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An Integrative Review of the Employability Literature (2005-2020):

How a Simplistic and Individualistic View of Job Acquisition Inhibits Theory, Research, and Practice in Higher Education

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Executive Summary

The term “employability” (and its close cousin career readiness) is an idea that is playing an outsized role in shaping the future of global higher education in the early 21st century. In this paper we report findings from a critical, integrative review of the conceptual and empirical research on employability, where our primary aim was to evaluate whether recent scholarship has addressed long-standing critiques of the concept. These critiques include its tendency to be used as an ill-defined buzzword, an over-reliance on human capital theory, simplistic views on how people get jobs that over-emphasize skills and overlook structural forces, and ambiguous and/or evidence-free recommendations for campus practitioners. Thus, it is possible that a contested and poorly conceptualized and operationalized concept is driving a considerable amount of educational practice and policymaking in higher education - a hugely problematic proposition.

To address these issues, we conducted a two-staged integrative literature review of the employability-related studies published between 2005 and mid-2020, beginning with 38 conceptual papers that elaborated on theoretical issues, and then 60 empirical papers that met our inclusion criteria (e.g., peer-reviewed, in English, included direct measures of employability). In our analysis we answered the following questions: (1) How are researchers conceptualizing employability? (2) To what degree are these conceptual positions operationalized in empirical research? and (3) To what degree are scholars’ conceptualizations, empirical research, and practitioner recommendations responsive to long-standing critiques of the employability concept?

Our paper begins with a brief historical review of the employability concept, followed by a discussion about the need for interrogating influential concepts in social science, key criticisms of the term, and a brief overview of ways that the employability concept informs contemporary educational practice (e.g., advocacy for generic skills-focused teaching, internships, etc). We then report our methods for conducting the review and findings from the review of both conceptual and empirical studies.

To systematically analyze the 38 conceptual papers, we created a new nine-category diagnostic framework that captures key ontological and epistemological assumptions of employability scholars. Our analysis of the conceptual literature confirms prior observations that a confusing profusion of definitions of employability persists in the field, and that one of the biggest limitations facing the field is the widespread embrace of human capital theory and its assumptions regarding causality, methodology, the nature of human skill and mobility, and the purpose of higher education itself. Our review of the 60 empirical studies also revealed that individuals’ possession of particular knowledge, skills, and abilities (KSAs) continue to be seen as the primary determinant of employability (n=31, 51.6% of the papers in our review), and that employability is a phenomenon that can (and should) be understood as a probabilistic matter, with one or more variables predicting a graduate’s employment-related outcomes (n=50, 83.3%). The literature can also be characterized as predominantly focusing on the temporal frame of a student’s time during college (n=29, 48.3%), micro-level units of analysis (i.e., individual students or graduates) (n=46, 76.6%), the role group of students (n=29, 48.3%), outcome metrics of perceived employability (n=19, 31.6%), and recommendations focused on generic skills instruction (n=43, 71.6%). It will be important and interesting to track these

indicators over the coming decades to assess if and how the literature is evolving, particularly in response to critiques of the employability concept.

We conclude the paper with a call for scholars to reject the term “employability” in favor of “employment prospects,” as it underscores how job acquisition involves a complex array of both “supply” (e.g., individual student KSAs) and “demand” (e.g., labor market conditions, global pandemics) factors, and how an individuals’ prospects are not solely based on merit but are also shaped and constrained by the structural inequality. Finally, we offer seven methodological questions that future scholars should consider when designing studies of graduates’ employment prospects: varying perspectives on causality, alternatives to human capital theory, methods for capturing multi-dimensional phenomena, the need to foreground student and worker voices and interests, how to engage in translational research, and considerations for framing research that does not solely position the purpose of higher education as a financial return on investment but also as an endeavor to benefit the common good.

Keywords: employability, higher education, career readiness, internships, skills, college-workforce transitions, labor market, workforce development, critical studies, multi-dimensional research.

Introduction

The idea of employability has achieved a remarkable level of influence in postsecondary research, policymaking, and campus-based practice around the world, due largely to the now dominant conception of higher education's purpose as providing a return on investment (ROI) in the form of a well-paying job Siivonen et al., 2023; Tomlinson & Holmes, 2017). The concept generally refers to the various individual, social, or contextual factors that impact the likelihood that they will acquire a desirable job upon graduation, and scholars have generated a panoply of frameworks and hundreds of studies on how to measure, study, and enhance students' employability (Holmes, 2013; McQuaid & Lindsey, 2005; Tomlinson, 2012). Consequently, employability and its close cousin "career readiness" is one of the ideas (or buzzwords) that is singularly shaping the future of higher education in the early 21st century.

In this paper we report findings from a critical, integrative review of the conceptual and empirical research on employability, where our primary aim was to evaluate whether recent scholarship has addressed long-standing critiques of the employability concept in their research designs and recommendations for campus practitioners (e.g., faculty, career advisors, administrators). Such a review of the literature is important because employability research plays an influential role in how the general public, campus leadership, and policymakers think about the purpose (and future) of higher education (e.g., Minocha et al., 2017), making the validity of the core concept driving this discourse a pressing issue. While recent reviews have summarized aspects of the empirical literature (e.g., Artess et al., 2017; Williams et al., 2016), these efforts have not scrutinized the theoretical perspectives underlying scholars' approaches and the subsequent quality of the recommendations made for practitioners in the field.

This scrutiny is especially warranted in the case of the employability concept, which has long been a highly contested term with no consensus regarding its meaning or measurement, raising questions about whether it should be playing such a prominent role in postsecondary education (Moreau & Leathwood, 2006; Rothwell & Rothwell, 2017). In fact, for over 25 years scholars have sounded the alarm about the problematic nature of the term, which has been called an ill-defined buzzword (Philpott, 1999), a chameleon concept that takes on different forms depending on the situation (Knight, 2001), and a "fuzzy notion" that is often not defined at all (Gazier, 1998, p. 298). Further, the core assumption underlying the dominant interpretation of the term - that employment is primarily (if not solely) predicted by an individuals' possession of key knowledge, skills, and abilities (KSAs) - ignores evidence from across the disciplines demonstrating the myriad of structural and personal forces that dictate job acquisition (McQuaid & Lindsay, 2005), and relies on theoretical propositions (e.g., human capital theory, possessive individualism) regarding the nature of self, responsibility, and success in society that have been roundly critiqued in the field (Ball et al., 2000; Holmes, 2013, 2023).

These questions and critiques aren't merely abstract academic exercises in criticism, however, as the employability concept is actively shaping real-world educational policy and practice around the world. Organizations have created new global "employability" rankings where individual institutions of higher education (IHEs) are ranked alongside their peers in a high-stakes game of global competition in the sector (Times Higher Education, 2023), while some nation's postsecondary funding policies are directly tied to employability-related metrics (McQuaid & Lindsay, 2005). Additionally, "how-to" manuals advise campus stakeholders on ways to embed employability into course curricula, new extra-curricular programs, classroom

pedagogy, and institutional planning (e.g., Cole & Tibby, 2013; Mohee, 2019; Yorke & Knight, 2006), and research in the area has long advocated for students to pursue (and IHEs to feature) courses that highlight generic skills instruction and work-based learning (WBL) programs such as internships (Cranmer, 2006; Clark, 2017).

Thus, a contested and ill-defined concept and the evidentiary base building on these conceptualizations is potentially driving a considerable amount of educational practice and policymaking - a hugely problematic proposition. As applied scholars who are most interested in translating research into actionable educational practice, the prospect that campus stakeholders are being provided with flawed guidance and worse, that students are being advised with insufficient and/or inaccurate information about their futures, is deeply troubling. Consequently, given the emergence of more nuanced accounts of employability such as a focus on students' multi-dimensional resources or "capitals" (Tomlinson, 2017), and frameworks capturing a variety of agentic and structural factors (e.g., Moreau & Leathwood, 2006) that avoid many of the existing problems in the literature, we wondered if current scholarship was responding to this untenable state of affairs by responding to prior critiques and advancing new, more clearly defined and multi-dimensional studies (and recommendations) about employability?

To address these issues, we conducted a two-staged integrative literature review of the employability literatures between 2005 and mid-2020, beginning with a review of 38 conceptual papers that elaborated on theoretical issues in the literature, and then 60 empirical papers that met our inclusion criteria (e.g., peer-reviewed, in English, included direct measures of employability). In our analysis we then sought to answer the following questions: (1) How are researchers conceptualizing employability? (2) To what degree are these various conceptualizations evident in current empirical research? and (3) To what degree are scholars' conceptualizations, empirical studies, and practitioner recommendations responsive to long-standing critiques of the employability concept?

The paper begins with a brief historical review of employability, followed by a discussion about the need for interrogating influential concepts in social science (Bills, 2004; Holmes, 2017) and key criticisms of the concept, followed by a brief overview of ways that the concept is being used to inform educational practice today. We then report our methods for conducting the review and findings from the review of both conceptual and empirical studies. Our results of the conceptual literature confirm prior observations that a confusing profusion of definitions and conceptions of employability persists in the field, and a new diagnostic framework for distinguishing among different elements of employability studies. We further conclude that one of the biggest limitations facing the field is the often implicit embrace of human capital theory and its manifold assumptions regarding causality, methodology, the nature of human skill and employment opportunities, and the purpose of higher education itself. We conclude the paper with a call for scholars to reject the term "employability" in favor of "employment prospects," and offer seven methodological questions to guide future research on topics including positions on causality, alternatives to human capital theory, methods for capturing multi-dimensional phenomena, the need to foreground student and worker voices and interests, how to engage in translational research, and considerations for framing research in ways that do not solely position the purpose of higher education as a financial returns on investment.

Background

Why Study Employability? A Brief Review of the Concept of Graduate Employability

In this section we briefly review the history of the employability concept, as views of the idea and how it has impacted educational policy and practice have evolved over time as world events, academic theories, and global economies have changed throughout the 20th and 21st centuries (Gazier, 2001; McQuaid & Lindsey, 2005; Thijssen et al., 2008). In particular, as Tomlinson (2017, p. 2) writes, the current debate has been especially subject to the "changing political economy of higher education," where education is increasingly seen as a private good that is the responsibility of the individual - who benefits from their ROI - and not that of the state or society writ large.

Acknowledging the presence and influence of the evolving socio-political context of an idea is important, because it is a fallacy to think that current views of employability represent a definitive account of how people acquire jobs or as a set of "stable standards" for who is most in-demand in the labor market (Gazier, 2001, p.5). This is the case with many scientific ideas and constructs - they are constantly changing with new knowledge and discoveries - but recognizing the transiency of ideas is especially pertinent with respect to employability, as it has never achieved paradigmatic status in the field as a settled construct but instead has gone through many different iterations over time.

Early Usage of the Term: A Focus on the Long-term Unemployed and State-led Solutions

The definitive historical account of employability was written by French economist Bernard Gazier (2001), though other reviews of the concepts' history are also useful and should be consulted for a more in-depth review than is provided here (e.g., Artess et al, 2017; Forrier & Sels, 2003; Thijssen et al., 2008). While the earliest usage of the term can be dated to the early 1900s, the first scholarly publications on employability emerged in the 1950s with analyses of how to improve the attitudes and employability of "difficult to place" people (e.g., adults with disabilities) in Montreal, Canada) (Feintuch, 1955). This focus on assisting persons who were either long-term unemployed or had considerable difficulties finding jobs via state- or employer-sponsored support services was at the heart of the first version of the employability concept – dichotomic employability.

This early usage built on prior distinctions in economic and labor policy between the "valid and the invalid poor," the latter group being unable to work and thus required direct emergency material support, while the former were encouraged (or pushed) to find work via public works projects or similar interventions (Gazier, 2001, p.5). During this post-war period of strong economic growth and a tight labor market, employability was therefore seen as both an issue of social and labor policy, with efforts usually overseen by state actors who used public funds to support or engage specific populations (Thijssen et al., 2008). Besides supplying additional workers for a growing global economy, another intention of policymakers and researchers during this period was to reduce the financial burden (i.e., via welfare payments or other state-funded programs) of the unemployed on the government (Versloot et al., 1998). While this approach was criticized for overlooking the structure and characteristics of the labor market itself, or the prospect that not everyone fell into the simplistic binary distinction of being

employable or not, this early view is notable for viewing the state, employers, and individuals (but not higher education) as collectively being implicated in both people's employment situations and subsequent policy solutions (Gazier, 2001).

In the 1960s and 1970s social workers, doctors, and economists developed different versions of employability policy and programs. One version was created by medical professionals to evaluate the degree to which disabled persons were ready to seek employment and if so, the types of activities that would be appropriate – or what Gazier (2001) called socio-medical employability. Next, manpower policy employability emerged in the 1960s and added new items to scales (e.g., deficiencies of professional qualifications and social skills) that determined a person's employment prospects (or lack thereof). For Gazier (2001) and Thijssen et al. (2008), this early era of employability policy was characterized by a focus on helping individuals find jobs via feasible training programs and interventions, with the ultimate goal of full employment and the nation's economic health. Then, amidst the economic crises and the decline of lifetime employment in the 1970s, views of the concept shifted to a more meso-level perspective that incorporated indicators of job quality (e.g., duration, salary) and organization-level functioning and stability (see also McQuaid & Lindsay, 2005). A crucial shift in how researchers and governments defined employability then followed, with the rise of human capital theory and a focus on an individuals' (and not necessarily employers or governments) initiative to find and retain employment.

Growing Focus on Individual Skills, Personal Responsibility & Rise of Human Capital Theory

The effect of these changes in the economy and labor market resulted in a fundamental paradigm shift in how society thought about employment itself. As Moreau and Leathwood (2006) argue during this period, "the employment question has been reformulated into the 'employability' question," (p.310). A host of events in the latter half of the 20th century fomented this change - recessions, an increasingly globalized world economy, technological advances, and socio-economic polarization - but changes in how people thought about employment opportunities themselves were arguably altered to this day by a revolutionary new way of thinking about human and economic wealth in labor economics - that of human capital theory. While other theories have also shaped conceptions of employability, such as possessive individualism (Holmes, 2023) and neoliberal individualism (Ball et al., 2020), human capital has played an outsized role in how governments, society, and employability researchers conceptualize the problem of how people get jobs and flourish in society and the workplace.

One of the origins of human capital was a 1959 paper titled, "Investment in man: an economist's view," where Schultz argued that economists had made the mistake of limiting their view of "capital" to, "only include those classes of wealth that are commonly bought and sold in the marketplace" (p. 111). This reference to a classical theory of capital is based on Marx's focus on land, money, and equipment, with aspects of labor or of human knowledge or skill seen as separable entities (Lin, 2001). Instead, Schultz (1959) argued that investments in education and KSAs should be seen as a form of human capital, whereby people invest in themselves (or in educational systems) with expected returns in wages, productivity, and economic growth.

The idea that capital investments could be made in people, and later in other types of capital such as social or cultural resources (Lin, 2001), was immensely influential not only in economics, but also in the way that other social scientists, policymakers and the general public

viewed the relationships among education, work, and social and economic mobility. For instance, Kalfa and Taksa (2015) argue that human capital theory ushered in the idea that "learning is earning" (p.583), which not only shifted the idea of education from an intellectual or moral endeavor to a financial one, while also introducing the prospect that pursuing education was a personal or private investment that did not require state support. Consequently, human capital theory dovetailed with growing conservative political movements in the U.K. and the U.S. that advocated for the importance of personal responsibility and hard work as the key to individual and societal success, and the subsequent removal of state funding from programs and services such as welfare or public education (McQuaid & Lindsay, 2005; Tomlinson, 2017). These developments helped to shape the next phase of employability that Gazier (2001) calls initiative employability, where the political and rhetorical focus shifted from state-supported employment programs to one where getting a job was increasingly seen as a matter of personal initiative, responsibility and investment.

It is important to note that human capital theory was but one of what Lin (2001) called a "neo-capital" perspective that took the classical view in new directions by considering that resources such as education, social networks and ties (Fernandez et al., 2000), or cultural tastes and dispositions (Bourdieu, 1986) could also yield "returns" in society and the labor market. But work on social and cultural capital, which tend to be pursued by sociologists and anthropologists, tends to vary from labor economists' research on human capital by situating these resources in broader contexts of social structures and agentic behavior. Further, human capital scholars generally overlook the role of politics, power dynamics, and exploitation among social classes, which are key elements of the classical version of capital theory as espoused by Marx (see Lin, 2001).

But in the 1990s the human capital perspective and its focus on how individual-level education and KSAs could yield returns in the labor market were ascendant, and coincided with increasing attention to (and fear about) what some call the "skills agenda" (Moreau & Leathwood, 2006). Driving this agenda were surveys of employers who expressed disappointment with graduates' KSAs and fears that rapidly industrializing nations like China and India were training legions of students with key skills that would ultimately lead to job loss and national economic decline (Cappelli, 2015; Carnevale et al., 1990). The skills agenda reached the highest levels of government in countries like the U.K., where the influential Dearing Report argued that educational systems needed to respond to employer needs by focusing on skills that were in demand in the workplace (Higdon, 2016), which is also a position espoused by political conservatives and the rise of neoliberalism in both government and higher education policy (Ball et al., 2020). In re-framing the purpose of higher education from one of knowledge production and public benefits to one of privatized investments, the neoliberal view also shifted views of students towards one of a "bundle of skills" to be bought or sold on the open market (Urciuoli, 2008, p. 211). Such perspectives aligned well with human capital theory, which remains the dominant explanation for employability and the relationships among the self, education, and the world of work today (e.g., Deming, 2017).

The Multi-dimensional Approach to Employability as Alternatives to Individualistic Perspectives

In response to the limitations of both human capital theory and the initiative employability perspective, researchers in the 1990s and early 2000s began advancing frameworks for explaining job prospects and attainment that included a variety of multi-dimensional factors.

This final phase of employability approaches in Gazier's (2001) historical account of the concept was labeled interactive employability, which refers to multiple, interacting forces that theorists contended actually shaped a person's employment prospects and status. In particular, scholars argued that "demand-side" factors such as the business cycle, transportation networks, educational programs, job quality, and hiring discrimination should be considered at the same time as "supply-side" elements like individual student KSAs (e.g., McQuaid & Lindsay, 2005).

This perspective is consistent with research across the disciplines on the complex, inter-related factors that impact job attainment in contrast to the initiative employability account, which some view as a uni-dimensional and overly reductionist account of a deeply complex phenomenon (Tomlinson, 2017). While Gazier (2001) suggested that interactive employability was an approach in its ascendancy as the 21st century began, others disagree and contend that the individualistic human capital approach remains the dominant explanatory framework in employability studies, arguing that as a result theory development is of utmost importance to the field (Holmes, 2023). It is our aim in this paper to discern which approach is in fact being most widely used by theorists and empirical researchers, but before reporting the results of our literature review, we first elaborate on limitations with the employability concept in general, and the initiative employability perspective in particular.

Interrogating the Employability Concept: Why a Critical Review is Needed

It is not uncommon for certain ideas or concepts to capture the imagination of the education establishment and the general public, even if those ideas are not grounded in empirical research or worse, are managerial fads that lack both evidence and conceptual rigor and clarity (Birnbaum, 2000). This is especially the case with research agendas or topics – like skills (Bills, 2004), active learning (Hora, 2014; Martella et al., 2023), or employability – that have become widely used buzzwords that become ubiquitous in policymaking and academic circles, their popularity outpacing the evidence supporting their efficacy or even their very existence as a real, measurable phenomenon.

Since employability falls into this category of contested concepts, many critical analyses of the employability concept exist, with readers directed to work by Holmes (2013), Moreau and Leathwood (2006), Hinchliffe (2002), Tomlinson and Holmes (2017) and McQuaid and Lindsay (2013), with critiques focusing on methodological issues by Harvey (2001) and Suleman (2018). For the most part, critics of the concept focus on the dominant paradigm of employability that adopts a human capital approach, where individual KSAs or other attributes are considered singularly predictive of employment prospects and outcomes. At the same time, scholars across the disciplines have criticized human capital theory, particularly when it is applied to phenomena such as the nature of skills and personhood (Urciuoli, 2008), social and economic mobility (Bourdieu, 1986), the relationship between education and work (Marginson, 2019), and for ignoring the role of power and class dynamics in conceptions of labor itself (Bowles & Gintis, 1975). However, despite considerable conceptual and empirical problems with both human capital theory and individualistic conceptions of employability, it is notable (and frustrating) that despite decades of criticism, scholars regularly fail to respond to or even acknowledge problems with the concept (Holmes, 2023).

In this section we briefly outline several prominent critiques of employability in general, and the dominant perspective variously called "initiative" employability (Gazier, 2001) or "skills as

possession" (Holmes, 2013) in particular, which underscores why a critical review of the literature and its impact on educational practice is essential.

1. Employability is a nebulous, ill-defined buzzword. The first critique of the employability concept is the fact that no consensus exists in any disciplinary community or group of scholars regarding its precise definition, characteristics, or measurement. Some have argued that employability is an ill-defined "buzzword" (Philpott, 1999), a "fuzzy" or elusive term with no clear and agreed upon definition (Cranmer, 2006), and even a "chameleon concept" that takes on different forms and serves different purposes depending on the analyst and their goals (Knight, 2001).

In a particularly biting analysis, Rajan and colleagues (2000) contend that its ascension as a buzzword for policymakers and administrators has made it, "one of the few words that has gone from cliché to jargon without the intermediate stage of meaning" (p.23 in Rothwell & Arnold, 2007). Of course, the presence and widespread adoption of ill-defined terms is not unusual in social science, but at previously noted (Holmes, 2017; Ryle, 1954), it becomes problematic when such terms are treated as a scientific construct that has, "technical certainty and consensus" (Pfeffer, 1993, p. 599), as is the case with employability. Further complicating matters with employability is how parties operating at different levels of the educational system, such as the macro-level of governments versus the micro-level of classrooms, will necessarily draw upon different assumptions and understandings when interpreting the term. As Holmes (2013) points out, "We should not assume that a particular term has the same meaning when used as a technical concept in these different levels of discourse" (p.539).

Finally, measurement issues exist with poorly defined concepts like employability that lack consensus regarding how to operationally define and measure the phenomenon in the field. Some have noted that the concept is too often (and uncritically) conflated with employment itself, which ignores the possibility that it "is possible to be employable, yet unemployed or underemployed" (Wilton, 2011, p.87).

2. The dominant view over-estimates the role of the individual (and merit) in determining socio-economic outcomes. For some observers, the focus on individual KSAs and students as the primary agent responsible for securing opportunities and employment, unnecessarily and incorrectly absolves other parties from the more complex phenomenon of how people actually get jobs (Brown et al., 2003). For Moreau and Leathwood (2006), this approach ignores the role of structural inequality, discrimination, and government policy in causing under- or unemployment, while embracing the myth of meritocracy where hard work and personal responsibility will secure a good job for a hard-working young person. Others contend that such a view is also evident in the labor market itself, where firms are viewed as being no longer responsible for employment security, training or even job quality, while making precarious work the norm (Baruch, 2001).

These critiques essentially contend that these views are not only overly simplistic but also favor the interests, privilege, and power of employers and the state, while putting the onus of the responsibility (and the blame) on individual students and families. Critics note that underlying this view is a neoliberal ethos of higher education (and also students themselves) as marketized entities whose primary purpose is economic, and whose success or failure should not require state intervention (Ball et al., 2000; Urciuoli, 2008).

3. Employability researchers too often overlook temporal aspects of careers and human development. Another critique of the employability concept is the lack of attention to the temporal processes of career development over a person's lifetime, while instead viewing employability as a static attribute or outcome (Holmes, 2013). This argument emphasizes that a graduate's prospects in the labor market is a phenomenon that unfolds over a life-course and can take place over the long term either within a single organization or across multiple employers (Thijssen et al., 2008; Forrier & Sels, 2003). While this perspective is considered basic knowledge in the fields of career development (e.g., Savickas, 2012) and sociology (e.g., Hodkinson & Sparkes, 1997), this "processual" view is rare among employability scholars (Holmes, 2013).

The temporal nature of careers has two implications for employability studies. First, it suggests that cross-sectional analyses or "snapshot-in-time" studies are necessarily limited as they fail to capture how people navigate the labor market over time. Second, the fact that other fields (e.g., career and counseling psychology, sociology) have long studied the temporal nature of career exploration and development suggests that employability researchers would benefit from drawing upon these disciplinary perspectives and literatures.

4. Many views of human competency or "skills" are overly generic. The employability literature is replete with analyses and discussions of "skills," particularly in terms of those KSAs that employers purport to seek (and rarely find) in new employees (Tomlinson, 2017). In many cases, these types of skills are discussed using umbrella terms such as "soft skills," "employability skills," or "non-cognitive skills" (e.g., Savitz-Romer, & Rowan-Kenyon, 2020), or where competencies such as "communication" are discussed in generic terms without reference to specific contexts, situations, or professions (Hora et al., 2018). However, critics of these approaches note that cognitive psychology and the learning sciences- arguably the disciplines that have most investigated nuances of human skill in educational contexts - have long contended that while some facets of skill can be considered applicable to many settings and situations (i.e., domain-general), in actual practice they necessarily implicate features of the contexts in which they are used (i.e., domain-specific) (National Research Council, 2012). This contention has been confirmed by communication and education scholars, who have found that how skills are used in fields such as engineering (Darling & Dannels, 2003) or health care (Hora et al., 2019) vary considerably.

In addition, some have argued that conceptions (and uses) of skills such as critical thinking or teamwork are deeply shaped by actor identity (e.g., race, class, gender, nationality) and personality, such that the enactment of these competencies can be seen as "dispositions of character" (Clark & Zukas, 2013, p.209). Attention to contexts of skill use are relevant to postsecondary education, as questions persist regarding whether instruction in generic skills actually transfers to other situations and contexts (Clarke, 2018). Finally, researchers such as Urciuoli (2008) and Hinchliffe and Jolly (2011) critique the generic skills approach for perpetuating a narrow conception of the purpose of higher education (i.e., as a venue for solely acquiring employer-desired skills) and also reducing the notion of student personhood and experience to marketable skills.

5. Dominant approaches ignore structural inequality, discrimination, and power dynamics. Another common critique of the employability literature is that it too often ignores the fact that job acquisition is not a simple matter of merit, and that the notion of a "level playing field" is a myth (Brown et al., 2003; Moreau & Leathwood, 2006). In obscuring the presence and

role that exclusionary forces play in keeping certain groups and people from easily acquiring KSAs, education, and high-quality work opportunities, scholars too often assume and therefore depict an unrealistic situation where employment and career success is simply a matter of hard work and merit (Holmes, 2013).

Instead, voluminous evidence from interdisciplinary sources demonstrates that this is simply not the case. Research from education, sociology, and labor economics shows how parental income and neighborhoods are strongly associated with students' acceptance to selective colleges and intergenerational mobility (Chetty et al., 2020), that hiring discrimination persists in the U.S. labor market (Quillian et al., 2017), and that structural barriers to key experiences such as internships exist for many college students (Hora et al., 2021). Further, some argue that educational policies and the curriculum have long been designed to maintain power, domination, and control among the elite (Apple, 1978; Bourdieu, 1986). These issues highlight the fact that a students' employment prospects - the key phenomena being addressed by the employability concept - are shaped by forces of power, inequality, and discrimination that most social scientists accept as an empirical fact, but that are rarely included in conversations about employability (Burke et al., 2017; Holmes, 2013, 2023; Siivonen et al., 2023).

6. Ignoring the "demand" side oversimplifies a complex phenomenon. The final critique builds upon each of the issues outlined above and implicates both human capital theory and the dominant paradigm of employability that is focused on students' KSAs or the "supply" side of the supply-demand equation. The criticism is that the "demand" side (e.g. labor markets, employer behaviors) is either completely ignored or incorrectly minimized in how the field conceptualizes a students' prospects and outcomes in the labor market (Holmes, 2013; Moreau & Leathwood, 2006; Rothwell & Rothwell, 2017). At the same time, the influence of students' KSAs is over-estimated and over-prioritized, sometimes based on adherence to a neoliberalism ideology that emphasizes personal responsibility (Brown et al., 2003; Holmes, 2023), which subsequently impacts how policymakers and educators think about employability issues and develop campus programs and practices.

As noted above, a voluminous amount of evidence exists that specify the varied factors that impact a person's employment prospects, which extend beyond inequality and discrimination to include the nature of employer-employee arrangements (Thijssen et al., 2008), technological advances and obsolescence (Mondolo, 2022), the quality of K-12 teachers (Chetty et al., 2014), and regional transportation networks for commuters (Sanchez, 2008) to name but a few. Consequently, scholars argue that employability researchers should adopt not only multi-level, multi-dimensional approaches (e.g., Fugate et al., 2004; Williams et al., 2016), but also new theoretical frameworks that do a better job of addressing the classic sociological tension between "structure" and "agency." This question pertains to whether individual free will and agency dictate behavior, or whether it is more shaped by social, cultural and economic structures, with some contending that researchers should address both "individuals' agency on the one hand and social structure on the other" (Tomlinson, 2017, p.6). For instance, scholars have drawn upon theories such as Bourdieu's relational field theory (Clark & Zukas, 2013) or Bronfenbrenner's ecological theory (Llinares-Insa et al., 2016) to address agency-structure dynamics within studies of employability, rather than human capital theory which reinforces a reductionist view of job acquisition while also sidestepping the structure-agency debate entirely.

Why this Matters: A Concept with Real-world Impacts on Teaching, Advising, & Campus Priorities

While one could interpret these critiques of the employability concept as yet another abstract academic debate with little impact on the "real-world," such an interpretation would be wrong, as the concept has had a direct and real impact on educational practice and policy making around the world. Scholars have outlined the influence of the idea on postsecondary accountability culture and funding policies (Hartmann & Komljenovic, 2021), governmental policies focus on the skills agenda (Rothwell & Rothwell, 2017; Holmes, 2023), and in perpetuating a marketized and vocational conception of the purpose of higher education in the public discourse (Holmes, 2023). But in this paper, we are concerned with the concept's impact on student experiences, particularly in the areas of classroom teaching, advocacy for work-based learning, and institutions' strategic priority-setting.

Emphasis on generic skills-focused instruction in college courses. The employability narrative has raised the profile of the concept of "skills" in higher education, and how well (or poorly) students' development of these skills are aligned with workforce needs. While considerations about workplace skills have long been prominent in professional programs (e.g., nursing) and institutions whose mission is primarily career development (e.g., community or technical colleges), the focus on skills across the disciplines and the postsecondary sector is relatively new. Coinciding with a shift away from didactic lecturing to more student-focused active learning, this new focus on students' skill development has led to institutional mission statements, course learning objectives, and modular stand-alone "employability" courses that highlight generic transferable skills (e.g., communication, critical thinking) (Cranmer, 2006).

However, these approaches are based on assumptions that faculty are adequately trained in pedagogical methods required to effectively teach these skills, that such courses are in fact providing these skills to students, and especially that a generic approach to skills instruction is effective - all assumptions that have been challenged in the literature (Clarke, 2018; Holmes, 2023; Hora et al., 2022). In particular, scholars investigating teaching and learning issues underlying skills have found that in the workplace and real-world contexts, generic forms of skill are rarely used (e.g., communication in general) but instead that they are deeply shaped by professional and situational contexts (e.g., communication in an engineering firm) (Darling & Dannels, 2003; Hora et al., 2019). Despite such evidence, the focus on teaching college students generic skills to boost their employment prospects continues to remain a high priority in many postsecondary circles (Cranmer, 2006; Savitz-Romer, & Rowan-Kenyon, 2020).

Uncritical advocacy for experiential and work-based learning. Another effect of the employability discourse on campus practices is the growing advocacy for experiential learning, which can involve either on-campus work-integrated learning (WIL) or off-campus work-based learning (WBL) programs like internships, apprenticeships, or co-op programs. While WBL has long been part of vocational and professional training programs in higher education, in the 1980s they began to become more popular across the disciplines (Perlin, 2012). As research evidence mounted regarding the efficacy of programs like internships on graduates' employment status, wages, and even academic learning (see Hora et al., 2017), in the U.S. they became part of the widely promoted group of programs known as "high-impact practices" (HIPs) (Kuh, 2008). Now, internships are widely viewed as a critical linchpin in enhancing students' employment prospects and pre-professional socialization.

However, the literature also shows that internships are largely inaccessible to large swaths of the student population based on the lack of available positions, lack of time due to coursework, low pay, and insufficient information regarding how to pursue these often highly competitive

positions (Hora et al., 2021). Further, high-quality internship experiences are difficult and often expensive to design, with high-quality supervision, authentic tasks, and scaffolded work key but often missing elements of an effective internship (Hora et al., 2023). These findings underscore the fact that despite internships being one of the most common applications of the employability discourse in higher education, they are also one of the least accessible and most difficult to design and implement.

Impact on campus priority-setting and future strategic planning. Finally, while the employability narrative has influenced the postsecondary sector since the 1990s, it gained strength in the early 2000s as postsecondary leaders began responding to political pressure, new policies and funding mandates, and growing calls for change in campus practices and priorities by employability scholars. Specifically, researchers (and then policy makers) called for more skills-focused teaching, WBL, and a general orientation of the sector to workforce development (Hora et al., 2019) - a set of reforms that could be informed through "employability audits."

Several of these guides have been developed by employability researchers (e.g., Cole & Tibby, 2013; Mohee, 2019; Yorke & Knight, 2006), and here we highlight two examples. First, the widely cited "Embedding employability into the curriculum" guide prepared by Yorke and Knight (2006) was created to help those creating or revising program curricula to "tune" their efforts to better develop students' employability, and to identify gaps in assessment and pedagogy (p. 2). The framework is designed to help campus stakeholders evaluate if core courses include a focus on key skills and their inclusion across the curriculum. A similar effort led by Mohee (2019) draws on Yorke and Knight's (2006) individualistic conception of employability and frames the problem facing global higher education as one of needing to "demonstrate the value of higher education" in economic terms (i.e., ROI) (p. 2). The core of this approach is an employability "scorecard," which a campus taskforce could use to audit the presence of generic transferable skills, WBL, hands-on learning, assessments, and career services across a campus or division (Mohee, 2019).

Overall, these employability audits or guides rely on an individualistic conception of employability, with students' possession of generic skills as the primary variable dictating their future success. While the approaches also includes IHEs as a key actor in facilitating student development, they nevertheless rely on a human capital and individualistic perspective that views employment opportunities as largely dependent on students KSAs, with little attention given to the broader role of the state, politics, or the labor market, thereby reproducing an overly reductionist view of how people actually get jobs. Next, we will turn to the conceptual and empirical literature to examine whether this individualistic perspective remains dominant, or if alternative perspectives are emerging in the field that can better advise campus practitioners.

Methods

In this literature review we adopted an integrative approach, which involves reviewing, critiquing, and synthesizing a body of literature to arrive at a comprehensive understanding of a subject (Broome, 1993; Torraco, 2016; Whittemore & Knafl, 2005). While integrative reviews can be used to explore new topics that could benefit from a holistic synthesis and analysis, our review instead sought to examine a mature and well-studied topic – that of employability - to provide a critical summary of the literature and a reconceptualization that could inform future research (Whittemore & Knafl, 2005).

The problem that guided our inquiry was the lack of knowledge on the status of recent (i.e., 2005 to mid-2020) conceptual and empirical research on employability, the degree to which the empirical literature embraced or pursued multi-dimensional perspectives that took into account a diverse range of factors, forces or variables consistent with an "interactive" approach to employability (Gazier, 2001), and how these conceptualizations and empirical studies were informing practitioner recommendations.

Search Parameters & Inclusion Criterion

Our review included two distinct searches – one for journal articles and/or book chapters that focused on conceptual issues related to employability, and one for empirical studies published in peer-reviewed journals. The time frame for the review of conceptual pieces was undetermined, as many widely cited analyses and critiques of employability were published over 20 years ago (e.g., Gazier, 2001). In contrast, for our analyses of empirical studies we recognized that a number of reviews had previously been published that analyzed studies going back to the 1990s (e.g, Artess et al., 2017; Williams et al., 2016), and wanted to restrict our analysis to a more recent time frame. Additionally, with the onset of the Covid-19 pandemic in early 2020 leading to a profusion of studies that incorporated this new global development on higher education and the labor market (e.g., Capone et al., 2021; Siivonen et al., 2023), we elected to confine our search parameters for empirical studies from January 2005 to June 2020. While other literature reviews of employability have addressed a similar time frame (e.g., Abelha et al., 2020), ours is unique in not restricting the review to a specific sub-topic of employability studies but instead covers a broad range of conceptual and empirical topics.

Conceptual review. To review the conceptual literature we analyzed books, journal articles and technical reports that addressed terminological, theoretical or other conceptual issues related to employability. These documents were identified by reviewing all papers included in the empirical review that contained discussions of conceptual issues to identify sources that were frequently cited as key documents for the conceptual development of the employability concept (e.g., Holmes, 2013). The inclusion of 38 specific works for this analysis was ultimately a subjective decision based on how thorough and informative the piece was with respect to providing insights into conceptual issues with employability.

Empirical review. In reviewing the empirical literature we sought to identify sources using two strategies – key word searching and bibliographic tracing (Whittemore & Knafl, 2005). Our review started with searches of four online search engines (Academic Search Premier, ERIC, Education Research Complete, and Business Source Primer) using the following key words or phrases: "employability"; "college" or "university" or "higher education": and "framework" or "model" or "assess" or "evaluate" or "measure." As previously noted, to delimit the analysis to a manageable size and to focus attention on the most recent empirical work, the searches were limited to publications between 2005 to mid-2020.

The initial search led to a total of 721 publications after removing duplicates. In addition to this keyword search of scholarly databases, we also reviewed the bibliographies of more recent conceptual papers on employability to see if any recent empirical studies had not been captured by the initial keyword search process. In addition, we used the "cited by" function in Google Scholar for the selected conceptual papers to see whether more recent empirical studies that referenced these works were relevant but had not been captured by the initial search. Through

this process, we added 51 papers to our initial list of papers for further review for a total of 772 papers.

We then reviewed these publications using the following inclusion criterion: a) the paper included an attempt at an empirical measurement of graduate employability, no matter how the concept was defined, b) the paper include a clearly stated operational definition of employability, c) the paper was written or abstracted in English and published in a peer-reviewed journal, and d) the paper focused on college students and/or recent graduates (either as research subjects or objects of inquiry - or other direct measures), but not employees in the workforce where there was no explicit attention to connections to the postsecondary sector.. Papers that focused on employability or career readiness in a K-12, adult education or workforce training, theoretical or conceptual articles or reports, and education-related technical reports that lacked any empirical component, and magazines articles and conference papers were all excluded.

In order to ensure consistency in applying the inclusion criteria, both authors reviewed a random sample of 20 papers and compared our inclusion assessments before proceeding further with the review. Starting with the initial search of 772 publications, manuscript titles, abstracts, publisher name, and publication dates were then reviewed as part of the first application of inclusion criteria, which resulted in a total of 148 papers that tentatively met the inclusion criteria. After an initial review of these 148 publications, both authors noticed t a large number of papers that involved the elicitation of subject (usually employers) opinions about important skills for hypothetical groups of students (e.g., college graduates in general) or non-specific referents, and not necessarily a direct measurement or study of students' or graduates' actual skills or other attributes that may influence their employment prospects. We then made a decision to not include studies that elicited respondent opinions about skills for generic, non-specific groups (e.g., Finch et al., 2013; Zehrer & Mössenlechner, 2009; Bennett et al., 2008), given widespread critique of these "skills lists" types of studies as being more akin to opinion surveys and less about the factors that impact specific individuals or group's chances in the labor market (Hinchliffe & Jolly, 2011). Additional types of papers that were excluded include evaluations or studies of the impacts of pedagogical interventions, co- or extra-curricular programs (e.g., internships) on student outcomes that did not include specific measurements of employability.

The application of this additional criterion resulted in 87 papers being excluded, with a final pool of 60 papers included in the analysis. While this number will seem small for some readers given the large and growing scope of employability studies, many manuscripts in the literature did not meet our arguably restrictive inclusion criteria. We also interpret the relatively small number of included studies (relative to the initial search) as possible evidence that the field could benefit from more terminological, conceptual and empirical precision and clarity.

Data Analysis

Analyses of the final corpus of data involved categorizing different ways that employability researchers conceptualized the concept for the conceptual review, documenting the different approaches that empirical studies are taking in designing their studies for the empirical review, and synthesizing our findings via a new agenda for theory development, research, and educational practice (Whittemore & Knafl, 2005).

For the 38 conceptual papers, we first reviewed each manuscript to identify authors' definitions of employability, key elements of those definitions (e.g., individual KSAs, social capital), and

underlying theoretical assumptions informing the approach. In most cases the theoretical positions of authors were clear and took the form of proposals for frameworks with which to understand the literature (e.g., Holmes, 2013) or explicit statements of the theoretical foundations of employability definitions and/or studied (e.g., Llinares-Insa et al., 2016). We used an open-coding process that involved writing analytic memos about definitions of employability and theoretical issues or positions, which was revised through analyst conversations about emergent and recurring themes and issues in the documents (Strauss & Corbin, 1998). The result of this analytic step included the identification of three different aspects of authors' ontological positions about the nature of employability and six epistemological positions taken by researchers.

For the 60 empirical papers that met our inclusion criterion, we reviewed each publication to document two features: (1) the definition of employability used in the paper including positions on the underlying theoretical assumptions outlined above, and (2) the primary recommendations made to practitioners by the authors. To increase the reliability of the analysis, both analysts independently coded a selection of the dataset and met to discuss and resolve differences in results. After this step, the frequency of particular research questions addressed in the literature were tabulated, and all papers were coded using the coding scheme outlined above, with key findings and illustrative papers reported according to each of the three ontological or six epistemological positions identified in the conceptual literature.

Results of Conceptual Review

How is Employability Conceptualized & Defined?

We first report our findings on the most widely used definitions of employability and the underlying theoretical assumptions informing them. Our goal in conducting this analysis was to illuminate the nature of the "theoretical baggage" (Ryle, 1954) that informed certain interpretations of the employability concept. and if and how these conceptions were evident in the empirical literature. Before reporting our findings, we first provide several definitions of employability to illustrate different approaches researchers have taken in conceptualizing the idea (see Table 1).

Table 1. Selected definitions of employability

Author(s) (Date)	Definition and/or conception of employability
Arora (2015)	The employability agenda has emerged as an organizing principle, which has been framed as common sense and so justifies the repositioning and corporatization of the sector (p. 636).
Baruch (2001)	Employability offers people a different kind of psychological contract so that they will feel a fair deal exists, so that they will not feel betrayed when the organization cannot offer stable employment but instead requires individuals to market themselves (p. 545).
Boden & Nedeva (2010)	A nuanced understanding of employability relies on a 'positional conflict theory' approach, which considers how labor markets are 'rigged' to give preferential advantage to some at the expense of others (p.38).
Bridgstock & Tippett (2019)	The capacity to 'employ' one's 'abilities' – that is, the ability to harness one's skills, knowledge and other attributes in order to add value across a range of different contexts across the life course, including employment and career, as well as community and civic engagement (p. 8).
Brown, Hesketh & Williams (2003)	An attempt to legitimate unequal opportunities in education and the labor market at a time of growing income inequalities (p. 114).
Burke et al. (2017)	Graduate employment experiences and trajectories (are best understood) in the context of the directive nature of agency and the regulatory effects of structure (p. 88).
Clark & Zukas (2013)	Employability needs to be understood relationally, and an important feature of employability is "how closely an individual's habitus conforms to the requirements of the field that they enter, and, if necessary, how quickly they are able to develop the required dispositions (p.216).
Forrier & Sels (2003)	An individual's chance of a job in the internal and/or external labor market (p. 106).
Fugate, Kinicki & Ashforth (2004)	A psychosocial construct that captures the aspects of [career identity, personal adaptability and social and human capital] that facilitate the identification and realization of career opportunities within and between organizations (p. 18)
Gazier, B. (2001)	Not a theoretical notion inserted into a network of explanatory connections or of explicit, univocal and stable standards. Rather, it is a matter of identifying the problems and priorities linked to the actions of persons and institutions involved in the access to work and employment (p. 5)
Harvey, L. (2001)	The propensity of the graduate to exhibit attributes that employers anticipate will be necessary for the future effective functioning of their organisation (p. 4).
Hillage & Pollard (1998)	The capability to move self-sufficiently within the labor market to realize potential through sustainable employment. For the individual, employability depends on the knowledge, skills and aptitudes they possess, the way they use those assets and present them to employers and the context within which they seek work (p.12).
Hinchliffe & Jolly (2011)	A graduate identity and capability model of employability, where identity is "the cultural capital acquired prior to entering an organization," is preferable to the dominant skills list model (p. 582).
Hogan, Chamorro-	An attribution employers make about the probability that job candidates will make positive contributions to their organizations (p. 11)

Premuzic & Kaiser (2013)	
Holmes (2013)	The always temporary relationship that arises between an individual graduate and the field of employment opportunities, as the graduate engages with those who are gatekeepers to those opportunities, particularly those who make selection decisions (p. 50).
Jackson & Bridgstock (2020)	A multi-dimensional, lifelong and life-wide phenomenon that is malleable and driven by the individual, yet encouraged and facilitated by higher education (p. 2).
Llinares-Insa et al. (2018)	A personal meta-competence and a social construction comprised of individual and contextual variables that include, four components (proximal processes, biopsychological characteristics of a developing person, parameters of the ecological context, and the temporal dimension) (p.2).
McQuaid & Lindsay (2005)	A broad framework of employability takes account of not only of 'individual factors' (including employability skills and attributes and job search), but also 'personal circumstances' and 'external factors.' Clearly, these factors have a close two-way interaction with each other (p.214).
Pool & Sewell (2007)	Having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they are satisfied and successful (p. 280).
Rothwell & Arnold (2007)	The ability to keep the job one has or to get the job one desires (p.25).
Thijssen (2000)	Employability can be defined at three levels: (1) a core definition pertains to an individual's ability to perform workplace functions and tasks, (2) a broader definition pertains to all individual factors (including attitudes towards work) that influence employment, and, (3) a comprehensive definition includes individual and contextual factors that influence employment (in Forrier & Sels, 2003, p. 106).
Tomlinson (2017)	Employability is largely constitutive of the accumulation and deployment of a variety of interactive forms of capital (i.e., human, social, cultural, identity and psychological), that are key resources that confer benefits and advantages onto graduates (p. 339).
Vanhercke et al. (2014)	Perceived employability concerns the individuals' perceptions of his or her possibilities of obtaining and maintaining employment (p. 593).
Yorke & Knight (2006)	A set of achievements, understandings and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations (pg. 3).

Common Conceptualizations and Definitions of Employability

As Table 1 indicates, there are many different definitions of employability. As the literature has grown in scope and depth over time, new definitions and frameworks are continually emerging, such that "there are as many measurements (of employability) as researchers of the topic" (Forrier & Sels, 2003, p. 103). This has led to a competition of sorts, with researchers constantly presenting and promoting new models, frameworks and conceptions of employability. This state of affairs has led scholars such as Cashian and colleagues (2015) to pose the question, "is it time to move the employability debate on?," arguing that debates around the types of skills desired by employers and factors influencing employability have become "sterile and repetitive" (p. 1). Furthermore, the observation made almost 30 years ago by Gazier (1998) that the term is often not defined in both reports and research articles continues to plague the field, as our review of the empirical literature revealed that it was not uncommon for authors to not define the

term at all, instead assuming that readers knew what the term meant and measured. Ultimately, it is clear that terminological problems continue to characterize and arguably inhibit the field of employability research.

With respect to some of the most influential definitions of employability, perhaps the most widely cited definitions are those of Hillage and Pollard (1998), Pool and Sewell (2007), and Yorke and Knight (2006), all of which articulate a view of employment being contingent primarily (if not solely) predicted by an individual students' KSAs. More recent definitions tend to adopt a more expansive and multi-dimensional interpretation of the term, including the works of Fugate and colleagues (2004), Holmes (2013), Forrier and Sels (2003) and Tomlinson (2017), which is a development that generally tracks with Gazier's (2001) observation that the field is evolving from a focus on individual-level KSAs and personal responsibility (i.e., the initiative employability perspective) to models that accounted for contextual factors that also shaped a person's job opportunities (i.e., the interactive employability account).

However, some fundamental differences regarding the nature and subsequent measurement of the employability concept are evident in the literature that make it clear that considerable disagreement continues to exist among scholars on how to define and operationalize the concept. As a result, in our analysis we sought to identify the underlying ontological and epistemological positions or assumptions evident in the 38 papers included in our conceptual review. We found that approaches to defining and measuring employability varied in more nuanced ways than prior interpretations of the literature as being categorized according to focusing on skills possession, positionality, or process (Holmes, 2013), but instead varied according to three ontological positions regarding the nature of the phenomenon that is captured by the term "employability," and six epistemological positions regarding how knowledge about employability can be generated via empirical measurements (see Table 2).

Table 2. Ontological and epistemological differences in conceptualizing and studying employability

Ontological Positions on Nature of Reality Captured by Employability Construct					
Probablistic: Specific factors predict employment	**Relational:** Dynamic relations among forces shape opportunity	**Critical:** Power dynamics and unequally distributed resources and/or structural forces inhibit opportunity for certain groups			
Epistemological Positions on how to best Measure or Study Employability					
Temporal frame where employability is operational (during college, post-graduate, throughout career)	**Level or unit** of analysis where employability operates (micro-, meso-, macro-levels)	**Nature and locus of factors** that cause or impact employment (Individual KSA, misc. individual attributes, multi-dimensional)	**Role group** best positioned to provide evidence on employability (students, graduates, educators, employers)	Nature of effects or **outcome measures** of employability (KSAs, perceived employability)	**Application of results to practitioners** in the field (Generic skills, disciplinary skills, generic WBL, systemic)

In the remainder of this section, we discuss how these different elements inform conceptualizations of employability across the 38 reviewed works. It is important to note that

the sub-categories within each position are not mutually exclusive, as some scholars adopt multiple approaches regarding the nature of employability itself and how it can best be studied and understood.

What phenomenon or reality does the concept of employability refer to? The first distinction that can be made among different scholars' conceptions of employability pertains to the ontological assumptions about the nature of the phenomenon or state of reality that the term refers to. It is not the case, as Römgens and colleagues (2020) suggest, that "*all* definitions of employability come down to an individual's (perceived) ability to obtain and maintain employment throughout his/her career" (emphasis added, p. 2). Instead, we identified two additional ontological positions in the literature – that of employability referring to the synergistic relations among socio-cultural, economic, political structures and individual agents (i.e., the relational account) that dictate an individual's position in society, and employability as indexing or capturing negative changes in the relationships among labor, employers and society (i.e., the critical account).

Probabilistic accounts: Employability refers to the factors that influence the probability that an individual will get a job. Many scholars define and/or conceptualize employability in terms of the "chance" or "probability" that an individual will find and secure employment, largely due to the complex array of forces that influence a person's employment prospects in a given time and place. While several scholars explicitly signal a conception of employability as one of chance by using terms such as "likely" in their definitions of the term (e.g., Pool & Sewell, 2007; Yorke & Knight, 2006), the probabilistic interpretation of employability is perhaps most explicit in the line of inquiry advanced by Forrier and Sels (2003), whose definition of employability emphasizes the "chance" of an individuals' success in internal or external labor markets. In later work, Forrier and colleagues (2015) argue that consensus exists on this point, but that "considerable debate as to what this chance constitutes" remains in the field (p.56).

This debate typically pertains to the types of factors, such as individual-level KSAs (i.e., the supply of labor) or features of labor markets (i.e., nature of demands for labor), that increase or decrease the probability of securing a job and identifying the most influential characteristics has been one of the primary goals of the field for decades. In fact, regardless of whether a scholar embraces a focus on what McQuaid and Lindsay (2005) call the "supply-side orthodoxy" while ignoring demand-side issues, or if a more multi-dimensional approach is pursued, the phenomenon under investigation remains unchanged – the probability that someone is able to obtain a job or not.

It is important to note the underlying assumptions regarding causality that inform this probabilistic account. In most cases, employability researchers adopt what sociologist John Levi Martin calls third-person causality, where "objective" measurements of changes in one (or more) independent variables affect or cause changes in dependent outcomes (2011). Martin (2011) critiques this dominant stance on the grounds that social scientists have, "decided that the best explanation is a 'causal' third-person explanation, in which we attribute causal power to something other than flesh-and-blood individuals," (p. 5) or first-person accounts. For Martin (2011), the corrective is to shift emphasis to a rigorous science of subjectivity that also draws on both field theory and attention to actor-environment dynamics, where regularities or structures in the social, political and economic fields are perceived by individuals in ways that constrain or delimit how individuals act and behave.

Relational accounts: Relations among factors shape social positioning and opportunity. Recently some employability researchers have adopted such a perspective by using a relational approach to conceptualize employability (e.g., Burke et al., 2017; Clark & Zukas, 2013; Kalfa & Taksa, 2015), especially the version advanced by Bourdieu (1977) which asserts that one's position in society is shaped by the synergistic effects of one's habitus (i.e., personal dispositions) and the acquisition and deployment of various forms of capital (e.g., social, financial and cultural) as they function within specific fields. Employability researchers adopting this view argue that individuals should not be viewed as being passively "influenced" by their socio-cultural, economic and physical contexts, but instead that people internalize normative messages about behavior which effectively blurs the line between actor and environment (Burke et al., 2017). Consequently, a relational account is not simply arguing that "both/and" structure and agency impact a person's position, but instead offers a fundamentally different view of reality, especially that the way fields themselves are organized allocate positions to different elements (i.e., persons) based on how their characteristics are valued (or not) within that field (Martin, 2003).

The relational approach is one of three perspectives on employability that Holmes documented in his 2013 paper (i.e., the "positional" approach), tracing its origins to scholars of education working in the critical tradition who argued that one of the functions of educational systems is to reproduce power and privilege for the elite (e.g., Collins, 1971). However, Holmes (2013) does not explain the positional approach in terms of field theory thus does not capture the full theoretic range or potential offered by that perspective. Furthermore, while Holmes (2013) critiqued this approach to employability research as advancing a pessimistic "counsel of despair" (p. 548) because it suggests that humans lack agency and are primarily subject to structural forces in social life, others have argued that such a situation, "does not mean it is not an accurate depiction of social space and the graduate employment markets more specifically" (Burke et al., 2017, p. 102).

Critical accounts: Employability refers to the changing psychological contract between employers and employees. The third ontological position underlying the employability literature is less common than the probabilistic or relational positions outlined above, but nevertheless reflects a particular view of the phenomenon indexed by the construct. This stance– that the phenomenon under investigation is an inequitable and even dysfunctional social contract among education, employers and society – is what we call here a critical account (e.g., Moreau & Leathwood, 2006).

The critical perspective in the employability literature is also evident in work on the psychological contract between employers and employees (e.g., De Cuyper & De Witte, 2008; Boden & Nedeva, 2010), which refers to the unspoken assumptions governing relations between management and labor regarding the commitments each party has to one another. In post-WWII economies this contract typically involved employers promising (in spirit if not in writing) stable employment and investments in workers' skills and training, which employees returned with loyalty to the brand or organization. With recessionary pressures, trends in automation, and the globalization of markets, employers began to adopt a different view of this contract, where employees are seen as free-lancers who must look out for themselves in a tumultuous labor market (Baruch, 2001). Additionally, researchers drawing on relational accounts often (but not always) adopt a critical perspective in focusing on the ways that resource allocation and valuation is intentionally structured to enable the powerful to maintain hegemonic control over resources (Brown et al., 2003; Burke et al., 2017).

What are the Epistemological Positions Taken by Employability Researchers?

Next, we turn to the epistemological positions of employability researchers, or how they explain the nature of employability-related knowledge and how it can be known, discovered and studied. These categories include: (a) the temporal frame that demarcates when employability is operative, (b) the level or unit of analysis where employability functions, (c) the indicators or measures that capture employability itself, (d) the role group or dataset best positioned to supply evidence on employability, (e) the outcome measures of employability, and (f) recommendations made to educational practitioners.

Temporal frame where employability is operational. The first epistemological choice made by employability researchers pertains to the time frame wherein employability functions and operates. For most researchers, the period of time immediately after graduation from a college or university – often measured via first-destination surveys administered six months after graduation – is the focus of attention. Other temporal frames used in the literature include student experiences during college or throughout longer periods of a career or life-course.

Perhaps the most explicit discussion of the issue of time is made by Holmes (2017), who argues that employability studies should focus on the long-term processual nature of a students' professional development, and how their beliefs, values and sense of self that students develop over time (see also Hinchliffe & Jolly, 2011). In these cases, the primary argument is that employability does not only refer to a college graduates' short-term success (or failure) in getting a job after graduation, but instead pertains to a career-long process whereby individuals grow, develop and seek work throughout their working lives (Forrier & Sels, 2003; Holmes, 2017). With this perspective the locus of inquiry shifts from post-graduate job outcomes to a lifelong process of career and identity development.

Level or unit of analysis where employability functions or operates. Next, researchers also measure employability by specifying the level or unit of analysis where employability is located or most operational.. For some researchers, these levels of analysis are mutually exclusive categories where employability functions in different ways. For instance, Thijssen et al., (2008) argue that employability operates at three levels – societal, organizational, individual – with data and policy implications unique to each level. Similarly, Tomlinson (2017) suggests that employability operates at the macro-level of educational and labor market systems and structural features, the meso-level of educational institutions or individual employers, and the micro-level of individuals and their unique backgrounds and dispositions.

The growing focus on the macro-level as an important contextual backdrop and/or influence on student opportunities offers a slightly different approach to the unit of analysis problem. For example, Kalfa and Taksa (2017) see the macro-level (i.e., the university), meso-level (i.e., groups of academics and collective habitus) and micro-level (i.e., embedded cultural capital of students) as the pertinent levels where employability functions – each interacting with one another within a single organization (see also Forrier & Sels, 2003). Together, these various approaches to the unit of analysis problem highlight its importance in determining how and where to measure the concept in the field.

Nature of key influences on employability. The next dimension distinguishing employability studies from one another is the most commonly addressed in the literature – that of the nature of specific indicators or variables that are seen as most influencing employability. It is important to note that in some cases the variables outlined below - especially that of self-perceived

employability - could be used in empirical studies as either an independent or dependent variable. With that caveat in mind, the four types of influences on employability that researchers frequently studied are as follows.

***Individual-level KSAs*.** Perhaps the most common way that scholars propose to measure employability is through the KSAs that an individual student has or "possesses," which is then theorized to be a primary determinant of employment (Holmes, 2013). Demonstrating how ingrained this operationalization of the concept has become in the field, terms such as "employability skills" or "employability capacities" (e.g., Coetzee, 2014) effectively conflate the prospect of getting a job with an individual's skills or capacities. The types of skills included in this approach to employability measurement generally include a combination of technical or disciplinary knowledge, the so-called "soft" or "non-cognitive" skills (e.g., problem-solving skills).

Individual-level psychosocial attributes. Another individual-level indicator of employability is that of psychosocial attributes, which refers to domains including a person's mental state and psychological tendencies that impact their state of mind, well-being, and life outcomes. While originating in social, counseling, and industrial/organizational (I/O) psychology, research on psychosocial or what some call "person-centered constructs," is increasingly prevalent in the literature via foci on attributes such as graduate identity, perceived employability, and self-efficacy (i.e., beliefs in one's ability to perform tasks) (see Forrier et al., 2015; Fugate et al., 2004; Hinchliffe & Jolly, 2011).

In addition, researchers can also focus on how individuals perceive their environments, experiences, and opportunities, which is a common approach in ethnographic or qualitative research. While such an approach can be categorized in terms of the topics that study participants are reflecting upon (e.g., employers, labor markets), here we focus on the cognitive or perceptual aspect of such data.

***Individual-level capital(s)*.** Another employability metric that focuses on individual-level attributes is that of "capitals," or the various forms of resources that can impact a person's ability to find and secure employment (e.g., Clarke, 2018; Tomlinson, 2017). Accounts of capital in the employability literature tend to adopt what Lin (2001) calls neo-capital perspectives that elaborate on Marx's original focus (i.e., land, machinery and money used to generate commodities with expected returns) to include other resources including human capital (i.e, education, KSAs) (Becker, 1994), social capital (i.e., information and resources conveyed through social networks) (Lin, 2001), and cultural capital (i.e., credentials, tastes and dispositions) (Bourdieu, 1986). Researchers have also added new categories such as employability capital (Peeters et al., 2019), movement capital (e.g., Forrier et al, 2015), and graduate capital which combines a variety of other forms of capital (i.e., human, social, cultural, psychological and identity) into a single construct (Tomlinson, 2017). While some researchers who emphasize individual-level capital also adopt a critical and relational perspective (Boden & Nedeva, 2010; Brown et al., 2003; Burke et al., 2017), others strip away the original foci on class domination and the reproduction of power and privilege to solely focus on resources that graduates can use to obtain employment.

Multiple individual-level attributes. Another approach taken by researchers is to not focus on a single type of variable (e.g., KSAs) but instead to view employability as dictated by a combination of these individual attributes. For instance, the widely cited USEM model (Yorke & Knight, 2006) asserts that four individual-level factors – understanding (of disciplinary material),

skills, efficacy beliefs and metacognition – interact with one another to impact a students' potential for obtaining a job. Similarly, Forrier and colleagues (2015) approach both focus on a diverse range of individual-level factors that impact people's employment outcomes and career mobility (i.e., human capital, social capital, self-awareness, and adaptability).

Individual and contextual (multi-level) elements. The final category incorporates both individual-level elements as well as forces at the meso-level (e.g., institutional programs and policies) and macro-level (e.g., political, economic, and socio-cultural factors). For example, Llinares-Insa and colleagues (2016) offer a similar approach that highlights how structural forces and individual agency are dynamically interconnected, which draws on a bioecological model of development (Bronfenbrenner & Morris, 2006) and argues that employment outcomes are constrained by contextual forces such a labor laws, economic conditions and the individual's home and workplace situations, personal dispositions, self-perceptions and resources (Llinares-Insa et al., 2016).

While some scholars adopting this multi-dimensional perspective view these contextual factors primarily in terms of a backdrop to individual experience, others emphasize that these forces interact with one another synergistically and thus can only be understood in their relationship to one another. For instance, McQuaid & Lindsay (2005) argue that employability is best understood as the dynamic interactions among external factors such as labor market conditions (e.g., physical location of jobs, hiring practices), personal circumstances (e.g., access to personal transportation), and individual-level KSAs.

It should be noted, however, that a multi-dimensional and relational perspective of employability does introduce significant methodological challenges, given the sheer volume of potential variables that could be considered as salient in shaping an individuals' job prospects. Consequently, some argue that the goal is not to examine or document the entirety of this process, which also would require the collection and analysis of longitudinal data on a large number of data points, but to offer "a road map on which various paths can be marked out" (Forrier & Sels, 2003, p. 120).

Which role group is best positioned to provide data on employability*?* The next dimension that employability researchers use to measure the concept is which role group is the object of study, or the primary actors or parties whose experiences best capture the phenomenon – students (both current and recent graduates), educators, or employers. While some scholars are not explicit about their rationale for including (or excluding) a particular group, others are clear about their reasons for focusing on a particular group. For example, Hogan and colleagues (2013) argue that analyses of employability must account for employers' firsthand accounts of the types of attributes sought in new employees, since "hiring organizations ultimately define who is employed" (p. 7). Others argue that the employer perspective is too frequently featured in employability studies, and thus turn to eliciting data from students about their own prospects in the labor market and perspectives about the entire process (e.g., Higdon, 2016; Tymon, 2013). Such calls for a more diversified range of interests and perspectives to be heard - particularly those of college students - has been evident across the postsecondary research landscape as many feel that student voices have long been marginalized (see Bovill et al., 2011).

What are the effects or outcome measures of employability? The next category for measuring employability pertains to the nature of the outcome or effect of employability.

Traditionally, one of the most common outcomes has been that of employment status, or whether or not a graduate has some sort of job, with distinctions sometimes made between full- or part-time, or formal or informal employment. But researchers are increasingly studying other types of outcomes that could be predicted or influenced by employability-related phenomena such as student perceptions of their own employability (i.e., self-perceived employability) (e.g., De Cuyper et al., 2008). This broadening of the phenomenon of "employability" is based in part on growing sentiments in the field that, "there is so much more to employability than gaining employment" (Pool & Sewell, 2007, p.278).

Type of practitioner recommendations. The final category that we identified pertains to the recommendations that they make to educators in the field of practice, which we view as an important indicator of how scholars' view the nature of employability evidence. While not precisely a measurement of the concept, we contend that researchers' underlying epistemological positions are evident in recommendations they provide to practitioners as a form of praxis, which can be seen as action that is informed or guided by disciplinary theory or tradition (Kemmis, 2010, Warry, 1992).

Here, we focus on three indicators for practitioner recommendations: skills-focused instruction, WBL programs, and systemic reforms. Reform in the area of skills-focused instruction refers to guidance that classroom curricula and pedagogy be revamped to highlight generic transferable skills (e.g., teamwork) or specific disciplinary versions of these skills (e.g., teamwork in health care) (see Clarke, 2018). In addition, scholars may recommend that postsecondary leadership invest in faculty development programs to train faculty in how to design, teach, and assess for skills, which is a skillset that faculty are rarely trained to do during their graduate programs (Hora et al., 2021).

Additionally, researchers have recommended both WBL and work-integrated learning (WIL) - which involves on-campus educational programs and experiences tailored to real-world workplace situations - as key strategies for enhancing student employability (Jackson & Bridgstock, 2021). The focus on WBL and WIL is based on evidence that experiences such as internships contribute to a variety of employment-related benefits such as higher wages, job satisfaction, and professional skills in comparison to students without these experiences (see Hora et al., 2017). Finally, we draw attention to recommendations that involve both "supply" and "demand" factors in more structural reforms. Such initiatives can include efforts that involve partnerships between IHEs, employers, and/or government (e.g., Forrier & Sels, 2003), as well as systemic reforms that are explicitly aimed at improving diversity, equity, and inclusion (DEI) related outcomes for graduates (e.g., Brown et al., 2003). Capturing each of these elements sheds light on researchers' underlying views on praxis and also the nature and quality of advice educators in the field are receiving from the empirical research.

Results of Empirical Review

How is Employability Studied and What are Key Findings?

Next, we turn to the analysis of the 60 empirical studies included in our review. We first briefly describe the most common topics being pursued by employability scholars to provide a snapshot of current interests in the field, and then the degree to which the papers exhibited the ontological and epistemological characteristics outlined in the conceptual review above.

Types of Research Questions Addressed in the Empirical Literature

The nature and scope of recent inquiries could be placed into six categories (see Table 3), which are not mutually exclusive as some studies addressed more than one type of research question or topic.

Table 3. Primary types of research questions and/or topics addressed in the empirical literature

Research questions and/or topics	# of papers	Examples
Relationship between various factors and employability/employment	32	Alibaygi et al., 2013; Jackson & Wilton, 2017
Impact of educational interventions on student outcomes	18	Barton et al., 2019; Pitan & Atiku, 2017
Focus on student/graduate self-perceived employability	16	Low et al., 2020; Jackson & Tomlinson, 2020
Research on perceptions of KSAs and environments	11	Brits, 2018; Matsouka & Mihail, 2016
Validation of research instruments	5	Karli, 2016; Vargas et al., 2018
Critical analyses of employability dynamics	5	Gracia, 2009; Morrison, 2014

Research on Relationship Among Various Factors & Various Student Outcomes

The most common research question in the empirical literature (32 papers) aimed to identify the various factors that predicted or were correlated with student outcomes. The types of factors examined in the literature vary considerably are are not restricted to employment status, while the outcomes similarly captured a diverse range of variables. For instance, researchers examined how factors such as networking behavior (Batistic & Tymon, 2017; Chen, 2017), characteristics of social networks (Chen, 2017), career management skills (Chiu & Chuang, 2016), and career identity (Gonzalez-Roma et al., 2018) were associated with employment-related outcomes. These outcomes were also conceptualized broadly in foci on variables such as proactive career behaviors (Clements & Kamau, 2018), career choice status (Jackson &

Wilton, 2017), and protean career orientation (Cortellazzo et al., 2020). These results suggest that employability scholars are moving beyond a sole focus on how student KSAs predict employment status, which has long been a critique of the field.

Research Evaluating Impacts of Educational Interventions on Student Outcomes

The next group of studies (18 papers) focused on studying the impacts of educational interventions on various student outcomes. These programs included volunteering (Barton et al., 2019; Goodman & Tredway, 2016), online self-reflection tools and accompanying career-related workshop (Bennett et al., 2020a), internships (Kapareliotis et al., 2019), and work placements (Bennett et al., 2008), with subsequent attention to how these programs influenced outcomes such as social networks, KSAs and job outcomes (Nghia et al., 2019).

Research on Student/Graduate Self-perceived Employability

Next, many scholars in our review focused on students' self-perceived employability (16 papers), either as variables in statistical analyses (both independent and dependent variables) or as a primary object of study in qualitative studies. Our review revealed a considerable growth of interest the construct, with studies that focused on testing and validating instruments for self-perceived employability (Álvarez-González et al., 2017; Rothwell et al, 2008; Vargas et al., 2018) and also research on how self-perceptions influenced students' career outcomes (Bennett et al., 2020a) as well as how contextual factors shape self-perceived employability itself (e.g., Goodman & Tredway, 2016).

Research on Perceptions of KSAs & Environments

A similar line of inquiry that focuses on agent perceptions involves studies of employer evaluations of student KSAs (11 papers). As previously noted, we focused on studies that asked specific groups to evaluate their own skills or those of another group instead of generic evaluations of ambiguous populations. Papers in this category include the work of Brits (2018) and Jackling and Natoli (2015) that elicit employer views of student (or intern) skills, and other studies that focus on comparing employers and graduates' opinions of student KSAs (e.g., Matsouka & Mihail, 2016). Additionally, there are innovative examples of this approach such as Piopiunik et al's (2020) study on how skills act as signals to employers, which was analyzed using employer responses to fictitious applications, and individuals' perceptions of features of their social and/or institutional environments such as the prestige of particular colleges or universities (Jackson, 2014; Pitan & Muller, 2019), student perceptions of workplace culture for women (Gracia, 2009), and perceptions of the labor market (Jackson & Tomlinson, 2020; Pham, 2022).

Research on Validation of Research Instruments

The next type of research question includes the validation and field-testing of research instruments (5 papers). For example, in a 2014 study, Pool and colleagues describe a validation study of the CareerEDGE Employability Development Profile (EDP), a diagnostic tool and self-report questionnaire that can be used by higher education professionals to develop new programs and interventions. Other studies in this category included validation studies of perceived employability scales in Turkey (Karli, 2016) and Spanish (Vargas et al., 2018).

Research Advancing Alternative and Critical Views of Employability

Finally, a smaller group (5 papers) of empirical papers i set out to critique the concept of employability altogether, using an empirical examination of the topic to highlight the concept's limitations and/or problems. This category included an analysis of supervised work experiences, where the author argued that the current employability discourse too often overlooks the fact that the workplace is a "socially constructed complex arenas of embodied knowledge" (Gracia, 2009, p.301), which resulted in findings that highlighted gender-based discrimination. Similarly, Moreau and Leathwood (2006) studied the experiences of graduates from an inner-city university in England, which highlighted the myth of a "level playing field" with respect to job acquisition.

Identification of Conceptual Categories in Empirical Papers

Next, we report the degree to which the 60 empirical papers exhibited features outlined in the previous section (e.g., ontological or epistemological positions). An overview of our findings can be found in Table 4.

Table 4. Sixty (60) empirical papers in our review according to conceptual categories

		Ontological Positions			Epistemological Positions					
	Author (Year)	**Prob**	**Rel**	**Crit**	**Temporal Frame**	**Level/Unit of Analysis**	**Nature of Influential Factors**	**Role Group**	**Outcome Metric(s)**	**Practitioner Recomm**
1	Adebakin et al., (2015)	X			Post-grad	Micro-level	Indiv KSAs	Employers	KSAs	Generic Skill Dev
2	Alibaygi (2013)	X			During college	Micro-level, Macro-level	Multi-dim	Students	Perceived employability	Systemic Equity
3	Alvarez-Gonzalez et al, (2017)	X			During college	Micro-level, Macro-level	Indiv Psychosocial	Students	Perceived employability	Disc Skill Dev, Faculty Dev, WBL Generic, WBL Structural, Systemic Equity, Partnership
4	Barton et al (2019)	X			During college	Micro-level	Indiv KSAs	Students, Graduates	Perceived employability	Generic Skill Dev
5	Batistic & Tymon (2017)	X			During college	Micro-level, Macro-level	Indiv Capitals	Students	Perceived employability	Generic Skill Dev, WBL Generic
6	Bennett et al (2020a)		X		Throughout career	Micro-level	Indiv Psychosocial	Students	Perceived employability	Disc Skill Dev, WBL Generic, Systemic Equity
7	Bennett et al. (2020b)	X			During college	Micro-level	Indiv KSAs	Students, Educators	Perceived employablity	Generic Skill Dev, Disc Skill Dev

		Ontological Positions			Epistemological Positions					
	Author (Year)	Prob	Rel	Crit	Temporal Frame	Level/Unit of Analysis	Nature of Influential Factors	Role Group	Outcome Metric(s)	Practitioner Recomm
8	Bennett et al. (2008)	X			N/A	Micro-level	Indiv KSAs	Employers	Hiring decisions	Generic Skill, WBL Generic
9	Brits (2018)	X			Post-grad	Micro-level, Macro-level	Indiv KSAs	Employers	KSAs	Generic Skill
10	Chen (2017)	X			Post-grad	Micro-level, Macro-level	Indiv Capitals	Graduates	Self-identity, KSAs	Generic Skill
11	Chien (2015)	X			Post-grad	Micro-level	Indiv KSAs	Students,Graduates	Labor mkt (Job status, job performance)	Generic Skill
12	Chiu & Chuang (2016)	X			Post-grad	Micro-level	Indiv KSAs	Graduates	Labor mkt (Wages)	Generic Skill, WBL Structural
13	Clark & Zukas (2013)		X		Post-grad	Micro-level, Meso-level, Macro-level	Indiv Psychosocial	Graduates	Labor mkt (Job status)	Disc Skill Dev
14	Clark et al (2015)	X			Post-grad	Micro-level	Indiv KSAs	Graduates	KSAs, job status	Generic Skill, Systemic Equity
15	Clements & Kamau (2018)	X			During college	Micro-level	Other Indiv Attributes	Students	Proactive career behaviors, Perceived employability	Disc Skill Dev

		Ontological Positions			Epistemological Positions					
	Author (Year)	Prob	Rel	Crit	Temporal Frame	Level/Unit of Analysis	Nature of Influential Factors	Role Group	Outcome Metric(s)	Practitioner Recomm
16	Cortellazzo et al. (2020)	X			Post-grad	Micro-level	Other Indiv Attributes	Graduates	Perceived employability, job offers	Disc Skill Dev
17	Crossman & Clarke (2010)	X			N/A	Micro-level	Indiv KSAs	Employers Educators Students	Labor mkt (Job prospects)	Generic Skill Dev, WBL Generic
18	De Guzman & De Castro (2008)	X			Throughout career	Micro-level	Indiv KSAs	Graduates	Labor mkt (Job status)	Generic Skill Dev, WBL Generic
19	Donald et al (2019)	X			During college	Micro-level	Indiv Capitals	Students	Perceived employability	Disc Skill Dev, WBL Structural, Systemic Equity, Partnership
20	Engelberg & Limbach-Reich (2012)	X			Post-grad	Micro-level	Indiv KSAs	Graduates	Job status	Disc Skill Dev, WBL Generic
21	Goodman & Tredway (2016)	X			During college	Micro-level	Other Indiv Attributes	Students	Perceived employability	Generic Skill Dev, WBL Generic
22	González-Romá et al (2018)	X			Post-grad	Micro-level	Other Indiv Attributes	Graduates	Labor mkt (Job status, job quality)	Generic Skill Dev, Disc Skill Dev, Faculty Dev, WBL Generic, Partnership

		Ontological Positions			Epistemological Positions					
	Author (Year)	Prob	Rel	Crit	Temporal Frame	Level/Unit of Analysis	Nature of Influential Factors	Role Group	Outcome Metric(s)	Practitioner Recomm
23	Gracia (2009)		X	X	During college	Micro-level, Meso-level	Indiv Psychosocial	Students	KSAs, Perceived employability	WBL Generic, Systemic Equity
24	Hennemann & Liefner (2010)	X			Post-grad	Micro-level	Ind KSAs	Graduates	Job status, KSAs	Generic Skill Dev, Disc Skill Dev, WBL Generic
25	Hinchliffe & Jolly (2011)	X			Throughout career	Micro-level	Ind KSAs	Employer	Graduate identity	Disc Skill Dev, WBL Generic
26	Hora & Blackburn Cohen (2018)		X		Post-grad	Micro-level, Meso-level	Indiv Capitals	Employer, Educator	Cultural capital valuation	Generic Skill Dev, Disc Skill Dev, WBL Generic, Systemic Equity
27	Huq & Gilbert (2013)	X			During college	Micro-level	Ind KSAs	Students	Course evaluations	Generic Skill Dev,WBL Generic
28	Jackling & Natoli (2015)	X			During college	Micro-level	Ind KSAs	Employers	KSAs	Generic Skill Dev,WBL Generic
29	Jackson & Tomlinson (2020)	X			During college	Micro-level	Ind KSAs	Students	Perceived employability	Generic Skill Dev, Disc Skill Dev, WBL Generic, Partnership
30	Jackson & Wilton (2017a)	X			During college	Micro-level	Misc Indiv Attributes	Students	Perceived employability	Generic Skill Dev,WBL Generic

		Ontological Positions			Epistemological Positions					
	Author (Year)	**Prob**	**Rel**	**Crit**	**Temporal Frame**	**Level/Unit of Analysis**	**Nature of Influential Factors**	**Role Group**	**Outcome Metric(s)**	**Practitioner Recomm**
31	Jackson & Wilton (2017b)	X			During college	Micro-level	Misc Indiv Attributes	Students	Career choice status	Generic Skill Dev,WBL Generic, Partnership
32	Jackson (2014)	X			Throughout career	Micro-level	Multi-dim	Graduates	Hiring criteria	Partnership
33	Jackson (2012)	X			During college	Micro-level	Ind KSAs	Students	KSAs	WBL Structural, Partnership
34	Kapareliotis et al (2019)	X			During college	Micro-level	Ind KSAs	Students	Perceived employability /Work readiness	Generic Skill Dev, WBL Generic, WBL Structural, Partnership
35	Karli (2016)	X			During college	Micro-level	Other Indiv Attributes	Students	Perceived employability	Generic Skill Dev
36	Lau et al (2014)	X			Post-grad	Micro-level	Ind KSAs	Students	KSAs	Generic Skill Dev, Faculty Dev, Systemic Equity,
37	Low et al (2020)	X			Post-grad	Micro-level, Macro-level	Multi-dim	Students	Perceived employability	Generic Skill Dev, Faculty Dev
38	Mason, Williams, & Cranmer (2009)	X			Post-grad	Micro-level, Meso-level	Ind KSAs	Students, Educators	Labor mkt (Job status)	Partnership

		Ontological Positions			Epistemological Positions					
	Author (Year)	**Prob**	**Rel**	**Crit**	**Temporal Frame**	**Level/Unit of Analysis**	**Nature of Influential Factors**	**Role Group**	**Outcome Metric(s)**	**Practitioner Recomm**
39	Matsouka & Mihail (2016)	X			Post-grad	Micro-level	Ind KSAs	Graduates, employers	KSAs	Generic Skill Dev, WBL Structural
40	Monteiro et al (2020)	X			Post-grad	Micro-level	Indiv Psychosocial	Graduates	Perceived employability , job search strategy	Generic Skill Dev
41	Moreau & Leathwood (2006)		X	X	Post-grad	Micro-level, Macro-level	Other Indiv Attributes	Graduates	Labor mkt (Job status)	Systemic Equity
42	Morrison (2014)		X	X	During college	Micro-level, Macro-level	Indiv Psychosocial	Students	Perceived employability	Disc Skill Dev, Systemic Equity, Partnership
43	Nghia et al (2019)	X			During college	Micro-level	Indiv Capitals	Students	Perceived employability, job status	Generic Skill Dev
44	Peng (2019)	X			During college	Micro-level	Indiv Capitals	Students	Perceived employability	Generic Skill Dev
45	Pham (2022)	X			Throughout career	Micro-level	Indiv Capitals	Graduates	Job search strategy	Generic Skill Dev, Partnership
46	Pitan & Muller (2019)	X			During college	Micro-level, Meso-level	Other Indiv Attributes	Students	Perceived employability	WBL Generic, Systemic Equity, Partnership

		Ontological Positions			Epistemological Positions					
	Author (Year)	**Prob**	**Rel**	**Crit**	**Temporal Frame**	**Level/Unit of Analysis**	**Nature of Influential Factors**	**Role Group**	**Outcome Metric(s)**	**Practitioner Recomm**
47	Pitan & Atiku (2017)	X			During college	Micro-level	Ind KSAs	Students	Perceived employability	Generic Skill Dev, WBL Generic
48	Poole et al (2014)	X			During college	Micro-level	Ind KSAs	Students	KSAs	Generic Skill Dev
49	Potgieter (2012)	X			Throughout career	Micro-level	Other Indiv Attributes	Students	KSAs	Generic Skill Dev
50	Qenani, MacDougall, & Sexton (2014)	X			During college	Micro-level	Indiv Psychosocial	Students	Perceived employability	Generic Skill Dev, WBL Generic
51	Rosenberg et al (2012)	X			Post-grad	Micro-level	Ind KSAs	Graduates, Educators, Employers	KSAs	Generic Skill Dev, Faculty Dev
52	Rothwell, Herbert & Rothwell (2008)		X		During college	Micro-level, Macro-level	Multi-dim	Students	Perceived employability	Generic Skill Dev
53	Saunders & Zuzel (2010)	X			During college	Micro-level	Ind KSAs	Students	KSAs	Generic Skill Dev
54	Su & Zhang (2015)	X			Post-grad	Micro-level	Ind KSAs	Graduates, Employers	KSAs	Generic Skill Dev
55	Tymon et al (2020)	X			During college	Micro-level	Ind KSAs	Students	Employability -related self confidence	Generic Skill Dev
56	Vargas, Sánchez-Queija, Rothwell, & Parra (2018)	X			During college	Micro-level	Indiv Psychosocial	Students	Perceived employability	Generic Skill Dev

		Ontological Positions			Epistemological Positions					
	Author (Year)	**Prob**	**Rel**	**Crit**	**Temporal Frame**	**Level/Unit of Analysis**	**Nature of Influential Factors**	**Role Group**	**Outcome Metric(s)**	**Practitioner Recomm**
57	Williams et al (2019)	X			N/A	Micro-level	Ind KSAs	Educators, Employers	Employability theories/ KSAs	Generic Skill Dev
58	Wilton (2011)	X			Post-grad	Micro-level	Ind KSAs	Graduates	KSAs, job status	Systemic Equity
59	Yang, Cheung & Song (2016)	X			Post-grad	Micro-level	Ind KSAs	Graduates	Learning satisfaction	Generic Skill Dev
60	Zehrer & Mossenlechner (2009)	X			During college	Micro-level	Ind KSAs	Employers	KSAs	Generic Skill Dev

Table 5. Primary ontological and epistemological characteristics of the 60 papers in the analysis

Ontological Positions	# (%) of papers	Examples
Probabilistic	50 (83.3%)	Pham (2022); Su & Zhang (2015)
Relational	7 (11.6%)	Morrison (2014); Rothwell et al. (2008)
Critical	3 (5.0%)	Gracia (2009); Moreau & Leathwood (2006)
Epistemological Positions		
Temporal frame		
During college	29 (48.3%)	Alvarez-Gonzalez et al, (2017); Peng (2019)
Post-graduation	22 (36.6%)	Matsouka & Mihail (2016); Wilton (2011)
Throughout career	6 (10%)	Bennett et al (2020a); Potgieter (2012)
N/A	3 (5%)	Crossman & Clarke (2010)
Level/unit of analysis		
Micro-level (individual)	46 (76.6%)	Jackson & Tomlinson (2020); Vargas et al. (2018)
Meso-level (organizational)	0 (0.0%)	N/A
Macro-level (sector, societal)	0 (0.0%)	N/A
Multi-level	14 (23.3%)	Hora & Blackburn Cohen (2018); Mason et al (2009)
Nature of factors		
Individual KSAs	31 (51.6%)	Lau et al (2014); Pitan & Atiku (2017)
Individual psychosocial attributes	8 (13.3%)	Qenani et al (2014); Vargas et al (2018)
Individual capital(s)	7 (11.6%)	Chen (2017); Nghia et al (2019)
Other Individual Attributes	10 (16.6%)	Cortellazo et al (2020); Potgeiter (2012)
Multi-Dimensional Factors	4 (6.6%)	Alibaygi (2013); Low et al (2020)
Role group		
Student	29 (48.3%)	Jackson (2012); Tymon et al (2020)
Graduates	15 (25%)	Chiu & Chuang (2016); Monteiro et al (2020)
Educator	0	N/A
Employer	6 (10%)	Jackling & Natoli (2015); Zehrer & Mossenlechner (2009)
Multiple	10 (16.6%)	Rosenberg et al (2012); Su & Zhang (2015)
Outcome metrics		
KSAs only	11 (18.3%)	Jackson (2012); Poole et al (2014)
Labor market outcomes only	8 (13.3%)	De Guzman & De Castro (2008); Moreau & Leathwood (2006)
Perceived employability only	19 (31.6%)	Batistic & Tymon (2017); Rothwell et al (2008)
Misc (single-outcome)	12 (20%)	Huq & Gilbert (2013); Jackson (2014)
Multiple	10 (16.6%)	Clements & Kamau (2018); Hennemann & Liefner (2010)
Type of practitioner recommendations		
Generic skill development	43 (71.6%)	Clark et al (2015); Hennemann & Liefner (2010)
Disciplinary skill development	14 (23.3%)	Jackson & Tomlinson (2020); Morrison (2014)
Faculty development/training	5 (8.3%)	Alvarez-Gonzalez et al. (2017); Low et al (2020)
Work-based learning: Generic	22 (36.6%)	Batistic & Tymon (2017); Pitan & Muller (2019)
Work-based learning: Structural support	6 (10.0%)	Chiu & Chuang (2016); Matsouka & Mihail (2016)
Partnerships	12 (20.0%)	Donald et al (2019); Mason et al. (2009)
Systemic equity focus	12 (20.0%)	Alibaygi (2013); Gracia (2009)

Ontological Positions on the Nature of the Employability Phenomenon

In this section we briefly describe some illustrative findings reported in empirical papers that aligned with one of the three ontological perspectives on the nature of employability: probabilistic, relational, or critical approaches.

Probabilistic. By far the most common ontological approach taken by researchers included in our review was that of employability as referring to the likelihood or probability that a student would get a job upon graduation or other related outcomes (50 papers). In this approach, researchers most often used survey or large datasets (e.g., nation-level panel data) to evaluate the degree to which certain variables explained the variance in outcomes such as wages, employment status, or self-perceived employability, though several scholars employed mixed-methods or qualitative approaches (e.g., Barton et al., 2019).

One example of this probabilistic approach is a 2015 study by Su and Zhang, who sought to identify the individual-level skills that were most associated with finding a job, surveying 300 employers and 187 graduates in China about key "employability skills" such as teamwork, initiative, and sense of responsibility. The authors found that graduates underestimated the importance of professional knowledge (compared to employers) and other gaps in the valuation of key "personal qualities" that predict a person's job prospects (Su & Zhang, 2015). Another paper by Engelberg and Limbach-Reich (2012) surveyed bachelor's graduates in social and educational work in Luxembourg eight months after graduation, examining their employability in terms of both rate of entry into the labor market and self-reports of practice proficiency as acquired at university.

Some studies that adopted a probabilistic perspective also drew on theory and method from traditions grounded in relational sociology. For instance, in a study of the relationships among social networks, job-searching behaviors and perceived employability, Batistic and Tymon (2017) surveyed 376 business students in the UK, finding that networking is positively related to access to resources and increased internal and external perceived employability (Batistic & Tymon, 2017). While the study draws upon social capital theory and emphasizes that the model is indirect in its conception of networking as an antecedent (and not sole predictor of) resource acquisition, the empirical approach and intent of the study is to identify if and how networking enhances the likelihood that a student will be more or less employable upon graduation, which is a decidedly probabilistic conception of the phenomenon.

Relational. A less common approach (7 papers) taken in the employability literature is a relational approach, where the aim is less to document variables that predict employability outcomes but instead is to capture the interactions between and among factors that shape individual positions and opportunities in a given field or context (Martin, 2001). One example of a study in this category was conducted by Bennett and colleagues (2020a), who sought to examine how Australian students conceptualize their working lives over time and their reproduction of public messages regarding work. Data were collected via a self-reflection questionnaire with descriptive statistics finding that most (i.e., 25%) students felt they would work in their major areas from 10-14 years, and text entries coded using word cloud techniques. Overall, instead of seeking to predict employment outcomes the authors examined the social construction of career decision-making over time, which along with other examples of empirical studies adopting a relational approach in education research (e.g., Ferrare & Apple, 2015; Hora,

2020) indicate that a research program informed by relational and field theoretic approaches is possible in the field of employability studies.

Critical. The third category is that of critical conceptions of the employability phenomena (3 papers), which takes as the object of study the nature of inequality and power relations within society. Despite the similarities between a critical perspective and theoretical perspectives such as positional conflict theory, which emphasizes the ways that education and the economic sector legitimate and perpetuate inequality (e.g., Brown et al., 2003) some papers that adopt this approach do not explicitly focus on these cycles of inequality and power dynamics, but instead involves a study of how perceptions of institutional prestige may impact student self-perceptions (e.g., Rothwell et al., 2008). In contrast, the work of Morrison (2014) whose study focused on class and gender-based inequalities in the labor market, a study of gender-based discrimination (Gracia, 2009), and Moreau and Leathwood's (2006) analysis of how ethnicity and gender shape employment outcomes involve an explicit analysis of inequality and power. For instance, Moreau and Leathwood's widely cited study (2006) draws upon interviews and telephone surveys with students at a less-selective inner-city university in the UK as part of a larger argument against the discussion of employability in terms of KSAs. While the participants in their study echoed such dominant employability narratives, the evidence indicated that features of student identities – especially for women and non-white students – came up as they discussed the factors that impacted their career prospects. Ultimately, Moreau and Leathwood (2006) argue that the erasure of such factors could be harmful to students who are likely to blame themselves for difficult college-to-work transitions.

Epistemological Positions on the Nature of the Employability Phenomenon

Next, we review illustrative findings reported in empirical papers for the six categories that reflect scholars' epistemological perspectives on how employability can be known, measured, or understood: temporal frame, level of analysis, nature or locus of phenomenon, role group, outcome measures, and practitioner recommendations.

Temporal frame. Another category that distinguished the empirical studies in our review from one another was the span of time in the students' and/or graduates' lives that are the primary object of study.

During college. Studies that focused on college students still enrolled in degree programs were the most common (29 studies) in our review. An example of this temporal frame is the study by Clements and Kamau (2018), who surveyed 432 undergraduates from 21 universities in the U.K. to study if and how motivational processes (i.e., goal setting) influenced students' career seeking behaviors. The results indicated that students' goal commitment was associated with career planning, network building and other proactive career behaviors.

Post-graduation. With the widespread interest in how employability attributes impact graduates' ability to find a well-paying job immediately upon graduation, many studies (22 studies) focus on this period. For instance, Yang et al. (2016) found that experiential learning activities such as internships or job shadowing, positively impacted the learning satisfaction and skill-levels of 450 recent graduates who were entry-level employees in the hotel industry in China.

Throughout working life. The last temporal category identified in our review pertains to working adults who are beyond the immediate post-graduate period (6 studies). In some cases, these employees were enrolled in a part-time academic program while in others the research subjects were seeking new jobs or positions (e.g., Pham, 2022). Another type of study in this category focused on analyzing the long-term career outcomes of graduates from a particular university, such as the analysis by de Guzman and de Castro (2008) in the Philippines, which found that 540 employees were well-represented in middle management positions, and in the natural sciences and social-behavioral fields.

In addition, it is important to recognize that a large body of research exists on employability issues for working adults (e.g., De Cuyper et al., 2011), but studies that had no explicit connection to a specific college or university were excluded from the review. This line of inquiry, however, is notable for its focus on organization- or meso-level factors, and which addressed individual mobility within firms and across firms. For instance, a study of the influence of individual (e.g., self-efficacy beliefs) and organizational (e.g., corporate culture) factors on employees turnover intention conducted in The Netherlands found that organization-level employability norms and practices related to staff retention (i.e., employability culture) were negatively related to staff departures, signaling the need for firms to cultivate a strong culture of retention and human capital development (Nauta et al., 2009). Research in this area offers an interesting approach to studying organization-level factors that could be examined at the college-level and/or for college graduates in future research.

Level or unit of analysis. Studies in our review mostly used data from sources at the micro-level (i.e., individual students or graduates), with less attention to meso-level (i.e., specific departments, institutions, or organizations) and macro-level (e.g., sector, industry, society) factors. These decisions about which units of analyses are particularly important as they reveal researchers' conceptions about the nature of employability and how it can best be measured.

Micro-level (individual). Most scholars in our review focused on the micro-level of employability, eliciting data from individual students, graduates, or employees (46 studies). An example of a micro-level study is the qualitative analysis of psychology students from a UK university, where Barton and colleagues (2019) examined student motivations to volunteer, their career goals, and how volunteering may have impacted their employment prospects. Another angle on micro-level analyses is the elicitation of individuals' perceptions of meso- or macro-level factors (e.g., Jackson & Tomlinson, 2020, Monteiro et al., 2020; Vargas et al., 2018), which are decidedly micro-level phenomenon but capture an important interface between actors and their environments that is at the core of relational frameworks such as field theory.

Meso- (organization) and macro-levels (sector, industry, society). In our review no studies adopted an exclusively meso- or macro-level perspective. Instead, researchers included these levels in multi-level analyses that also included micro-level accounts of individual characteristics.

Multi-level (individual, organization and/or sector, industry, society). Several studies in our review adopted a multi-level approach to measuring employability (14 papers). Some authors focused on social class and networks - which we interpreted as a macro-level phenomenon of students or families within broader society - as key indicators of graduates' employment prospects. For instance, Alibaygi et al (2013) examined how the job prospects of

agriculture students in Iran were influenced by individual skills and level of commitment to their university, along with social class as measured by their father's occupation. Using path analysis methods, the authors found that students from lower classes had a lower commitment to the university and lower levels of perceived employability (Alibaygi et al., 2013). Similarly, Chen (2017) included social network data in an analysis of the influence of students' networks scale and heterogeneity on employability (i.e., professional self-identity, teamwork skills, etc.), finding that networks had a positive impact on these individual-level attributes.

Another approach to studying multi-level forces implicated in employability is that of Clark and Zukas (2013), who drew upon Bourdieu's relational framework to examine how individual-level actions of business students are shaped and constrained by their position in society and macro-level factors such as their social networks. Similarly, the analysis of Gracia (2009) focused on the meso-level of the workplace as a "complex arena of embodied knowledge" where individuals navigate unique social and structural elements of a firm, thus capturing the dynamic and synergistic relationship between and among levels of analysis.

Nature of factors influencing graduate employability. Next, we turn to perhaps the feature of employability studies that has received the most attention – the nature of the factors or attributes that may influence or predict a graduates' job prospects and outcomes. Here we report how scholars measured key predictors or influences of employability: individual-level KSAs, psychosocial attributes, capital(s), and miscellaneous attributes, and also multi-level approaches that include both student and contextual factors.

Individual -level KSAs. As one of the most dominant lines of inquiry in the field, the focus on individual-level KSAs as a key influence of employability was not surprising (31 papers). A key finding, however, is that the different research questions addressed in these studies are quite diverse and thus the category should not be viewed as a homogenous group of papers studying the same phenomenon.

For example, one group of papers focused on documenting the matches or mismatches in the perceptions of KSAs between different stakeholder groups (e.g. students, graduates, faculty, employers). In a study of employer perceptions of the employability skills (e.g., work in a team environment, written communication) of a cohort of student interns, Jackling and Natoli (2015) found that 12 internship providers in the field of accounting considered teamwork to be the most highly developed skill for their former interns. These employers also reported that many interns had failed to be "work ready," meaning that their knowledge of business culture, communication skills and an ability to deal with ill-designed problems was lacking (Jackson & Natoli, 2015). Similar studies elicited employer views of student KSAs in Nigeria (Adebakin et al., 2015) and South Africa (Brits, 2018) indicate the continuation of a long-standing focus on documenting employer satisfaction with graduates and a growing interest in the topic from scholars in African countries.

Another group of studies examined how students or graduates evaluate their own KSAs, with implications for their employability and/or assessments on the quality of their education. For instance, Hennemann and Liefner (2010) surveyed 257 graduates from a German geography program to identify mismatches in how their university education developed 26 categories of key workplace KSAs. Results indicate that respondents felt that communication, self-motivation, cooperation, and organizational skills were under-developed while lab techniques,

geomorphology, sampling techniques and methods of identification (e.g., rock, flora) were over-developed (Hennemann & Liefner, 2010). Similar studies found students were over-confident in areas such as professionalism and teamwork (Jackson, 2012), indicating specific KSAs that students may be lacking and/or over-estimating with respect to workplace needs.

Another type of inquiry focused on the impacts of individual attributes on different employment-related outcomes. For instance, Chien (2015) examined academic behaviors (e.g., study habits and classroom engagement) among 4,959 students in Taiwan, finding that they have a positive and direct effect on salary, and self-evaluations of students' college experiences and its relevance to their current jobs. Similar studies examined the relationship between KSAs (e.g., teamwork, career management) and graduate wages (e.g., Chiu & Chuang, 2016) and how written communication influenced the wages of graduates (Wilton, 2011).

It is important to note that in many of these studies there is a continued use of higher-order descriptors for categories or families of KSAs such as "soft skills," "generic skills" or "employability skills" that are not careful and precise constructs with standardized interpretations in the field. These categories are often comprised of distinct KSAs that are idiosyncratic to individual researchers and thus are make comparability across studies impossible, while also reinforcing the illusion of homogeneity across skills and the populations expressing them in practice (see Hora et al., 2018 and Urciuoli, 2008).

Individual-level psychosocial attributes. Another type of individual-level factor that scholars surmise impacts graduate employability is that of psychosocial attributes, or aspects of a person's psychological status or characteristics (8 papers). One of the most common examples of a psychosocial attribute in the literature is that of self-perceived employability. For instance, Rothwell et al. (2008), who argued that the construct was multi-faceted and consequently introduced the 16-item self-perceived employability scale (S-SPE) that included both internal (e.g., confidence in one's skills, status of field of study, engagement in academics) and external (e.g., view of labor market demand) dimensions. This validation study was followed up by scholars around the world, and the influence of the S-SPE was evident in our review with additional research occurring in Spain (Vargas et al., 2018) and Turkey (Karli, 2016).

Other approaches to studying self-perceived employability include the paper by Qenani et al. (2014), who focused on the factors that predict self-perceived employability, which included student perceptions of personal mobility, their university's reputational capital and the state of the external labor market, finding that these and other variables explained 12.17% of the variance in students' perceived employability. Similarly, Alvarez-Gonzalez (2017) elicited students' perceptions about how their geographical mobility and family circumstances may affect their employment prospects, and Clark and Zukas (2013) interviewed students regarding their perceptions of their own dispositions and career opportunities. Clearly, a focus on how students perceive their job prospects and the opportunity structures available to them is increasingly evident in research on employability, which we contend is a promising and productive development in the literature.

Individual-level capitals. Scholars are also beginning to study the effects of different types of "capitals" or resources that can be deployed in the service of finding and securing employment (7 papers).

We highlight the growing prominence of social capital as a key variable in employability research, which is consistent with the nearly ubiquitous inclusion of different forms of capital (e.g., human, social and cultural) in employability frameworks (e.g., Tomlinson, 2012). For instance, Nghia et al., (2019) interviewed students in Vietnam about the impact of particular academic programs on their social networks while Pham (2022) asked recent returnees (from abroad) about how they developed (and deployed) their social capital while seeking work in their home countries. In a paper drawing on NSSE items, Peng (2019) surveyed 811 Taiwanese students using measures of student-faculty dynamics as a way to examine how social capital (and international mindsets) impact employability, finding that both significantly impact students' abilities to and attitudes about work (as measures of employability) (see also Chen, 2017). Another study by Batistic and Tymon (2017) focused on networking behaviors and job search learning goal orientation of 376 surveys from a UK university business school, finding that networking behavior was positively and significantly related to increased internal and external perceived employability via enhanced access to resources and information (Batistic & Tymon, 2017).

While these studies do capture elements of an important construct (i.e., social capital), because they are not direct measures of social networks as is commonly used in the literature (e.g., with name generating network measures), we categorized these studies as focusing on individual-level attributes and not on meso- or macro-level phenomenon. It is also important to note that no scholars in our review measured social capital using methods commonly used in social network analysis and sociological studies of social capital such as name generators that capture inter-relationships between and among egos (i.e., the respondent) and alters (i.e., their contacts), and instead relied on far coarser measures (e.g., single questions asking students about whether they had extensive networks) (e.g., Gonzalez-Roma et al., 2018; Peng, 2019). A smaller number of studies explored other forms of capital including a study of employer and educator perceptions of cultural capital in China (Hora & Blackburn Cohen, 2018), and how different forms of capital (e.g., social, cultural, psychological, scholastic, etc.) impact employability (Donald et al., 2019). Finally, it is important to note that while some studies (e.g., Clark & Zukas, 2013) adopted theoretical frameworks that build on neo-capital theories, they often did not explicitly measure distinct forms of capital and instead captured student perceptions of their opportunities and dispositions.

Miscellaneous individual-level attributes. Our final sub-category includes other individual-level attributes other than KSAs, psychosocial attributes, or capital(s) (10 papers). Several studies measured individuals' perceptions of their environment, which highlights the distinction between subjective and objective accounts of labor market conditions. In their 2006 study, Moreau and Leathwood write that they were, "interested in whether the graduates felt that their occupation was a graduate-level position of the kind that they had expected to gain after graduation" (Moreau & Leathwood, 2006, p. 312). Additional papers in this category included a focus on perceived workload demands (Clements & Kamau, 2018), protean career orientation (Cortellazzo et al, 2020), and the relationships among students' self-esteem, biographical details, and employability (Potgieter, 2012).

Multi-dimensional variables. The final group of studies identified in our review with respect to the nature and location of factors influencing employability is that of multi-dimensional variables (4 papers). This result was initially surprising, given long-standing arguments that the field needed to move beyond a focus solely on individual-level KSAs and instead account for a

greater range of factors, particularly “demand-side” elements such as labor market conditions, and socio-economic trends beyond the control of individual students (Fugate et al., 2004; Rothwell et al., 2008; Thijssen et al., 2008). As previously noted, we only included studies in this category if the meso- or macro-level factors in a given study were included as a part of a definition of employability (and not solely as a control or outcome variable), and were measured using direct and objective methods (e.g., labor market data), instead of individual perceptions of these elements (e.g., student perceptions of labor market conditions).

In one study that exemplifies a multi-dimensional approach, Jackson (2014) investigated how institution-related factors (i.e., institutional status measured by institution type such as a research-intensive university), course quality (i.e., measured by the Course Experience Questionnaire), paid work experience and other individual-level factors, all of which are conceptualized as “determinants of job attainment,” were associated with graduates’ employment status. Using data from the national Australian Graduate Survey (AGS) from over 28,000 Australian college graduates in 2011 and 2012, Jackson (2014) found that the odds of graduates’ status of being employed in a full-time position (as opposed to part-time or unemployed) were increased by 38% based on institutional status, 19% by attendance status (with part-time enrollees more likely to obtain full-time employment), and 19% by course quality. While the course quality measure used in this study is based on student perceptions of instructional quality (as opposed to a non-student data source or a measure such as student learning outcomes), other measures such as institutional status can be considered an external influence on students’ employment prospects.

In this category we also included studies that did not simply use demographic variables as controls in statistical models, but explicitly selected macro-level variables such as place of birth or economic disruptions as predictors of student employability. For instance, Alibaygi and colleagues (2013) examined the relationship between students’ gender, father’s occupation, place of birth, and other variables with perceived employability among a sample of 253 agricultural students in Iran. A path analysis indicated that the factors most strongly associated with perceived employability were social class, commitment to their university, self-reported generic skills, and agricultural background (Alibaygi et al., 2013). Low and colleagues (2020) also analyzed two cross-sectional datasets from the Spanish Observatory of Young People’s Transition into the Labor Market (2012) in 2008 and 2011, which were selected to represent two distinct labor market conditions – one covering five years of a recession. Thus, the external force in this study was the broader economy itself, with the researchers finding that personal initiative predicted perceived employability in a “normal” economic condition, while career passivity increased it during the recessionary condition.

Role group. Next, we report the frequency and nature of researchers’ reliance on a particular role group (i.e., students and graduates, employers, educators, or multiple perspectives) that are the focus of their studies.

Current students. 29 (48.3%) of the studies focused on current students where data were directly collected on the relationship between their KSAs and employability - particularly transferable or “soft” skills - (Alibaygi et al., 2013), students’ self-perceived employability (Alvarez-Gonzalez et al., 2017), and other attributes of individual students. Another example in this category is the study by Clements and Kamau (2018), who elicited data from 432 undergraduates from UK universities and found that higher commitment to career goals was

positively associated with proactive career behaviors (e.g., career planning), and that strong mastery approach (e.g., motivation to seek new opportunities) was associated with high perceived employability. This particular study is notable in its testing of established theory - goal-setting theory and job demands and resources from management studies - to the context of student employability, and in its conceptual and empirical rigor.

Recent graduates. When recent graduates were studied in 15 (25.0%) of the papers, questions tended to be retrospective regarding the quality or sufficiency of their college education with respect to their employment prospects. For example, Wilton (2011) analyzed business and management alumni data from the Class of 1999 survey in the UK to assess how well these graduates felt their degree program had cultivated particular skills such as written communication (63% reported substantial impacts) and advanced software skills (47% reported no impacts). Wilton (2011) also explored the relationships among these skills assessments, graduate demographics, and current job status, finding that ethnic minorities reported higher skill development than white students, but lower current job quality and job appropriateness to their education.

Educators. No studies focused solely on educators, indicating that for this time period few scholars considered the experiences or perspectives of faculty and instructors alone to be important. That said, many studies included educators' perspectives in combination with other groups.

Employers. Six studies (10.0%) elicited information from employers, primarily regarding the sufficiency of recent graduates' skills to adequately perform in their current positions. One example from this group is a study by Adebakin and colleagues (2015), where employers from Lagos, Nigeria were surveyed regarding their views on the skills most required in four sectors (e.g., education, manufacturing, banking, telecommunications) and whether they felt Nigerian university graduates had these skills. The results indicated a high valuation of most skills in their survey, with teamwork and computer skills being most highly rated across industry groups, but with employers not considering graduates to be "excellent" in any of the eight listed skills. The authors thus conclude that little sectoral differences exist in either the key skills required for success in the workplace or in their disappointment at Nigerian graduates' possession of these skills.

Multiple perspectives. Finally, 10 (16.7%) studies captured combinations of role groups in their research designs. For instance, in a study that elicited recent graduates' and human resource managers' inn Greece about their views on the importance of "soft" skills in determining candidate competitiveness and new employee expertise, Matsouka and Mihail (2016) identified gaps in views of graduate competencies, with the largest deviations relating to emotional intelligence, professionalism, and leadership skills. Rosenberg et al. (2012) examined eight dimensions of "basic employability skills" needed for job performance in a study at a business school in southern California. Surveys were distributed to three groups – recent graduates, faculty, and human resource managers – regarding which skills are needed for job performance, which skills are received by college graduates in college, and additional training needed, with considerable differences in opinion among the three groups.

Outcome measures. Next, we report how researchers measured employability-related outcomes in their studies, which included 21 distinct variables. Here, we elaborate on just three

sub-categories of outcome measures in the interest of space limitations - self-perceived employability, labor market outcomes, and miscellaneous variables.

Self-perceived employability. Nineteen (31.6%) papers used self-perceived employability as their key outcome measure. For instance, Vargas and colleagues (2018) focused on the relationship between this variable and gender and family income level, finding that both male students from families with higher income levels see themselves as more employable than women and those from families with lower income. Batistic and Tymon (2017) studied the relationship between networking and employability, finding that networking is related to both internal (i.e., views about the self) and external (i.e., views about the external world) self-perceived employability by boosting access to information and resources.

Another study in this category by Alibaygi and colleagues (2013) evaluated factors influencing perceived employability of senior agriculture students using a descriptive-correlation survey methodology. Path analyses revealed that social class, university obligations, mastery in generic competencies, and agricultural background/experience were the most important factors affecting students' employability. Interestingly, students who had worked on farms were more familiar with competencies required in the workplace and had subsequently tried more diligently to acquire them (Alibaygi et al, 2013).

Labor market outcomes. Eight (13.3%) studies in our review focused on labor market-related variables as their primary measure of employability outcomes. Mason and colleagues (2009) investigated the impact of varying departmental "employability skills" initiatives on measures of graduates' labor market performance using First Destination Survey data. Meanwhile, de Guzman and de Castro (2008) traced the career trajectories of working professionals backward to identify which factors determine employability when looking at graduates who reached middle management positions. Another example in this category is that of Chiu & Chuang (2016), who examined the connection between 12 self-assessed employability skills and wage compensation, finding skills such as creativity and resilience do indeed play a role in the labor market.

Miscellaneous individual-level variables. While the final category that we highlight here is that of miscellaneous individual-level outcomes, other types of outcome measures used by scholars in the field include KSAs and multi-dimensional or multi-level approaches. But here we feature micro-level outcomes given the diversity of measures evident in the literature, which includes graduate identity (Hinchliffe & Jolly, 2011), the valuation of KSAs as forms of cultural capital (Hora & Blackburn Cohen, 2018), and hiring criteria (Jackson, 2014). These studies indicate a shift in the field from a previous reliance or focus on job status as the primary outcome of interest, to a more nuanced and multi-faceted conception of the types of graduate outcomes that can be impacted by various forces, programs, or influences.

Type of practitioner recommendations. Finally, we report the types of recommendations that employability researchers suggest for educational practitioners. These tips and strategies for practical reform reflect how scholars view the translation of their theoretical positions and empirical evidence into the field of practice or social action. The three sub-categories for these recommendations are skills-focused instruction, work-based learning, and systemic reforms.

Skills-focused instruction. Researchers recommended two types of pedagogical approaches related to students' skill enhancement. The first category encompasses reforms aimed at developing generic or "soft" skills. The second category focuses on discipline-specific skills development. In total, fifty-seven studies (95%) suggested recommendations on developing or improving curriculum and pedagogical practices for enhancing students' skills. Among those, the most common recommendations centered around embedding more employability-enhancing components in the college curriculum, such as increasing pedagogical practices to enhance students' "soft" skills (e.g., Rosenberg et al., 2012) and career self-management skills (e.g., Jackson & Wilton, 2017b), with forty seven studies (71.6%) providing related recommendations. Fourteen studies (23.3%) called for reforms that embed discipline or industry specific skills within curriculum and practices (e.g., Bennett et al., 2020b).

Work-based learning. Another common recommendation relates to work-based learning (WBL), which ranged from generic calls for integrating more WBL opportunities to more nuanced arguments on providing support systems for effective and equitable WBL practices.

Twenty-five studies (42%) specifically mentioned curriculum and instruction strategies related to work-based learning, such as internships. Nineteen studies focused on increasing exposure to participate in work-based learning, with multiple works even calling for mandatory internship as a part of college curriculum (e.g., MacDougall & Sexton, 2014; Pitan & Muller, 2019). Six other studies addressed the need for structural reform in work-based learning. For example, Alvarez-Gonzelez and colleagues (2017) addressed the responsibility of the public administration in providing adequate supply in the internship labor market so that students can find an opportunity that aligns with their career goals while geographically reachable.

Systemic reforms. The final group of recommendations encompasses systemic reforms addressing the interconnectedness of employability with broader and institutional structures. Sixteen studies (27%) called for structural and systemic change in policies and practices surrounding student employability, pointing out that employability is not solely dependent on students' knowledge and skills. For instance, Wilton (2011) points out that educational practices that leads to an increased supply of work-ready college graduates can be successful only when there is a reciprocal increase in high-quality job opportunities in the labor market.

Twelve studies (20%) stressed the importance of fostering partnerships across stakeholders. The most commonly mentioned partnership was higher education-employer partnerships. For example, Donald and colleagues (2019) stressed the need for collaboration between faculty, college career service providers, and graduate recruiters, in developing work–integrated learning opportunities that address the labor market demands. However, studies including Matsouka and Mihail (2016) take a reserved position on university-employer partnership, claiming that changing educational practices constantly to meet the labor market demands is neither possible nor desirable.

Discussion

In this paper we reported the results from a critical analysis of the ways that the influential concept of employability is being conceptualized in the research literature, particularly in how it is operationalized in empirical studies and practitioner recommendations. While key limitations with our paper should be kept in mind, including the limited time frame of our review (2005 to mid-2020) that excluded more recently published studies, our study expands and enhances prior reviews of the employability literature (e.g., Artess et al., 2017; Williams et al., 2016) by contributing new insights into recent key findings, continuing issues, and future directions.

In this final section we provide a brief overview of the status and deployment of the employability concept in current higher education research and recommendations for educational practice, persistent gaps and challenges in the literature, promising developments, and recommendations for future theory development, research, and practitioner guidance. We situate these remarks within broader concerns not just of graduates' job prospects – a foci that has arguably overshadowed other, equally vital purposes of higher education – but also goals such as knowledge production, intellectual growth, and public service that have traditionally been at the center of conversations around the value and role of higher education in society. Our conclusions are also attentive to our current historic moment that is shaped by a myriad of forces but especially structural inequality, technological change, and social and ecological disruptions (e.g., climate emergency, Covid-19 pandemic). With these broader issues and concerns in mind, we conclude the paper with suggestions for theory development around the employability concept, and new directions for empirical research and educational practice in the coming years.

Status of the Concept: A New Categorization Scheme and Persistence of Individualistic Narrative

One of the primary contributions of our paper is elaborating on the conceptual underpinnings of the employability concept beyond historical stages (e.g., Gazier, 2001), a tripartite categorization of possession, positional, processual (Holmes, 2013), or as occurring on multiple levels (Thijssen, 2000). Instead, we found conceptualizations of employability to be more complex than these accounts, with three distinct ontological assumptions regarding the nature of employability itself (i.e., probabilistic, relational, critical), and six epistemological positions regarding its measurement (i.e., temporal frame, unit of analysis, key influences or predictors, type of measurement, outcome metrics, practical implications). These nine categories provide future scholars with a more nuanced and fine-grained framework for understanding and critiquing the literature, and for studying employment-related phenomena.

Our review further confirmed prior assertions (e.g., Tomlinson, 2017) that researchers most often embrace influences of individual KSAs as the primary determinant of employability (n=31, 51.6% of the papers in our review), indicating that the "skills as possession" narrative remains pervasive (Holmes, 2013). However, our analysis further revealed additional features of the literature that are dominant, particularly the underlying ontological position that employability is a phenomenon that can (and should) be understood as a probabilistic matter, with one or more variables predicting a graduate's employment-related outcomes (n=50, 83.3%). The literature can also be characterized as predominantly focusing on the temporal frame of a student's time

during college (n=29, 48.3%), the micro-level units of analysis (i.e., individual students or graduates) (n=46, 76.6%), the role group of students (n=29, 48.3%), outcome metrics of perceived employability (n=19, 31.6%), and recommendations focused on generic skills instruction (n=43, 71.6%). It will be important and interesting to track these indicators over the coming decades to assess if and how the literature is evolving, particularly in response to critiques of the employability concept.

And monitoring the progress of how scholars conceptualize and operationalize the employability concept will be critical, given that our review documents considerable limitations with the literature on these points. Unfortunately, our analysis confirms Holmes' (2023) assertion that despite decades of critiques about the theoretical and methodological underpinnings of the concept, few scholars respond to or acknowledge these issues – several of which were outlined in the beginning of this paper. We contend that the most critical challenges with the literature are largely grounded in the continued (and uncritical) embrace of human capital theory and its attendant assumptions about the forces that shape students' opportunities and outcomes, misconceptions about the nature of "skill," and limited attention to issues of power and inequality, student and worker interests – all of which contribute to overly vague and ultimately ineffective guidance for educational practitioners.

Continued Problematic Dominance of the Human Capital Paradigm on Theory, Method, & Practice

An important background note to the following observations is the continued problem with employability being treated as a nebulous, ill-defined buzzword, as operationally precise definitions are uncommon and consensus across scholars non-existent. However, in our view perhaps the biggest limitation facing the field of employability studies is the often implicit embrace of human capital theory and its manifold assumptions regarding causality, methodology, the nature of human skill and employment opportunities, and the purpose of higher education itself. Many critiques of human capital exist in the social sciences (e.g., Bowles & Gintis, 1975; England et al., 1988; Marginson, 2019; Tan, 2014), and we suggest that employability researchers need to pay closer attention to ways that the theory may be shaping how they design research projects, interpret data, and frame the notion of employability itself (Holmes, 2023). This influence was evident in our analysis through the predominant use of a probabilistic conception of the employability phenomenon (83.3% of papers in our review), individuals as the primary unit of analysis (76.6%), and a focus on individual KSAs (51.6%). While such elements of research could of course be grounded in theoretical positions other than that of human capital, it is in their combined usage along with the ways that scholars frame and discuss the "problem" of employability and its subsequent solutions that constitute the basis of our conclusions.

The continued influence of human capital theory was at first surprising given that the general notion of human capital has long been critiqued in the employability literature (Brown et al., 2003; Holmes, 2013). However, upon closer investigation it became apparent that in-depth analyses of human capital theory itself are uncommon, where investigations tend to be of a more generalized "skills agenda" or of late capitalism (exceptions include Kalfa & Taksa, 2015 in the employability literature, and Marginson, 2019 in the general higher education literature). But critiques of the skills agenda or capitalism alone are insufficient because researchers continue to perpetuate the specific logic of human capital and its underlying framing of the nature of

personhood that reflect a very particular - and in our view, flawed - view of graduates' employment prospects and the role that higher education can play in fostering them.

In fact, many of the critiques of the employability literature noted earlier in this paper and that remain evident in the literature – such as over-estimating the role of the individual in determining socio-economic outcomes or in misunderstanding the nature of human "skill" – have their roots in the human capital paradigm. Given that an in-depth analysis of human capital and its limitations is beyond the purview of this paper, here we offer a summary of the main critiques of the theory by Tan (2014):

To recapitulate in a nutshell, the neoclassical economic model in general and HCT in particular are criticized due to its definition of human being (utility-driven animal); the description of human being (self-interested and rational homo economicus); its prescriptive nature (governable and stimuli-response puppets who alter their behavior in response to the modification in environmental variables); and lastly due to the terminological shift that it has brought (the labor itself is a form of a capitalist enterprise). (Tan, 2014, p. 436).

Based on our analysis, we contend that these same critiques of human capital can also be applied to most of the employability literature published between 2005 and 2020, with several long-standing critiques (e.g., primacy of individualistic explanations, overlooking "demand-side" forces, skills treated in an overly generic manner) remaining unaddressed and unexplored. Perhaps most problematic, however, given our interests in how research is translated and then applied to the field of educational practice, is how the literature continues to proffer overly vague recommendations regarding generic skills instruction and advocacy for WBL programs such as internships that are not grounded in sound theory or empirical data. As a result, we conclude that in general the employability literature fails in being truly and appropriately phronetic or suggesting practical knowledge-based actions to address real-world educational and social problems (Holmes, 2023).

Given the continued lack of attention paid to these issues and the pervasive influence of the framing assumptions of human capital in the literature, we agree with Holmes' contention that, "the pressing issue for the field of graduate employability research is that of theory development" (2023, p. 365), as current approaches are wholly inadequate for the sound examination of what we see as the central problem of identifying the various forces that shape and thwart college students prospects in the contemporary labor market.

A Way Forward: Towards a New Conception & Study of Graduate "Employment Prospects"

In this final section of our paper, we outline a way forward for theory, method, practice, and the broader question of how to best "frame" the problem or phenomenon of employability. In doing so, we do not offer yet another framework for how to measure employability, which we suggest neither the literature nor educational practitioners really need, nor do we engage in additional "mourning" about the neoliberal, marketized turn that shape most of the contemporary discourse about higher education. Instead, in response to Holmes's (2023) contention that the key issue

facing the field is theory development, and Clarke's (2018) argument that scholars put their energies towards redefining, "graduate employability and the dimensions that underpin this concept" (p.12), we offer the field a new way to think about the overall phenomenon of how and why people get jobs in the modern labor market.

A critical element of this new paradigm is to reject and cease using the term "employability" given its continued use as an ill-defined buzzword or untechnical term, little prospect that scholars in the field will arrive at consensus regarding its meaning and measurement, and especially the lack of attention to the considerable "theoretical luggage" that informs the idea (Holmes, 2023). This call for rejecting the term is not dissimilar to the argument that the inventors of the term "soft skills" made back in 1972, as these U.S. Army researchers recognized that the notion had no validity and would only perpetuate misunderstandings about the nature of human skill and task performance (U.S. Army Continental Command staff, 1972). Of course, their desire to retire the concept of soft skills massively failed, and we recognize the likely futility of the term employability being erased from both academic and popular discourses.

Regardless, we argue that scholars and those engaged in employability-related endeavors retire the term and instead use the phrase "employment prospects" when referring to the general idea, with the following definition: an individual's ongoing prospects and opportunities for securing sound employment in the contemporary economy. This phrase and definition should signal to listeners that the primary phenomena being discussed pertains to a person's prospects, potentialities, or opportunities, and not to some innate, fixed, and immutable aspect of self. In using the term "opportunities," authors would also highlight that a person's job prospects are dependent on a combination of "supply" and "demand" factors, with some elements completely outside the control of the individual student.

This is especially important in our current historical moment, as forces such as the Covid-19 pandemic, worsening inequality, the climate emergency, and the as-yet-unknown impact of artificial intelligence on society and work collectively represent an especially unpredictable and potentially troubling socio-economic milieu in which students will be grappling with throughout the rest of the 21st century. We conclude our paper with seven questions for future scholars as they think about how to best study and then support college students' future employment prospects.

Seven methodological questions to consider when designing studies of graduate employment prospects. Given the ongoing methodological limitations plaguing the employability literature, we encourage researchers to question their underlying commitments to certain core issues prior to designing their studies. The following seven questions can guide scholars in thinking through these issues as they develop rigorous and actionable research projects that both build upon prior research while also acknowledging and addressing the considerable critiques of the employability literature.

1. Is a third-person probabilistic notion of causality the only way to study your problem?
We contend that re-thinking one's views on causality is a critical first step in improving the quality and rigor of research in this area. Issues related to causal inference have received considerable attention in the social sciences in recent years (e.g., Hedström & Ylikoski, 2010), and here we highlight two general categories of causality that should be considered. The sociologist John Levi Martin (2011) compares first-person accounts of causality that rely on

individuals' accounts of their own experiences and causality (e.g., I got my job via an uncle's referral) versus third-person accounts based on analyses of "objectively" measured variables (e.g., male students with high perceived employability get more jobs), concluding that social scientists have over-estimated (and fetishized) the explanatory power of third-person accounts. (It is important to note that Martin's (2011) analysis does not neatly align with the oft-critiqued qualitative-quantitative dichotomy, as scholars in either tradition can adopt a first- or a third-person view of causal inference). Alternative perspectives that prioritize first-person accounts can be found in the employability literature (e.g., Clark & Zukas, 2013; Gracia, 2009) and broader theoretical work on career development (e.g., Ball et al., 2020; Hodkinson & Sparkes, 1997). We argue that these alternatives should be strongly considered in light of the aforementioned critiques of human capital theory and probabilistic accounts of employability – both of which embody third-person views of causality.

2. What are the best alternatives to human capital theory for your investigation? Next, we encourage researchers to consider alternatives to the default (and dominant) theoretical perspectives of human capital, and instead explore other ways to conceptualize the problem of graduates' employment prospects. At the heart of this consideration is the basic fact that job prospects are shaped by the dynamic interaction among both "supply" and "demand" forces as they unfold over time, or as Burke et al. (2017) state: "Graduate employment experiences and trajectories (are best understood) in the context of the directive nature of agency and the regulatory effects of structure" (p. 88). Given this assertion, the question becomes which theory best allows for an exploration of such phenomena?

A variety of options abound for scholars including Bourdieu's version of field theory (Bourdieu, 1977; Burke et al., 2017; Martin, 2003), Ball and colleagues' adaptation of careership theory (Ball et al., 2020; Hodkinson & Sparkes, 1997), intersectionality (Hora et al., 2022; Núñez, 2014), social cognitive career theory (Bennett et al., 2020), or bioecological models of human development (Bronfenbenner & Morris, 2006; Llinares-Insa et al., 2016) to name but a few. While studies that focus on person-centered constructs like metacognition or student experiences such as internships can productively explore how these variables function within complex, multi-dimensional socio-economic spaces (e.g., Bennett et al., 2020; Jackson & Wilton, 2017b), such investigations that may not draw on theoretical traditions that are explicitly relational in nature would need to be carefully framed and operationalized to avoid the reductionist tendencies of human capital theory.

3. What are some ways to empirically capture the multi-dimensional complexity shaping employment prospects? Once the more conceptual issues of positions on causality and theory are settled, it is time to consider how to empirically capture the multi-dimensional forces that shape graduate employment prospects. This problem is rather complicated and involves designing a study that accounts for various types (e.g., types of capital, student identities, labor market conditions) and levels (e.g., individual, organizational, societal) of factors that influence student prospects, and how they may interact with one another. Since no single model or study can feasibly capture all these elements, the researcher should focus on a more de-limited number of variables or forces to study while also accounting for the multi-dimensional nature of the phenomenon under investigation.

Then, data collection and analytic techniques should be employed that are amenable to relational analysis such as social network analysis, grounded theory, latent class analysis,

inductive thematic coding, mind-mapping, and so on. In cases where a more linear model is selected or required, instead of merely controlling for multi-level or multi-dimensional variables, ideally these factors could be included in analyses that account for multi-variate dynamics using methods such as hierarchical linear or structural equation modeling. Examples in our review of the literature that reflect a more dynamic and nuanced perspective include Batistic and Tymon (2017), Alvarez-Gonzalez et al. (2017), Donald et al. (2019) Karli (2016), and Jackson (2014), which provide hope that the era of "interactive employability" that Gazier (2001) observed is finally in the ascendancy.

4. Is there a way to incorporate time or processes of career development in your study? The next thing to consider is whether time or processual elements of career development or trajectories can be incorporated into a study. This is a basic question facing scholars conducting longitudinal qualitative studies (e.g., oral histories over time), panel-based studies, or analyses of large datasets from different historical periods – whether to analyze data as cross-sectional or longitudinal phenomenon. While cross-sectional or "snapshot-in-time" analyses will always have a role to play in contributing insights on student employment prospects, we agree with Holmes' (2013; 2017) contention that the processes whereby students develop professional identities and experience the labor market over time remain understudied.

A variety of theoretical frameworks are available for scholars interested in such process-oriented studies, especially from counseling and vocational psychology (e.g., career adaptability, chaos theory of career development, social cognitive career theory), which are fields rarely cited in much of the employability literature. Additionally, processual studies of career development and pathways necessarily must extend beyond studies of college students to include working adults, which is terrain that the work of Forrier et al. (2015) or Thijssen et al. (2008) fruitfully explores and can be built upon in the future.

5. Are you adequately foregrounding student-worker voices and interests? It is rare to find in the employability literature an explicit focus on or attention to the interests, voices, and rights of students and/or workers, with the interests of national economies, employers, or the higher education sector often taking precedence. While some may argue that a focus on job acquisition itself reflects a commitment to students given their need to find gainful employment at some point in their lives, we found in our review that such studies are still framed or justified in terms of a ROI mentality, employer needs, or the competitiveness of specific nation states. Instead, what we advocate for here is explicit attention to worker rights in an era of burnout, labor exploitation, and structural inequality, as well as a commitment to articulating what anthropologists call the "emic" or insider perspectives and voices of students themselves as opposed to employers, educators, or politicians. Examples of such commitments can be found in the work of Bovill et al. (2011) in studies of student engagement in designing postsecondary curriculum and instruction, Ball et al.'s (2020) research on how students navigate the difficult socio-economic landscape of South London, and our own work on students accounts of problematic aspects of WBL programs such as college internships (Hora et al., 2021; 2023).

6. Is your study being designed in ways that can help inform or support campus practitioners? As advocates of translational research where empirical studies are used to impact real-world (and not solely theoretical or political) concerns and practices, we urge scholars to ensure that their studies are designed to generate feasible, high-quality findings that can directly inform or support campus practitioners. A key first step towards this goal is to

ensure that how a study is framed and subsequent findings disseminated does not reify the overly simplistic, uni-variate narrative that has been dominant in employability research (e.g., "soft" skills will singularly impact job acquisition), which can and does influence educational practices via adoption of scholars' recommendations (Cranmer, 2006) or through "employability audits" (e.g., Mohee, 2019). Instead, studies should acknowledge the complex array of forces shaping a students' employment prospects, particularly when sharing data with campus leadership, emphasizing that no "magic bullet" solution exists to the multi-dimensional problem at hand.

Then, to make research results useable for those directly engaged in student-facing activities (e.g., advising, teaching, mentoring), we recommend adopting a community engaged scholarship (CES) approach where a principal aim of scholars is, "building bridges between theory and practice, and communicating one's knowledge effectively" (Boyer, 1990, p. 16). While CES is often undertaken with off-campus constituents or partners in mind (e.g., local non-profit organizations), the main idea is the same if the "community" is faculty or career services professionals – to collaboratively develop and/or apply knowledge to pressing real-world issues (Da Cruz, 2018).

We also highlight two topics that need attention with respect to the recommendations that researchers give to practitioners – skills-based instruction and WBL programs such as internships. Our analysis revealed that too often skills are conceptualized in generic, de-contextualized terms with correspondingly vague directives for practitioners to teach students "key employability skills." While much of this over-simplification can be attributed to labor economists' reductionist views on the nature of human skill and how to measure it (e.g., social skills measured by high school club participation – Deming, 2017), the amplification of lists that pronounce the "top skills employers want" are also to blame.

With research demonstrating that skills considered "soft" like oral communication are in fact key elements of how people enact discipline-specific knowledge in the performance of specific tasks (e.g., managing a technical meeting in an engineering firm) (Darling & Dannels, 2003), it is more productive to recommend that faculty teach content knowledge using active learning methods that require the practice of discipline-specific forms of communication, critical thinking, teamwork, and so on (see Hora et al., 2021). Such guidance to improve faculty teaching, of course, also requires that institutions commit sufficient resources to training and professional development for future and current faculty, given that many have received little training in how to teach, much less how to embed transferable skills into their courses (Hora et al., 2021a). In addition, when employability researchers recommend that colleges and universities offer (and advocate for) more internships to be offered and pursued, they too often leave out documented problems with sufficient numbers of internship placements and access to these frequently unpaid positions (e.g., Hora et al., 2021b). In other words, scholars should ground their recommendations in current research on these educational practices that account for and address problems with how they have been implemented in the past.

7. Can you frame your study in ways that does not solely position higher education as a financial return on investment? Finally, we suggest that it is worth questioning what has become the default assumption or framing regarding why someone should attend college that underlays much of the scholarship on employability – to maximize a student's financial ROI. Such a utilitarian view of higher education of course marginalizes other benefits of a

postsecondary education such as cultivating qualities that facilitate human freedom and wisdom (Cronon, 1998; Urciuoli, 2008), socio-economic and political emancipation of marginalized peoples (Du Bois, 1968), or preparing young people to be informed and engaged citizens in a participatory democracy (Roth, 2014) to name but a few of the non-pecuniary benefits or outcomes of a college degree. However, when the over-arching rationale for our studies of graduate employability and/or career development are framed solely in vocational or financial terms, we necessarily diminish these other equally important benefits.

Even if graduates' employment prospects are the primary focus of our research programs – a foci that should continue given the need for student's economic mobility and career aspirations - we argue that the field needs to broaden how we describe the role and purpose of higher education in society. As the discourse surrounding higher education becomes increasingly dominated by concerns about students' ROI, state funding (or lack thereof) of higher education, and institutional finances, it drowns out any voices advocating for the value and importance of learning itself, and what some argue is at the core of a person's ability to not only learn but also to secure a well-paying job – human flourishing (see VanderWeele, 2017). When did the central concern of higher education cease to be about the development, growth, and flourishing of a person's character, intellect, and ethical grounding and the impact of these attributes for the public good?

Unfortunately, the notion of graduate employability and its continued prominence in the global discourse of higher education has contributed to the narrowing conception of the role and meaning of higher education in society, and even of personhood itself (Urciuoli, 2008). In an era where global pandemics, unpredictable technological innovations, rising inequality, and a climate emergency which threatens to massively disrupt not only our planetary ecology but also how we go about our daily lives, such a myopic focus is in our view indefensible, and it is within our power as a scholarly community to work to re-frame the contours of the debate about the purpose and meaning of education itself.

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