Institutional Arrangements and Student Engagement Supporting Post-practicum Interventions

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This chapter presents a narrative situated within a large national project, across a range of disciplines and involving multiple universities. It will posit an argument that the design of Work Integrated Education (WIE)[1] has largely limited its attention to providing Work Integrated Learning (WIL) experiences in the form of placements and other alternative, authentic activities, and failed to place sufficient emphasis on augmenting the work-based learning with post-practicum learning. It will also differentiate between the diverse models and modes of WIE and WIL, and consider two key matters in regard to post-practicum learning. Firstly, it considers the role of higher education institutions in supporting the curriculum changes required to include effective, post-practicum pedagogies. It identifies some orthodoxies of higher education which present barriers to achieving the changes required to enhance WIL, and how we might address these challenges. Secondly, given that student learning must be the central focus of provisions of education, this chapter discusses how students' learning progresses in the context of contemporary higher education, with an emphasis on the provision and integration of work-based experiences, and, in particular, the essential use of post-practicum interventions.

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[1] Throughout this chapter, we will use terms such as Work Integrated Education (WIE), Work Integrated Learning (WIL) and Practicum. We will primarily use 'WIE' as this refers to the design and delivery of an educational program. The term 'WIL' is used when referring to student learning within the program. 'Practicum' is a term used to denote a program of learning that occurs in the practice setting in contrast to theoretical, propositional learning in classrooms and online learning platforms. WIL has come to be used as a common term to denote all of these things, however, we believe that these distinctions are important.

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1 Fostering Post-practicum Experiences

The inclusion of work-based experiences into university degree programs has been overwhelmingly welcomed and commended by students and graduates. Students appreciate the interesting and engaging alternative that WIE offers (Rayner & Papakonstantinou, 2015). Students recognise the unique potential value of WIL in enhancing their employability. Considerable systematic research has confirmed that students are right in believing that exposure to work environments provides favourable opportunities for the types of learning that classrooms cannot provide (Freudenberg, Brimble, & Cameron, 2011; Jackson, 2013).

It must be emphasised that the positive outcomes derived from providing students with WIE within their studies are predicated on an assumption that these programs are well designed and well managed. There is considerable evidence-based information available to provide guidance to decision-makers regarding the design of WIE and the management of WIL, and this information has been used to good effect across many programs. One problem, however, is that it remains the case that the provision of WIL experiences is sometimes still viewed simplistically as a matter of negotiating and allocating placements for students. Despite the overwhelming evidence that comprehensive, evidence-based WIE design is important to achieve its full potential gains (Smith, 2012), it is still all too often regarded as an 'easy curriculum option' of merely placing students in workplaces.

Billett's (2011) work, along with that of others, has provided detailed evidence that good practice in pedagogical design for effective WIL requires substantially more than this. Students and their workplace supervisors require preparation, students' self-management requires deliberateness (Trede & McEwan, 2016) and, of key interest in this volume, is the inclusion of post-practicum experiences as an important augmenting factor in enhancing the experiences. These inclusions require both curriculum space and purpose-driven activities that are led by expert tutors. However, the inclusion of post-practicum experiences, in particular, remains an important but rarely acknowledged role of universities. The importance of post-practicum learning can be found in a growing recognition that how students come to experience what is afforded to them in workplace or educational settings, and how they come to learn from them and reconcile across them, is premised upon their role as catalytic meaning makers. Hence, curriculum and pedagogic considerations need to fundamentally embrace considerations of how students come to engage with, and learn from, these WIL experiences. Recent reviews have indicated that it is not sufficient simply to provide workplace experiences; these experiences need to be augmented.

A review of over 30 WIL projects funded by the Australian Government over the previous 7 years (Orrell, 2011), identified that the majority of projects exclusively focused on innovation and development of pedagogies in the WIL experience, yet none had considered the importance and value of post-practicum pedagogies. While a number attended to the value of students' reflections on their learning within workplaces, the design of deliberate, innovative educational activities occurring

post-practicum that explicitly leveraged students' workplace experiences to enhance their learning, were entirely neglected. It is most certainly not sufficient to merely provide workplace experiences. These experiences need to be augmented with activities that build on and transform them into learning for the longer term that can then be transferred to new workplace contexts.

Billett (2010) has long argued that an important and unique role for universities within the WIE agenda is to provide curriculum space and activities to support students' engagement in critical, self-reflexive review of their WIL experiences. In doing so, he has argued that students' learning is enhanced when they are able to transform experiential knowledge into evidence-supported, practice knowledge. Since the 2011 review, Billett has initiated a multi-disciplinary, multi-program project across Australian universities to assist health education disciplines, which has since been applied in other disciplines, to develop innovative ways to augment post-practicum learning (Billett, Newton, Rogers & Noble, 2019) and to generate evidence of their effectiveness in enhancing graduate employability. A survey study conducted by Billett, Cain and Le (2018), within this larger project, identified that students welcome post-practicum opportunities to engage with their peers and tutors to critically review their workplace experiences, to consolidate their learning, and to reflect on and plan their career directions. This study also found that students have quite definite notions of their preferred mode for engaging in post-practicum learning, indicating that their preference was to engage in face-to-face post-practicum peer group reviews led by experts.

2   Diversity of WIE Models

Models of WIE in higher education arise from particular historical precedents and institutional imperatives, and are significantly shaped and influenced by particular educational intentions. There are three distinctive placement models, as well as innovative alternative modes of WIL, that are increasingly being developed in order to work around some of the constraints that prevent universities from offering WIL placements for all students. There are three broad modes of work-integrated placement programs: (1) professional placement programs; (2) vocational placement programs; and, (3) generic placement programs.

2.1   Professional Placement Programs

This first mode, professional WIE, is largely found in pre-professional programs such as Medicine, Nursing, Speech Pathology, Engineering, Social Work, Teacher Education and other similar professional programs. The distinctive nature of this mode of WIE is that alignment with professional practices is often required and guided by accreditation processes led by peak bodies associated with the relevant

profession occupations whereby such accreditation is a requirement for graduate registration to practice in those professions. The inclusion of WIL into the professions education curriculum is broadly accepted, rarely requiring justification within the academic milieu because it is largely driven by compliance with professional accreditation. In the case of some professions, there are prescriptive requirements for the number of days or hours that students must undertake placement; the range of exposure they must have to different aspects of professional practice; and workplace supervisors must meet specified professional qualifications. Failure to adhere to such requirements can jeopardise the accreditation of the university program itself as well as the future employment eligibility of graduates.

The pedagogy of these professional placements also has some distinctive features arising from the fact that WIE in professional programs largely incorporates either a placement of significant duration or a number of placements over time. Over the course of the placements, students in professional programs are required to demonstrate their progressive development of capabilities towards meeting required professional standards of practice. Attainment of the expected professional standards of practice must also be attested through university approved, valid, and reliable assessment processes, particularly because they can be associated with 'high risk' professions whereby the university has to ensure that those who graduate are well equipped to practice at a level that will provide assurance that they are not a social, economic, or psychological risk to community wellbeing.

It is challenging to find where the work experience itself is used as a resource for further learning in these programs. Other than the projects included in this and its prior publication, little evidence has been found of professional programs that incorporate post-practicum activities that sustain, augment, and enhance post-practicum learning. However, there are some notable instances. One is found in pre-service teacher education where, at a national level, an expectation has been imposed that graduates of all initial teacher education programs must produce a portfolio of evidence of practice experience and attainments that aligns with the National Professional Standards for Teachers (Graduate Level) (Roberts, 2016). Each initial teacher education program has been encouraged to develop their own particular approach to this requirement (TEMAG, 2014).

Other instances can be found in health professions, such as the new paradigm for medical education, Programmatic Assessment for Learning (PAL), following the lead of similar programs in the United States and the Netherlands (van der Vleuten et al., 2012). However, there is a critical difference; these examples are largely motivated by a requirement to generate evidence to attest to the attainment of professional capabilities. By contrast, the motivation for the kinds of post-practicum programs considered in this series of projects is primarily the transformation and enhancement of the learning that has occurred in workplace learning. While these two different intentions might not be exclusive of each other, the differences in the primary motivation is notable.

2.2   Vocational Placement Programs

The second type of WIE includes those programs that focus on occupational areas of practice, such as Business, Information Technology, Environmental Management, Health Science, Media, and Sports Coaching. Some of these occupations might be classified as 'new professions' in which status and potential impacts have not previously warranted extensive workplace experience as entry requirements. WIE in such programs often requires matching students' capabilities to the particular placement contexts. For example, within sports coaching programs, a tennis expert should not be placed where they would be required to coach football. These programs are often a one-off event, with variable length of process, learning outcomes with some reference to the vocational domain, assessment activities, and supervisory arrangements largely established by the course of study in conjunction with university course rules.

Institutional acceptance and practices for the vocational placement model of work integrated learning is quite different from that in professional programs described earlier. While these vocational programs will have practice options and opportunities, they are not regulated by external bodies and are open to accommodate students' career and personal needs.

2.3   Generic WIL Placement Programs

The third type of WIE is an area of significant recent growth in universities. Generic WIE programs are largely delivered centrally in the university, or by large 'super faculties' or colleges. Principally, they aim to provide students in generalist degrees with WIL and Service Learning (SL) experiences. SL is defined as "a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities" (see the National Service Learning Clearinghouse). Service learning is where students undertake work that meets a community need while developing personal capabilities that will enhance their employability and their sense of civic responsibility (Patrick et al., 2019).

The intent of generic WIL is to provide authentic experiences and challenges that extend students' learning experience beyond that provided by formal classrooms, thus increasing students' personal and social awareness as well as enhancing their capabilities that can lead to satisfying careers. Evidence (see Barrie, 2006; Hill, Walkington, & France, 2016) suggests that, despite diverse terminology used by different higher education institutions to describe these capabilities, they are largely referring to similar sets of generic knowledge, skills and dispositions not associated directly with a particular discipline or occupation. This mode has no specific discipline-based or externally imposed learning outcomes linked to a particular occupation but, commonly, there are learning outcomes that seek to address the

publicly stated graduate capabilities of their particular institution. Assessment in this type of WIE is varied and student-centred. In some sense, unlike the previous two modes of WIE, this mode is not restrained or limited by any histories of traditional, ritualised WIE practices and are thus open to leading the way in developing innovative practices in the contemporary university.

Collectively, these three modes of WIE constitute the models are offered by universities in Australia and also internationally. Terms that refer to such programs include practicums, clinical experiences, cadetships, internships and sandwich courses. Central to all is the importance of providing students with workplace experiences as a key element of the higher educational provisions.

3   Alternatives to Placement Models of WIE

While the three WIE modes described above are largely workplace-based, there are other emerging types that somewhat stretch the definition of WIE and, at some point, provoke debate regarding the purposes of higher education but, nonetheless, all aim to enhance graduate employability. These diverse and emergent modes of WIE programs include consultancies, simulations, and client-based projects, which are conducted in collaboration with industry partners on campus. Other models include on-campus work experiences hosted by universities' service centres, such as libraries or careers centres, where universities are recognised as work sites. This latter model of WIE can be used as an early staging process in WIL for students who have low social capital or other challenges and, as a result, require greater support and cultural orientation to work and workplaces. Other emerging models include entrepreneurial start-ups, either within a discipline or adopting an interdisciplinary approach, in which students of diverse disciplinary backgrounds combine their expertise to create solutions, solve problems, and market their novel products. Examples of many of these emerging models are reported by Sachs, Rowe and Wilson (2017) in their recent review of WIL in Australia.

Another recent inclusion is the adoption and reporting of a more deliberate approach to include WIE in research higher degree education programs, in which research students engage with industries as partners or members of research teams (Jones & Warnock, 2015). Until recently, inclusion of internships in research higher degrees has been ad hoc and informal, but now such initiatives have been adopted at a national and institutional level. Such practice is now a formally recognised, encouraged, recorded practice, and is reported to government as an intentional strategy within the WIE space (Universities Australia Work Integrated Learning Final Report, 2019). The intentions for this type of WIE is to assist postgraduate students to form industry-related networks that will enhance their ability to secure employment that will enable them to utilise their advanced knowledge in their field of research.

Finally, there is a growing impetus for 'virtual' WIL where students undertake projects or tasks in an online space, exposing students to, and helping them prepare

for, increasing trends of remote working (Sachs et al., 2017). Online WIL has proved useful for simulations of matters that are too risky for safety, ethical, or political reasons to give students actual firsthand exposure, for example, conflict resolution and crisis management within Peace and Conflict Degree programs.

There are other emergent modes of WIE not accounted for here but, suffice to say, WIE is emerging as a site of innovation as universities seek to find alternative ways to enhance their graduates' employability (Ferns, Russell, Kay, & Smith, 2018). Apart from a desire to seek a future-oriented approach, the need to be innovative is prompted by the drive to increase student participation in WIL and a scarcity of placements (Doran & Cimbora, 2016; PhillipsKPA, 2014), particularly in the second and third modes of WIL (vocational and generic) described above. These imbalances in supply and demand are due to an increased interest in providing all university students with a WIL experience (Universities Australia, 2019) and a general reluctance amongst some employers to facilitate placements within their companies, often due uncertainties of cost impost and the related benefits (Jackson, Rowbottom, Ferns, & McLaren, 2016).

4   Post-practicum Activities Across WIE Modes

Nonetheless, the learning outcomes of all these modes of WIE are likely to be enhanced by the inclusion of a post-practicum element to the curriculum. Post-practicum activities leverage students' workplace learning and assist them to transform their experiences into transferrable practice knowledge that can be applied to the diverse employment contexts that graduates seek. All these diverse modes of WIE, however, provide challenges that disrupt traditional and common expectations related to university education. The introduction of a fully comprehensive approach to WIE calls for new considerations related to policy development, curriculum design, instructional and supervisory responsibilities, and assessment. The impact is ubiquitous and has effects on university leaders, professional (administrative) staff, and academics, as it challenges the very canons of university education and the role of universities within society. Despite the extensive scholarship regarding WIE and WIL practices, the broad conception of the practice is largely limited to that of placements and alternative simulations, and on-campus learning experiences which are variously enthusiastically embraced or vigorously contended. What remains largely ignored is the important and unique role of universities in capturing such rich WIL experiences and augmenting and transforming them into practice knowledge that has value in the longer term for graduate careers.

5   Purpose of Universities and Canons
of University Education

Universities have long held that their primary function is to generate and transmit knowledge through research and educational activities. Increasingly, a third agenda has assumed considerable importance, namely, to engage with governments, industries and communities to foster research translation. More recently, this agenda has expanded to demonstrate measurable impact of university research and education to justify the economic and societal investment in these institutions (Connell, 2019). Of course, as alluded to earlier, universities are increasingly expected to educate and produce graduates with high level knowledge, skills, and dispositions that will meet the evolving needs of the workforce. There are some subtle tensions that are tacit within this broad understanding of the university role in society. In the last 40 years, universities have incrementally emerged from institutions that were set up to cater to the educational needs of society's intellectual elites (Orrell & Higgs, 2012). Not only did they seek to produce leaders, they also sought to perpetuate the global intellectual community through research training of the next generation of academics. These universities have been challenged by the massification of education, where fewer graduates of university education expect to become academics, and there is an expectation of education for employment as a return on investment. Education for education's sake and speculative thinking and research no longer have popular currency. As a result, discourse regarding university education is increasingly being diminished to that of it being a private benefit, rather than a common good (Williams, 2016). This significant change in the expectations of universities has WIE at its heart, but change is slow to arrive within the university sector and graduate employability is a new mantra which has not necessarily been founded on aligned changes to curriculum, policies, and university infrastructure.

So, there are tensions in the different roles and societal expectations of higher education, and increasing consideration of educational approaches such as providing and integrating workplace experiences do not always sit easily within how universities see themselves, their resourcing, and privileging of some activities over others. Yet, those in the field and concerned about the engagement of higher education more broadly within society would suggest that these three elements manifest collectively. It is the research that informs both the content and process of teaching, it is the teaching and learning by students that extends and instantiates what research finds, and engaging with applications of knowledge associated with occupations reaches out and addresses societal needs and those of individuals and their communities. As such, there is not necessarily attentional contradiction across these three elements, though many might see this to be the case. Consequently, it is worth considering how initiatives such as work integrated education, and specific practices such as augmenting students' experiences post-practicum, fit within the contemporary role of universities.

There are several core orthodoxies that are challenged by the scale of WIE as an enterprise of the modern university. They include:

- the roles and expectations of university staff, both academic and professional;
- the follow-on contestations regarding the purpose, design, and contested space within the curriculum;
- legitimising and requiring student engagement in post-WIL learning; and
- the relationships between universities and industry and communities in seeking to achieve greater equality and reciprocal benefit for all parties in the provision of WIL.

5.1   Staffing Matters

While traditional professions-based WIE programs, such as those described earlier, may have been frustrated by some established university canons, over time, they have found ways to work around them to achieve their intended outcomes. This has been possible because WIL was largely invisible within the traditional university structures and often within university curriculum, where the work of academics who bridged the theory-practice divide was unrewarded and unrecognised (Cooper & Orrell, 1999). Now that WIE has gained the attention of university leadership in response to their accountability for graduate employability and employment, its execution has challenged both those who would hold fast to the traditions of university education and those who would disrupt it. These differences in viewpoints in regard to the purposes of university education and its related practices has produced three states of university staff who support the university education agenda. These states are:

- A traditional academic role in which academics have a vested interest in research with an obligation for research translation through education.
- A modern academic role in which academics have been recruited for their practice expertise and whose focus is on maintaining a symbiotic relationship between theory and practice. A challenge for these academics is to maintain their practice currency and, at the same time, engage in applied research.
- A third state, namely, academic and professional staff who are fully engaged in education to practice WIL (Schneijderberg & Merkator, 2013; Whitchurch, 2010a, 2010b; Whitchurch, Skinner, & Lauwerys, 2009). This third state is, as yet, largely invisible within university polices and academic profiles, and represents academics and professional staff whose primary role is to recruit and prepare students for placements, and supervise and assess them during their placement experience.

It is these latter group of staff that are now predominantly involved in designing and leading the introduction of models of post-practicum learning activities. These staff roles are not new, but their existence and contribution to WIE and WIL is now being noticed at an organisational level due to the small but growing body of research emanating from the UK, Germany, and North America. The dilemma universities face is how to classify those who occupy these positions. Some have an

academic classification and some do not and are employed for their practice knowledge and expertise. They teach, but their teaching does not take commonly expected forms such as lectures and tutorials in classrooms. They also assess student performance, but this assessment is not efficient as it is often a one-on-one process to assess performances (e.g., assessment of practicum outcomes that may take place across a variety of contexts for the student cohort and are subject to wide-ranging variables) that cannot be standardised or replicated if contested and involve a greater degree of subjective professional judgement. According to the canons of university policy, if they are to teach and assess, it would seem that their classification should be academic. However, much of their work involves recruiting students for WIL, identifying placement opportunities, managing off-campus liaison with graduate employers, and preparing workplaces so that students can experience worthwhile learning experiences, all of which are traditionally viewed as professional or administrative tasks. The role classification and associated WIE workload is in the early stages of consideration (see Bilgin, Rowe, & Clark, 2017) and requires the attention of university leadership.

5.2 Interplay Between Curriculum Structures and WIE

There is limited opportunity to capitalise on students' practicum experiences without explicit attention to the two important issues of the *legitimacy* of embedding such activities and their *timing* within the unit of study and the broader degree. New claims on curriculum space for post-practicum activity add to the contestability of WIE and concerns curriculum leaders expressed in regard to overloading in an already crowded curriculum. Such claims can result in resistance and challenges by classroom-based academics who are not involved in, nor committed to, WIE. This is especially the case where WIL is not required by external professional accreditation bodies and where requests to accommodate post-practicum space may be regarded by those responsible for the theoretical elements of the curriculum as an unreasonable impost. While WIE in professional programs is not protected from such challenges, the demand for space in the curriculum is legitimated by accrediting bodies. Such contestation prompts internal debates regarding the relative importance of theory versus practice in the education of the next generation of professional practitioners.

5.3   Student Participation in Post-practicum Learning Experiences

Timing is also critical for ensuring that students engage with post-practicum activities and don't merely 'drift away' post-placement without the benefit of an opportunity to collaboratively reflect on the meanings and knowledge that the collective experiences provide. This can be particularly problematic when WIL is not interwoven and scaffolded throughout the degree, such as in many professional degree programs. In generalist degrees, or those with a vocational focus, such as Business, IT and Media, WIL is often a one-off, final capstone unit which offers little opportunity for post-practicum experiences. Scaffolded WIL experiences occurring early in the degree program would better enable students to build their workplace learning experience and enact their post-practicum learning. Multiple episodes of WIL and a whole-of-program approach afford students the opportunity to share and reflect on their workplace experiences with their student peers, enabling ideal conditions for rich post-practicum experiences. Importantly, for some students, the world of practice is very familiar; for less professionally connected students it can be unfamiliar territory. Students with less developed social and cultural capital may need additional time and support to be factored into the curriculum structure to adjust to the workplace setting to optimise their learning outcomes.

Timing group-based post-practicum activities within a singular academic unit dedicated to WIL can also be problematic as students are often at different stages in their WIL experience during the semester cycle. Some may complete the typical unit requirement of 80–120 h of workplace learning in a block format, while others may choose to structure their experience in an episodic manner across a longer time span to accommodate paid work, study, and caring commitments. The need to vary start and completion times to cater to industry partners' cycle of demand for WIL students is increasingly apparent, particularly given the growing competition among universities to secure placements for their students (Jackson et al., 2016). This then leads to the central concern within contemporary higher education, and that is student engagement.

For effective student engagement in post-practicum experiences, those responsible for curriculum design must shift their focus to consider how students can be helped to engage and learn from their experiences in the physical and social settings of the workplace. Considerations for student engagement and how that can be enacted by students themselves, as well as promoted by teachers and institutions, are central here. This issue brings to the fore the often ignored important role that universities can play in enhancing the 'experience curriculum' through assisting students to transform and learn from what they are afforded through opportunities to engage in activities and interactions in workplace settings. This transformation process is a legitimate responsibility of university education because it shapes how students can become self-regulating professionals who can translate and construct knowledge from their workplace experience, thus focusing on learning for the longer term (Boud & Falchikov, 2007).

A central concept here is that post-practicum experiences have the potential to develop students' capacities for 'experiencing': that is, those processes by which individuals bring what they know, can do, and value to make sense of, engage with, and change in reflecting on their particular encounters. As Dewey (1933) stated, "we do not learn from experience. We learn from reflecting on experience" (p. 78), and post-practicum activities are critical for students to understand, crystallise, and make meaning of their workplace learning. This is not only in the sense of the capabilities they enhanced, and the skills and knowledge they applied, but also their developed understanding of the profession, industry, and sector within which they were based, the networks they created, the professional socialisation that occurred, and what all these mean for their own employability and future career goals and aspirations. To optimise students' self-awareness and personal development, post-practicum activities must explicitly address how their experience influenced the different dimensions of their own employability, including their professional connectedness and networks (Bridgstock, 2016), capacity to transfer skills and knowledge across different contexts (Jackson et al., 2019), non-technical capabilities, professional identity, and ability to self-manage their career (Bennett, 2018; Jackson, 2016). Encouraging students to deliberately engage in critical appraisal of their experiences by comparing and contrasting those with others at the conclusion of their WIL experience–which encounters and learnings influenced them, in what way, and what this may mean for their future career–should be integral to every WIL experience.

To engage increasingly diverse student cohorts, post-practicum activities should effectively accommodate different learning styles and enable students to draw on their learning from the full spectrum of work settings. These could range from virtual, on-campus experiences to external, employer-based environments in a range of different sectors and industries. While peer-based post-practicum experiences are highly valued (Billett et al., 2019), these must be effectively adapted for the increasing number of students engaged in online learning, as well as for off-campus students in regional settings. The growth in technology enhanced learning has seen increased use of tools such as Zoom and Blackboard Collaborate, which offer recordable, virtual chat room facilities, although their comparative value when reflecting in small, face-to-face group scenarios may require further exploration. Embedding different types of reflective activities and assessments–such as the written, video, or artistic formats employed by Gribble and Netto (2019)–will cater to different learning needs and the preferences of heterogeneous student cohorts.

As stated earlier, establishing programs that provide students with opportunities to undertake work experience is often mistaken for a complete learning activity and are also perceived in some quarters as 'easy' activities in which the goals are self-evident and tacit, and learning processes that are 'natural' and intuitive. Ostensibly, a novice is assigned to a community organisation, given tasks they are expected to complete, surrounded by models of practice, mentors, and experts as well as the ethical, social, and economic dilemmas facing the host organisation. Skills and insights are largely expected to be caught or taught on the job without formal supervision and assessment. However, this learning space is often a novel learning milieu

for students, many of whom will be challenged in finding ways to succeed in their workplace learning, because their capacities to regulate and manage their own learning have been developed in learning environments that are far more structured than workplaces. Meeting these challenges to provide quality learning outcomes for students is best enabled if underscored by sustained university-industry partnerships.

It appears that post-practicum experiences typically take place on-campus, or virtually, rather than being conducted in the workplace setting. One of the challenges to innovative post-practicum curriculum design is to not merely limit them to traditional academic-led and classroom-based activities. To overcome the previously highlighted issues of timing and legitimacy, post-practicum experiences could take the form of reflective activities with co-workers and assigned buddies in the work setting. Importantly, activities should engage peers who are at a similar stage of development and have recently undergone similar experiences. Small group debriefs could consider the achievement of placement outcomes and goals, and any enablers and inhibitors of these. This could develop students' self-awareness and understanding of their own capabilities, enhance their informal learning of professional norms, inform their coping strategies for arising challenges, and manage encountered differences between theoretical knowledge acquired in the university classroom and their practical application in the work setting.

These small group debriefs are consistent with the 'huddles' described by Jackson and Trede (2019) and align with the value of effective feedback processes highlighted by Antwertinger, Larkin, Lau, O'Connor and Santos (2019). Such work-based post-practicum activities will help students to make sense of their own experiences while simultaneously mobilising the knowledge and experience of seasoned workers to enrich students' discipline-based learning. They may also assist students in deepening relationships with their workplace colleagues, as well as enhance workers' understanding of the importance of reflective learning practice and how this may be enacted. Such activities, however, require careful facilitation and dedicated preparation for participating co-workers beyond that normally provided for workplace supervisors of WIL students.

5.4   University-Workplace Partnerships for WIE

Universities Australia, in collaboration with other significant industry groups, has made a commitment to endeavour to support the enterprise of university engagement with Australian industries and businesses in the National Strategy for Work Integrated Learning (Universities Australia et al. 2015). Their concern is to facilitate university collaborations with graduate employers that will ensure that students of all disciplines can have effective WIL experiences and, in doing so, enhance graduate employability. In particular, they aim to assist universities to identify opportunities for increased scale, breadth, and quality of WIL placements and advocate for the research, scholarship, and development of the evidence base to improve WIL

effectiveness and outcomes for participants. They also aim to identify and address impediments to universities and graduate employers improving the currency, quality, and capability of WIE programs and Australia's global competitiveness.

The importance of university-industry engagement and partnerships to support WIE is embodied in the national strategy's high level collaboration between higher education and industry governing bodies, and raises a number of important questions. First, how might universities engage industry with post-practicum activities? Second, how might mature partnerships be fostered in which both universities and industry understand each other's needs? Finally, how can a significant cultural shift be achieved by both partners, such that collaborating on WIL becomes integral to their institutions to develop the nation's talent?

International examples have been identified where positive and effective partnerships have prevailed and been sustained despite significant challenges. The UK 'sandwich degree' model, in which students complete 2 years of university study, 1 year in industry, and then return to university for their final year of study, is one such example. Despite the Global Financial Crisis and recession that followed, employers remained committed to supporting students in these 1-year arrangements. Evidence shows that "it is unequivocal that sandwich placements add significant value to their beneficiaries, which has been shown in the learning outcomes across all types of university" (Kerrigan, Manktelow, & Simmons, 2018, p. 102), particularly for contributing to upward social mobility. Another example, are the significant numbers of students who have engaged in cooperative education in Canada, completing their degree by alternating terms of university study and paid employment (Haddara & Skanes, 2007). This requires the commitment of large numbers of employers to engage with universities to support the development of the future pipeline of quality talent. These examples provide evidence that productive, reciprocal partnerships can be sustained where all parties know, understand, and experience the long term benefits of sustained and committed partnerships.

The centrality of engagement between higher education institutions and industry is widely acknowledged (see Ankrah & Omar, 2015; Fitzgerald, Bruns, Sonka, Furco, and Swanson, 2016. According to the Carnegie Foundation for the Advancement of Teaching:

> Partnership of college and university knowledge and resources with those of the public and private sectors enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good (2006, p. 34)

Dorado and Giles (2004) identify three types of engagement between university and community agencies. The first is engaging in *tentative* partnerships which are episodic and often likely to represent initial engagement between the parties. Where this type of partnership occurs, there can be a high turnover of placements each year due to uncertainty of the other's needs and where the cost benefits of engagement are unknown. The second approach is forming *aligned* partnerships. Usually these have successfully travelled the tentative pathway but, over time, have actively

engaged in seeking a better fit to meet the diverse set of needs of each stakeholder, namely, the students, the industries, and the university. So, while the needs may not align, the pathway to each set of needs can be met through engaging together. Accomplishing this alignment takes time to establish and, thus, is less episodic than the tentative partnership.

The third approach is establishing partnerships which demonstrate *committed engagement* between the university and the host organisations**.** The starting point in establishing these partnerships is characterised by the explicit commitment of both parties to engage with the goals of the other, and to form a sustained partnership that has intentions that last beyond the execution of a particular project or a particular placement. Over time, the goals of each impact on the others and often result in shared goals. Universities are good at establishing such relationships to support research but have seemingly failed to leverage this capacity in relation to education and, particularly, in the context of WIE.

While distinctive, these three qualitatively different pathways to forming university-industry partnerships are not exclusive but are potentially reflective of an incremental evolution of partnerships. In current times, this latter evolution is desirable because it is the basis of relevant and worthwhile benefits for all stakeholders. These findings of Dorado and Giles (2004) provide a framework for WIE leaders to evaluate their partnerships with host organisations and to formulate strategies to enhance them. Little evidence has been found to indicate that such an approach is common practice.

Studies have identified a number of motivators for industry to host university students in work placements, including an altruistic desire to give back to their industry or profession, and to fulfil what they regarded as their corporate responsibilities (PhillipsKPA, 2014). Hosting students in workplace-based WIL is also considered a strategy to improve corporate image, a stimulus for the development of their own staff, and a way to advance their businesses by being better able to recruit graduates in the future (Jackson et al., 2016; PhillipsKPA, 2014). Along the same lines, deeper ties with universities may provide employers with access to new thinking and ideas based on emerging research. Closer industry-educator collaboration on research has attracted significant attention given Australia's lag in translating research into commercial outcomes (Howard, 2016).

Successful linkages between universities and industry require deliberate attention and the allocation of sufficient resources by both the university and discipline-based educational units to prepare university staff for their WIL-related activities that may be unfamiliar to many (Cooper & Orrell, 2016). Engaging with groups outside universities is not limited to WIE and has increasingly been encouraged to foster collaborative research agendas that can demonstrate impact. However, the polarisation of research and education within universities is sustained in both internal structure, accountabilities, and activities that relate to engagement with industries and communities. Greater integration and collaboration between research, engagement, and education portfolios–given their shared agendas–would foster improved success and achieve multi-dimensional, sustained partnerships. A self-evident option for universities is to embed agreements in their research contracts

with external organisations regarding the number of internships and placements that will be made available for students undertaking WIL over the duration of the collaborative research agenda. Other universities report having formed institutional advisory groups with significant representation from external bodies so that, together, universities and industry collaborate on generating strategic means for enhancing partnerships that have reciprocal value. These advisory groups produce guidance for preparation programs for both university and host organisation staff and for students.

There are challenges to building effective links with industry to support partnerships for WIE so that students can gain the benefits they seek. These challenges include developing clearly defined roles for all stakeholders, realistic expectations of students, established lines of communication between employer, student and university coordinator, and finding areas of mutual benefit to both industries and academics (Choy & Delahaye, 2011). There are also legal issues in determining how students can engage so as to work within the legislation related to students in workplaces, as well as forming transparent agreements on who owns the intellectual property on any marketable outcomes produced during the placement.

6 Challenges of Integrating the Needs WIE into University Practices

There is no doubt that there are genuine attempts in universities to provide WIE programs that will enhance graduate employability. Significant changes have occurred in universities in this regard over the past 20 years due to universities adopting a more enterprise approach to management of WIE, but rates of development– are inconsistent across disciplines and across universities. A constraining factor in many disciplines is resistance within the higher education sector to the demands the WIE programs make on infrastructure and curriculum space. Introducing WIE has challenged many taken-for-granted assumptions about the role of universities in society, and how they interact with industries and communities. WIE has also challenged taken-for-granted assumptions about the work and role of university academics and expectations of the purposes and what experiences should be included in curricula. Inclusion of WIE has imposed expectations of change on universities, but change is measured as it must respond to competing demands and available evidence to support the innovations. As a result, those who would like to embrace new and emerging paradigms of university education have to mitigate the challenges of working within university systems, policies, expectations, and infrastructure that often fail to acknowledge the new roles, responsibilities, curriculum goals, and designs that the new paradigm requires.

Effective WIE imposes financial costs to host organisations and is resource-intensive for universities to support new roles and curricula. It is important within this new paradigm to allocate resources that will contribute to sustained

relationships to ensure return on investments with the understanding that producing evidence of impact and value will not be immediate. The robustness of relationships between individuals, universities, and industry needs to become the focus of research to determine the level of business savviness required by academics for engaging with industry. Increasingly, in this age of accountability, governments are seeking evidence of impact and value of university education to society, yet, we find an education systems that is largely reactive in data collection and reporting rather than proactive in managing partnerships that include a commitment to the provision of WIE.

Also of critical importance is that sufficient time and resources are allocated to the explicit consideration and embedding of post-practicum experiences into curriculum and unit structures. This facilitation of post-practicum activities and processes may require a more scaffolded approach to WIL in degree programs of a non-professional nature, or a review of the structure and design of dedicated WIL units. Careful consideration is required as to how post-practicum experiences can best engage diverse student cohorts, and assist and encourage them to make meaning from their experiences. Post-practicum experiences conducted in the workplace may prove useful for programs with crowded curricula and resistance from academics to embed further WIE in degree structures. With careful design and prepared key stakeholders, post-practicum experiences can optimise student learning from WIL, extending it beyond capability development to developing awareness of their own employability and what actions they might take to help achieve their personal goals and career aspirations.

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