From Campus to Career: Leveraging Technology to Improve Work Readiness and Industry Engagement

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Students undertaking professional degrees are often expected to step into the workplace fully formed, with unrealistic expectations around their experience and capabilities. Universities, facing an increasingly competitive market in a neoliberal context, are focused the student experience, attraction and retention metrics, as students demand return on their investment of money and time. Alongside this, criticism of work readiness and employability comes from graduates and the industries that need them. It is in this space that technology and innovation can offer simple, albeit disruptive ways of increasing the possibility of connecting tertiary students with industry partners to facilitate authentic learning. Early workplace experience, undertaken while still studying, provides both students and employers an opportunity to understand their respective needs within a temporary low risk and low stakes environment. A platform for connecting students with industry for paid employment experiences that sit outside the ubiquitous and often unpaid internships and practicums, offers authentic ways of preparing graduates for the workforce. It also has the potential to improve the way industry connects with the university enabling a richer experience for all; students, universities and industry partners.

Keywords: Work readiness, recruitment, career sustainability, university partnerships, teacher shortage, graduate outcomes, learning

Introduction

Preparation for the workforce has become an increasing focus for students undertaking professional degrees. In a neoliberal context, where return on investment and perceptions of value underpin decision making, universities are turning their focus to the student experience as they seek competitive edge in the global marketplace of education. This shift is driven by the growing demand from students and employers alike for graduates who are not only academically proficient but also ready to integrate seamlessly into the workforce (Jackson, 2018). Employers increasingly prioritise work-ready skills such as critical thinking, problem-solving, and adaptability (Tomlinson, 2017), compelling universities to embed these competencies within their curricula.

Moreover, the COVID-19 pandemic has accelerated the transformation of higher education, highlighting the need for innovative approaches to bridge the gap between academic learning and practical application (Marinoni et al., 2020). As students and institutions navigate this new landscape, leveraging technology to enhance employability has emerged as a pivotal strategy. Recent studies indicate that students who engage in work-integrated learning experiences report higher levels of employability and career readiness (Smith et al., 2019), underscoring the importance of these initiatives.

The pilot study presented in this article illustrates how universities can utilise technology to provide access to their talent pool of students to directly support the needs of their industry partners, intentionally blurring the lines between learning and work as they furnish connections. Offering a platform for tertiary students to create profiles indicating employment availability opens opportunities for domestic and international students to access the job market, build networks, and improve their university experience. This approach not only

enhances employability but also promotes inclusivity by focusing on institutional enrolment. Employment processes are fraught with potentially bias-inducing identifiers, by utilising the institution as the starting point addresses some aspects of unconscious bias that particularly affect international and low SES students.

In this context, as a result of a partnership between The Faculty of Education and The Faculty of Engineering and IT (University of Melbourne), an innovative platform was designed and developed to enable connections between pre-service teachers, schools, and early childhood (EC) centers for employment. Industry experience, beyond the traditional practicum, such as internship placements, and extended projects undertaken while still studying, provided both students and schools an opportunity to understand their respective needs within a temporary low-risk and low-stakes environment. Additionally, offering education providers the opportunity to connect with entire cohorts of pre-service teachers, rather than the few they meet during placement, gave participants in this study a unique opportunity to address staff shortages in their organisations.

Background Literature
Beyond Employability

Work readiness for graduates of professional degrees has become a focus of tertiary institutions as they look to remain competitive in an increasingly global student market. The perceived value of study and student satisfaction on graduation impacts universities' reputations and are important indicators of graduate preparation for the workforce (Abelha et al., 2020; Cheng et al., 2021; Mtawa et al., 2021; Small et al., 2018). The current research on graduate employability and competency development, identifies the importance of innovation and collaboration capabilities (Abelha et al., 2020) as well as personal and interpersonal skills (Small et al., 2018). Domestic and international students seek employment that sustains them during study, though these positions are often transitory and transactional rather than connected directly to their intended profession. Peeters et al., (2019) term 'employability capital' highlights the combination of personal resources (human capital) and social capital (connections and networks), as essential to professional success and career sustainability. In addition, the strategic focus of tertiary institutions on improving diversity, inclusion and equity, for both domestic and international cohorts, highlights the importance of targeted industry-based work experience. Supporting students to increase their employability capital throughout their studies can be utilised as a means of enhancing their learning, improve the student experience and graduate pathways.

Graduate Careers and Employability

Employability is more than course completion and technical skill development (Matthews et al., 2016). 'The Report of the 2015 Graduate Outlook Survey: Perspectives on Graduate Recruitment', by Graduate Careers Australia Ltd, offers a summary of the needs of graduate recruiters in Australia. University career services were highly utilised and perceived as valuable ways of connecting with graduating students (Matthews et al., 2016). Graduate recruitment practices rely predominantly on technology, followed by in person events such as careers fairs and campus presentations. The use of programs that included work experience, internships, placements and other part time and casual work were seen as effective talent pathways (Matthews et al., 2016). Furthermore, employers had clear partnership preferences with tertiary institutions based on perceptions of graduate calibre and course relevancy. Improvement in the area of industry-based experience was identified a key area of improvement for graduate programs (Matthews et al., 2016).

Participating in industry related work experience, has the potential to assist students in building the knowledge and awareness of post graduate opportunities that align to their personal and professional goals and enable them to develop employability capital. A 2019 report from the Australia Institute, suggested that Australia's 'laissez-faire' attitude to graduate transition had created a significant gap leading to inadequate support graduates moving into the workforce and the lack of meaningful engagement with industry pathways to support this transition (Pennington & Stanford, 2019). Student learning about employability capital and opportunities to improve their skills falls to the structure of courses and the requirements of governing bodies.

Small et al (2018) offers a comprehensive summation of the approaches to career readiness in Higher Education, indicating the importance of interpersonal skills as essential along with knowledge and skills. Professional degrees often contain practicums, work integrated learning or internships which offer exposure to relevant experience that builds employability (Ng et al., 2022). Samson & Oliveira (2023) utilised an inter-faculty project to explore the importance of exposure to real world collaboration for students to increase employability. Their study identified the benefits for students' interpersonal skills through collaboration opportunities.

Employability capital, however, is a much more nuanced status. As pointed out by Byrne (2022) and noted in Small et al (2018) and Peeters et al (2017), there are often significant barriers to employment, regardless of one's personal employability status and the skills garnered within a course construct. It is the intersection of study, experience, institution, and personal attributes that create a graduate profile, which are further influenced by employers unconscious (or conscious) biases, and the socio-cultural and economic context (Byrne, 2022). Moving from student to employee requires authentic work connections which can advantage students with local social capital. Many students, regardless of their skills, knowledge and interpersonal capabilities, miss out on opportunities that would enrich their studies, improve their employability and support them in practical ways, due to some of the factors detailed above. Non-local students particularly struggle to establish networks that will enhance their learning experience and connect them with relevant professional opportunities.

Millennials, Zoomers and the Future

Understanding the needs of current and future students (Deschênes, 2020) as well as future workplaces, the new psychological contract and career self-management (Abro et al., 2020; Baruch, 2006; Donald et al., 2020) requires engaging with a complex dynamic that calls for innovative approaches. The future of work necessitates career self-management (Donald et al., 2020; Hirschi & Koen, 2021), which implies that successful professionals will have more than the necessary work place competencies, and require a level of self-awareness, self-efficacy and agency in order to curate a career that is purposeful and sustainable. The stark requirements of a post covid global economy, a climate crisis and the rise in interest in a social and solidarity economy (SSE) and the organisations and societies that contribute to it (OECD, 2023) indicate that innovative, agile and prosocial professionals are advantaged.

The capacity to successfully transition to the workplace requires a holistic development that includes personal and social capabilities, the socio-cultural context and pertains to finding satisfying, meaningful and sustainable work across the life span and in varied settings (Small et al., 2018). The state of work has also changed significantly since last century, where there is less reciprocal loyalty and longevity. Current graduates are looking to build affective commitment with their workplaces where there is a prosocial, values driven, vision and strategy (Baruch & Rousseau, 2019; Lub et al., 2016; Rani & Samuel, 2019). It is these pro-social Millennials and Zoomers who will further shape the global societies (Lub et al., 2016; Rani & Samuel, 2019) and determine the qualities of the organisations and entities that maintain and sustain them. As these are the generations who currently fill the undergraduate and postgraduate places, there is an opportunity for universities to leverage technology, partnerships and the need for employment to support students in building relevant professional skills that will lead to meaningful and sustainable careers.

Technology

Employment partnerships are an area for expansion in the tertiary sector. Universities use technology to build job boards and offer targeted email marketing for industry to send offers to particular cohorts of students. Platforms like Career Connect at the University of Newcastle, Careers Online at the University of Melbourne, GradConnection by Seek and others,, exemplify how technology can headhunt and attract talent directly from the student population. These services range from high-touch, resource-intensive talent recruitment services

to more automated, yet equally effective, solutions. Yet they are all based on the traditional model. This traditional employment process begins with crafting a job description and advertisement, then sifting through applications to find suitable candidates, interviewing, and reference checking. It is time consuming, resource intense and while it is online, the model has been lifted directly from paper-based advertising. This model can also deter candidates due to the linguistic characteristics of the advertisement (Fatfouta & Sczesny, 2023) or deselect them due to the unconscious biases of employers (Burgette et al., 2023). However technological platforms can serve as bridges across the gaps inherent in the current models, creating online, inclusive, and equitable spaces and offering ways of connecting that are more immediate, meaningful, and effective. In order to do so, they must flip the model of recruitment and place the potential of shortlisting and selection in the hands of the recruiter, while also allowing a more equitable presentation of candidates.

Pilot Study: UniConnectED

The initial conceptualisation of the project began within a Faculty of Education where the founders were focused on enhancing engagement between Universities and Schools. An early connection with the Faculty of Engineering and IT set the foundation for an on-going collaborative partnership, culminating in the development of a prototype. This prototype served as an important tool for validating the design of the software, specifically focusing on requirements validation (Oliveira & Sterling, 2023). It allowed us to assess usability aspects such as interface simplicity, navigation efficiency, and user interaction satisfaction to ensure the platform was intuitive and practical for both school recruiters and students (Samson, & Oliveira, 2023) With this validation, the prototype proved instrumental in advancing the project to a minimal viable product stage, attracting necessary funding (Samson & Oliveira, 2023), and transitioning the collaboration towards a more formal partnership where specialised staff could be employed to further refine and enhance the platform.

Launched in May 2024, the platform currently hosts over 40 partners, of which 35 are external to the university and more than 120 students currently studying in the pilot faculty. Early analytics indicate that in month one, there was a total of 55 connections made in the first two months (Table 1). These connections are reach outs initiated by the partners and received by the students via an email directly to the student's inbox. Further analysis will involve understanding the success rate of the initiated contact on employment outcomes. This will be determined by response, interview, acceptance of part time or casual work and other opportunities.

Table 1: Partner reach outs

Partner	Number of reach outs
Partner 1	4
Partner 2	5
Partner 3	3
Partner 4	1
Partner 5	3
Partner 6	20
Partner 7	2
Partner 8	1
Partner 9	2
Partner 10	13

The next stage of the research will focus on usability and connections. Perspectives of both students and industry partners will be collected via online surveys and participation in focus groups or interviews. This stage of the research will examine how the opportunity to engage in paid professionally relevant work may assist

students as they transition from studies to workplace. In addition, the research will seek to gauge the affective commitment towards the university by industry partners through the provision of direct access to student talent as well as the impact on students experience metrics from students. Through gathering both student and partner perspectives, the research will look to identify user patterns, employment offers and acceptances, high demand roles and satisfaction with the service provided by the platform as well as their experience of this flipped model of recruitment.

Discussion

The integration of technology to develop an ecosystem that improves employability and opportunities underpins the purpose of UniConnectED. Technology can also be used to circumvent the first stages of the employment process through fast tracking shortlists and avoiding processes that may exclude otherwise suitable candidates. Prospective employers are presented with a comprehensive list of students based on an unbiased selection process, where student capabilities are key rather than where they went to school, their nationality, or their social networks. Presenting candidates in this way offers more equitable access to students and supports organisations looking to improve their diversity, inclusion and equity practices. Furthermore, connecting students with actual employment has the potential to be integrated in the current focus on WIL and internships by the tertiary sector and the benefit of building equity and inclusivity as it reduces the financial hardship of non-paid experience (Camern & Hewitt, 2022).

Developing interdepartmental collaborative teams to examine problems of practice and learning, leverages the resources and knowledge capital of tertiary institutions. By focusing on the needs of students, from graduation expectations to generational context, innovative projects that harness technology in simple, yet effective ways, can be developed to address the pressing need of industry experience while studying towards a degree. Within the current context of a workforce crisis in education, the narrowly defined partnership between ITE providers and schools can be expanded to relieve some of the pressures on schools. Supporting the needs of the ITE student cohorts brings the benefit of improving the student experience, and improve their employability capital on graduation. Schools further benefit through a more prepared, resilient and capable workforce, more able to support the educational goals and improve the outcomes for the young people they teach.

Conclusion

Exploring these pathways could lead to greater reciprocity and partnerships between universities and industry partners and build the employability capital of students, local and non-local, undertaking professional degrees. Navigating learning spaces that include employment as well as practicum, opens the possibility of creating innovative pedagogies that enhance graduate preparation. Through using technology to build stronger connections between the triad of university faculties, students and the professional sector, further possibilities arise that could facilitate closer and more meaningful learning experiences.

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