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Employability Learning and Teaching Research: A Twenty Year Structured Narrative Review

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Abstract

Employability is a set of key personal attributes and transferable and discipline-specific skills considered essential for effective workplace performance; however, there are numerous perspectives about employability and how to develop it in higher education. Definitions and measurements of employability are influenced by factors such as government policy, requirements of employers, discipline norms and structural barriers. In the context of the Special Issue: 20-year *JUTLP* Review, this structured narrative review aimed to explore and understand employability to inform higher education learning and teaching practice. Forty-six articles published in the *Journal of University Teaching & Learning Practice* were included, set in the context of 45 review articles on employability sourced from Scopus and ERIC databases and other selected literature. Several definitions of employability drew on existing employability frameworks and researchers' evolving conceptions of employability within their disciplinary contexts. We propose a composite definition of employability based on the findings from this review: Employability is lifelong, evolving and complex, requiring adaptability and capabilities including knowledge, skills and attributes to obtain sustainable employment and resolve work ambiguities in challenging globalised, sociocultural and economic contexts. Higher education teaching practices, curriculum and assessment develop employability by developing discipline-specific alongside transferable knowledge, skills, attitudes, literacies, competencies, capacities and capabilities relevant to potential workplaces and aligned with employability attributes. Student-centred experiential learning models such as work-integrated learning, internships, industry experience, problem-based learning and reflection promote employability. Higher education also should promote career development competencies to enable students to showcase their skills, experiences, and attributes to employers through e-portfolios.

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Introduction

Employability is broadly described as the ability of a person to gain sustained employment by achieving a set of personal attributes, discipline-specific and transferable skills and understandings that are highly valued by employers as essential for effective performance in the workplace (Yorke, 2006; Tight, 2023). Employability is frequently conflated with, and measured through, employment outcomes soon after graduation by governments and in university rankings (Healy et al., 2022; Kamil & Muhammad, 2021), but is far more complex (Yorke, 2006; de Blaquière et al., 2019). Employability is viewed as key to individual career success and is often used as an indicator of educational program quality (Neroorkar, 2022), but also depends on external factors such as socioeconomic conditions (McCafferty, 2022), and hence is better viewed as the potential for, rather than acquisition of, employment (Tight, 2023). The employability literature provides numerous definitions of employability, employability frameworks, and perspectives on the role of higher education in developing employability. The following sections of the introduction draw on literature selected largely from a systematic search of review articles on employability (see Supplementary Materials).

Definitions of employability

Definitions of employability have changed over time and are contested, varying across cultures and countries, political viewpoints, theoretical lenses and organisations, including governments, professional associations, employers, and higher education institutions (HEIs). Higher education (HE) research about employability has been conducted at different levels, including education and social systems, HE institutional strategies and individual academics' approaches to develop their students' employability (Abelha et al., 2020; Healy et al., 2022; Palmer et al., 2018; Sumanasiri et al., 2015). While employability is commonly viewed in relation to obtaining and maintaining a job with an employer, in business and administration fields it also has an entrepreneurial dimension of creating work for oneself and others (Fossatti et al., 2023; Rees, 2021; Palmer et al., 2018). Employability is viewed as an antecedent to employment outcomes (Healy et al., 2022), and as an ongoing process of lifelong learning, development, and career management to gain, maintain, and progress in the workplace and navigate the labour market across individuals' employment lifetimes (Cook, 2022; Mahajan et al., 2022; Masduki et al., 2022).

Employability frequently includes competencies, capacities, and capabilities of individuals, including their knowledge, skills, attitudes, values, attributes, experiences, achievements, behaviours, practices, identity formation, self-awareness and goal setting (Abelha et al., 2020; Cake et al., 2022; Chan & Chen, 2022; Craps et al., 2021; Fahimirad et al., 2019; Scoupe et al., 2023; Winterton & Turner, 2019). Knowledge and skills required for employability are discipline-specific or 'hard', as well as transferrable, generic, or 'soft' (Cheng et al., 2022; Clarke, 2018; Clinkard, 2018), and are discussed further below. Individuals' capabilities need to be dynamic, including adaptability, flexibility, and engagement with lifelong learning (Clarke, 2018; Clinkard, 2018; Cook, 2022; García-Álvarez et al., 2022; Ramnund-Mansingh & Reddy, 2021).

Definitions of employability frequently incorporate broad contextual factors, including social and macroeconomic conditions, labour market supply and demand, massification of higher education, employers' requirements, reputation of universities, and structural barriers and biases faced by many individuals (Cheng et al., 2022; Clarke, 2018; Dinh et al., 2023; Donald et al., 2024; Eimer & Bohndick, 2023; García-Álvarez et al., 2022; McCafferty, 2022; Tsiligiris & Bowyer, 2021). An example definition of employability incorporating both individual and contextual factors is 'the

capacity to be self-reliant in navigating the labour market, utilising knowledge, individual skills, and attributes, and adapting them to the employment context, showcasing them to employers, while taking into account external and other constraints' (Small et al., 2018, p. 151).

Employability frameworks

Employability frameworks provide guidance for policy, curriculum, learning and teaching activities, and student support, incorporating hard and soft skills and career development competencies as well as external, contextual factors (Clarke, 2018). Employability frameworks enable reflection and discussion amongst key stakeholders including universities and their academic and career development staff, employers, governments, and students (Advance HE, 2019; Donald et al., 2024). Employability frameworks for specific professions are valuable instruments to guide development of students' professional identities and capabilities matched to employer expectations in those professions (Craps et al., 2021; Tatum, 2020).

Existing frameworks highlight individuals' connections to others, cultures and society (Caingcoy, 2021; Healy et al., 2023) and commonly cover numerous competencies, capacities and capabilities including discipline expertise; generic skills in social, emotional, and meta-cognitive domains; efficacy beliefs; life-long learning and work-life balance (Scoupe et al., 2023; Small et al., 2018; Sumanasiri et al., 2015). Clinkard (2018) suggested reconceptualising employability frameworks to enable students to utilise narratives and be proactive through reflecting, self-evaluating and recording their growth. Related career development models focus on developing individuals' awareness of job opportunities and their skills and ability to showcase these to employers, for example the DOTS (decision-making, opportunity awareness, transition planning, and self-awareness) model (Small et al., 2018).

Caingcoy (2021) summarised several employability frameworks and proposed one for teacher education in the Philippines incorporating 'communication; information and communication technology; critical thinking and problem-solving; collaboration, cooperation, and teamwork; research; and leadership' (Caingcoy, 2021, p. 187). Cook (2022) identified 13 models of employability and discussed their paradigms and relationships to curricula and teaching, including intra-curricular, co-curricular and extra-curricular elements. Eimer and Bohndick (2023) reviewed 21 models and frameworks, which they categorised into narrow models focusing on generic competencies; broad models including generic and discipline-specific skills; holistic models additionally incorporating external or contextual factors and barriers to work; and models addressing contextual factors including global inequalities, historic and ongoing injustices, pandemics, extreme climate events, social unrest and conflict.

Broader models of employability are framed as capitals, which are dynamic, interacting, personal and relational resources that are accumulated and deployed in the labour market by individuals (Tomlinson, 2017). Williams et al. (2016) synthesised the employability literature into four capital dimensions: human (knowledge and skills), psychological (self-efficacy, resilience, etc.), social (connections and contacts) and cultural (ideas, customs, behaviours) capitals, as well as career management and contextual factors. The graduate capital model of Tomlinson (2017) includes human capital (generic, discipline-specific, and career management knowledge and skills), identity capital (self-concept in relation to future work and self-presentation through resumes and interviews), psychological capital (additionally specifying career adaptability), social capital (networks and relationships with family, community, peers, and potential employers), and cultural capital (awareness of norms and behaviours aligned to potential employers). The employability capital growth model of Donald et al. (2024) incorporates similar capitals to Tomlinson (2017)

such as social, psychological and career identity capitals, while expanding, reframing or adding other capitals such as cultural capital (to include experiences gained from volunteering, extracurricular activities and study or travel abroad), economic capital (money and material resources), health capital, scholastic capital (qualifications and grades), market-value capital (skills developed through previous work, internships or placements), and personal identity capital (employer judgements based on personal characteristics). The employability capital growth model also includes external factors and individuals' awareness of these, such as labour market supply and demand, job location, automation and artificial intelligence; and personal and career outcomes (Donald et al., 2024).

Employability is also conceptualised as a series of literacies. The employability literacy framework describes employability as a process, rather than the acquisition of a set of skills (Kendall & French, 2018). A social approach defines seven literacies with a social constructivist underpinning required for employability: career, learning, ethical, emotional, digital, rhetorical and core literacies. Key aspects of the implementation of this framework are student self-assessment of their literacies at a single timepoint or across their career, and provision of enabling resources to facilitate their development (Bennett, 2020). Empowering students through reflective questioning addresses gaps in students' understanding of employability (Scott et al., 2019).

Engagement of the higher education sector with employability

Employability research debates the range of skills required and whether responsibility for developing employability should lie with the individual, the workplace or higher education institutions (HEI), and intersects with debates on the purposes of higher education as having predominantly instrumental value (to prepare for employment) or intrinsic value (to develop the individual) (Tight, 2023). In Australia and the United Kingdom (UK) in the 1990s, universities implemented generic graduate learning outcomes or attributes in response to expectations of governments and employers to produce work-ready graduates (Clarke, 2018). Employability is increasingly becoming a core concern for university students who face occupational uncertainty (Petruzziello, et al., 2023) in the face of massification of higher education and changing labour markets in the UK (Tight, 2023), Australia (Small et al., 2022) and elsewhere, reflecting increased globalisation, short-term employment contracts, and growth of the knowledge economy (Clarke, 2018). It is misguided to assume that students will gain employability skills and develop the confidence to articulate them based on disciplinary curricular provision alone (Yorke, 2006; Rees, 2021). Employability skills can be embedded in curricula to increase students' confidence to develop, perceive and articulate their generic skills, as both these and discipline-based skills are valued in the workplace (Yorke, 2006; Bennett, 2018; de Blaquière et al., 2019; Tight, 2023). Many HEIs encourage students to build a record of their experiences and developing expertise in an e-portfolio, enabling them to grow their professional identity, skills and employability while addressing the HEI's employability framework and graduate attributes (Mitchell et al., 2021).

Many courses incorporate work-integrated learning (WIL), industry experience or internships, in which students learn and participate in a work environment, applying theory to practice (Clarke, 2018; Jackson & Dean, 2023; Tatum, 2020). Project-based learning, in which companies, communities, local governments or non-government organisations provide authentic problems for students to analyse and develop solutions, is a sustainable and scalable approach to developing employability skills (Hart, 2019; Montalto, 2023). Interdisciplinary projects have been associated with perceived student employability increases (Hart, 2019). Co-curricular activities facilitated or provided by universities such as volunteering, leadership development, and mentoring focus on

career development and employability through gaining diverse experiences (Kinash et al., 2016) and developing networks and social capital (Aliu & Aigbavboa, 2023).

Competencies related to employability

Higher education is expected to integrate broad employability competencies into curriculum while teaching discipline-specific knowledge and skills. Employability expectations are frequently embedded as graduate attributes into undergraduate teaching and learning practices with a view to enhancing student learning and employability outcomes (Fallows & Steven, 2000). These attributes are considered relevant to all employment contexts, and are variously referred to as generic, graduate, professional, transversal, transferrable, core, key, soft, holistic, 21st century or employability competencies, capabilities or skills (Chan & Chen, 2022). García-Álvarez et al. (2022) classified many of these into five skill dimensions: job-related basic skills (literacy, numeracy, information and communication technology), self-management (problem solving, critical thinking, adaptability), socio-relational (teamwork, negotiation), entrepreneurship (creativity, leadership), and social and professional responsibility (ethics, sustainability). Most of these also appear in the World Economic Forum's (2023) list of core skills expected by organisations, which also includes systems thinking, customer service orientation, artificial intelligence and big data, user experience, programming, marketing, networks and cybersecurity, and sensorimotor skills, although employers' specific requirements vary within and across industries.

Measures of employability

Measures of employability should be multi-dimensional and provide opportunities for accountability and improvement (Harvey, 2001), rather than narrowly focusing on the percentage of graduates obtaining employment within a short timeframe after graduation, as frequently reported in university rankings and by governments (Healy et al., 2022; Kamil and Muhammad, 2021) including Australia and the UK (Clarke, 2018). Typically, subjective indicators assess personal perceptions of 'knowledge, ability, skills, attitudes, competencies and other attributes' while objective indicators measure variables including 'demographics, education, training, employment and income*'* (Neroorkar, 2022, pp. 860-861). As an example of a subjective indicator questionnaire which students could use to self-assess their employability, the validated Student's Employability Competences Questionnaire (SECQ) is based on numerous other existing instruments, with seven factors: 'social competences, e-literacy, efficacy beliefs, flexibility, healthy work–life balance, lifelong learning and oral and written communication' (Scoupe et al., 2023, p. 88).

Research questions

The aim of this review is to explore and understand employability in the higher education context to inform future learning and teaching practice. The approach was a structured narrative review of *Journal of University Teaching & Learning Practice (JUTLP)* papers relating to employability published in the last 20 years.

Three research questions guided this review:

1. How has employability been defined, framed, and used in *JUTLP* over the last 20 years, and how does this relate to broader literature on employability?

2. What are the key themes, contributions to knowledge, and emerging evidence about employability as reported in *JUTLP*, and how do these relate to broader literature on employability?
3. How can employability research, particularly research published in *JUTLP*, inform learning and teaching practice?

Method

Given the broad nature of the research questions, a structured narrative review methodology (Ferrari, 2015, Waterval et al., 2015) with a systematic search strategy was used to achieve the aims of the study (Rethlefsen et al., 2021). The Scale for the Assessment of Narrative Review Articles (SANRA) has been used to promote the quality of this non-systematic narrative review using the following items: 'explanation of the review's importance (item 1) and statement of the aims (item 2) of the review, description of the literature search (item 3), referencing (item 4), scientific reasoning (item 5), and presentation of relevant and appropriate endpoint data (item 6)' (Baethge et al., 2019, p. 2). To capture relevant studies from *JUTLP* on employability, elements of systematic review methodology including Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA, Moher et al., 2009) guided the literature search and screening and review of articles for inclusion, using the Covidence platform's embedded PRISMA method as described below.

Literature search strategy

To identify articles potentially related to employability published by the *Journal of University Teaching & Learning Practice* (*JUTLP*), the *JUTLP* 'Advanced Search' function was used 8 August 2023 specifying search terms 'employability' OR 'work integrated learning' in 'all fields', with no date range, limited to *JUTLP*. Results were exported as a 'bibliography export' and imported into an Endnote library and then into Covidence. Papers without abstracts were located and the first paragraph copied into Covidence as a note.

Upon review, the following search terms were independently applied to the *JUTLP* 'Advanced Search' function on 2 February 2024 to search in title or abstract or subject: (Pre) Professional identity, Career development, Preparing for workplace/workforce/practice, Career/job readiness, Readiness for practice, Safe to practice, Classroom readiness, Graduate/Professional/Transversal capabilities/outcomes/competencies/capacities, Internship, and Industry experience / industry.

Screening of article information – *JUTLP* papers

Titles and abstracts of *JUTLP* papers were double-screened by 11 authors, and one author (MG) resolved conflicts. Papers that did not mention employability, or concepts related to employability, in the abstract were excluded from the next stage of the review. Full texts were double-reviewed by 10 authors, and one author (RM) resolved conflicts. Inclusion criteria specified were higher education context, being about employability or making an explicit link to employability and published between January 1, 2002, and August 8 2023, in *JUTLP*. Exclusion criteria specified papers that were vocational education and training (VET) only, not explicitly linked to employability, WIL that only focuses on WIL curriculum design, or book reviews.

Papers which focused on employability during higher education, including skills development to transition to the workplace, were included, but papers that focused on development of employability-related skills in a workplace setting outside the higher education context were

excluded. Relatedly, literature that described the development of a skill that was a workplace requirement or professional expectation (for example, arithmetic), was not included in the review. Studies were excluded if they only discussed the development of a graduate attribute in pre-professional settings but were included if they discussed the translation of this graduate attribute into the practice setting. Papers that aimed to implement teaching innovations, align assessment, or map curricula to graduate attributes were excluded for reasons including focus on the process or not linking to employability (Thompson et al., 2008; Reneland-Forsman & Magnusson, 2019; Missingham et al., 2018; Clarke et al., 2023; Allinson & Mahon, 2022). One excluded study explored the impact of the COVID-19 pandemic on student experience and noted that COVID-19 had reduced students' employment on graduation; however, it was focused on the environment of employment, rather than the students' intrinsic employability (Cifuentes-Faura et al., 2021).

Articles identified in the search of additional terms and not already included were screened by two authors (SW, ER) and a third author (DCL) resolved conflicts. Articles that met the eligibility criteria were downloaded into Covidence® for extraction.

Extraction of article information

One author (DCL) developed extraction categories based on another systematic review (Choi-Lundberg et al., 2023) and the research questions of this paper; three authors (RM, FS, CW) refined extraction categories. A double extraction was undertaken within Covidence®, with consensus by a third author. Data were exported to a MicroSoft Excel® file and additional notes made on evolving definitions of employability, pedagogies to develop employability, and skills, attitudes and attributes considered relevant to employability by academia or industry.

Results

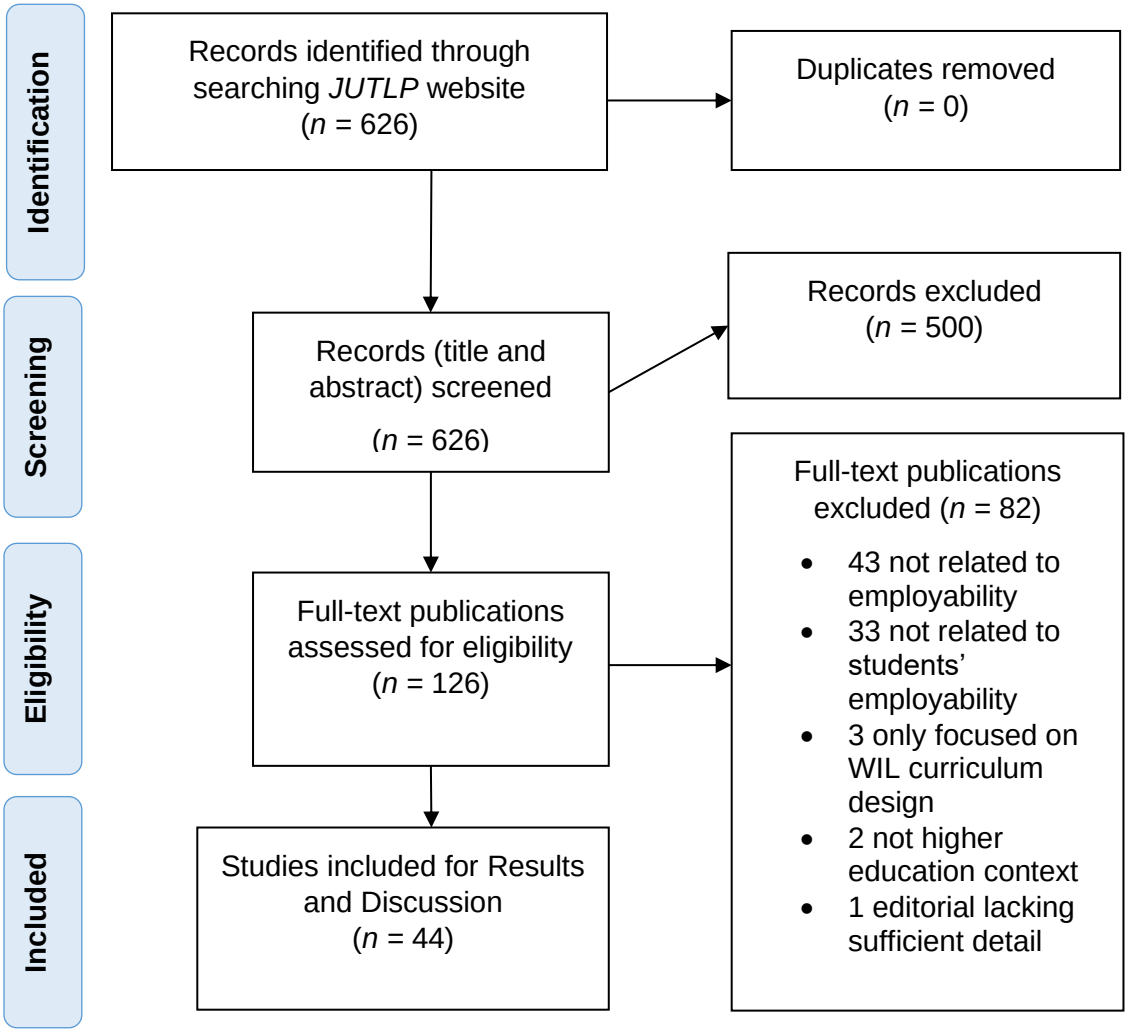
Characteristics of *JUTLP* papers

The first search of *JUTLP* yielded 626 papers with publication years from 2004 to 2023, with screening and full text review resulting in 44 included documents as presented in a PRISMA chart (Figure 1). The second search yielded eight papers not already in the 44 included documents, with two papers being included for review after screening. Thus, a total of 46 articles were included in the review.

Of the 46 included *JUTLP* publications, 33 (72%) were from Australia, with several other countries represented (see Supplementary Materials). Most articles were based on empirical research using quantitative (n=3), qualitative (n=17) or mixed methods (n=12). Other article types included conceptual or discussion papers, policy or literature reviews, and position papers or editorials. Discipline areas spanned nearly all UNESCO (2015) 2-digit field of education codes (see Supplementary Materials). In the following sections of the Results, the context is Australia unless stated otherwise.

Figure 1

PRISMA diagram of literature search and screening of JUTLP articles on employability or work-integrated learning (after Moher et al., 2009)



Defining employability

Not many of the *JUTLP* publications defined the concept of employability; rather, employability was simply described in the context of knowledge, skills, professional behaviours and capabilities considered by the authors (mainly academics) to be important or required for employment in a particular discipline. Papers with more clearly articulated definitions of employability were found to draw on a few existing employability frameworks, but mostly researchers' evolving conceptions of employability within their own disciplinary contexts were presented. Common across the papers, however, was the view of employability as lifelong (Winchester-Seeto & Piggott, 2020), evolving, and complex (Struan et al., 2023, UK context) attributes requiring adaptability. Transferable skills, reflective thinking, and possession of problem-solving capabilities to resolve ambiguities in work and the workplace were identified as important elements of employability (Gouda-Vossos et al., 2023; Piggott & Winchester-Seeto, 2020). Belonging was identified as an important construct to foster in an online environment to facilitate students' professional identity

development, which can strengthen employability (Mueller et al., 2022; New Zealand and Australia contexts). Savage and Healy (2019) explicitly link employability to graduate learning outcomes (GLO) of 'discipline knowledge, communication, digital literacy, critical thinking, problem-solving, self-management, teamwork and global citizenship' (Savage & Healy, 2019, p. 3). The varying definitions of employability are reflected in the varied skills, capabilities, attributes, and competencies described across the papers.

Pre-existing employability frameworks were employed in some studies to frame the research. For example, in a study by Bennett and Robertson (2015) involving creative arts, media and journalism students and pre-service teachers, a literacy framework informed by the layered literacies framework (Cook, 2002) was applied. This layered literacies framework centres on six work-related literacies: basic literacy (effective communication), social literacy (working with others), rhetorical literacy (tailoring texts for various audiences), technological literacy (using technologies including for social interactions), ethical literacy (standards of the profession), and critical literacy (perceiving and reacting to power structures and ideologies). The authors expanded on this framework, adding "career literacy" as a seventh layer, focusing on awareness of industry structures and one's place within them (Bennett & Robertson, 2015).

Hayes and Cejnar (2020) used the employability skills framework of Jackson (2013) to articulate their findings in relation to students' perceptions of industry-based interdisciplinary projects and alternative WIL opportunities. The students, from various disciplines, were especially interested in acquiring soft skills and behaviours, such as learning effective teamwork and communication with peers and industry partners.

Mueller et al. (2022) used a Community of Inquiry Framework, which was underpinned by a constructivist worldview, to examine lived experiences of belongingness in several online WIL (eWIL) contexts in Australia through collaborative enquiry. The authors identified priorities for virtual internships and eWIL to develop professional belongingness, including approachable mentors building trust and rapport and modelling professional behaviours; providing regular networking and socialising opportunities with employees and other interns; and provision of meaningful tasks, guidance and formative feedback (Mueller et al., 2022).

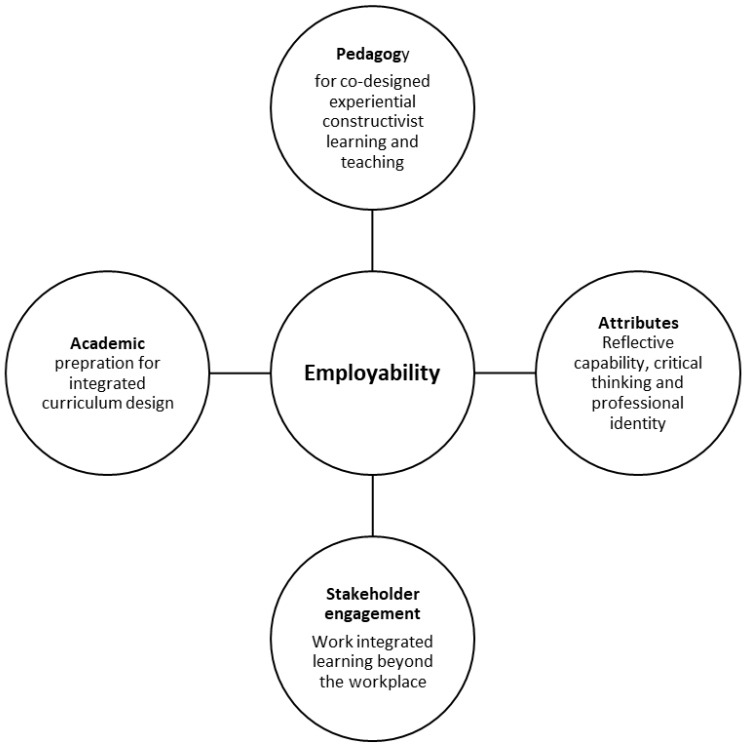
Bandaranaike (2018) in a discussion paper summarising their work with colleagues across various disciplines in Australia, Mexico and Thailand presented how they used the Work Skill Development employability framework in conjunction with a research skills development framework to articulate skills and autonomy developed during WIL. The Work Skill Development framework enables employers to evaluate students on WIL, and students to reflect and self-assess across six work skill facets of 'initiative, resourcefulness, lifelong learning, self-management, problem solving, and communication & teamwork' across various levels of student autonomy from 'prescribed direction' to 'unbounded' (Bandaranaike, 2018, p. 6).

Included papers used a number of employability measurement tools to inform their employability-focused research. Durham et al. (2020) used a modified version of the Employability Impact Survey (EIS) developed by Smith et al. (2014) to explore public health graduates' perspectives of effectiveness of their degree to promote skill development and employment preparation. The EIS includes questions related to six employability dimensions: 'collaboration, informed decision making, commencement readiness, lifelong learning, integration of theory and practice, and professional practice and standards' (Durham et al., 2020, p. 3). Gouda-Vossos et al. (2023) used the self-perceived employability scale of Rothwell et al. (2009) to explore how science, technology, engineering and mathematics (STEM) students perceived their employability skills to

be impacted by undertaking an educational career development module. The concept of self-perceived employability as a multifaceted construct was highlighted in this paper, including the individual's perception of their capabilities, understanding of the job market, self-awareness and confidence. Figure 3 presents the key employability components collated from the *JUTLP* articles, as described in the following sections. Data was collated and clustered under the themes of 'Pedagogy', 'Attributes', 'Stakeholder Engagement' and 'Academic' preparation.

Figure 3

Employability components in JUTLP papers



Pedagogies for employability

The *JULTP* literature demonstrates that pedagogies for employability adopt purposeful, integrated, student-centred learning opportunities and are embedded throughout the curriculum. Employability pedagogy is grounded in constructivist learning theory, as noted by Dickie and Robinson (2021), Bayerlein (2020), Low et al. (2021), and Firn (2015), which posits that individuals construct knowledge through their active reflection on their own experiences (Jadallah, 2000). Other, closely related, learning theories that the *JUTLP* literature drew on to study student employability included experiential learning (Dean et al., 2020b; Durham et al., 2020; Kelton & Kingsmill, 2016; Mueller et al. 2022; Perrin, 2014, in USA; Savage & Healy, 2019; Smith et al., 2023, in USA; Villarroel et al., 2020, in Chile), service learning (Bennett et al., 2016; Ramsaroop & Petersen, 2020, in South Africa), and socio-cultural perspectives on learning (Bennett et al., 2016; Heron, 2019, in UK).

Strategies used to support or develop students' employability included authentic WIL, partnerships with industry, portfolios, and reflection activities to capture the future-focused capabilities expected of the globally connected workforce. Real life, authentic experiences of work and workplaces were identified multiple times in the *JUTLP* literature as supporting students'

employability or development of employment-related skills and knowledge. Specifically, in-person, virtual or remote or hybrid WIL, simulations, and non-placement based industry projects were key strategies related to higher education's capacity to develop student employability in numerous disciplines (Table 1). These strategies embedded authentic activities and related assessments that replicate tasks in the world of work.

Table 1

Pedagogies and disciplines of work-related learning experiences reported in JUTLP papers

Pedagogies	Disciplines	References
In-person WIL, internships, apprenticeships or placements		
	Business	Sheridan et al., 2019
	Communications	Bennett & Robertson, 2015
	Journalism	Dodd et al., 2021
	Law	Ashman et al., 2021; Kennedy et al., 2016
	Medicine	Hargreaves, 2016, in UK
	Psychology	Villarroel et al., 2020, in Chile
	Sport and exercise science	Hodges & Martin, 2020, in NZ
Virtual, remote and/or hybrid WIL programs (eWIL)		
	Law and accounting	Ashman et al., 2021
	Sport and exercise science	Hodges & Martin, 2020, in NZ
	Writing	Smith et al., 2023, in USA
	Multiple	Connor et al., 2021 in NZ and Australia; Dean et al., 2020b; Mueller et al., 2022, in NZ and Australia
Simulation		
	Accounting	Bayerlein, 2020
	Foreign policy	Kelton & Kingsmill, 2016
	Multiple	Dean et al., 2020a, 2020b; Sarmiento et al., 2020, in Philippines
Non-placement based industry projects		

Pedagogies	Disciplines	References
	Education	Ramsaroop & Petersen, 2020, South Africa
	Music	Yeo & Rowley, 2020
	Public health	Durham et al., 2020
	Multiple	Dean et al., 2020a, 2020b; Hayes & Cejnar, 2020; Piggott & Winchester-Seeto, 2020

Within the WIL-related *JUTLP* literature, several papers reported on the benefits and/or effectiveness of authentic, real-life WIL for developing students' employability. Dodd et al. (2021) found the participation of student journalists in a WIL initiative (UniPollWatch) during the 2016 federal election improved their ability to understand political reporting, including knowledge of the electoral process and politics, and how to work in a newsroom. Sheridan et al. (2019) showed how concurrent WIL and online theoretical instruction, as an alternative to weekly lectures and tutorials, could be an effective model for developing the employability of graduate business students. Virtual and non-placement WIL were also described as useful for employability purposes. Kelton and Kingsmill (2016), for example, identified how foreign policy students benefited from working on discipline-specific, "pseudo-real" (p. 3) foreign policy simulations, learning how to use their analysis of complex foreign policy crises to provide recommendations, engage with sensitive information ethically and thoughtfully, and communicate effectively. Hodges and Martin (2020) described the value of student participation in a New Zealand on-campus and online exercise prescription clinic for teaching employment-related skills and knowledge, such as the capacity to assess, exercise, test, and train clients, which is an essential employment requirement for graduate clinical exercise physiologists. Mueller et al. (2022) describe key aspects that are integral to the development of general and professional belonging in an eWIL environment in New Zealand and Australia, including setting expectations and building and maintaining relationships and trust, maintaining mentor presence and role modelling of professional behaviours, and fostering professional belonging through meaningful tasks.

Additional benefits of WIL programs were identified in the *JUTLP* literature, with WIL described as enhancing students' employment-related learning outcomes across cognitive, skill-based, and affective domains (Bayerlein, 2020). WIL was described as providing a bridge, or integration, of theory and practice in disciplinary contexts (Sheridan et al., 2019; Villarroel et al., 2020, in Chile; Yeo & Rowley, 2020). WIL and virtual WIL were seen as important for increasing access and opportunities for regional students to engage in higher education (Ashman et al., 2021) and to complete WIL placements in urban areas in New Zealand and Australia (Connor et al., 2021). Non-placement industry projects, or "projects of consequence" (Piggott & Winchester-Seeto, 2020), were described as projects representative of those typically encountered in industry, and which afford students opportunities to develop the cognitive and affective capacities to respond to project demands and ambiguous work requirements. Criticisms of virtual WIL and non-placement WIL were also evident, however, such as concerns about virtual WIL reinforcing educational disadvantage for those unable to afford or access resources (e.g., broadband internet, computing technologies), and questioning of the value of online WIL to employers in New Zealand and Australia (Connor et al., 2021).

The role of higher education institutions in supporting and developing students' professional identities was a key theme in the *JULTP* literature. Clanchy et al. (2021) argued that the

development of a pre-professional identity is a critical element of employment preparedness, with experiences like voluntary or paid work, alongside personal and social factors, impacting on students' professional identity formation and confidence. Specifically, coursework or WIL-related activities that required students to engage in reflective practice were described as developing or enhancing students' professional identities. Hargreaves (2016), for example, discussed the critical importance of reflection and reflective practice in the context of medical education, with "reflective competence" (p. 1) being a key skill taught progressively in the Leeds University medical school curriculum in the UK. Kennedy et al. (2016) reported on a novel place-based learning initiative for law students (Bush Law 101) and explained how embedding collaborative reflection opportunities into the curriculum enabled students to learn how practicing law in regional and rural areas shapes their professional identities. Reflection was also shown to have other benefits for enhancing student employability. Boyd et al. (2023), for example, found the adoption of reflective pedagogies in their business courses in the UK supported their students to become confident and adaptable writers in the workplace.

Reflection was highlighted in many *JULTP* papers, which signals the importance of integrating metacognitive capacities with disciplinary knowledge for lifelong learning and employability. Students' capacity to self-reflect was described as a critical element for assisting them to make the transition from student to professional (Yeo & Rowley, 2020). Strategies specifically targeting student reflection included ePortfolios (Bennett & Robertson, 2015; Yeo & Rowley, 2020) and circular mentoring (Yeo & Rowley, 2020). Bennett and Robertson (2015), for example, discussed the value of attaching an ePortfolio requirement to internships, and leading students to collect evidence of their "career literacies" (p. 1), such as their social, technological, ethical, and critical literacies, for their future employer. Reflection activities embedded in the higher education curriculum were described as supporting students' cognitive, emotional, and metacognitive functions, including their capacity to self-regulate and be self-aware (Coulson & Homewood, 2016).

Another approach to raise students' awareness of graduate learning outcomes was to use experiential learning opportunities such as a laboratory practical to introduce reflection and employability attributes (Savage & Healy, 2019). This was achieved by creating a GLO (graduate learning outcomes) activity introducing and guiding first-year biology students to reflect on current strengths related to graduate attributes, then form small groups with different strengths, and finally solve a challenge in the group (Savage & Healy, 2019).

Attributes considered by the education sector to impact employability

Attributes that promote employability move the student beyond basic skill attainment to develop a range of competencies, capacities and capabilities and collaborative practices to succeed outside the university in the workplace and beyond to be productive and positive citizens. Transferable skills or soft skills were often indicated as essential attributes, as was the ability to critique effectively. Critical thinking provides an essential human element that can also inform creativity and other factors of employability. Communication and teamwork are common generic graduate attributes at many HEIs and were often key attributes recognised by authors to impact employability, as were problem-solving, leadership, entrepreneurship, reflection, self-management and global citizenship. These attributes enable graduates to work effectively both independently and within a team and are often embedded within undergraduate and postgraduate learning outcomes.

In a variety of professions, especially those with accreditation, professional capabilities often inform competency-based assessments aligned to workplace expectations. Professional competencies, belonging and identity are frequently identified by educators to impact employability. In addition, networking is commonly identified as an important attribute for employability success to enhance teamwork and enable professional development (Table 2).

Table 2

Attributes or skills considered important for employability as reported in JUTLP papers

Attribute or skills	References
Transferrable skills or soft skills in general	Hadiyanto et al., 2021, in Indonesia; Hayes & Cenjar, 2020; Heron, 2019, in UK; Hodges & Martin, 2020, in NZ; Mackaway et al., 2011; Rahman & Lakey, 2023; Sarmiento et al., 2020, in Philippines; Smith et al., 2023, in USA
Communication and teamwork	Bandaranaike, 2018; Boyd et al., 2023, in UK; Gallagher et al., 2023; Gouda-Vossos et al., 2023; Hadiyanto et al., 2021; Hayes & Cejnar, 2020; Julien et al., 2012; Kelton and Kingsmill, 2016; Piggott & Winchester-Seeto, 2020; Porkodi et al., 2023, in Oman; Ramsaroop & Petersen, 2020, in South Africa; Sarmiento et al., 2020; Sonnenschein and Ferguson, 2020, in Norway and Australia; Savage & Healy, 2019
Ability to critique and critically analyse	Bandaranaike 2018, Firn, 2015; Gouda-Vossos et al., 2023; Hayes & Cenjar, 2020; Piggott & Winchester-Seeto, 2020; Ramsaroop & Petersen, 2020; Struan et al., 2023, in UK
Reflective capacity	Boyd et al., 2023; Coulson & Homewood, 2016; Hargreaves, 2016, in UK; Houston & Thompson, 2017; Sheridan et al., 2019
Problem solving	Firn, 2015; Hadiyanto et al., 2021; Julien et al., 2012; Piggott & Winchester-Seeto, 2020; Ramsaroop & Petersen, 2020; Savage & Healy, 2019
Leadership	Hodges & Martin, 2020; Perrin, 2014, in USA; Porkodi et al., 2023; Smith et al., 2023
Entrepreneurship	Low et al., 2021; Piggott & Winchester-Seeto, 2020; Porkodi et al., 2023
Professional competencies and identity	Bennett et al., 2016; Clanchy et al., 2021; Coulson & Homewood, 2016; Dean et al., 2020a; Durham et al., 2020; Hargreaves, 2016; Jones et al., 2016; Low et al., 2021; Ramsaroop & Petersen, 2020; Savage & Healy, 2019; Villarroel et al., 2020, in Chile
Professional belonging	Mueller et al., 2022, in NZ and Australia

Attribute or skills	References
Self-management	Savage & Healy, 2019
Global citizenship	Savage & Healy, 2019
Networking	Bennett & Robertson, 2015; Dean et al., 2020b; Firn, 2015; Heron, 2019; Hodges & Martin, 2020

Note. Countries other than Australia listed at first citation in this table.

Attributes considered by industry to be required for employability

Few partnerships with industry were reported in the *JUTLP* literature; however, it was acknowledged in many papers that industry is an important stakeholder in graduate employability (Ashman et al., 2021; Bennett & Robertson, 2015; Dodd et al., 2021; Hayes & Cenjar, 2020; Heron, 2019, in UK; Jones et al., 2016; Latukefu et al., 2014). Partnerships and co-designed curricula created by universities, industry and professions are important for employability in the workforces of the future. The ability 'to do' the work in practice, solve complex problems, work in teams, demonstrate ethical practice and use emotional intelligence complement practical skills required in the workplace (Dean et al., 2020; Dodd et al., 2021). Transferable skills such as professional identity, leadership, resilience, and autonomy can be applied to various contexts to contribute toward employability (Boyd, et al., 2023, in UK; Latukefu et al., 2014; Rahman & Lakey, 2023).

Industry highly valued attributes associated with operational performance as well as transferable skills such as critical thinking, effective communication, teamwork, emotional intelligence, and problem-solving (Bayerlein, 2020; Dean et al., 2020a; Dodd et al., 2021; Heron, 2019, in UK; Mitka et al., 2023, in UK; Rahman & Lakey, 2023; Sarmiento et al., 2020, in Philippines; Sonnenschein & Ferguson, 2020, in Norway and Australia). Employers recognised graduates with strong communication skills and the capacity to connect, engage, and comprehend diverse perspectives as highly employable (Boyd et al., 2023, in UK; Heron, 2019, in UK; Hodges & Martin, 2020, in NZ; Jones et al., 2016; Latukefu et al., 2014; Rahman & Lakey, 2023; Sonnenschein & Ferguson, 2020, in Norway and Australia). In addition to these attributes, industry considers school-level results and the prestige of the university to be significant determinants of employability (Ashman et al., 2021).

Discussion

The aim of this paper was to develop an understanding of employability in the higher education context to inform future teaching and learning practice. As part of this understanding a definition of employability was established based on the multiple definitions provided in the literature. Our proposed definition recognises the complexity of employability as an evolving concept required to meet current and future employer expectations:

Employability is lifelong, evolving and complex, requiring adaptability and capabilities including knowledge, skills and attributes to obtain sustainable employment and resolve work ambiguities in challenging globalised, sociocultural and economic contexts.

This definition also acknowledges the imperative to work towards sustainable environments and societies in increasingly tense geopolitical and challenging socioeconomic contexts.

Disciplinary contexts of employability

The *JUTLP* article set spanned nearly all 2-digit fields of education codes (Supplementary Materials) and numerous disciplines (Table 1), indicating that employability is gaining attention across disciplines in HEIs, including those that are more strongly vocational (health, journalism, law, engineering, education, etc.) and less so (arts, humanities, sciences, etc.), as noted by other authors (for example, Tight, 2023). Previously, employability was not a trait commonly explored in healthcare or education research, with the more common terms used being 'readiness to transition to practice' (healthcare) and 'classroom readiness' (education), although the *JUTLP* article set included nine from health and two from education (Supplementary Materials). Potentially, the use of these readiness terms may be explained by the chronic staffing shortages experienced by healthcare professions (World Health Organization, 2016) and education (Craig, 2017) which may result in the perception of guaranteed employment for all new graduates. Extending this concept is the notion of a 'safe to practice' threshold in healthcare professions, which references the assessment of a threshold level of competence at which point novices are considered safe to enter the workforce. This derives from the apprenticeship models that were historically used to train healthcare students (Burke, 2003). Whilst readiness to transition to practice and safety to practice are not directly encompassed by employability, they may be more relevant terms for professional degrees.

Implications for learning and teaching practice

HEIs are responsible for enabling learners to holistically grow and develop, while preparing them for future careers (Cook, 2022); thus, employability needs to be embedded into HEI curriculum. Such curriculum supports students to develop discipline-specific knowledge and skills while also developing deep learning and transferable skills relevant to future workplaces and developing the ability to showcase their skills, experiences, and attributes to employers. Various pedagogical activities can be effectively used to facilitate development of authentic employability skills, supported by co-curricular and extra-curricular activities.

Curriculum integration of hard and soft skills

Many authors argue that generic competencies should be embedded in discipline-specific knowledge and skill development in teaching and learning activities and be assessed, as well as made explicit to students as learning outcomes to enhance students' awareness and development of soft skills, and thereby address gaps between employers' requirements and graduates' capabilities (Cook, 2018; Dinh et al., 2023; Fahimirad et al., 2019; Fallows & Steven, 2000; Fossatti et al., 2023; Hadiyanto et al., 2021; Hayes & Cejnar, 2020; Heron, 2019; Rahman & Lakey, 2023; Savage & Healy, 2019; Smith et al., 2023; Tatum, 2020). Incorporating self- and peer-assessment into assessment tasks can build employability skills (Osmani et al., 2015) such as reflection, critical analysis, and communication skills. However, students may lack confidence in their own or peers' judgements and worry about social repercussions of assessing peers; developing students' assessment literacy and clear criteria and standards relating to generic competencies may overcome these issues (Chan & Chen, 2022). Fostering a sense of professional identity has been encouraged within curriculum to support the development of employability skills (Mueller et al., 2022). Involvement of industry and prospective employers in the assessment process is also suggested (Houston & Thompson, 2017; Mackaway et al., 2011; Sarmiento et al., 2020).

Students may overestimate their own competence in basic generic skills including numeracy, which are foundational for other, more complex generic competencies such as problem solving

and project management, so basic skills such as these should not be neglected (Gouda-Vossos et al., 2023; Hack-Polay, 2020). Digital literacy development can be promoted in all subjects through finding, selecting, evaluating, synthesising, and applying information to support learning, decision making and assessment task completion; communicating and collaborating across digital platforms; developing e-portfolios; and using common and discipline-specific software and applications to complete assignments and projects (Khuraisah et al., 2020; Villarroel et al., 2020; Winchester-Seeto & Piggott, 2020). Technology skills in artificial intelligence, big data, and programming are also in demand by many employers (World Economic Forum, 2023) and there are cross-disciplinary opportunities to develop these IT-based skills (Gallagher et al., 2023).

Guidance on which employability competencies to include in curriculum may be from several sources. Universities commonly specify graduate attributes or generic competencies expected of all their graduates (Cook, 2018; Savage & Healy, 2019), and many employability frameworks provide categories and lists of relevant skills and attributes (Bandaranaike, 2018; Eimer & Bohndick, 2023; Osmani et al., 2015). The World Economic Forum (2023) surveys organisations about core skills required of their employees, with cognitive skills such as analytic, creative and systems thinking; self-efficacy skills including resilience, flexibility, motivation, life-long learning, and attention to detail; interpersonal skills like empathy, active listening and leadership; and technology skills all ranking highly. Alternatively, in vocational degrees in health sciences, teaching and engineering, professional standards from accrediting bodies list required competencies for new graduates for entry-level positions and further training. In disciplines such as business, management, and accounting, professional associations and employers may provide more concise lists relevant to their specific requirements (Osmani et al., 2015). These and other higher education disciplines such as arts, social sciences and health focus on competencies such as effective team work and communication with peers and industry partners (Hayes & Cejnar, 2020). Most students will have many different jobs across their careers, and employers' requirements vary, so development of a broad base of general competencies, such as communication, cultural competencies, ICT, self-management, socio-relational, entrepreneurial, global citizenship, sustainability, critical thinking, problem solving and social responsibility (Bennett et al., 2016; Coulson & Homewood, 2016; García-Álvarez et al., 2022; Hayes & Cejnar, 2020; Savage & Healy, 2019) is beneficial for graduates. It is also important for curriculum designers to be aware of differences in potential career outcomes and to effectively inform student choice of careers (Craps et al., 2021).

Pedagogies and assessment for employability

Guest lectures from alumni and employers can build social and cultural capital for students through developing networks and gaining understanding of values and practices in the world of work (Donald et al., 2024). WIL, placements, internships, job shadowing, and fieldwork provide opportunities in various disciplines for development of profession- or industry-specific skills as well as various generic competencies, development of professional identity and networks, and application and transfer of theory and skills to practice in real-world work environments (Bayerlein, 2020; Dean et al., 2020a; Dinh et al., 2023; Dodd et al., 2021; Donald et al., 2024; Durham et al., 2020; Murray et al., 2020; Sheridan et al., 2019; Tsiligiris & Bowyer, 2021; Winterton & Turner, 2019). Service learning provides similar opportunities through integrating coursework with community service to address local needs (García-Álvarez et al., 2022). As well as in-person WIL, well-designed eWIL can foster employability skills and address equity of learning opportunities for those students learning remotely (Ashman et al., 2021; Dean et al., 2020b; Hodges & Martin, 2020; Smith et al., 2023).

Exposing students to work-related knowledge promotes skill development applicable to their future careers (Bandaranaike, 2018; Kennedy et al., 2016), with WIL often acknowledged as providing a point of difference for higher education students to enhance their employability (Hodges & Martin, 2020). WIL and reflective practice enable integration of theory and practice to develop nuanced knowledge and skills in a variety of professions, including teaching (Ramsaroop & Petersen, 2020) and medicine (Hargreaves, 2016). Real-life scenarios, project-based learning, case studies, role-plays and simulations incorporating cooperative learning pedagogies and teamwork assessment tasks can promote application of theory to practice while developing various soft skills and can potentially be delivered in person or online (Kelton & Kingsmill, 2016; Low et al., 2021; Mueller et al., 2022; Perrin, 2014; Tsiligiris & Bowyer, 2021).

Project-based learning with students working in groups on problems from industries, communities, local governments, or non-government organisations provide authentic scenarios and networking opportunities with industry, communities, and classmates (Donald et al., 2024; Montalto, 2023; Murray et al., 2020) and can provide multidisciplinary collaboration opportunities (Piggott & Winchester-Seeto, 2020). Project-based learning for design, engineering and technology students may occur in student learning laboratories, which may be virtual (simulated laboratories), remote (enabling control of physical equipment remotely), in-person, or hybrid laboratories, enabling authentic, experiential, collaborative learning on complex design tasks simulating multidisciplinary workplaces to develop hard and soft skills such as resilience, critical thinking, creativity and collaboration (Admiraal et al., 2019; Choi-Lundberg et al., 2023; Latukefu et al., 2014; Low et al., 2021). Such pedagogies may be embedded in units across the degree in which theoretical knowledge is developed and applied, or as standalone capstone units in the final year or semester of study, promoting authentic learning and developing communities of practice (Cook, 2022; Sonnenschein & Ferguson, 2020).

E-portfolios can be developed by students across their degree programs in a variety of disciplines to improve ICT skills and digital literacies, serve as evidence of learning and experience through a digital repository of learning products, work, extracurricular activities and reflection; and promote creativity, reflection and metacognition including self-awareness of discipline-specific and generic skill development (Bennett & Robertson, 2015; Mitchell et al., 2021; Yeo & Rowley, 2020). Clinkard (2018) suggests an AGILE framework of reflective questions to guide e-portfolio development with an entrepreneurial lens, relating to adaptability (resilience and learning from challenges), gathering (developing networks), identity awareness (including within communities of practice), lifelong learning (within and outside formal education), and enterprise (identifying opportunities, taking initiative, being creative and leading). E-portfolios also provide students with an opportunity to take ownership of their learning journey by generating a resource with self-generated contributions throughout their program.

The ability of students to identify learning and self-care needs and integrate critical thinking through WIL experiences across their program of study can be used to generate transformative agency as they transition from student to professional worker (McDermott-Dalton, 2022). E-portfolios are used ‘as a vehicle for encouraging self-realisation and reflection’ (Rowley & Bennett, 2016, p. 16). E-portfolios are emerging as a vital component of employability development within higher education from a metacognitive employability framework (Bennett, 2018). These digital tools provide an opportunity to drive curriculum change in the development of employability skills (Calderón-Garrido, 2023).

Professional networking sites such as LinkedIn may be used to build professional networks, in line with the connectedness learning model of Bridgstock and Tippett (2019): developing social

network literacy; building an identity; and making, maintaining, strengthening, and working with connections (Healy et al., 2023). However, there are risks with social network sites including privacy, identity theft and scams, and cybersafety concerns such as bullying and harassment (Healy et al., 2023).

Increasing face-to-face learning activities provides more opportunities for in-person interactions to promote building social capital (Winterton & Turner, 2019), which was more difficult with rapid moves to fully online teaching prompted by COVID-19 pandemic lockdowns (Crawford et al., 2020) although online WIL did enable development of transferable employability skills such as digital literacies and adapting to the future global workforce (Connor et al., 2021). Face-to-face opportunities can also be important for the development of many laboratory, inquiry, and research skills that are transferable to postgraduate study and future employment (Firn, 2015; Julien et al., 2012).

Co-curricular and extra-curricular activities

Career services staff can develop various co-curricular activities to enhance employability, such as leadership and mentoring programs; workshops on career planning, resume writing, presenting e-portfolios and showcasing skills in job interviews; and career talks from employers (Chan & Chen, 2022; Cook, 2018; Cook, 2022). Such activities should be focused on raising awareness of and developing students' employability skills, agency and social capital (Dinh et al., 2023), and helping students understand the broad external, contextual factors that influence employability (Clanchy et al., 2021; Eimer & Bohndick, 2023). Employability questionnaires can be used by students to self-assess their developing employability competencies (Scoupe et al., 2023) and by universities and staff to monitor the impact of employability initiatives.

Mentorship programs require a large pool of mentors, who can be recruited from alumni and industries through which universities have existing relationships such as research collaborations or WIL placements, and networks developed through academic and other staff sabbaticals (Firn, 2015; Tatum, 2020) or ongoing part-time work in industry (Fahimirad et al., 2019). Mentors should be provided with appropriate guidance and tools on facets of the mentoring relationship, which include providing psychosocial support through empathy, developing trust and being available; emotional and autonomy support to help mentees develop skills in decision-making and dealing with challenges; networking support to develop the mentee's network through providing access to the mentor's networks; and encouraging students to reflect on their developing knowledge, skills, employability and potential career pathways (Nuis et al., 2023).

Career services staff can liaise with employers to advertise online or at job fairs internships and part-time work and liaise with non-government and community organisations for volunteering opportunities that might be available (Cook, 2018; Cook, 2022; Smith et al., 2023). International study or 'study abroad', service learning and social entrepreneurship can build cross-cultural competencies, improve social awareness, and development of skills to work in diverse and multicultural contexts (Jones et al., 2016; Winterton & Turner, 2019). Academic staff can also facilitate access to their professional networks for students to expand their social capital. These initiatives may particularly assist students from disadvantaged socio-economic backgrounds (Ashman et al., 2021; Jones et al., 2016; Struan et al., 2023; McCafferty, 2022) and other equity groups who often struggle with access to these opportunities. Students can be encouraged to participate in extracurricular activities to develop generic capabilities such as time management and inter-personal skills, and to document their involvement and skills developed in their resume and e-portfolio (Aliu & Aigbavboa, 2023).

Implications for administrators and policy

For the last three decades universities in Australia and the UK have been emphasising the development of employability of their students to address the skills gap of graduates not meeting employers' expectations (Clarke, 2018; Tomlinson, 2012). This requires resources (Porkodi et al., 2023) such as staff development and support to effectively incorporate generic graduate attributes into curricula and address other aspects related to employability (Cook, 2018). Rather than taking a narrow, neoliberal focus on employment outcomes, universities should integrate employability with their wider missions (Palmer et al., 2018), including advancing knowledge, fostering innovation, addressing local and global challenges, and promoting the holistic development of individuals, communities, and societies (Cheng et al., 2022; Cook, 2018). University leaders should explore and select relevant employability models to develop their employability agenda, and to recognize external factors over which they have limited or no influence (Eimer & Bohndick, 2023). Nevertheless, failing to improve employment outcomes and the broader employability of graduates risks reputational damage to HEIs in the eyes of society, governments, employers, potential students and their families and communities (Hack-Polay, 2020).

Universities should encourage career services staff to work with academic and other professional staff to incorporate employability and career development learning into curriculum (Healy et al., 2022; Savage & Healy, 2019) and provide leadership, professional development, resources, and time to do so (Cook, 2018; Fahimirad et al., 2019; Hack-Polay, 2020). Significant effort is required for university staff to build relationships with employers and develop WIL placements, industry projects and mentorship programs, and universities need to adequately resource these activities (Tsiligiris & Bowyer, 2021). Governments can encourage and facilitate university-employer-professional association partnerships, including reviewing and renewing curriculum to include the knowledge and skills required across industries in relevant disciplines (Osmani et al., 2015; Raihan & Azad, 2023; Senan & Sulphey, 2022). Partnerships may also assist in the development of common language around graduate outcome statements, generic competencies, capacities and capabilities, and how these can be evidenced on transcripts or through digital badges (Chan & Chen, 2022). Furthermore, such partnerships may also support WIL and internship opportunities for students with employers (Dinh et al., 2023).

Government, industry, community, and university collaboration may address the country's development plans and global goals such as the UN Sustainable Development Goals in developing countries such as Tanzania (Mgaiwa, 2021), as well as local community needs (García-Álvarez et al., 2022). As part of quality assurance processes, accreditation of universities and specific degree programs should examine whether graduates are meeting the needs of employers in terms of their knowledge, skills, and attitudes. Standardised, validated measures of employability incorporating subjective (perceptions) and objective (longitudinal employment outcomes) measures may be used for accountability, evaluation and quality improvement at various levels (Neroorkar, 2022).

Students from disadvantaged socioeconomic backgrounds face barriers to success at university despite government agendas to widen participation, including unfamiliarity with the environment and financial barriers requiring part-time work to pay bills rather than pursuing co-curricular and extra-curricular activities and unpaid internships to build networks and social capital (Donald et al., 2024; McCafferty, 2022); furthermore, they likely struggle financially when undertaking unpaid WIL. To truly increase participation and socioeconomic mobility, universities and governments should better support such students to be able to participate fully (McCafferty, 2022; Palmer et al., 2018). For example, an apprenticeship model for WIL as proposed by Ashman et al. (2021)

would improve participation of rural and regional students who may be underrepresented due to a perceived lack of social capital and low sense of belonging. Disadvantaged students often struggle with transition and need enhanced resilience to build connections and networks. To compete more fairly with advantaged students in a graduate market, these students need more support from government, HEIs, alumni and employers. Other marginalised groups based on gender, sexuality, ethnicity, indigeneity, culture, disability, and migrant or refugee status also need additional supports in overcoming structural barriers for success at university and in the world of work (Healy et al., 2022).

With the accelerating developments in big data, artificial intelligence, mixed reality, robotics and automation, the ongoing and future changing nature of work needs to be considered by all stakeholders, and HEIs need to develop students' skills through provision of equipment, learning activities and assessment tasks that incorporate latest developments, and promote students' motivation, adaptability, and resilience (Khuraisah et al., 2020). Furthermore, universities must promote knowledge, skills, mindsets, and actions towards sustainability to address climate change, resource depletion, ecosystem collapse and increasing global conflict (Mocatta & White, 2020; Leiva-Brondo et al., 2022). These emerging opportunities and threats should be incorporated into employability frameworks.

Limitations

Our key search terms of employability and work-integrated learning for *JUTLP* and employability for review articles meant we may not have captured relevant publications focusing on related concepts such as 'graduateness' (Eimer & Bohndick, 2023), service learning (García-Álvarez et al., 2022), or work-readiness (Healy et al., 2022). After peer review, we searched several additional terms in *JUTLP* titles, abstracts or subjects; only two papers were identified as relevant and not already included in the included *JUTLP* article set.

The limitation of reviewing papers from a single journal was addressed by a parallel review of 'reviews of employability' to contextualise the *JUTLP* findings. The method of a structured narrative review is acknowledged as less robust than a systematic review; however, it suited the call for papers to review 20 years of *JUTLP* papers on a topic. This method allowed us to identify a range of findings (e.g., the variety of methods used to research employability and a wide range of knowledge related to the topic of employability) that might otherwise be excluded from a systematic review with more demanding inclusion criteria.

Our analysis indicates that employability is a dynamic and evolving concept in higher education, with increasing research attention across disciplines and countries. The *JUTLP* papers included in our review demonstrate this trend, with a notable focus on Australian studies, but with representation from Europe, the Americas, Asia and Africa. Furthermore, the broader literature that was used for context in this review primarily originates in Asia and Europe. We found that employability is influenced by a range of professional, social, and cultural factors, contributing to its evolving definition, and it continues to be a contested concept.

Conclusion

We propose a definition of employability as

> "lifelong, evolving and complex, requiring adaptability and capabilities including knowledge, skills and attributes to obtain sustainable employment and resolve work ambiguities in challenging globalised, sociocultural and economic contexts".

In the *JUTLP* papers, employability is generally associated with the discipline-specific knowledge and transferrable skills and attitudes required for success in the workforce, including communication, teamwork, critical and reflective thinking, leadership, entrepreneurship, professionalism, professional identity, self-management and global citizenship. The *JUTLP* papers tended not to draw on employability frameworks; we encourage scholars to draw on relevant frameworks and incorporate multiple dimensions of employability in their research and teaching practice.

The educational learning theories identified through the review of the *JUTLP* papers included constructive, experiential, and service learning. Consequently, teaching and learning strategies identified in this review were often connected to these theories, although not always explicitly. The teaching and learning strategies used include authentic experiences, WIL, and reflective practice, which allowed students to apply discipline-specific knowledge and support professional growth and thus employability.

While there is a level of agreement across the *JUTLP* papers that employability research is important to inform learning and teaching practice to prepare students for the changing world of work, a paucity of collaborative research between HEI and employers about effective interventions that strengthen employability was observed, and ongoing development of employability definitions, skills and attributes, frameworks and measurement instruments are required, taking into account increasing sociopolitical conflict and climate change, which threaten a sustainable future.

Conflict of Interest

J-AK is Senior Editor for Special Issues for *Journal of University Teaching & Learning Practice*. The other authors disclose that they have no actual or perceived conflicts of interest. The authors disclose that they have not received any funding for this manuscript beyond resourcing for academic time at their university. The authors produced this manuscript without artificial intelligence support.

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CRediT statement

DCL: Conceptualisation, Methodology, Investigation, Data curation and analysis, Writing – original draft, Writing – review & editing, Project administration; TD: Conceptualisation, Methodology, Investigation, Data curation and analysis, Writing – original draft, Writing – review & editing, Project administration; MLB: Data analysis, Writing – original draft, Writing – review & editing; BC: Data analysis, Writing – original draft, Writing – review & editing; MG: Data analysis, Writing – original draft, Writing – review & editing; RM: Data analysis, Writing – original draft, Writing – review & editing; SP: Data analysis, Writing – original draft, Writing – review & editing; FG: Data analysis, Writing – original draft, Writing – review & editing; ER: Conceptualisation, Methodology, Formal analysis, Investigation, Writing – original draft, Writing – review & editing; SW: Data analysis, Writing – original draft, Writing – review & editing; CW: Data analysis, Writing – original draft, Writing – review & editing; JAK: Conceptualisation, Methodology, Data analysis, Writing, Supervision, Project administration

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*Articles published in *Journal of University Teaching & Learning Practice* included in the structured narrative review.

**Review articles from other journals identified through PRISMA-based systematic search of Scopus and ERIC databases.

Supplementary materials

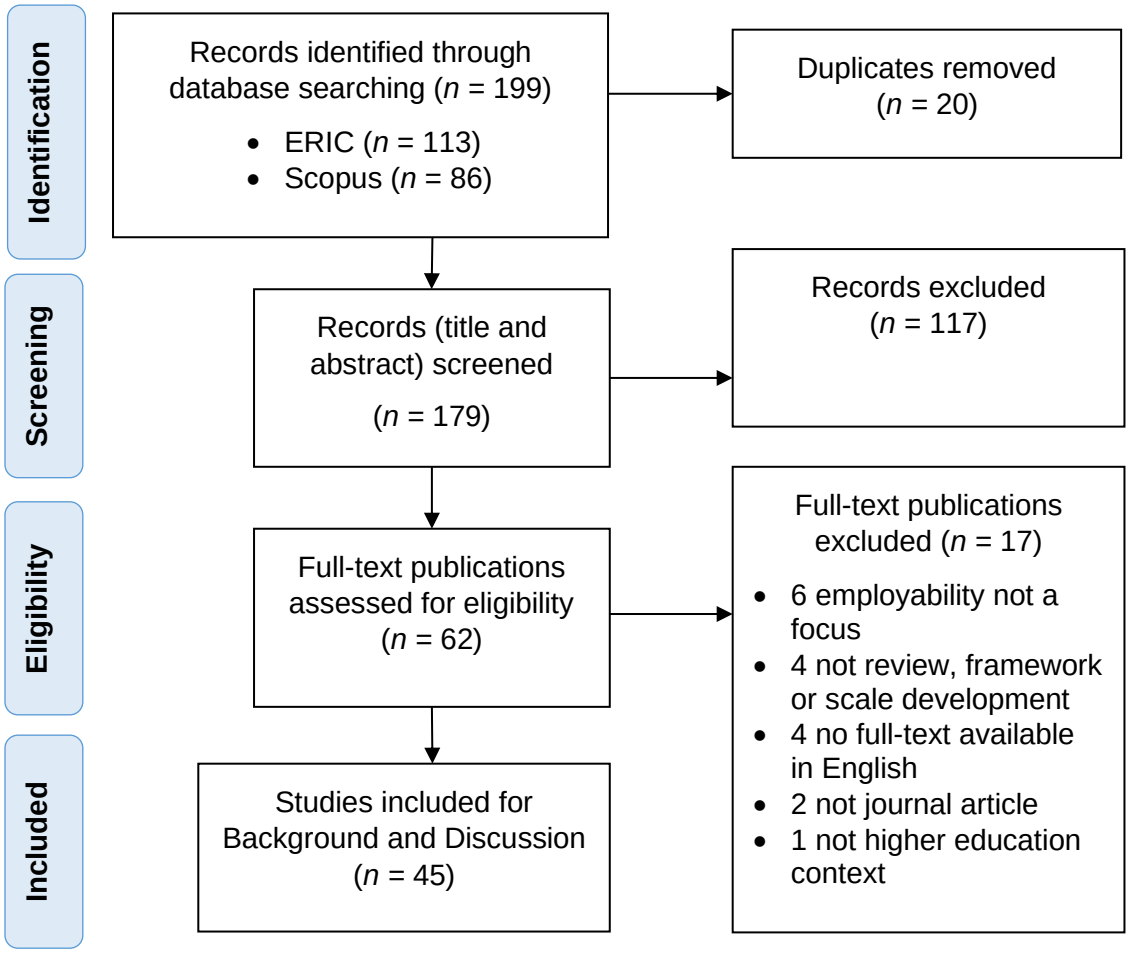
Systematic search of review articles on employability for Introduction and Discussion

The focus of this structured narrative review article is twenty years of *JUTLP* papers on the topic of employability. In addition, a systematic search for review articles on employability was undertaken to provide broader context for the findings of the *JULTP* papers, informing the Introduction and Discussion sections of the article.

To find review articles on employability, Scopus and ERIC databases were searched within title, abstract or keywords or descriptors on 16 and 22 August 2023, respectively, from 2014 to 2023 with search terms employability AND higher education AND (review OR meta-analysis OR bibliometric analysis OR citation analysis). A total of 86 documents from Scopus and 113 academic journal articles from ERIC were screened in Covidence, resulting in 45 included review documents as presented in a PRISMA chart (Supplementary Figure 1).

Supplementary Figure 1

PRISMA diagram of literature search and screening for review articles on employability (after Moher et al., 2009)



Included reviews were authored by academics from Asia (n=18), Europe (n=17), Oceania (n=10), Africa (n=4) and Americas (n=3), with several reviews authored from more than one geographic region (United Nations Statistics Division, 2023), thus providing international perspectives on employability.

General information was extracted from the review articles, including employability definitions, frameworks, competencies, and measurement, and was synthesised to inform the writing of the Introduction and Discussion sections.

Characteristics of *JUTLP* papers included in the structured narrative review

Included *JUTLP* articles (n=46) were predominantly from Australia (n=33), five from the United Kingdom, three from New Zealand, two from the United States of America, and one contribution each from Chile, Indonesia, Norway, Philippines, South Africa and the Sultanate of Oman (the total exceeds 46 as three articles had authors from two countries).

Thirty-four articles related to the employability of undergraduate students, while the remaining articles were related to postgraduate students, graduates, or the relevant cohorts were not specified but were clearly higher education contexts.

Participants in the studies included students (n=25), staff (n=14), and others such as industry experts and community members (n=8), with many articles including more than one participant type, while 11 studies did not involve participants.

The discipline areas of the articles, classified by UNESCO (2015) 2-digit field of education codes, were social sciences, journalism and information (n=10); health and welfare (n=9); arts and humanities (n=8); business, administration and law (n=8); natural sciences, mathematics and statistics (n=6); engineering, manufacturing and construction (n=3); information and communication technologies (n=3); education (n=2); services (n=2); and agricultural, forestry, fisheries and veterinary (n=1). The total exceeds 46 as many articles discussed two or more disciplines. Thirteen of the studies were about higher education generally and did not specify disciplines.