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A narrative review of graduate employability models: their paradigms, and relationships to teaching and curricula

Elizabeth J. Cook[1]

Corresponding author: Elizabeth Cook (e.cook@ecu.edu.au)
[1]Strategic and Governance Services Centre, Edith Cowan University

Abstract

Increasingly governments expect universities to improve graduate employment outcomes. Universities respond by implementing employability strategies in, alongside and outside curricula, with debates ongoing about whether employability is part of the curriculum, why and how. The context and process of employability is commonly framed in neoliberal and human capital paradigms. Some academics are resistant to their university's employability strategy and programmes often adopt a 'bolt on' approach, which is outside the curriculum. At this time, the world is in the midst of multiple crises, linked to sustainability, technology and survival in societies, which are redefining and affecting life and work. With all these tensions in mind, should universities reconsider how they think and act with respect to graduate employability, careers and the world of work? What are the key values of employability paradigms and models, and how do they connect to the curriculum? This paper presents a narrative review of conceptual employability models published in the peer reviewed higher education literature since 2000 with each model positioned on a continuum based on its: (1) paradigm, i.e., underlying beliefs about careers, employability and employment; and (2) relationship to teaching and curricula (i.e., intra-, extra- and/or co-). I observe that most models are focused on the employability of individuals (i.e., career, skills, capabilities) and economic success (i.e., markets, knowledge economy, workforce), with limited consideration of wider contributions to local and global career development through social, ecological or technological lenses. Models with stronger individualistic focus appear to be less connected to teaching and curricula than models that also focus on others. I discuss the potential implications of these observations for universities and teaching and learning.

Keywords
Higher education; graduate employability; career; curriculum; teaching; conceptual models; relational paradigm

Introduction

The COVID-19 pandemic has impacted everyone and forced us to reflect on human values and needs in life and work, including the importance of systems, connections and relationships. Fresh air, human touch and connections with nature are vital to humankind. As the same time, the climate crisis is highlighted. It is clear that urgent action is required to sustain life and livelihoods. Earth's survival and our success stems on everyone assisting to deal with these issues and challenges – individually, locally and globally.

The world our university students will graduate into has changed significantly since the pandemic and will always change, perhaps more rapidly as time goes on. Employers, workplaces and individuals are increasingly aware of the importance of connections, relationships, technologies and issues like sustainability and mental health. The workforce is changing shape, how we engage in work has changed and people are calling for change, which requires systems thinking (Dunnion & O'Donovan, 2014; Galbraith, 1999; Grohs et al., 2018). Students, graduates, teachers and wider society increasingly expect universities to demonstrate commitment to sustainability, including through the curriculum (Chankseliani & McCowan, 2021; Jones et al., 2021; McCowan, 2019; Students Organising for Sustainability, 2021). As always, humans need to be aware of their interactions and positionality in respect to life and work (to adapt accordingly). But it seems that adaptability and awareness (of self, others, and social, ecological and technological aspects) is becoming more important as life and work increases in complexity. Most people need and want to have a positive career influence on local and/or global systems. Could universities use employability more as a device to help foster positive change through careers, workforce and employment? Is this something that universities and academics might want to do? Is it time to rethink the meaning and purpose of 'employability'?

Governments are increasingly expecting universities to improve graduate employment outcomes (Dearing, 1997; Funck & Karlsson, 2019; Jongbloed & Vossensteyn, 2010; Organisation for Economic Co-operation and Development (OECD), 2017; Williamson, 2019) despite growing numbers of graduates and shrinking, volatile and constrained labour market conditions (Jackson, 2020; Jackson & Bridgstock, 2021), currently exacerbated by the COVID-19 pandemic. The complexity and contestation of graduate employability is largely shaped and fuelled by notions of Capital (Tomlinson, 2017), neoliberal perspectives, and topics such as individual and institutional competition, marketisation and massification of HE (Olssen & Peters, 2005; Tight, 2019).

Graduate employability can be easily confused with graduate employment outcomes, which are a priority of governments internationally (Dearing, 1997; Jongbloed & Vossensteyn, 2010; Organisation for Economic Co-operation and Development (OECD), 2016; Williamson, 2019). This is because employment outcomes are often used as a proxy metric for graduate employability even though the constructs are not synonymous, nor employability an employment guarantee (OECD, 2017; Jackson, 2020; Jackson & Bridgstock, 2021; Yorke, 2006). To clarify the distinction: employability is a *process* of lifelong and lifewide learning (Barnett, 2011) and development, while employment is one of its many possible *outcomes* (Healy, Hammer, & McIlveen, 2022; Jackson, 2011; Jackson & Bridgstock, 2021).

In Australia, where I am based, the Federal government has signalled expectations of universities through the introduction of performance-based funding (e.g., Wellings et al., 2019) and, more recently, the National Priorities and Industry Linkage Fund (Department of Education, Skills and Employment, 2021). Both policies incentivise universities to increase graduate employment outcomes and, in turn, have resulted in universities including graduate employment outcomes in strategic plans, leading to the development of employability-focused policy and practices (Cook, 2021; Hewitt, 2020; Jackson & Bridgstock, 2021). This is

neoliberalism in action and the situation is similar in many other countries (Hewitt, 2020; Norton, 2019; Smith et al., 2018).

Relationship between graduate employability and the curriculum

When it comes to how graduate employability agendas relate to the curriculum, there are three common alternatives:

1. intra-curricular, i.e., embedded or integrated within curricula as part of formal learning, and often assessed. For example, work-integrated learning, study tours and capstones (see also Artess, Hooley, & Mellors-Bourne, 2017; Blackmore et al., 2016; Bridgstock, Grant-Iramu & McAlpine, 2019; Kinash, 2015; Kinash, Crane, & Judd, 2016; Pegg, et al., 2012).
2. co-curricular, i.e., activities that sit outside curricula but are developed and delivered by universities, often via their career service centre. Examples include, professional networking events, leadership and mentoring programs, and community and outreach activities.
3. extra-curricular, i.e., opportunities outside the university, sometimes advertised by the career service centre, for example, paid work or volunteering.

While there have been debates and contestations surrounding these alternatives (e.g., Bradley, Quigley, & Bailey, 2021; Jackson & Bridgstock, 2021; Jackson & Tomlinson, 2021; Thompson, Clark, & Walker, 2013), I won't spend time reviewing them here.

My stance is that it is useful to invest efforts in embedded and integrated approaches, but this needs to be done within an adequate and renewed paradigm. A reason for this stance is supported by Daubney (2021, n.p.) who writes that 'surfacing employability through curriculum makes it structurally unavoidable for all students to engage with [it].' Daubney argues that academics can help learners realise the 'innate employability value' of their chosen discipline through redefined learning outcomes and clearer articulation of knowledge, attributes, skills, and experiences gained through coursework and/or research. While co- and extra-curricular practices are largely managed by career services in specialised hubs on campus and online, academics often struggle to integrate employability into their teaching practice. This is understandable because academics are not career experts and current approaches rely on limited resources in the form of personalised support from career advisers and career development learning designers. Importantly, not all academics agree with the individualised and human-capital framing of graduate employability agendas and literature that has cemented what this term means for many.

Although employability is conceptually and methodologically situated under the umbrella of career development and career development learning (see McCredie & McAlpine, 2022), most of the graduate employability literature fails to reference both the depth and breadth of theory and evidence from that field (Healy, Hammer, & McIlveen, 2022). This is observed in the disconnected manner that universities deliver employability strategies, i.e., careers and employment services remain largely separate from academic disciplines, and Law and Watts' (1977) Decision learning, Opportunity awareness, Transition learning and Self-awareness (DOTS) model, from the field of career development, remains venerable in universities. It is promising that recent scholarly discussions are generating interest to bring these fields closer together.

For some academics, graduate employability has gained pejorative connotations. For example, academic commentators have argued that graduate employability can have a detrimental impact on the value and purpose of university degrees (Tomlinson, 2012; Sin, Tavares, &

Amaral, 2019). Frankham (2017) goes further, postulating that the culture of performativity in higher education, encouraged by metrics and league tables, can have an opposite effect than is intended, i.e., to *not* prepare learners for the workplace. Although degree quality cannot be measured by the percentage of employed graduates, universities' international reputations are linked to graduate employment outcomes (e.g., QS Quacquarelli Symonds Limited, 2022), intensifying the pressure on staff. Scholars have also observed teacher resistance to employability (Osborne & Grant-Smith, 2017), issues of graduate over-education and over-skilling (Sloane & Marvomaras, 2020), poorer employment outcomes for marginalised groups (Pitman et al., 2019), and job uncertainty and social identity disturbance (Godinic, Obrenovic & Khudaykulov, 2020). Heightened contention around the construct of graduate employability has created renewed interest in alternative conceptualisations. The next section discusses some alternative views that have emerged.

Emergent graduate employability paradigms and models: from individualistic to relational

The world of work is severely disrupted by the pandemic, and disturbances are expected to continue with ongoing issues and challenges like climate change. This is because the world is not merely complicated, but supercomplex (Cilliers, 1998) and turbulent (Garretson et al., 2021). Henceforth, scholars are exploring ways to ensure that higher education keeps up with changing contexts. For example, Lacković (2019) conceived that understandings, perceptions and actions associated with graduate employability should also consider wider perspectives that question employability with respect to society, environment and technology. Increasingly scholars (e.g., Hooley, 2020; Lacković, 2019; Walker & Fongwa, 2017) assert that the current human capitals approach (e.g., Tomlinson, 2017), which originates from the DOTS model, is restricting and limited when one considers employability's wider meanings and purposes. They recognise that, although human capitals approaches promote the development of necessary skills and attributes for employment (which *are* important to address through higher education), they inadequately consider the wider aspects of employability, employment and work, such as associated benefits, impacts, issues, challenges and motivations.

Similarly, Forrier, De Cuyper and Akkermans (2018) view employability as inherently contextual and relational. They oppose the dominant view focused solely on individuals amassing assets for achieving positive results for themselves. With narratives (both inside and outside the walls of universities) so focused on jobs success and the economy, learners are perhaps in danger of thinking this is all that careers and employment is about, when it is, and can be, so much more. I believe that wider employability understandings, perspectives and actions have much to offer graduates, may better align with the supercomplexity (Barnett, 2000a; Barnett, 2000b) of life and work, and support better integration of employability with other university strategic change agendas (e.g., sustainability; diversity, inclusion and equality).

Scholars contend that universities have a social and moral obligation to develop employable graduates who are citizen scholars (Arvanitakis & Hornsby, 2016; Miller et al., 2020; Mortari, 2016). These are employed citizens who are motivated and have the capacity to make positive changes happen for themselves *and for others*. The field of career guidance has a longstanding social justice tradition yet is not often explored in the employability literature. As Hooley and Sultana (2016) note, social justice is not only about helping individuals, but about broader aspirations and objectives, including enhanced social inclusion, cohesion and solidarity, and ensuring human rights and needs are met. For example, Sultana (2020) highlights the importance of 'authentic work education' in providing intellectual tools and encouraging moral resolve to imagine more socially just and fulfilling ways of living together. Both he and Lacković (2019) advocate for enabling learners to gain insights into individual and collective possibilities

and responsibilities as vital for addressing the challenges and issues shaping life on Earth. Perhaps instilling care and respect for other beings and things would help to instil motivations for collective solidarity, which may, in turn, assist in dealing with local and global challenges and issues, while increasing fulfilment in work. Sultana (2020) posits that this may benefit human flourishing.

Hooley, Sultana & Thomsen (2017) argue that greater emphasis on these aspects by universities may help to balance the dominance of neoliberalism in society. Blustein, McWhirter and Perry (2005) and Carosin et al. (2021) similarly advocate for the development of critical and communitarian understandings of career, employability and work as a means of contesting responsibilisation, exploring humanness, humanity and world, and attending to issues of sustainability and decent work. The narrative literature review, which follows, explores some of these ideas as they are observed in conceptual graduate employability models published in the higher education research literature since 2020.

I have been reflecting on the shifting landscape of life and work, and what it might mean for university teaching, specifically for graduate employability. How can universities better connect employability strategy with the pressing need to tackle broader issues and challenges? Are lecturers and students engaged in employability dialogue as part of usual teaching and learning? Are students and graduates confident and motivated to make positive contributions in the world through careers? I believe it is possible to improve employability strategies to better reflect broader issues, concerns and challenges and that intra-curricula employability practices are not yet integrated in academic teaching. Moreover, I believe that many students experience diminished hope in respect to making positive change as their degree progresses, often due to labour market pressure and discourses focused heavily on economy and jobs. What do you believe?

The next section is the narrative literature review (Bearman et al., 2012). For each conceptual graduate employability model, I explore its: (1) paradigm, i.e., underlying beliefs about careers, employability and employment; and (2) relationship to curricula (i.e., intra-, extra- and/or co-) – rather than implementation or practiced positioning – to judge the likelihood for intra-curricular integration, which is of relevance for academics. I discuss the potential implications of my observations for universities and teaching and learning.

Review of graduate employability models

I define a 'model' in a document as a framework represented by a diagram (with supporting text) that summarises what the author(s) conceive as included in the construct of 'graduate employability.'

Review questions

The following questions guided my exploration of the conceptual graduate employability models:

- What are the distinguishing characteristics or features of each model?
- What is the relationship (estimated proximity) of each model to teaching and the curriculum, i.e., intra-curricular, or extra- or co-curricular?
- Is there a relationship between orientation (paradigm) and proximity to teaching and curricula across the models? If so, why might that be?
- Where, on a spectrum of individualistic to relational graduate employability orientations, could each model be positioned?

Methodology

This narrative literature review presents my perspectives on the literature and includes 'a systematic presentation of the studies' (Bearman, et al., 2012, pp. 626-627) but is not a systematic literature review. Narrative literature reviews 'are [particularly] helpful in presenting a broad perspective on a topic [to] bring practitioners up to date [and] serve to provoke thought and controversy … in a balanced manner' (Green, Johnson, & Adams, 2006, p. 103).

I am a science graduate and place high value on logic, clarity and precision in qualitative research. Thus, I have attempted to share as much relevant information as possible to assist readers in making informed decisions about the quality and integrity of this research. So, even though this is a narrative review, it contains more details than is traditionally expected of a review of this type (see Bearman, et al., 2012, p. 629).

The process undertaken was configurative (Gough et al., 2012), not aggregative, to enable critical and interpretive exploration of the conceptual models, their paradigms and relationships to teaching and curricula, for generating new knowledge. It was also a rapid review process, thus making Google scholar adequate and appropriate as the chosen tool for searching literature.

Method

Search and appraisal

I tested key words, aligned to the research questions, in various combinations using Google Scholar (18-24 January 2021). The following string generated the largest number of relevant sources:

> ['higher education curriculum' OR 'university curriculum'] AND ['graduate employability' OR 'career development learning'] AND [conceptualisation OR conceptualization OR construct OR model]

Initially, I limited the search to grey literature, books and peer-reviewed journal articles published in English since 2000. This resulted in 1350 documents, which I screened by title and abstract to download only relevant documents. I sorted these documents into three groups: conceptual research; empirical research (including case studies); and technical reports. In reviewing the literature as a whole up to this point, I could already see that authors mainly referred to, and sometimes measured, graduate employability skills and attributes, and/or used employment outcomes as a proxy metric for employability.

Then, I narrowed the scope to focus only on the conceptual research to specifically target *perspectives* on graduate employability practices, rather than what had been practiced (case studies) or reported (technical reports). By excluding case study research, I acknowledge that a number of potentially relevant pedagogical approaches may have been excluded but it was my intention focus on the review questions, which emphasise conceptual thinking of the topic.

Of the conceptual research, 13 documents clearly depicted a graduate employability model, mostly via a diagram or table. These are summarised in Table 1 in chronological order.

Table 1: Final 13 Conceptual Research Documents

Citation	Title	Document Classification	Location
Harvey, Locke, & Morey (2002)	Enhancing employability, recognising diversity: Making links between higher education and the world of work.	Report for Universities UK	UK
Harvey (2005)	Embedding and integrating employability	Journal article in *New Directions for Institutional Research*	UK
Knight & Yorke (2006)	Embedding employability into the curriculum	Higher Education Academy Learning and Employability Series	UK
Holmes (2013)	Competing perspectives on graduate employability: Possession, position or process?	Journal article in *Studies in Higher Education*	UK
Penttinen et al. (2013)	Supporting students' pedagogical working life horizon in higher education.	Journal article in *Teaching in Higher Education*	Finland
Tomlinson (2017)	Forms of graduate capital and their relationship to graduate employability	Journal article in *Education + Training*	UK
Clarke (2018)	Rethinking graduate employability: the role of capital, individual attributes and context	Journal article in *Studies in Higher Education*	Australia
Bennett (2018)	Embedding employABILITY thinking across higher education	Report for Australian Government Department	Australia
Dacre Pool, Gurbutt, & Houston (2019)	Developing employable, emotionally intelligent, and resilient graduate citizens of the future	Chapter in *Employability via higher education: Sustainability as scholarship*	UK
Cole (2019)	Defining and developing more effective approaches to employability in higher education: A case study of undergraduate sports degrees	Unpublished Dissertation	UK
Cloutman & Higgs (2019)	Developing personal and population employability: Understand, pursue and manage.	Chapter in *Education for employability (Volume 2): Learning for future possibilities*	Australia
Lacković (2019)	Graduate employability (GE) paradigm shift: Towards greater socioemotional and eco-technological relationalities of graduates' futures	Chapter in *Education and technological unemployment*	UK
Bridgstock (2020)	Graduate employability 2.0: Enhancing the connectedness of learners, programs and higher education institutions	Report for Australian Government Department	Australia

Synthesis and interpretive analysis

I read each document in depth, considering the review questions, and undertook the following steps to synthesise and make observations on the documents:

1. developed a framework to guide interpretive analysis (Table 2).
2. using Table 2, compared and contrasted perceived graduate employability paradigms (orientations) across the documents.
3. estimated the proximity of each model to teaching and curricula (i.e., intra-, extra- and co-curricular), drawing on personal expertise and career experiences of teaching, educational design and career development learning design.
4. created Table 3 and Figure 4 to summarise and visualise all observations to this point.
5. sorted the reviewed documents into three groups: (1) focused predominately on individuals and skills for personal success; (2) focused on individuals' skills and success, including social and/or cultural aspects; and (3) encompassing individuals' skills and success, plus wider considerations for others (both human and more-than-human, e.g., technology and ecology).
6. extracted relevant text from each document using Nitro PDF Editor, i.e., book chapters from books, and text detailing models, key definitions and practical/pedagogical examples, excluding the rest. This was to ensure that only relevant text was included in word frequency analysis.
7. created three PDFs for analysis, one for each group, using Nitro Pro Editor to merge individual PDFs.
8. ran Word Frequency Queries in NVivo12 to generate three word-clouds (Figures 1, 4 and 6) from the three PDFs. This was to show the overall orientation and relationship to teaching and curricula of each group of documents, enabling readers to make their own judgements about what I said I saw. For consistency, the same word frequency criteria were applied for each query: 50 most frequent; minimum length 6 characters; and grouping with stemmed words.
9. noted key observations across these groups.

Table 2 defines the characteristics of two imagined polar opposite paradigms (or extreme orientations). I created this table as a framework to guide and clarify my understandings of the differences in orientations of authors in respect to employability. Lacković's (2019) book chapter was instrumental in the development of this framework because it clearly defines the prevalent individualistic paradigm and introduces possible ways for defining alternatives. Note that these paradigms (orientations) are not exclusive, nor bad or good, but, rather, are imagined as two ends of a spectrum. Models cannot be at either end of the spectrum (as they are not black and white) but can be closer to one end or another (as variable shades of grey), depending on the perceived stance of the authors writing in respect to graduate employability.

Table 2: Characteristics of the Imagined Extreme Paradigms of Graduate Employability, Building on Lacković's (2019) Conceptualisation of GE Paradigm to Expand the Individualistic Towards the Relational

Individualistic Paradigm	Relational Paradigm
Individualism Focused on self and selves, excluding considerations for others, i.e.: - individual employment-related skills, outcomes, characteristics and employment - competitive advantage - my world, my career future, for me	*Relationalism* Focused on self, selves *and* humanistic aspects, such as: - interactions with other humans in employment and career - considerations for others - concerns for equality and social justice - our world and our career futures
Human-Driven Market-driven higher education Neoliberal marketisation Students as consumers Knowledge economy Labour market Unemployment and underemployment	*More-Than-Human Inclusive* All above aspects (under *Relationalism*) plus relationships with other things, e.g., environment, other beings, artefacts, technologies, etc., during career and in employment
Human Capital Emphasis on developing and possessing human capitals for personal gain	*All Capitals* Having awareness of, and developing, human, social, cultural, identity and psychological capitals
Economic Economic value of university degrees Creation of knowledge economy Value for self, driven by financial gain	*Greater Good* Higher education for positive change, beyond values for selves and economy Creation of knowledge for sustainability, survival and the greater good

Narrative review findings and key observations

This section is organised into the three groups created in step five of the Method (above). For each group (subsection), I describe my observations of the models in each document in response to the review questions and show the group's word-cloud. The relative sizes of the words in each word-cloud reflect the frequency of particular words used by the authors of those documents (in the group). These are my personal analytical observations and how I see this literature as aligned with my review questions. Obviously, any qualitative research is personal interpretation, and I have provided the reasons for my analytical positioning. I intend to stimulate discussions about the ways that educational researchers have conceptualised employability and guided its operationalisation, specifically in respect to the curriculum.

Models focused predominately on individuals and skills for personal success

Knight and Yorke's (2006) Understanding, Skills, Efficiency beliefs and Metacognition (USEM) model is heavily focused on developing *individual* learners' subject-understandings, skills, meta-cognition and attributes without considerations for others. Teaching quality is mentioned without description of pedagogy.

The models by Harvey, Locke and Morey (2002, p. 18) and Harvey (2005, p. 15) are almost identical and focus on individuals' employment success. The key difference is that Harvey emphasised the importance of university-led employability activities and centralised careers

supports. While both documents include mention of extra-, intra- and co-curricular employability activities, but do not what teaching and learning would entail.

Penttinen, Skaniakos and Lairio's (2013, p. 888) Pedagogical Working Life Horizon model is focused on learners' concerns for *their* futures to the exclusion of concerns for others. 'Working life orientations' (i.e., individual relationships, knowledge and skills, and employability) are described as embedded in curricula, without pedagogical details, although they recommend supporting reflection and inquiry. Noteworthy recommendations include the need to consider the careers guidance literature and include employability in all degrees to reach all learners.

Dacre Pool, Gurbutt and Houston's (2019, pp. 85-89) model is comprised of Dacre Pool and Sewell's (2007, p. 281) CareerEDGE model and Duckworth's (2016) concept of resilience. Drawing inspiration from Knight and Yorke's (2003; 2004; 2006) USEM and Watts' (2006) DOTS model, the authors suggest that lecturers, tutors and careers practitioners use this model to support career development learning, reflection and evaluation. However, they don't not explain 'how' (i.e., in respect to pedagogy and the curriculum). While Dacre Pool, Gurbutt and Houston's (2019) model is predominately focused on developing individuals for their own gain, this is not emphasised as strongly by these authors as those previously discussed. The reason I say this is because these authors mention the need for social interactions both for evaluation (see Cook, 2021) and the development of emotional intelligence (EI) (see Goleman, 1998). Dacre Pool, Gurbutt and Houston's (2019) model has strengths including emphasising intra-curricular employability, referencing career development learning theory and highlighting the importance of student wellbeing (reflecting a shift towards learner-centred approaches in higher education). Dacre Pool, Gurbutt and Houston's (2019) recommend using their model to support the audit of graduate employability activities, integrate resilience and EI in curricula, and develop learners who reflect and evaluate their employability, but have not published details to guide such practices.

Figure 1: Word-cloud of Models Focused Predominately on Individuals for Themselves

Models focused on individuals' skills and success, including social and/or cultural aspects

Holmes (2013) may have been the first scholar to have criticised the individualistic focus of university employability activities. He felt that the approaches to date were too focused on *possession* (i.e., possessing human capital through skills and attributes) and *positioning* (i.e., accumulating social capital) of graduates, suggesting that *processual* aspects (i.e., career management and graduate identity development) were needed as well. I believe that each of these approaches are needed but that there is more to employability, careers and employment than these ideas convey. That is, employability, life and work is not only about preparing individuals for success but should encompass consideration of responsibilities for others (humans and non-humans) and the need for kindness and care on Earth. Holmes advocates for extra- and co-curricular employability approaches (managed by career services), as opposed to intra-curricular approaches, which is against my stance. That said, scholars have used Holmes as the basis for curriculum-related research, for example, to explore the impact of pedagogical interventions (see Jackson, 2016; Tomlinson & Jackson, 2019). Holmes acknowledges the need for graduates to demonstrate their worth to employers to get jobs but does not consider the potential impacts of social connections and relations on employment prospects and workforce dynamics, arguably stronger any employability training or similar. Instead, Holmes saw social interactions as instrumental for individual benefit. Challenging this notion, I postulate that, because social interactions and everything on Earth is relational, graduate employability should be too.

Cole (2019) steps further from the dominant individualistic view with his Dimensions for Learning model (p. 256) focused on more than just employment outcomes. This model encompasses learning, life and work in its broadest sense and as part of a complex system. Although Cole portrays learners as monitoring, articulating and reflecting on their employability and learning, he emphasises the importance of learners developing socio-cultural awareness and values through practiced interactions with peers and communities (moving beyond individuals and towards considerations for others). Furthermore, Cole introduces the model as a scaffold to support the curriculum design process. He emphasises the value of teachers listening to learners' definitions, perceptions, experiences and critiques of graduate employability, and defines the 'what', 'why' and 'how' of each dimension of learning to support pedagogical practice but does not provide explicit examples to guide lesson planning. In agreeance with other well-informed scholars (e.g., Artess, Hooley, & Mellors-Bourne, 2017; Blackmore et al., 2016; Hewitt, 2020), Cole highlights that it is important to involve career services, learning supports and prospective employers in the employability curriculum development process while aligning institutional employability agendas with national frameworks, for example, the HE Academy's employability framework (Cole and Tibby, 2013).

Bennett's (2018) employABILITY thinking model (Figure 3) is founded on six interrelated employability literacy types – basic, rhetorical, personal and critical, emotional, occupational, and ethical, cultural and social – that she says individuals need to develop. I consider these to be competencies or knowledges. However, some relate to wider society, and Bennett (2018) does emphasise the need for individuals to attend to issues of social and cultural difference, and the development of ethically responsible citizens. Through employABILITY, Bennett is aiming to show how teachers might transform their teaching practice. She has contributed an open-access website (https://developingemployability.edu.au/) with a plethora of resources to assist teachers to use employABILITY. Bennett socialises this resource through regular updates on LinkedIn and Twitter. Salient features of employABILITY include its strength-based metacognitive approach and emphasis on integrating employability within existing curricula.

Figure 3: Bennett's (2018, p. 10) Literacies for Life (EmployABILITY Thinking) Model (CC BY-SA 4.0)

Tomlinson's Graduate Capitals model (2017, p. 340) is comprised of five Capitals – human, cultural, social, identity and psychological, which, he says, are drawn upon by graduates' transitioning to work and managing their careers (i.e., portrayed as an individualistic focus). However, I have positioned Tomlinson's work at the half-way point of the spectrum because it includes social and cultural Capitals, which require social interactions that may result in contributions towards others. I feel that these aspects of employability are described more explicitly than Coles' model, but less explicitly in respect to learning and not at all in respect to pedagogy. However, anecdotally, I am aware that Tomlinson's model has inspired thought in respect to curriculum development for graduate employability at my university (and others as seen in case studies).

Clarke's (2018, p. 1931) Integrated Graduate Employability model is an extension of Tomlinson's (2017). While Tomlinson (2017) focuses on the application and utility of individuals in respect to labour markets (not on the labour market context itself), Clarke (2018) incorporates considerations of labour market supply and demand, other external employment-

related factors and how these impact individual graduate outcomes. These additional aspects may include people and materials in networked societies, but this does not appear to be part of Clarke's focus. Despite the name of this model, and suggestions that teachers' scaffold learning to support employability development, Clarke does not explain what teaching and learning for employability, using her model, might entail.

Cloutman and Higgs' (2019, p. 73) Employability Development (EmD) model is described for intra-curricula use but the authors do not provide details to guide its operationalisation (other than, what I perceive to be, loose descriptions that could be inspirational for some). I found no evidence of the use of EmD by university teachers, so its effectiveness as a pedagogical approach is yet unknown. Cloutman and Higgs describe graduate employability as a life-wide and lifelong process of understanding, pursuing and managing by individuals and populations. While they consider workforce considerations (and related effects on individuals and populations), they don't consider broader relational aspects or the effects of individuals towards others.

Bridgstock's (2020) GE2.0 connectedness learning model (Figure 2) is unique compared to the models discussed so far. It focuses on developing learners' 'capabilities to capitalise upon the affordances of digital and analogue social networks for professional and career development' (p. v). While GE2.0 aims to connect learners, teachers and university programmes with industries and communities through building authentic partnerships and knowledge-sharing networks, Bridgstock does not consider broader employability challenges or how learners may contribute to society through connectedness. Bridgstock developed a framework and pedagogic strategies to support the use of GE2.0 (http://www.graduateemployability2-0.com/). However, some 'pedagogic' strategies may be better classified as co-curricular or may be difficult for teachers to use without adequate training and resourcing (e.g., industry/alumni engagement). Two noteworthy intra-curricular suggestions posed by Bridgstock include: (1) using social media and e-portfolios; and (2) 'connectedness learning', which is described as authentic, just-in-time inquiry or problem-based learning activities operationalised in networks or with community/industry.

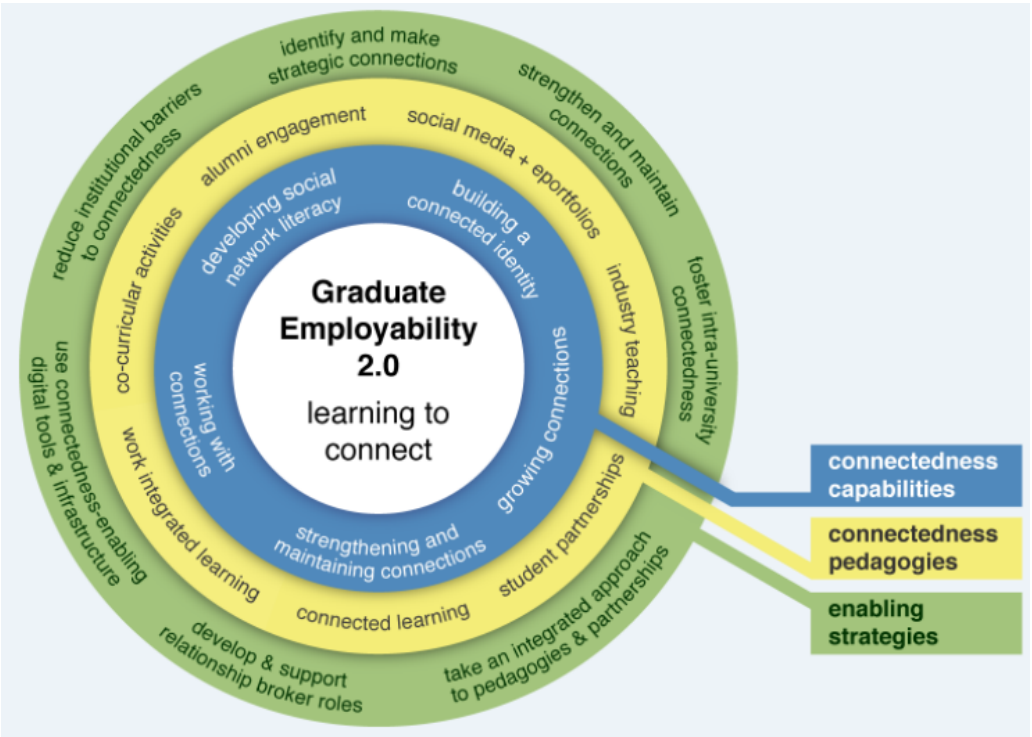

Figure 2: Brigstock's (2020, p. 15) Graduate Employability 2.0 (CC BY-SA 4.0)

Figure 4: Word-cloud of Models That Include Social and/or Cultural Aspects But Still Focus on Individuals' Success

Model encompassing individuals' skills and success, *and* wider considerations for others (human, more-than-human, technology)

One model stood alone in this group: Lacković's (2019) relational graduate employability paradigm (Figure 5), which comprises three integrated meta-layers of graduate employability: relational recruitability; socio-emotional relationality; and eco-technological relationality. The layers are concentric, with the inner layer, recruitability, incorporating many of the notions discussed in subsection (1) *models focused predominately on individuals and skills for success*. Thus, the basic inner layer is focused on what individuals can do for their own life and work success, a classical graduate employability approach. The middle layer considers family and work interactions, emotions and affect, and interdependencies and concerns for social justice that come into play in life and work, e.g., considerations for how employment decisions relate to other humans in society, not just individuals for their own success. The outermost layer considers wider, more-than-human issues and relationalities, challenges and concerns. For example, technological and ecological aspects of life and work.

Lacković says that, when combined, the three layers encompass 'relations with others for individual recruitment, relations to others as humanistic care for the closest and widest society, and the relationality to the ecosystem and technology' (Lacković, 2019, p. 204). I believe that Lacković may have chosen the word 'paradigm' to describe this model to convey that it is a philosophical and theoretical framework for guiding thoughts and actions in respect to graduate employability. Since there are some novel ideas incorporated, and unfamiliar language to many in the fields of education, employability and career development, I will provide further elaboration on each layer after Figure 5.

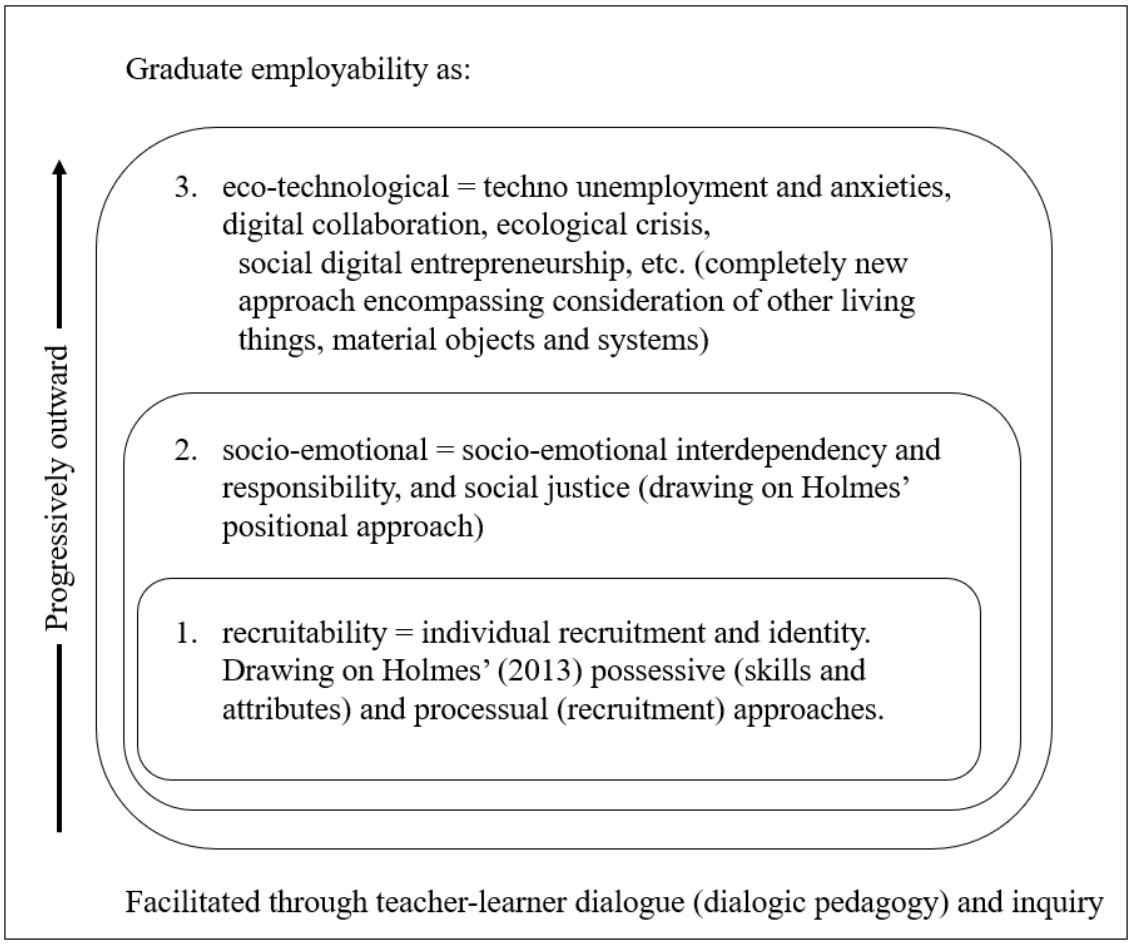

Figure 5: Relational Graduate Employability Paradigm (Adapted from Lacković, 2019, p. 205)

The relational recruitability layer acknowledges the *possessive* and *processual* aspects of graduate employability (Holmes, 2013), with possessive referring to the individual goal of amassing skills and attributes, and increasing self-awareness and professional identity, and processual referring to universities' recruitment and transitions work in support of employment outcomes and the process of employability development in individuals. This layer is individualistic, and outcomes focused, but not in a negative sense. As Lacković emphasises, this is a necessary component. Workforce, labour market and economy (context) could be considered to be part of this layer. For those who assimilate with Tomlinson's (2017) Graduate Capitals model, the human and identity capitals could be considered here too.

The socioemotional relationality layer draws on Holmes' (2013) *positional* approach to recognise the importance of social and emotional interdependencies in developing employable graduates and that the need to consider equality and justice in respect to employability, employment and workplace dynamics. Lacković argues that the impacts of social and emotional aspects (in society, life and work) should be acknowledged in the employability work of universities, including teaching. Turning to Tomlinson's (2017) model, the cultural, psychological and social capitals could be considered as relevant to this layer.

Finally, the eco-technological relationality layer brings in wider ideas than have been traditionally included in published conceptual graduate employability models. There are two parts to this layer, which Lacković says are vital to sustaining life and work, now and into the future. The first part incorporates ecological issues and concerns (e.g., the climate crisis), which must be addressed by individuals and workplaces across the globe. Employers will

increasingly expect graduates to create and innovate, and respond appropriately, in this regard. Moreover, students are increasingly advocating for greater attention to matters of sustainability in higher education.

The second part incorporates technological aspects relating to graduate employability and employment, including, for example, techno-materials, ways of working and living with technologies, and associated issues and anxieties. Also included are topics such as technological advancement and its effects, unemployment due to lack of technical skill, digital collaboration (which requires digital literacy) and social digital entrepreneurship (i.e., using technology to build networks and be an entrepreneur). Technological relationality could also include matters such as appropriate use of technology, workplace policy arrangements and rights to do with technology at work, and health and safety concerns (e.g., digital fatigue and ergonomic workspaces). Personally, I think human reliance of material objects could be considered as part of this component too.

In addition to describing the conceptual basis of the paradigm, Lacković provides pedagogical descriptions that may help teachers to use the paradigm in their teaching practices, with learners. She emphasises that the paradigm is intentionally designed for teachers' who practice dialogic pedagogies (staple for good teaching practice) so that it can be integrated within existing curricula in any discipline. Essentially, teachers would develop their existing dialogic activities to integrate disciplinary content with the relational model to challenge learners to share their perspectives, experiences and reflexive contemplations of content and discipline in respect to each meta-layer of the graduate employability paradigm.

Lacković's clear intention is for teachers to use the paradigm to expand and diversify what is already part of the curricula. She also suggests the paradigm may help teachers' (and learners') to engage in university employability policy, strategy, debates and practices more positively.

Lacković provides a few pedagogical examples as a good starting point for engaging in teaching with the paradigm. For example, she describes learners developing e-portfolios to explore and share their career experiences using the model's three layers to guide their reflections and analysis. Or learners creating and sharing 'relational network maps', showing personal, local and global social interdependencies and related complexities, as they relate to careers and employment. Another strength of Lacković's work is her emphasise on engagement and interactions among learners and with teachers to reinforce and deepen learning, while enabling the co-construction of a supportive and caring learning environment.

Figure 6: Word-cloud from Lacković's Book Chapter Focused on Contributing to Selves and Others.

Comparing the orientations and proximity to teaching and curricula of the reviewed conceptual graduate employability models

Having presented the 'relational' outlook to graduate employability as an emergent paradigm, and an individualistic approach as an established paradigm, I have produced Table 3 to summarise my observations in response to the review questions. That is, Table 3 compares the orientations and proximity to teaching and curricula of the conceptual models described by authors in the reviewed documents. Or, what I see as their positioning on the spectra of:

- *individualistic and relational*, i.e., from most to least individualistic as numbered one to 12 in the far-right column; and

- *proximity to teaching and curricula*, i.e., from distant to near as numbered one to 12 in the column second from the right.

The symbol (=) represents an 'equal ranking' of two models on a given spectrum. For example, in Table 3 the models by Harvey, Locke and Morey (2002) and Harvey (2005) were too similar to distinguish on both spectra and, thus, were assigned the same number in both the ranking columns.

Table 3: Summary of Observations in Response to the Review Questions – From Individualistic to Relational, and Proximity to Teaching and Curricula

Note: The symbol (=) represents an equal ranking of two models on a given spectrum.

Citation	Reference to:			Ranking on the two spectra:	
	Teaching	**Curricula**	**Learners or graduates**	**Teaching and Curricula – distant (1) to near (12)**	**Orientation – individualistic (1) to relational (12)**
Knight & Yorke (2006)	Meta-cognition, encompassing learning how to learn, and how to reflect and problem solve. Encourages use of assessment to develop the USEM model.	Promotes thinking about how to embed.	Learners	2	1
Harvey, Locke, & Morey (2002)	Engagement, reflection and articulation. Mentions pedagogy but doesn't demonstrate it.	Mentions extra-curricular engagement, work placements and curriculum embedded employability development.	Graduates	=3	=2
Harvey (2005)	Engagement, reflection and articulation. Mentions pedagogy but doesn't demonstrate it.	Mentions extra-curricular engagement, work placements and curriculum embedded employability development.	Graduates	=3	=2
Penttinen et al. (2013)	Mentions pedagogical focus on reflection and inquiry	Emphasis on pedagogy may or may not mean embedded. Extra-curricular engagement is implied.	Learners	5	3
Dacre Pool, Gurbutt, & Houston (2019)	Mentions learning activities to build emotional intelligence and resilience.	Embedded.	Learners	7	4
Holmes (2013)	Not mentioned.	Not mentioned.	Graduates	1	5

Citation	Reference to:			Ranking on the two spectra:	
	Teaching	**Curricula**	**Learners or graduates**	**Teaching and Curricula – distant (1) to near (12)**	**Orientation – individualistic (1) to relational (12)**
Cole (2019)	Focused on learning and provides a list of learning activities.	Embedded.	Learners	9	6
Bennett (2018)	Promotes learner-centred teaching. EmployABILITY website provides resources to support teaching practice, but these were not included in the analysed documents. Thus, the characteristics of teaching-learning could not be evaluated here. This is a limitation of this paper.	Embedded with an emphasis on integration within existing university curricula.	Learners	11	7
Tomlinson (2017)	Not mentioned.	Emphasis on extra-curricular engagement and co-curricular opportunities organised by careers practitioners.	Graduates	4	8
Clarke (2018)	Mentions scaffolding and skills development in curriculum.	Loose description of extra-curricular, co-curricular and embedded.	Learners	6	9
Cloutman & Higgs (2019)	Not mentioned. This model is process-related, not teaching and learning focused.	Not mentioned.	Learners	8	10

Citation	Reference to:			Ranking on the two spectra:	
	Teaching	**Curricula**	**Learners or graduates**	**Teaching and Curricula – distant (1) to near (12)**	**Orientation – individualistic (1) to relational (12)**
Bridgstock (2020)	Authentic and connected learning, communities of practice, student co-design, designing learning to meet specific learner needs, interactions and communications, reflection and collaboration, and rubrics to assess learning. Website provides a toolkit of resources for teachers (these resources were not analysed; an acknowledged limitation of this paper).	Mentions extra-curricular engagement, work placements and curriculum embedded employability development.	Learners	10	11
Lacković (2019)	Inquiry-based learning, reflection and collaboration, problem-solving and creativity, use of technology, teacher-learner and peer to peer interactions and communication, literacy development, relationality, teaching practice.	Emphasis on embedding in university curricula both in units and across degrees.	Learners	12	12

Figure 7 is a graphical visualisation of the key ideas shown in Table 3. Each of the 13 analysed documents is represented by a coloured circle to indicate whether an author was focused on *learners during* their degrees (yellow-orange) or *graduates* (purple) – as there was a clear distinction to that effect across all the documents.

The documents (circles) are positioned along bi-directional spectra of relative, estimated: (1) individualistic to relational orientations (i.e., along horizontal or X-axis); and (2) proximity to teaching and curricula (i.e., along the vertical or Y-axis). It is important to note that each document's position does not imply homogenous affiliation. Rather, degrees of affiliation are defined in respect to the extreme and opposite ends of the spectrum, not whether they are exclusively representing one orientation or another (as none did). Precision was not possible as this representation is based on judgement – *personal* judgement, shared to prompt readers to consider and share what they think with others.

To elaborate on what is shown, strongly individualistic and skills-focused orientations (i.e., focused on individuals' success) are positioned closer to the far-left end of the horizontal axis, while strongly relational orientations (i.e., focused on individuals and others, both human and non-human) are positioned closer to the far-right end. Similarly, descriptions by authors that indicated stronger connections to teaching and the university curriculum are positioned closer to the top of the vertical axis, while descriptions with little or no reference to teaching and the curriculum are positioned towards the other end of that axis.

Figure 7 shows there is an inverse relationship between individualistic-relational orientations and proximity to teaching and the curriculum across the analysed documents. That is, more individualistic orientations tended to be further removed from teaching and intra-curricular integration. This may be an important to consider when designing teaching approaches and curricula.

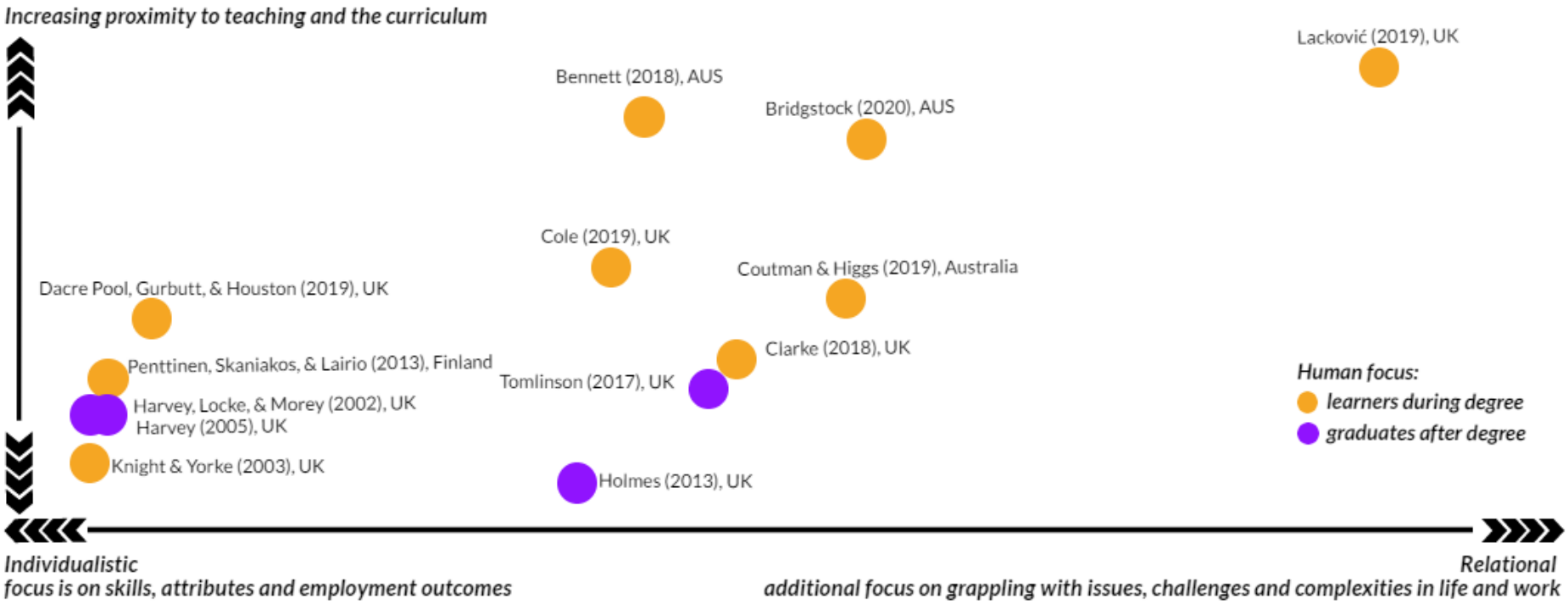

Figure 7: Bi-directional Spectra of Orientations and Proximity to Teaching and Curricula of the Reviewed Conceptual Graduate Employability Models

Limitations of the review

The limitations include that it was conducted by one researcher and the tables are my own interpretations. Hence, checking these perspectives with academic practitioners and other graduate employability authors will shed new light to this work, and this is what I will do as the next step in my doctoral research. It is important to continue this discussion.

As previously divulged, by excluding case study research from the review, I would have missed a number of valuable pedagogical approaches. However, this review was not about pedagogical approaches but the relational and individual orientations of models and their status as integrated or outside the curriculum.

In addition, the search string, by the nature of the chosen words, excluded known frameworks related to graduate employability and curriculum, such as Kinash et al. (2015) and Scott (2016).

Another limitation is my loose scrutiny of the web resources accompanying Bridgstock and Bennett's models.

Concluding remarks

This paper contributed a unique narrative literature review of 13 conceptual employability models published in peer reviewed higher education literature since 2000. To my knowledge it is the first review to explore the paradigms of key conceptual graduate employability models and their relationships to teaching and curricula. Through sharing my observations in the review, I hope to generate critique and discussion about the ways that universities currently think and act with respect to graduate employability, including whether approaches are still relevant today and into the imminent future. After all, what is the point of employment in the face of an ecological catastrophe, technological exploitation or devastating war?

The current dominant approach to graduate employability is focused on skills and individuals for their own success, with little or no reference of the need for graduates to contribute and consider other living or non-living beings and systems, and most often described, recommended (and likely suited) for delivery via extra and co-curricular engagements, as opposed to integration in the curriculum.

It is difficult to assure graduate outcomes when there are many graduates and limited jobs. As the scholarly community has said, the best chance universities have for achieving 'satisfactory' graduate outcomes for *all* learners is to innovate university curricula and teaching practice. This paper has shown that expanding the framework within which universities work, to consider supercomplex issues, concerns, challenge, contexts and relationality may be worth investigation and trial. To that end, Lacković's (2019) novel relational graduate employability paradigm may be worth consideration and expansion. It is designed to promote broader orientations, which Lacković postulates may help teachers more easily integrate employability in the curriculum, while preparing graduates for life and work in an increasingly supercomplex world. She suggests that universities could use the relational paradigm to guide policy, procedures, and behaviours and actions, that may contribute and promote more sustainable and co-creative ways of living and working in graduates' futures.

Lacković provides unique pedagogical examples (aligned with the paradigm) that may inspire some teachers, perhaps even those who have not yet engaged in their university's employability strategy. What stands her model apart from the other reviewed models is the fact that the paradigm and related pedagogical discussion is grounded in what is recognised as good practice principals in teaching and learning (e.g., interaction and student engagement, inquiry-based learning, critical and creative thinking, and peer-to-peer and teacher-peer collaborations), which could be further explored by academics and educational designers. Since pedagogical theory and knowledge is familiar to academics and forms part of daily teaching practice, Lacković's approach may be more likely understood and applied in the curriculum.

It could be argued that universities are responsible for enabling learners, as the future workforce, to 'understand and grapple with uncertain, changeable, and complex job futures and issues surrounding technological advancement, ecological crises, emotional selves and social inequalities' (Lacković, 2019, p. 193). Learners and society increasingly expect universities to demonstrate commitments towards sustainability, including through teaching (Jones et al., 2021; Students Organising for Sustainability, 2021). A recent survey by Times Higher Education found that 'sustainability' was a top priority for international students choosing a university in another country, mainly Western (Bothwell, 2021). Graduates will need to secure and maintain employment in a pandemic-prone, globally warmed and technologically-driven society. Future work will require mindsets and preparation beyond individualistic and neoliberal orientations of employability. This is not to suggest that prevailing approaches are not useful and relevant, but, rather, that they may now need expansion. It may also be the case that a relational and pedagogical graduate employability approach may be more sustainable for the sector in terms of resourcing, not only impact.

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