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PRODUCTIVE-DISRUPTIVE:

Spaces of exploration in-between architectural pedagogy and practice

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Spaces of exploration in-between architectural pedagogy and practice

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The Welsh School of Architecture, Cardiff University, UK
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Making Employability Skill Assessment Explicit: Isn't it time?

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Abstract

With architectural education facing a growing list of crises, one issue that has received less attention, but arguably lies at the foundation of many of these challenges, is around assessment of employability skills. Also referred to as 'soft' skills, 'generic' skills or more recently 'power' skills, these include critical thinking, problem solving, interpersonal skills, a capacity for logical and independent thought, communication and information management skills, intellectual curiosity and rigor, creativity, ethical awareness and practice, integrity and tolerance (Bath et al., 2004). By definition, these skills are essential for individuals to effectively engage in professional practice, as well as successfully transitioning to other career paths in the future. Furthermore, the architecture profession's aim of confronting systemic ecological, social and racial injustice very much depends on these skillsets, not just design prowess. Adding to this argument, the American Institute of Architects (AIA) and the American Collegiate Schools of Architecture (ACSA) recently published an 'Equity in Architectural Education' guide, which articulates what they see as the ongoing challenge jointly facing architecture programs and the industry: in order to become a truly diverse profession and meet the needs of the publics we serve, we must find ways of becoming more welcoming, more inclusive, more equitable and more supportive in our teaching practices. Key to these aims is to critically reflect on how and what we assess, insofar as it signals to students the skills and knowledge valued by the profession. In short, addressing the longstanding 'hidden curriculum' within our discipline's cultural practices is essential to addressing diversity, equity and inclusion. It is here where the uncodified values embedded in the way we approach employability skills, and our reluctance to assess them, rears its ugly head. Believing that employability skills can be promoted through an 'assessment by proxy' approach is problematic. What about employability skills, or our understanding of how best to promote them, makes their assessment feel so unappealing, unreasonable or unnecessary? It is certainly a challenge, but by refusing to engage in it, are we allowing privileged students with pre-existing social capital to achieve these tacit markers of success while leaving the rest of our cohorts to struggle unnecessarily?

Extending from a recent case study by the author (Thompson & Soccio, 2022), this paper proposes that, as a general rule, architecture schools do not assess employability skills—at least not in any systematic way. The paper then reviews recent developments in disciplines like engineering, accounting and nursing to glean lessons learnt in these contexts. In exploring the topic of employability skill assessment, a direct line is drawn between an issue that might appear mundane to the greatest challenges facing the architectural community.

KEYWORDS assessment, employability skills, soft skills, architecture, diversity

Introduction: A Reckoning in Architectural Education?

It seems as though architectural education faces a growing list of challenges these days. With architectural practice embroiled in systemic processes of ecological, social and racial injustice, the widespread perception is that cultural changes in the profession depend on curricular, pedagogical and cultural changes within architecture schools. One issue that has received less attention, but arguably lies at the foundation of many of these challenges, is around assessment of 'soft' skills or 'employability' skills. The AIA/ACSA's Equity in Architectural Education guide published in late 2022 makes this very case:

> In design education, formal rendering, geometric composition, and technical skills have traditionally been prized as visible signs of talent, while soft skills, such as collaboration, process skills, financial acumen, and emotional intelligence, are valued less. Even if they are valued, their subjective evaluation can allow implicit biases to affect assessments (p. 8).

The guide goes on to argue that these cultural features are like 'secret handshakes' and promote a division between 'ingroup' versus 'outgroup' members of the community, thus sustaining the lack of diversity, equity, and inclusion (DEI) across architecture schools and the profession (ibid., p. 9). Alongside other longstanding practices that reflect architecture's 'hidden curriculum', the broader concern is that 'certain students are better set up to succeed than others because of cultural norms that underpin curricular requirements' (ibid., p. 18). The key point is that, 'Students who already feel marginalized, underprepared, unwelcome, or that they don't belong are especially vulnerable' (ibid., p. 4). This claim is further supported by the startling findings of the recent report on the Bartlett School of Architecture, which revealed how architecture schools and industry collectively and systemically contribute to a culture of 'favouritism,' 'unhealthy habits' and 'psychological games' (see Howlett Brown, 2022).

This paper proposes that, as a general rule, architecture schools do not engage in the assessment of employability skills—that is, generic skills and graduate attributes, the most cited of which are: critical thinking, problem solving, interpersonal skills, a capacity for logical and independent thought, communication and information management skills, intellectual curiosity and rigor, creativity, ethical awareness and practice, integrity and tolerance (Bath et al., 2004). In actuality, employability skills may be valued as much as technical skills. Even so, the issue then becomes that our values are not reflected in our assessment or accreditation regimes. In a 2019 study by the Architects Accreditation Council of Australia (Maroya et al., 2019), the research team found agreement between academics and the profession in relation to the importance of generic skills. However, they noted that "While there is general agreement on the importance of these skills, how they are taught is a more difficult question and one that has vexed academia and the profession for many years" (p. 50). The misalignment between the value placed on employability skills by employers and educators (as proxies for employers) versus the degree to which employability skills are effectively demonstrated to students through assessment design contributes to the 'inscrutability of architecture culture' and ostensibly helps 'maintain the mystique' (AIA/ACSA, 2022, p. 7).

This paper follows from a previous publication by the author that reports on a study of academic perceptions of employability skills in architecture within a Master of Architecture program in Australia (Thompson & Soccio, 2022). Though emerging from an Australia-based perspective, the assumption is that both papers will strike a chord with those in other contexts with similar cultures of teaching practices and expectations around professional competency. Indeed, reference is made throughout this paper to sources from Australia, the United States and the United Kingdom, suggesting the concerns and challenges are far from localised.

Inspired by recent interdisciplinary scholarship, the paper also accepts the following statement: For architecture schools to meet reasonable minimum standards of diversity and inclusion, let alone operate in an equitable manner, the explicit assessment of employability skills is essential. Although assessment is not the sole area of concern, it

represents a lynchpin around which wider redesign of curricular benchmarking can then be considered. Acknowledging that this will not happen overnight, the paper is meant as an invitation to architecture to join what is an interdisciplinary project. It draws together arguments for *why* architectural education should transform its practices and *how* it might do so, whilst identifying the very real obstacles standing in the way. Though 'best practice' may not yet exist to guide such efforts, there are certainly lessons to be learnt from other disciplines' attempts that can inform groundwork and innovative practices.

The Perceived Value of Employability Skills in Architecture

In a study conducted in late 2021, the author interviewed eight members of a postgraduate learning and teaching community at an Australian school of architecture—including full-time educators, part-time teachers working in industry, and students employed in practice (Thompson & Soccio, 2022). Full details of the methodology can be found in the previously published paper. The study aimed to elicit perspectives on what employability skills were perceived as most valued by the architecture profession, and the degree to which the COVID-19 pandemic had impacted these perceived values. The one-on-one interviews followed a kind of Socratic dialogue, ultimately raising questions around the alignment of perceived professional values and pedagogical approaches—specifically, the degree to which employability skills were embedded into assessment regimes. There was consensus amongst ~~Across~~ participants~~, the consensus was~~ that competencies commonly understood as employability skills—including leadership, communication, teamwork, time management, motivation, adaptability, etc.—were essential for M.Arch graduates. When pressed to explain how ~~such~~ these skills were being encouraged such that students could appreciate their importance, the responses indicated that such skills were either a) an implicit feature of the curriculum (e.g., group projects implicitly signify the importance of teamwork skills, and help to promote them) or b) explicitly encouraged by teaching staff but not directly assessed or framed as a topic of feedback to be provided to students.

The belief held across this sample of participants was that graduates were, in fact, achieving employability skills through the current approach. This was evidenced by employers continuing to seek out students from each graduating cohort who, in the minds of educators and employers, embodied certain attributes valued by industry. This then raised the question of whether, and how, only certain students obtain such valued attributes (or demonstrate them more clearly than others), and how students and recent graduates are in fact judged by educators and potential employers. One full-time educator claimed that 'any employer can tell you within about three weeks whether that person's competent or not.' Others, including a student participant, described how teachers judge which students have the most highly valued employability skills through their engagement in a subject, and how these judgments inform which students are recommended to industry contacts as potential employees. Multiple participants, including current practitioners, discussed frequently receiving requests from industry contacts to identify potential employees from within a student cohort. Several participants, including a part-time tutor/practitioner, spoke about how final reviews—and other instances when practitioners enter the studio environment—serve as opportunities for employers to informally assess potential employees:

> They see who will be great in the office. They can see [particular students'] strengths and capabilities through just their motivation and the way they carry themselves, how they present, how they talk and can speak up, and that they're not afraid to actually have an opinion. That's something that I know employers really look out for, that skill of being able to carry yourself on your own, autonomously in an office. Then you don't need the handholding as much.

Thus, there appeared to be broad recognition across participant cohorts that students are being judged—by their teachers and industry guests—in terms of employability skills that are not evident in any graphic portfolio of design work nor necessarily represented through marks/rubrics or accreditation criteria. However, this was being done informally and without the direct input, or perhaps awareness, of students.

It is important to acknowledge that these issues within architecture resonate with other disciplines. Although architecture certainly contains cultural practices that are distinct, the core challenge—the misalignment between our stated values and our assessment practices—has been evidenced in many other educational contexts. The trouble evidently is that 'While [employability] skills and attributes are necessarily implicated in all academic work, their development is often tacitly assumed' (Johnson et al., 2015, p. 1). A sample of research publications that explore this challenge, and ways of potentially overcoming it, is reviewed below. But first, it is worth discussing the origins, concepts and questions surrounding the notion of employability skills.

Assessing Employability Skills across Higher Education

Beginning in the 1990s in Australia, and now globally, the so-called 'competency movement' has adopted the notion of generic skills—also known as 'transferable', 'work-ready', 'essential', 'twenty-first century', 'employability' skills (Oraison et al., 2019) or more recently 'power skills' (Runyon, 2022)—with the aim of 'creating a more flexible and mobile labour force to increase productivity […] by redefining work as a set of transferable or "soft" generic skills that is transportable and is the possession of the individual' (Windsor et al., 2012, p. 213). As Gill (2020, p. 146) argues, this shift is reflective of the increasing pressure placed on universities to produce employable graduates, leading to 'less focus on philosophical and higher-order thinking skills and greater focus on being job-ready.' Despite acknowledging the value of employability skills, a key challenge is how universities and university teachers balance these skills alongside the demands for discipline-specific knowledge and skills (Badcock et al., 2010, p. 442). Typically, at least in Australia, each university develops a set of graduate attributes derived from the values and expectations of various stakeholders with the intention that these are subsequently mapped and integrated into curricula and assessment designs (Askland et al., 2012, p. 3-4). Any discussion of quality assurance in relation to graduate competency and employability thus flows directly into the topics of assessment and accreditation. This is a topic that has received very little scholarly attention within architecture, although the exploration of assessing creativity by Askland et al. (2012) offers a useful basis for considering a wider set of employability skills.

Despite criticism and cynicism towards accreditation processes across the disciplines (see Timpson & Bayerlein, 2021), changes in accreditation criteria have been shown to impact learning (Volkwein et al., 2006) precisely because assessment and assessment practices have a significant impact on learning quality (Ostwald & Askland, 2012a, p. 76). Assessment, when designed well, supports students 'by determining the agenda for learning, guiding attention to issues that matter, promoting student self-regulation, fostering reflection and providing information about progress' (Ostwald & Askland, 2012a, p. 76). Finally, such processes are designed to adapt to changing industry practices and expectations. For instance, in countries including Australia, universities solicit feedback about their courses through monitoring and benchmarking mechanisms 'to ensure that essential knowledge is relevant and current and addresses changes in industry standards' (Oraison et al., 2019, p. 174). Through this engagement process, employability skills like teamwork, communication, and time management have been consistently identified as essential by employers across the professions. Moreover, their value relative to technical skills has evidently increased over time (Deming, 2017). With some variation in relative significance and between disciplines, studies have shown broad acceptance of employability skills amongst academics, students, and graduates, as well as consensus that employability skill development be integrated within disciplinary learning structures (dela Harpe & Radloff, 2006). On the other hand, historically, employability skills have not been assessed explicitly within university assessment designs, meaning graduates and employers have not been provided with direct indication of the graduate's potential workplace-readiness via such metrics. However, over the past decade or so, calls for new approaches to assessment posit that 'if the development of generic skills is truly prioritised in university teaching, it should be addressed by academic assessment' (Badcock et al., 2010, p. 444). Incorporating employability skills into assessment design and scaffolded reflection exercises allows students to engage in a process where they can 'identify and focus on the key employability skills they need to

develop, what their strengths and weaknesses are with reference to those skills, and their thoughts about what they might do next to develop them' (Sarkar et al., 2020, p. 358). Current research also suggests that any university-level attempts to design employability skills assessment modules (i.e., as transdisciplinary, ad hoc, standalone, out of context, add on or remedial) are typically doomed to fail. Instead, employability skills 'are best developed as part of regular discipline study and embedded into the curriculum' (dela Harpe & Radloff, 2006; see also Hattie, Biggs & Purdie, 1996). At present, a range of disciplines, including nursing (Song & McCreary, 2020), media and communication (Gill, 2020), science (Sarkar et al., 2020), accounting (Cotronei-Baird, 2020), and engineering (Burnett et al., 2021) are directing efforts to integrate employability skills into curricula. A sample of these are discussed in greater detail below.

Within the web of various actors and stakeholders, the perspectives of academics responsible for delivering curricula and assessing student learning represent a linchpin of sorts. As Cotronei-Baird (2020) has recently noted, 'there is a dearth of research on academics' understanding of employability skills and on the extent to which they integrate employability skills development into their teaching and assessment practice' (p. 204). In comparing academics' espoused understanding of employability skills and reported practice against their actual teaching practices, Cotronei-Baird (2020) identified a disjuncture between the two. Such findings contribute to the idea that 'employability skills are not systematically and consistently integrated into teaching and assessment practice' (Dyki et al., 2021, p. 231). In the recent study conducted by Dyki and coauthors, the majority of academics were 'mostly "discussing" employability skills, with little opportunities for students to develop and enhance the skills in practice' (Dyki et al., 2021, p. 231). This approach echoes the findings of the author's own study within an architecture program, as discussed above, in which participating academics perceived employability skills as valuable to employers whilst judging them informally through their interactions with students (see Thompson & Soccio, 2022).

Other reasons why employability skills are not widely assessed, according to Badcock et al. (2010), include: the challenge of defining which skills count as such and their relative value to each discipline or disciplinary cluster; the fact that 'generic skills are typically assumed to develop in conjunction with the development of knowledge and skills within a discipline area […and thus] levels of attainment of particular generic skills are rarely reported separately from discipline content knowledge' (p. 442); and the challenge of 'balancing the teaching of discipline-specific knowledge and skills with the development of more transferable skills, and integrating both within university curricula' (p. 442). Dela Harpe and Radloff (2006) also point to the following challenge:

> Typically staff value content over skills and see their role primarily in teaching their discipline content. Some staff may need support to take ownership for helping students to develop skills, to overcome anxiety about their ability to teach skills and to make the necessary changes to the curriculum (p. 31).

Arguably, one reason that architectural education is yet to implement ways to explicitly assess employability skills can be attributed to the heavy focus on design-based learning and widespread dependence on practitioners as educators. The sense that design itself is a mysterious, individualised and open-ended endeavour leads to the impression that becoming an architect is also comprised of such features. In other words, architectural culture conflates the design process with its pedagogical approach, thereby justifying tacit teaching practices (Thompson, 2019). Assessment of design-based processes and outputs is challenging enough as it is (Tregloan, 2012). Against this backdrop, Askland and Ostwald (2012) raise the juxtaposition of disciplinary values and higher-education practices through their observation that 'architecture and design are engaged in a struggle to maintain a balance between professional culture—with its acceptance of subjective judgement by expert designers—and the quality assurance expectations of modern higher-education institutions' (p. 47). Although their work focusses on the assessment of creativity—referring to it as 'a task which is more complex and nuanced than the assessment of technical skills and factual knowledge' (Askland and Ostwald, 2012, p.

47)—the same might be said for employability skills.

Lessons and Inspiration from Beyond Architecture

This section reviews three clusters of scholarship that investigate assessment of employability skills at various scales and disciplinary contexts. The first is an invaluable publication, by dela Harpe and Radloff (2006), that reviews three efforts at Australian universities to support the development of employability skills: one in business at the program level, one in physics at the individual subject level and one at the university-wide level across all disciplines. The authors then applied factors identified across five standard models for implementing successful change and innovation to evaluate the design features that supported and constrained each project. The results revealed that each of the projects encountered their own supports and constraints. Other than certain features being inherently tied to the scale of the effort (i.e., the subject-scale project required less infrastructure at the outset but ultimately required upscaling), their findings echo past studies in indicating that the key features for success are institutional structures that facilitate change (e.g., staff with expertise, project management, decision-making infrastructure, financial resources). The authors are also keen to mention that beyond these institutional features,

> [T]he role of conceptions of teaching and learning may also impact on successful implementation of skill development projects. The ability of staff to support skill development is predicated on them being able and willing to change their beliefs about teaching and learning and about themselves as teachers. Skill development requires a sophisticated understanding of student learning, and a student centred and process oriented approach to teaching. Kember (1998) points out that there is considerable evidence that changes in beliefs are extremely difficult to achieve even with extensive encouragement and support. Thus, it is not surprising that attempts to embed skills into the curriculum often create tension, dissonance and resistance (p. 30).

In acknowledging this reality, dela Harpe and Radloff make the following eight recommendations for those seeking to lead an effort, of whatever scale, to assess employability skills:

1. Identify and make explicit ‘compelling internal and external reasons for embedding skills into the curriculum and to use these to create a sense of urgency and an imperative to act’;
2. Allocate ‘sufficient time and effort to building the team that will provide leadership for the project and will drive its implementation’;
3. Ensure careful design of the project such that it is ‘aligned to the institutional context, explicitly tied to strategic directions, and includes opportunities for both top down and bottom up input’; include strategies for measuring progress and achievement of outcomes, and include students as partners;
4. Ensure that the project—including its aims, approach and outcomes—is ‘widely communicated to all stakeholders in many ways and using different media and forums’; ‘messages must be clear, consistent and compelling’;
5. Align ‘institutional policies, resources and infrastructure, staff development, and recognition and reward to the project goals’;
6. Emphasize the ‘value of creating and celebrating short term wins that recognize achievement of small steps towards project goals’;
7. Keep project momentum going, continuously adapt and refine the project ‘in response to the changing context and challenges that arise such as staff resistance, changes in institutional leaders and staff movement’;
8. Embed the change into the fabric of the institution ‘so that the innovation becomes normal practice and results in the creation of a change in the culture of the institution’.

In the field of nursing, efforts to assess employability skills are fairly developed

compared to other disciplines. Nursing education centres around authentic engagement with patients—in other words, students are assessed whilst working in practice and not merely in simulated practice-like settings. The concern amongst nursing educators when it comes to assessing employability skills evidently revolves around issues of 'validity, reliability, subjectivity and bias' (Levett-Jones et al., 2011). Song and McCreary (2020) reviewed literature and found that recent nursing graduates perceived they lacked sufficient training in employability skills relevant to professional practice, like critical thinking, communication, teamwork and leadership. The issue across multiple studies appeared to be around the difficulties that educators had in assessing such skills. Thus, new graduate nurses' 'lack of confidence in their soft skills may reflect nursing education's lack of attention to these competencies' (p. 9). The authors argue for using a combination of self-assessment and more objective evaluation tools like rubrics to scaffold the development of employability skills. Also in the nursing context, Ekman et al. (2020) identified 16 tools used for direct observation, a common approach across medicine in which 'trainees are observed and assessed while undertaking authentic patient care and clinical activities'. Although the authors identify significant issues across the set of individual tool designs, the overall approach of developing a tool or 'cording system' to operate as a digital rubric to facilitate the assessment of live, observable student behaviour warrants consideration in other service-oriented professions like architecture. Levett-Jones et al. (2011) review their own approach to assessing employability skills. Known as Structured Observation and Assessment of Practice (SOAP), the model is a single six-hour holistic assessment of nursing students' clinical knowledge, skills, behaviours, attitudes and values, undertaken in a clinical context in their final semester of coursework. The authors report that, 'The assessment process motivates students and causes them to critically reflect on their practice' (p. 67), ultimately 'ensuring that graduates meet the requisite standards of clinical competence and it gives them confidence in their ability to practice as a beginning registered nurse' (p. 69).

Finally, in science, Sarkar et al. (2020) used surveys and interviews to investigate academics' perspectives of the promotion of employability skills, including understanding which skills were assessed and what kind of approaches were used to promote these skills. The majority of participants believed, first, that promoting employability skills required student-centred and active learning pedagogies. Authentic project-based and/or work-integrated learning models were also considered as ways of promoting such skills. Mirroring the author's own study, roughly half of the 17 participants in Sarkar et al.'s study argued that employability skills need to be explicitly articulated and assessed rather than remaining in the 'hidden curriculum'. They then went on to argue that they lacked the skills or tools to do so effectively. Thus, they tended to employ an approach deemed '"assessment by proxy", referring to the practice of assessing a particular generic skill by the product of the skill use (i.e., the quality of an assignment or laboratory report) rather than use of the skill itself' (p. 355).

Between these three clusters of scholarship, the architecture community can glean valuable insights. First, dela Harpe and Radloff provide cross-disciplinary lessons in terms of the structures and strategies for leading institutional change around assessment practice. Second, research from the nursing context highlights the importance of authentic assessment, and the integration self-assessment tools, to ensure that students are participating in an evaluation process that occurs within professional settings. Lastly, a study from science reminds those of us in architecture that we are not alone in needing to address this challenge—and that though our assessment strategies will need to be tailored to our pedagogical contexts, we do not exist on an island that absolves us from responsibility.

Concluding Thoughts

Though at first glance it might not appear to be one of the most pressing challenges facing the discipline, the voices arguing that assessment practices are tied directly to student mental health and DEI aims like minority student retention and graduation rates are getting harder to ignore. We can anticipate this to mean that improvements to assessment will be increasingly expected to form part of the broader project of advancing DEI in architecture. As an essential element to addressing these *internal* challenges, resolving

the assessment of employability skills ultimately will allow architecture to better address its *external* challenges of various ecological and social crises.

What is clear from the experience in other disciplines is that much of the focus needs to address the belief systems of academics, and overcoming the mismatch between their stated values and their teaching practices. We can assume that any given architecture school is comprised of academics representing the following two belief systems:

A) I believe employability skills should be assessed, but I lack the skills or resources to do so; or
B) I am reluctant to assess employability skills because I believe such a prospect is either not necessary, is rife with challenges or is utterly impossible.

Thus, if architectural education is to make headway in assessing employability skills, one of the key initial questions in developing an effective strategy within any given educational context is the relative potency of the two mindsets. Ostensibly, those in Group A could be upskilled, whereas those in Group B would need to first be convinced before any upskilling takes place. In attempting to foster deeper reflection on this topic with reference to other disciplines, the hope is that this paper might convince and inspire.

From the lessons contributed by scholars beyond architecture, we can also appreciate that efforts to assess employability skills are dependent on certain skills amongst academics—including leadership, communication, teamwork, creativity and critical thinking. Sound familiar?

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