a smoother school-to-work transition (Kepir Sávoly et al. 2020, see online supplementary data).

Several studies argue that WRL improves confidence about doing a task and this in turn reinforces perseverance and effort (Lester and Costley 2010; Thomson 2010, see online supplementary data). However, as highlighted earlier, this feature cannot be deduced a priori from participation in a WRL setting (Feldman 2016, see online supplementary data; Kettis et al. 2013, see online

supplementary data). Some authors argue that classroom-based learning lacks features of WRL that enable students to learn how to transfer knowledge to real-world scenarios (Chen and Adefila 2020, see online supplementary data). Fletcher-Brown et al. (2015, see online supplementary data) point to the importance of 'live project learning' giving students exposure to the workplace resulting in personal, professional growth and self-confidence (Santiago 2009, see online supplementary data). In a similar vein, Thatcher et al. (2016, see online supplementary data) report that WRL facilitates learning through dialogue and service engagement. Such programmes combine the theoretical knowledge previously acquired with practical content and are deemed to be beneficial for the acquisition of transversal skills, such as communication and technical skills, teamwork, and adaptation to change (Hervás et al. 2012, see online supplementary data; Soltani et al. 2013, see online supplementary data; Walker et al. 2018, see online supplementary data).

Based on a systematic literature review, Feldmann (2016, see online supplementary data) concludes that WRL strengthens student motivation and transferable skills because it exposes them to variable situations. This is further endorsed by Dogara et al. (2020, see online supplementary data), Hegarty and Johnston (2009, see online supplementary data), Woodley and Beattie (2011, see online supplementary data) and Yorke (2011, see online supplementary data) who all emphasised that learning is essentially a social and experiential process, and that for WRL to be effective, the pedagogical design should have the student in the centre, ensuring effective student experience, reflection, and assessment. However, Kettis et al. (2013, see online supplementary data) emphasise the need to get away from the 'magic ingredient of placement' approach, advocating more structure and training for academics in providing WRL support for students. Gomes et al. (2018, see online supplementary data) and Diver (2021, see online supplementary data) caution that, poor, or inappropriate placements can have a negative impact on motivation. Conversely, a temporary loss in confidence during WRL can be interpreted as a growing awareness of their own weakness and skill gaps, providing further motivation to learn more strategically in their remaining years in HE (McKinnon and McCrae 2012, see online supplementary data).

A substantial share of the corpus studied internships as a route to promote employability. Qualitatively, internships are seen to impact on student's learning in similar ways as WRL. Internships are seen as a way to develop transferable skills and enhance the ability to transfer knowledge acquired academically to diverging work contexts and to constantly adapt to these contexts with the aim of systematically renewing actions (Moscardo and Pearce 2007, see online supplementary data; Smith et al. 2017, see online supplementary data). As a practical experience for applying academic concepts, internships deepen students' understanding of an organisation or profession (Hervas et al. 2012, see online supplementary data). As presented in [Table 1](#), internships can also provide students with an opportunity to improve their personal, professional, and social skills, promoting career prospects (McKinnon and McCrae 2012, see online supplementary data). Internships also foster students' ability to make decisions and cope with complex real-life scenarios (Hervás et al. 2012, see online supplementary data). Beaven et al. (2009, see online supplementary data) point out that students place high value on learning through challenging practical projects and being 'thrown in at the deep end'.

3.1.2. What is the right balance of skills?

A key challenge facing HEIs seeking to cultivate the employability of their prospective graduates is determining the most appropriate balance of skills for successful labour market engagement. The underlying idea is that there is an optimal combination of general and specific competencies that is required by firms (Chen and Adefila 2020, see online supplementary data; Forsyth and Cowap 2017, see online supplementary data; Pouratashi and Zamani 2019, see online supplementary data). On the one hand, several authors highlight the importance of acquiring specific (or vocational) competencies, as they can considerably reduce the extent of job-education mismatches (Heijke et al. 2003, see online supplementary data; Verhaest and Baert 2018, see online supplementary data).

Pegg and Caddell (2016, see online supplementary data) invoke the notion of a 'work ready' graduate, with discipline-specific knowledge and industry-specific skills developed through experience in the workplace. Verhaest and Baert (2018, see online supplementary data) point out that graduates endowed with specific competences are characterised by lower unemployment rates, and higher starting salaries. However, there may be a trade-off as vocational skills are specific to field and job position and therefore vocationally educated individuals have a higher risk of long-term unemployment if they are not able to find a matching job right after graduation (Verhaest and Baert 2018, see online supplementary data).

These general or transversal skills are part of the self-management capacity of work or the ability to work as a team and to retrain if needed. They include, for instance, the capacity of writing a job application, adaptation, career management, resilience and stress management skills, team-working, autonomous initiative (McKinnon and McCrae 2012, see online supplementary data; Smith et al. 2019, see online supplementary data; Thomson 2010, see online supplementary data; Wylie and Cummins 2013, see online supplementary data). There is a view that employers prefer general over specific skills. Bertolini and Goglio (2017, see online supplementary data) observe that this tendency is further increased by the process of flexibilisation of the labour market, where employers want immediately deployable workers but often do not want to bear the cost of training. Therefore, general skills may positively affect the probability of finding a suitable job (Lim and Lee 2019, see online supplementary data). Indeed, workers with more generic type of education appear to be more likely to participate in training once in the labour market (Heijke et al. 2003, see online supplementary data). Finally, generic degrees, being more focused on a wider type of knowledge and basic skills, may facilitate the process of learning in a changing context and seem to lower the costs of occupational mobility (Verhaest and Baert 2018, see online supplementary data).

Traditional vocational education has been criticised for not providing a sufficient theoretical foundation for graduates to continue learning and adapting throughout their working lives, and pure academic education, is often described as too theoretical (Bertolini and Goglio 2017, see online supplementary data; Stern 1999, see online supplementary data). Ideally, WRL can improve students' academic performance and develop work-related capabilities at the same time. Linking students' part-time employment with their classroom studies therefore may contribute to educational achievement, while still allowing students to gain valuable work experience (Wylie and Cummins 2013, see online supplementary data).

3.2. Students' awareness of employability

A key extrinsic motivation for engaging with employability-enhancing activities is that it is likely to improve chances of obtaining a job (Forsyth and Cowap 2017, see online supplementary data), being appointed at a higher grade, and obtaining higher salary (Santiago 2009, see online supplementary data). Moreover, it provides insight into a particular industry or type of employment (Little and Harvey 2007, see online supplementary data; Raven 2018, see online supplementary data) and students can increase their professional network, both in the firms where they realise the internships as well as in client companies (Hervás et al. 2012, see online supplementary data). Yet, several studies highlight student naivety about employability. Smith et al. (2017, see online supplementary data) report on a programme that attempted to underpin students' networks so that they became familiar with a variety of professional identities. The researchers noticed that many students thought internships simply happened or passed by them but they could not do much to avail these opportunities. Gbadamosi et al. (2019, see online supplementary data) and Fletcher-Brown et al. (2015, see online supplementary data) both noted the lack of student investment in networking with employers in placements.

McManus and Rook (2021, see online supplementary data) observe that sometimes students do not understand the importance of having work-ready skills for a successful school-to-work transition. This is critical as lack of awareness makes students less likely to make an effort to acquire them. They

argue that it is important to both explain to students the importance of having work-ready skills and cultivate students' ability to identify their own skills (McManus and Rook 2021, see online supplementary data). Similarly, Diver (2021, see online supplementary data) highlights the need to ensure adequate practical and emotional preparation of students for placement experiences.

3.2.1. Social stratification and social reproduction

There is evidence that professional bodies are working in partnership with HEIs to embed standards and curriculum composition within the degree structure to enable a smoother route to professional accreditation (Knox and Stone 2019, see online supplementary data; Pepper and McGrath 2019, see online supplementary data; Borah et al. 2019, see online supplementary data; Armitage-Chan and Jackson 2018, see online supplementary data).

Our literature search revealed that when looking at the success of WRL initiatives there are other confounding elements at play, as the role of social and cultural capital in the success of graduates in the workplace, many of whom hail from lower socioeconomic groups. Bertolini and Goglio (2017, see online supplementary data) highlight that when employers use informal social networks in the process of selection, they can reinforce social inequalities. Herbert et al. (2020, see online supplementary data) argue that it is very difficult for students from non-professional social backgrounds to compete unless they can be inducted into that culture early in their studies through WRL. This should include exposure to work practices, feedback, and reflective self-learning. They argue that such approaches should be formalised in new credit-bearing approaches which reward appropriate engagement and learning. Walsh and Powell (2018, see online supplementary data) highlight the example of Birbeck University of London, which developed an institutional approach designed to improve skills, networks, confidence, intrinsic motivation, and creativity of all students.

Other specific examples of inequality of outcomes in the literature search found gender disparities, cultural barriers, and racial issues. Analysing four main discipline groups (engineering, liberal arts, math/science/IT studies) in a private university in Manila, Santiago (2009, see online supplementary data) finds significant gender differences in graduate self-reported skills acquisition which also vary largely across disciplines. Santiago (2009, see online supplementary data) also identifies a significant gap in women's starting salary, although no direct effect is found by gender in skills acquisition. Other researchers have highlighted cultural barriers that exist for many from traditionally collectivist cultures, not instilled with the individual competitiveness necessary in the modern workplace. Research from Gbadamosi et al. (2019, see online supplementary data) highlighted the importance of part-time employment in changing self-efficacy attitudes of Cambodian students in the workplace. Moreover, there are indications that international students have not always benefited from WRL placements. Both Sonnenschein et al. (2019, see online supplementary data) and Sutherland et al. (2021, see online supplementary data) highlight racial barriers in hiring and engaging with international students from other ethnic cultures.

3.3. Employers, labour markets and economic context

Why do employers engage with the various forms of HE-led employability programmes? Some of the literature in the corpus suggests this is facilitated by government policy, for instance, programmes for economic development in developing countries (Chen and Adefila 2020, see online supplementary data; Dogara et al. 2020, see online supplementary data; Haron et al. 2019, see online supplementary data; Ishengoma and Vaaland 2016, see online supplementary data; Mobarak 2019, see online supplementary data). Another example is from Australia, which in 2016 introduced a National strategy for Work Integrated Learning (WIL) as a formal component of degree programmes to facilitate career readiness. However, this has led to a shortage of WIL placements, which disadvantages students lacking in networks and awareness of labour market opportunities (Jackson 2018, see online supplementary data; Woodley and Beattie 2011, see online supplementary data).

Moscardo and Pearce (2007, see online supplementary data) examining students work experiences in the Australian tourism sector argue that the main benefit for employers' is risk reduction in recruitment. Also, Beaven et al. (2009, see online supplementary data) suggest that WRL can improve the recruitment process, as most employers tend to consider work-related learning, and especially work placement activities, as a valid way of gaining experience. Moscardo and Pearce (2007, see online supplementary data) also find that WRL model reduces the time commitment required of employers to train staff. Reinhard et al. (2016, see online supplementary data) argue that a key feature for co-operation between HE and employers is relying on a pool of several firms which can reduce the risk of partnerships for HEs and students.

3.3.1. Skills mismatch and economic contexts

Several studies point towards the existence of a gap between skill formation in the education system and employers' needs, as main contextual trait of national labour markets (Saville et al. 2020, see online supplementary data) or of specific sectors within them (Beaven et al. 2009, see online supplementary data; Kasa et al. 2020, see online supplementary data). For bridging those gaps in skills and qualifications, it is observed that one of the most effective environments for employed individuals to learn is in the workplace (Lester and Costley 2010). In an integrated approach to degree programmes the workplace becomes a source of academically valid learning, rather than simply 'a site for gaining experience and applying what has already been learned' (Lester, Bravenboer, and Webb 2016, 10).

There are examples in the corpus illustrating how economic and labour market contexts interact with behaviour of employers and graduates. Lim and Lee (2019, see online supplementary data) argue that job competition in South Korea has increased due to a combination of weaker employment growth and increased educational attainment. This has led to a competitive employment preparation behaviour, where young people are seeking to distinguish themselves through additional qualifications, internship, and career counselling. Conversely, Bertolini and Goglio (2017, see online supplementary data) point out that in Italy, which has a high proportion of young people with low levels of qualifications and high youth unemployment, employers prefer informal methods of selection to overcome mis-trust, downplaying the importance of formal qualifications (Bertolini and Goglio 2017, see online supplementary data).

4. State of the literature and avenues for future research

The 87 papers included in this systematic literature paint an overall positive picture of the use of employability activities as part of HE curricula. However, when the state of the literature is reflected against the challenges faced by young people entering the labour market or the need of HEIs to prioritise resources, it is clear that the academic research community could do more to inform the decisions of stakeholders, from students, to HEIs, employers and government policy makers.

4.1. Need for more comprehensive view of employability activities

As mentioned in Section 2 the scope of the corpus is dominated by studies of WRL programmes. Whilst these studies are welcome, there is a dearth of studies looking at more diverse forms of employability activities. For instance, Norton and Dalrymple (2020) in their collection of case studies of employability in UK HEIs highlight several examples where employability is facilitated not through direct placement with employers but by embedding employability activities in the curriculum, such as through curricular frameworks, specific employability and skills training modules, and assistance with career planning and networking. It is important to obtain evidence on the effectiveness of such approaches, especially as they are likely to be less resource-intensive and easier to scale up for HEIs than placements and internships. This begs the question, what is the prevalence of

different types of employability activities in HE? To date we are not aware of any comprehensive survey of employability activities in a particular HE system or even a single institution, which is a lacuna that awaits future research.

4.2. Employability, diverse labour market contexts and heterogenous outcomes

A nascent theme that's emerging in the employability literature (as summarised in Section 3.3.1) are analyses of how different socioeconomic and institutional contexts influence the incentives of employers and affect the opportunities of prospective graduates. This territorial perspectives chime with the theoretical criticism of Brown, Hesketh, and Williams (2003) who argued that the employability prospects of any individual were always contingent on local labour market conditions. Theoretically, there is need to work on fleshing out more explicitly how employability and labour market outcomes interact with labour market and economic conditions. Empirically, there is a need for more evidence on the magnitude of how graduate attributes translate into labour market outcomes under different economic conditions and how stakeholders can contribute to it (Hodgson and Spours 2013).

Getting a firm handle on the territorial perspective is important, as within a European context, graduate employment outcomes are varied, ranging from double-digit youth unemployment in some parts of Southern Europe to being negligible (for an overview see Scandurra, Hermansson and Cefalo 2020; Scandurra, Cefalo, and Kazepov 2021). However, even where graduate labour markets are buoyant, such as in the UK, there is evidence of growing dispersion of graduate outcomes (Walker and Zhu 2008) and labour market inequalities across sex (Fortin, Bell, and Böhm 2017), class (Friedman and Laurison 2019) and race (Brynin, Longhi, and Zwysen 2019). There are indications of social origin effects in the employability literature (Section 3.2.1) and a need for further research into how employability activities might be used to reduce inequality in labour market outcomes.

4.3. Causal estimates of impact of employability activities

HEIs employability programmes are deemed to provide a faster transition to employment for graduates. However, most of the studies in the corpus do not assess graduate labour market outcomes empirically, but focus on the characteristics of WRL training, looking at possible benefits for the students in terms of future opportunities on the labour market. An important next step in understanding the impact of employability activities is to conduct more empirical research linking what happens at the level of the HEI with subsequent graduate labour market outcomes. A further difficulty is evaluating whether observed impacts are caused by employability activities or whether employability-rich programmes attract a selected body of students that are aware of employability issues and would have fared better than average in the labour market regardless of the details of the study programmes? Whilst it is well known that achieving or approximating random assignment in education research is difficult, there are numerous examples of such studies in other fields of research on the interaction between education and labour markets, in particular the substantial empirical literature evaluating active labour market programmes (for an overview see Card, Kluve, and Weber 2010).

A further aspiration to pursue towards a more comprehensive evidence base on the impact of employability activities is identifying differential effects of programmes of varying designs and intensities in different settings. Moreover, there is a need for more comprehensive stakeholder vantage points. Only 4 of the 87 publications have examined the views of all 3 stakeholders, employers, students, and HEI providers on the outcomes of specific WRL programmes (Fletcher-Brown et al. 2015; Hegarty and Johnston 2009; Ishengoma and Vaaland 2016; Reinhard et al. 2016). Most of the studies presented examine only the learners' perspective or occasionally along with that of the HEI provider.

5. Conclusion

The aim of this paper was to examine the current academic understanding of how and to what extent dedicated employability activities in HEIs facilitate employability and ultimately graduate labour market outcomes. We performed a systematic literature review on employability published in peer-reviewed academic journals and we reviewed 156 papers and ultimately included 87 papers for extraction. More than half (56%) were published within the last 7 years. They are predominantly case studies of employability activities in UK and Australian HEIs and are skewed towards placements and internships. We grouped the literature into three broad themes in line with who was the focal stakeholder of the study: students, HEIs or employers. Further sub-themes were identified to guide the discussion of the corpus.

The literature suggests all stakeholders value employability activities for similar reasons. They are seen as vital part of HEI education programmes, facilitating the development of diverse skills that are desirable in the labour market as well as de-risking labour market entry for students and appointments for employers by alleviating information asymmetries.

To strengthen the evidence-based on the impact of employability activities in HEIs we suggest several avenues for future research (see Section 4). There is need to study a more comprehensive range of employability activities, in particular various forms of embedded employability work (Section 4.1). The relative nature of employability (Brown, Hesketh, and Williams 2003) is under-theorised, and it is important to identify explicitly how (a) economic contexts influence outcomes and (b) how socioeconomic backgrounds give rise to inequality in employability (Section 4.2). Finally, it is crucial to strengthen the research design of empirical evaluations of employability activities to include outcomes, control for selection effects and determine the relative effectiveness of different approaches (Section 4.3).

Notes

1. See for instance a wide range of best practice case studies published by NACE: <https://www.naceweb.org/career-development/best-practices/>.
2. <https://www.topuniversities.com/university-rankings/employability-rankings/2022>.
3. <https://www.timeshighereducation.com/press-releases/global-employability-rankings-2021>.

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