An Institutional Framework for Scaffolding Work-Integrated Learning Across a Degree

Bonnie Dean
University of Wollongong, Australia, bonnie_dean@uow.edu.au

Venkata Yanamandram
University of Wollongong, Australia, venkaty@uow.edu.au

Michelle J. Eady
University of Wollongong, Australia, meady@uow.edu.au

Tracey Moroney
University of Wollongong, Australia, tmoroney@uow.edu.au

Nuala O'Donnell
University of Wollongong, Australia, nuala@uow.edu.au

See next page for additional authors

Follow this and additional works at: https://ro.uow.edu.au/jutlp

An Institutional Framework for Scaffolding Work-Integrated Learning Across a Degree

Abstract

Work-Integrated Learning (WIL) is an important pedagogical strategy for developing employability skills by immersing students in real-world understandings, applications and practices. Increasingly, universities are focusing on how WIL can be scaffolded across a degree, to involve students in a variety of WIL activities in order to apply disciplinary knowledge and skills. While placement models appear to be the dominant mode of WIL that are easily recognised within a degree structure, non-placement forms of WIL while emerging, remain less visible. This conceptual paper presents an institutional framework that accounts for a range of placement and non-placement WIL activities, to make WIL practices overt across a degree. It introduces the Work-Integrated Learning Curriculum Classification (WILCC) Framework that supports a university-wide approach for developing, mapping and reporting WIL. The WILCC Framework promotes the visibility of WIL across the institution, offers a common language for WIL across disciplines, and provides a tool to scaffold WIL experiences throughout degree programs.

Keywords

Authors

Bonnie Dean, Venkata Yanamandram, Michelle J. Eady, Tracey Moroney, Nuala O'Donnell, and Tracey Glover-Chambers

Introduction

Work-Integrated Learning (WIL) is a pedagogical strategy that enables students to practise and apply their discipline knowledge and build workplace and employability skills while enrolled in their university studies. While the benefits of WIL are well established in the literature (Kramer & Usher 2011; Smith et al. 2014), the extent to which students engage in WIL varies, or at worst, may be absent during their degree. Placement forms of WIL, whereby students undertake sustained time in a workplace with an industry partner, are historically seen as the dominant form of WIL, are often integrated within vocational or accredited degrees as a mandatory activity (Patrick et al. 2009). These placement models, such as internships and co-ops, may be used as sandwich units (work placement after formal studies as part of degree) or capstones (unit in final year of studies designed to integrate and apply learning) and have been shown to have significant impact on graduate employment outcomes (Silvia et al. 2018). Increasingly though, other innovative and non-placement forms of WIL are emerging (Kay et al. 2018; Patrick et al. 2009; Universities Australia 2019a). These 'other' forms of WIL however have been difficult to classify (Universities Australia 2019a), as they may be embedded within courses, rather than a standalone course, and therefore less obvious to students or the institution as a purposeful WIL activity.

This paper introduces an institutional WIL framework to illuminate WIL activities in order to purposefully design WIL across a degree. Enhancing the visibility of WIL serves three key purposes: first, to provide information about WIL opportunities within a degree; second, as a mapping tool for a Faculty to reflect on and plan how they can scaffolded WIL across a degree; and third, for the institution to systematically gauge, report on and develop WIL activities in order to ultimately enhance the employability of students. The Work-Integrated Learning Curriculum Classification (WILCC) Framework is different from existing typologies of WIL. It takes as its foundation, a broad definition of WIL, encompassing both placement and non-placement activities, within and external to credit-bearing units. It builds on the work of Kaider et al (2017) and aligns to the delivery models articulated in the recent University Australia (2019a) audit of WIL across Australian universities.

This paper articulates the features of the WILCC Framework including its origins, theoretical foundations and features. Before this however, the authors seek to set-the-scene by presenting three scenarios from different university stakeholders to illustrate the diverse issues that emerge when WIL goes unaccounted. The paper then turns to outline evolving typologies of WIL after which a lens is placed on student learning through practice as a way to conceive a theoretical framework of WIL.

Three scenarios

The undergraduate student

Enrolled in a Bachelor course, Mary, an undergraduate student, goes through her degree doing well in her studies. By her third and final year, she is relatively confident in writing an essay and has worked out the best ways to practise and study for the final exam, scoring *High Distinctions (A+ grades)* in three of the four subjects in her final semester. After graduation, she is interviewed by several organisations and is successfully recruited into a small-to-medium enterprise within the vicinity of her home. She is thrilled that all her hard work and years of studying at university have paid off. However, the first day of her first ever professional job – is a day of anxiety and surprise – as it is also the first time that Mary has stepped foot into a workplace to practise her occupation. With her high grades and a Bachelor degree, management sees her as a specialist in this field and

proceeds to set work targets based on this expectation. Mary begins to question whether she has made the right decision to pursue this career. With no prior professional workplace experiences to learn from, Mary has trouble trying to figure out which theories she should be using or how what she knows from university studies is going to be helpful in her new job.

The subject coordinator

Having taught and coordinated undergraduate and postgraduate courses for ten years, Paul, a subject coordinator has spent the last two years really focusing on getting his students prepared for careers beyond graduation. Paul has nurtured strong relationships with industry and works hard to maintain his professional networks, memberships and knowledge of changes in the field. Two years ago, with the help of an industry partner, Paul designed an activity into his second-year undergraduate subject that enables students to work on a real industry problem. Each semester, the industry partner or 'client' comes into class in Week 2 and presents the dilemma that their organisation is currently facing. In teams, students conduct empirical research, studying the industry and legislation in order to analyse multiple sources to develop a proposal for the best way to address the problem. During the semester, all students are taken on a field trip to the organisation to test ideas and ask employees questions to ensure their proposals are feasible and relevant. Each team presents their proposal back to the 'client' in Week 12 of semester. For Paul, there's a considerable time investment in this activity and yet he feels his efforts largely go unnoticed by the Faculty. Although his teacher evaluation scores are always quite high, no one really knows what Paul does inside his classroom, other than the students, three of whom have landed jobs after their pitch was taken up by the partnering organisation.

The Deputy Vice-Chancellor Education (DVCE)

Overseeing the daily operations of core educational activities in the university, Radhika, the Deputy Vice-Chancellor for Education (DVCE) is committed to ensuring students receive high quality education that includes being workplace ready. Radhika understands that the world of work is changing and wants to ensure students have equitable access to authentic work opportunities during their studies. She has oversight of the student services division that includes student welfare and career support. Through the reporting features of these services, Radhika gains a picture of the numbers and demographics of students accessing careers advice, attending events and retrieving resources. Building students' workplace readiness and developing strong industry partnerships has been at the forefront of the university's employability strategy which includes increasing student access to work integrated learning. Although she is aware there are good WIL practices happening in various degree programs, it has been difficult to access any comparative data on the degree to which different disciplines include WIL in their programs. From the outset, Radhika is not sure WIL even means the same thing in each Faculty at her institution.

These three scenarios are not unique and although fictional, are based on real narratives that problematise WIL in the higher educational landscape. The unmapped and unnoticed WIL activities that take place inside curriculum could instead present opportunities for different stakeholders if made visible. One of the most contentious issues to developing any framework for WIL, is systematically classifying WIL so that it may be effective across diverse disciplinary discourses and practices.

Typologies of WIL

The evolution of WIL typologies over the last decade represents a move away from a narrow conception of WIL as 'work placements' to a much broader and widening lens of WIL. One of the earlier typologies of WIL is offered by Cooper, Orrell and Bowden (2010) who present three models of WIL: *professional programmes*, *service learning* and *cooperative learning*. Each of these models transpires experientially *in situ*, where student learning resides in workplaces that operate in organisational, industrial or community contexts. Each mode of WIL is therefore a type of 'placement'. Similarly, Sattler (2011) delineates a typology to explain the different types of WIL experiences, including: *systematic training* (e.g., apprenticeships); *the structured work experience* (e.g., field experience, mandatory professional practice, co-op and internships); and *institutional partnerships* (e.g., applied projects, service learning). This typology is based on activities 'on-site' and always includes an industry partner, however it features project-based learning which is not delivered in single block placement but rather runs concurrently with course material.

Around this time, Patrick and colleagues (2009) unearthed a broad range of approaches to WIL that extended beyond placements. Problematising what is and is not WIL, Rowe, Wincher-Seeto and Mackaway (2012) suggest that the boundaries are often unclear because of the complexity of the many variables and understandings of WIL. Their simplified typology opens up WIL and offers the broad domains of 'on campus' and 'off campus' WIL activities.

Thinking forward into the future places and space of WIL, Kay and colleagues (2018) identify five innovative models that are growing within the WIL sector given advancements in technology, globalisation and creative partnerships with industry. These innovative models include: *micro-placements, online projects or placements, competitions such as hackathons, incubators or start-ups and consulting*. Again, these innovative models indicate that WIL includes and extends placement activities and suggests that any typology of WIL needs to consider both placement and non-placement types of WIL.

Issues with cross-disciplinary typologies of WIL

Caution is recommended when using nomenclature such as WIL 'types' (e.g. internship, field work, simulations) across disciplinary discursive and practice boundaries to categorise WIL. As Edwards et al. (2015, p. iv) argues, "[t]he definitions developed by universities for describing WIL are relatively similar across Australia, although there are differences in terminology used to label such activities." To this end, Coll and Zegwaard (2012) argue for a classification based on the defining features of WIL, rather than specific modes or models of WIL. Recently, two typologies of WIL have surfaced that avoid classification based on WIL types, looking more holistically at the subject/unit or the programme in which WIL resides.

The first typology is offered by Kaider, Hains-Wesson and Young (2017) who examine the degree to which assessment or activity inside a unit (subject) is proximal to the workplace or practitioners and is an authentic piece that resembles professional practice. Through these two dimensions – proximity and authenticity – a WIL activity type can then be named. For example, activities that have high-proximity and low-authenticity may include observations or job shadowing on site. Activities that have medium levels of proximity and high authenticity may include simulations, studios or projects with industry partners. This authenticity-proximity framework has also been overlaid with exemplars of activities that could take place across three stages of university education. *Introductory WIL* describes learning activities without industry involvement, for example case

studies and role plays and can vary in degrees of proximity and authenticity. *Second and third-year WIL* are defined as activities with industry involvement, such as projects for organisation or field trips. These are mostly medium to high levels of authenticity and proximity. Finally, *WIL Placements* are those activities within host organisations, including placements and service learning with high-proximity and high-authenticity.

Kaider et al.'s (2017) authenticity-proximity framework that avoids classifying WIL by 'types' is useful for three main reasons. First, it focuses on smaller units of WIL such as activities and assessments that take place inside the curriculum, suggesting that WIL can occur in any subject and not only those wholly dedicated to WIL. Second, it is not discipline specific, it is a WIL framework that could possibly be used across an institution. Third, by examining smaller units of WIL it becomes possible to start imagining ways WIL can be scaffolded across a degree program.

The authors claim this typology works as a resource for developing WIL as well as a tool for categorisation and analysis. However, by naming the categories according to year, it may be limited by suggesting certain activities reside in specific phases of university study. This could potentially conflict with degree programs that include placements in second year or field trips in final year or for students who are in a mixed progression grid.

The second typology was coined by Universities Australia (2019a; 2019b), the national higher education body for the advancement, support and promotion of Australian universities. The typology was employed in 2017 as a data collection mechanism to survey the scope and landscape of WIL across the 39 Australian Higher Education Institutions. The typology categories included *placement, project, fieldwork, simulation* or *other WIL activities*. It also requested information on the delivery of WIL activities:

- *Work Experience in Industry* – a unit/subject wholly devoted to WIL activity
- *Full WIL* – A unit/subject with 50% or more workload of WIL
- *Embedded WIL* – A unit/subject partitaly devoted to WIL, less than 50%
- *Extra-curricular WIL* – WIL activities outside a unit/subject

Through this typology, results showed that in 2017 over half a million (555,403) students at Australian universities participated in WIL activities (Universities Australia 2019b). Interestingly and solidifying the broad nature of WIL, 57% of these WIL activities were non-placement WIL. Therefore, while placements represent the largest WIL activity type in Australian universities (43%), a significant portion of WIL is not being undertaken as sustained periods of time in workplace sites (Universities Australia 2019b).

The Universities Australia (2019a; 2019b) typology is helpful as it articulates a way in which WIL might be reported based on looking at the WIL activities within a unit/subject (WEI, Full WIL and Embedded WIL) or outside a credit-bearing unit/subject (Extra-curricular). Because degree programs are based on the completion of a specific number of subjects, classifying subjects based on their WIL is useful to make WIL visible and to scaffold WIL across a program of study. Further, if Universities Australia were to return to conduct future audits, it would be advantageous to align to this typology so that information could be easily retrieved. There is a limitation though in using this typology directly, as the category of *Embedded WIL* appears to be quite broad, overlooking the introductory activities that Kaider et al (2017) highlight.

What remains to be realised is a framework that could be used to classify and report on all WIL activities, in every degree program, in every year, at the subject level, which draws on the strengths

of these two typologies. As suggested earlier, there are challenges when relying on 'types' of activities to classify WIL, as such models that fail to account for the multiple WIL discourses and practices. As WIL, fundamentally, is about student learning that is integrated with work and work practice, wouldn't it be useful to examine what it is that students *do in WIL* to help shape a WIL classification structure? A pedagogical framework such as this would be grounded in theories of learning, work and practice.

Learning through practice

While conceptions of learning in education and the workplace have been described through dichotomous concepts of formal (education) and informal (workplace) learning (Marsick 2009), Billett (2009) suggests that learning in WIL is better framed as *learning through practice*. Drawing on social learning theorists, this notion suggests that people only ever learn in practice (Lave 1996). For Billett (2010, p. 2), practice or praxis in a work context is "that which occurs through the usual or everyday exercise of the occupation. The enactment of the kinds of activities and interactions that constitutes the occupation". There is no privileging of particular settings as sites of learning. For students undergoing WIL, learning practices refer to the activities and interactions that students participate in that form part of the organised WIL program. These include practices of work in industry, simulated or classroom settings, whereby students are enacting the activities typical of the discipline, as well as practices of pedagogy, such as reflecting orally or in writing as prompted by the educator or workplace supervisor or engaging in content material.

Eames and Coll (2010) explore learning through practice and what that means for students in educational programs such as WIL. They propose that each setting on its own is insufficient to develop the kinds of learning that are required for effective occupational practice. According to Eames and Coll (2010, p. 192),

> *The real strength of cooperative education as a strategy of practice-based learning is not that students gain opportunities to learn in the classroom and in the workplace, but that these opportunities are fostered and integrated to create learning that is more than the sum of the two parts. This helps the learners to find their place in the world and to understand how to shape the future, which are true measures of education.*

Therefore, Eames and Coll (2010) suggest learning through practice is about *what students do*, in both the work and educational sites. They highlight how the two settings are integrated to enrich student learning by practising work and engaging in processes of personal reflection, often with the teacher's guidance.

By synthesising these notions - learning through practice as what students do across workplace and educational sites - a framework for classifying WIL could be developed in a way that avoids use of WIL types or allocation of activities into certain degree stages. It could also enable the scaffolding of activities across a course. Scaffolding is the theory and practice of a more experienced person (e.g. teacher) supporting learners to develop skills with the provision of greater autonomy over time (Amerian & Mehri 2014). Scaffolding WIL across a degree therefore suggests a movement from close teacher-interventions and support for learning of discipline knowledge and skills, towards greater opportunities for students to practise and learn more independently, such as in workspaces, through independent research or in industry projects. The section below introduces an approach

taken by one university to develop an institutional framework for classifying WIL to enable the scaffolding of WIL across a degree.

A university-wide approach to WIL

There is value to undertaking an institutional approach to WIL (Brown 2010; Dean et al. 2020) as a pedagogy to integrate into teaching and learning practices (Workman 2011). An institutional approach, however, requires vision and leadership, as Cooper, Orrell & Bowden (2010, p. 29) articulate:

> *...if work integrated learning initiatives are to be successful, the initial and primary concern of institutional leadership must begin with an understanding that the leaders' role is to ensure that all key stakeholders embrace or support the vision or direction for development.*

At the University of Wollongong, Australia, our vision is to ensure that every student has real-world, inquiry-led learning opportunities. Our aim is to provide every UOW student with the opportunity to engage in a variety of scaffolded, purposefully designed and learner-centred WIL experiences within their degree.

In order to achieve this objective, an institutional governance structure overseen by the UOW WIL Advisory Committee was established comprising representation from all five faculties and key units across the institution. One of the first tasks of the committee was to provide a unified vision and definition of WIL, as a step towards establishing a university-wide common WIL discourse. After wide collaboration and consultation, alignment with scholarship and professional networks, and consideration for the UOW context of teaching and learning, a definition was proposed and endorsed. The UOW (2020) definition of WIL is:

> *Work-Integrated Learning (WIL) describes activities that integrate work practices with learning in an academic institution. Through WIL, students undertake authentic, experiential learning relevant to their program of study. WIL may occur in person or remotely, in a physical or simulated workplace, or in the classroom. It includes practicums, placements, internships, service learning, industry projects and experience, workplace simulations and professional activities.*
>
> *WIL activities at UOW: are purposefully designed; are informed by design principles; draws on industry expertise, where relevant; foster opportunities for reflection and engaged feedback; and shape and support students' career goals through alignment of activity with career development frameworks.*
>
> *While the nature, scope and extent of WIL may vary considerably across the institution, WIL is classified into five clusters: Co-curricular WIL, Foundational WIL, Embedded WIL, Applied WIL and Professional WIL.*

Consistent with industry and national understandings of WIL, this definition opens the space for placement and non-placement WIL activities. It connects to pedagogical design principles for WIL such as being purposefully designed (ACEN 2015; Kramer & Usher 2011; Orrell 2011; Patrick et al. 2009; Sattler & Peters 2013) and the role of reflection and feedback within WIL activities to better integrate work and educational learning practices (Eames & Coll 2010). The definition also

clearly links to the role of WIL for developing employability skills and career readiness, by pointing to the alignment of WIL activities with career development frameworks. The remainder of the paper focuses on the classification of WIL activities into clusters based on the development of a framework, which has enabled the University to foster, embed, report and develop WIL.

Purposes and foundations of the WILCC Framework

The WILCC Framework was designed to meet several interrelated purposes:

1. *to enable the institution* to enhance the employability of UOW students; set goals relating to enhancing WIL; audit and report on current WIL activities according to specific categories; monitor changes or improvements over time; and capture data that are aligned to UA's external reporting measures, thereby enabling consistent and comparable data against that being collected across Australian institutions;
2. *to assist schools and/or faculties* to map various WIL activities across subjects or degrees; scaffold WIL activities across a degree program; and identify gaps and opportunities for WIL activities; and
3. *to support subject or course coordinators or program designers* to evaluate current WIL activities; set goals for enhancing WIL opportunities; and enhance relevant and quality learning opportunities for students to intellectually and practically engage in their chosen professions.

The purpose of the WILCC Framework is not to change ingrained disciplinary discourses around WIL, as historically embedded discourses particularly in vocational degrees or those with external accreditation bodies will use language inherited from these authorities. Instead, the aim of the WILCC Framework is to coin an institutional language for the reporting and development of WIL throughout all courses that will enhance the visibility of both placement and non-placement WIL activities within the curriculum. In order to weave the WILCC Framework into the fabric of institutional reporting and curriculum development, it has been designed so that it may:

- Focus on making visible WIL activities at the subject (unit) level
- Provide a framework for scaffolding a variety of WIL activities across a course
- Be embedded into subject reporting structures through the institution's online subject management system
- Feature as a core curriculum element in new and existing subject and course reviews and proposals
- Be simple to use and understand for subject coordinators, administrators, Academic Program Directors and other stakeholders.

The WILCC Framework draws out WIL activities embedded within subjects as well as WIL experiences that comprise the whole subject. Table 1 demonstrates the WILCC Framework's alignment with Kaider et al. (2017) and Universities Australia's (2019a) typologies.

Table 1. *WILCC Framework aligned with UA (2019) and Kaider et al. (2017)*

Kaider, Hains-Wesson & Young (2017) typology	UOW WILCC Framework	Universities Australia delivery modes
(N/A)	*Co-curricular WIL*	Extra-curricular WIL
Introductory WIL	*Foundational WIL*	Embedded WIL
2nd & 3rd Year WIL	*Embedded WIL*	
	Applied WIL	Full WIL
WIL Placements	*Professional WIL*	Work experience in industry (WEI)

WIL Curriculum Classification (WILCC) Framework

The WILCC Framework comprises five classifications that group WIL activities according to similar student learning practices. The first classification sits outside a credit-bearing subject and can include co-curricular or extra-curricular activities. The remaining four classifications are based on what takes place within a credit-bearing subject (or unit). Below are descriptions of the five classifications, after which several provisions are outlined and defining features of the WILCC framework are highlighted.

Co-curricular WIL

Co-curricular WIL describes coordinated activities that take place outside a formal credit-bearing subject yet are an extension of the course learning experiences. These activities are purposefully designed to include opportunities for career development learning, reflection and dialogue around feedback in order to encourage students to think about their careers and professional identities. The program must be endorsed or approved by the institution. This category of WIL is typically recorded as part of a student's portfolio or on their academic transcript. Co-curricular WIL activities display medium to high levels of authenticity and low, medium or high levels of proximity to a workplace. Co-curricular WIL activities may involve intentional teacher or leader facilitated sessions and may be programs specific to a disciple or across disciplines.

Foundational WIL

Foundational WIL describes activities within a credit-bearing subject that encourage students to observe, explore, analyse or reflect on theory in practice. Students do not directly engage with the practice of work (either in a workplace or simulation). These activities are purposefully designed to incorporate career development learning, reflection and dialogue around feedback in order to guide students' learning about the discipline as well as their own developing identities, concepts, skills, ethics and aptitudes. Foundational WIL activities display medium to high levels of authenticity however may include low, medium or high levels of proximity to a workplace. Foundational WIL activities take place within or around formal classes such as lectures, tutorials, workshops or labs.

Students engaged in foundational WIL are supported by high levels of peer-to-peer and peer-to-facilitator interactions, however, may or may not interact directly with an industry professional.

Embedded WIL

Embedded WIL describes activities within a formal credit-bearing subject that provide students opportunities to practise and critically reflect on a chosen discipline, engaging directly in work practices through simulations, workplace or work-based activities. In subjects with Embedded WIL, WIL activities compliment the learning of discipline knowledge, where the contact hours in the WIL activity/activities *are less than* the contact hours spent in formal classes such as lectures, tutorials or workshops without WIL activities. Embedded WIL activities display medium to high levels of authenticity and low to high levels of proximity to a workplace. Embedded WIL activities engage students independently or in groups and may or may not involve interactions with industry/community professionals.

Applied WIL

Applied WIL describes activities within a credit-bearing subject that provide students opportunities to practise and reflect on a profession. In subjects with Applied WIL, students regularly engage in professional practices through authentic workplace or work-based activities, where the contact hours in the WIL activities *are more or equal to* the contact hours spent in formal classes such as lectures, tutorials or workshops without WIL activities. Applied WIL subjects typically display high levels of authenticity and medium to high levels of proximity to a workplace. Applied WIL subjects engage students independently or in groups, to participate in professional practices which involve interactions with industry/community professionals.

Professional WIL

Professional WIL subjects are wholly devoted to WIL and are often a degree requirement. Professional WIL describes activities within a credit-bearing subject (or non-credit bearing if specifically required by an external accrediting body) and provides students opportunities to practise and reflect on work through substantial time in a workplace. Professional WIL experiences display high levels of authenticity and high levels of proximity to a workplace. During these practical experiences, students receive guidance, supervision and feedback from the organisation host. Students are also supported by teaching staff or coordinators throughout the experience, for example in briefing/debriefing, assessment, feedback or other support sessions. Students may also participate in a range of complimentary activities to integrate their learning with work practice, within or alongside their workplace experiences, such as workplace workshops or online activities.

Table 2: *WILCC Framework summary*

UOW WIL classifications	Key criteria	Examples
Co-curricular WIL	✔ Not within a credit-bearing subject ✔ Endorsed by institution ✔ Career development learning ✔ Reflection & engaged feedback ✔ Leader or teacher facilitated	Entrepreneurial or employability-based programs.
Foundational WIL	✔ No direct participation in work practices ✔ Career development learning ✔ Reflection & engaged feedback	Field trips, authentic case studies, career development modules, job shadowing.
Embedded WIL	✔ Direct participation in work practices: either in simulation, workplace or work-based activity ✔ Less contact hours in workplace or work-based activities compared to formal classes ✔ Career development learning ✔ Reflection & engaged feedback	Workplace simulations or role play, lab work, small industry projects.
Applied WIL	✔ Direct participation in work practices: in either workplace or work-based activity ✔ More or equivalent contact hours in workplace or work-based activities compared to formal classes ✔ Career development learning ✔ Reflection & engaged feedback ✔ Industry/ community partner interaction and feedback	Internships, placements or significant industry projects.
Professional WIL	✔ Whole subject if WIL focused ✔ Sustained workplace time ✔ Career development learning ✔ Reflection & engaged feedback ✔ Guidance, supervision and feedback from industry/ community partners ✔ Support from teachers/coordinators (briefing/debriefing/feedback/assessment)	Practicums, independent research projects, placements and professional experiences over sustained periods of time.

Defining features of the WILCC Framework

The WILCC Framework is different from other typologies of WIL in several ways. These include: a classification variable based on students' learning practices rather than activity-type; a desegregated focus on career development learning; and, the central role of reflection and feedback.

Learning practices, not activity-type

A key distinction between the WIL classifications is that it focuses on *what the student does* by learning through practice (Billet 2009; Eames & Coll 2010). From Foundational WIL to Professional WIL, there is a gradient of increasing authenticity of engagement in performing or doing work practices. For example, in Foundational WIL, students are introduced and exposed to work through opportunities to observe, explore, analyse or reflect on their discipline in practice. They don't, however, directly participate in work practices. In the categories of Embedded WIL and Applied WIL, students directly participate in work or work-based practices in simulated, online or off-

campus contexts. In Professional WIL, students perform work practices in a community or industry workplace. This emphasis on *what the student does* avoids classifying WIL based on a 'type' of activity (e.g. placement, internship, field work).

Career Development Learning

A central tenet of the UOW WIL definition and WILCC Framework is the integration of Career Development Learning (CDL) within WIL experiences and across discipline subjects (McIlveen et al., 2011). This integration assists students to link their learning to lifelong career management and employability skills by providing students opportunities for raising self-awareness around themselves and possible career opportunities (Dacre Pool & Sewell 2007). The importance of explicitly integrating career development, career readiness and career management skills in employability practices, is evidenced by the growth in career education research in the last 10 years, particularly in the United Kingdom through the Higher Education Academy. CDL can offer students an accessible structure to create ownership and agency over their career futures.

Reflection and engaged feedback

The final defining feature of the WILCC Framework is the articulation of reflection and engaged feedback as crucial to learning processes within each classification. Reflection is widely recognised more broadly in the higher education domain for its contribution to learning through experience (Moon 2004). In WIL pedagogy, reflection can aid the development of academic learning, skills development and lifelong learning (Harvey et al. 2010), when supported through the provision of explicit explanation and guidance to students on the purpose and role of reflection for learning (Dean et al. 2012). While there are diverse modes in which students may participate in reflection (Harvey et al. 2016), what remains important is the alignment of curriculum, reflection and experience for enabling student learning (Harvey et al. 2010). Additionally, the role of feedback in promoting student learning in higher education is well recognised. Engaged feedback in WIL refers to the fostering of open dialogue around learning and students' skills or practice, in order to facilitate the enhancement of future learning and performance (Boud & Molloy 2013). Engaged feedback is linked to enhanced readiness for lives and careers beyond graduation (Hounsell 2007). Taken altogether, reflection, opportunities for discussion around feedback and career development learning are considered important pedagogical design elements in subjects that feature WIL activities.

Conclusion

This paper presented how an Australian university established their institutional understanding of WIL and developed a framework to make WIL activities visible across all degree programs. To date, a university-wide framework such as this has not been deployed elsewhere. The approach espoused an intentionally broad definition, distinguished by (1) students' learning practices rather than as categories that name activity type, (2) the integration of career development learning within WIL experiences and across discipline subjects, and (3) student engagement in processes of reflection and engaged feedback, in what the authors refer to as the WILCC Framework.

The WILCC Framework is currently being utilised across all subjects to map WIL across the university. By mapping each subject, the Framework serves as a tool for reflection, development and planning for subject coordinators, academic program directors or Faculty education committees, to scaffold WIL and provide students with a variety of engaging, real-world experiences. The WILCC Framework is also embedded in university procedures for new subjects and course

proposals, and course reviews and is being used by academics and leaders in various capacities across the institution. This paper has focused on the conceptual framework and as such has not offered examples of course mapping using the framework. Being an introduction to a conceptual model, this paper is also limited to long-term evaluation of impact however future research will address this. Future research will expand on the implementation, evaluation and use of the framework in practice. In turn, this will include reflecting on the benefits of the framework for various stakeholders including the impact on student employability. The institution will continue to progress WIL strategically through the WIL Advisory Committee and use the WILCC Framework for future projects around evaluation and resourcing of WIL.

Acknowledgments

References

ACEN 2015, *National Strategy on Work Integrated Learning in University Education,* viewed 19th December 2019, http://cdn1.acen.edu.au/wp-content/uploads/2015/03/National-WIL-Strategy-in-university-education-032015.pdf

Amerian, M & Mehri, E 2014, 'Scaffolding in sociocultural theory: definition, steps, features, conditions, tools and effective considerations', *Scientific Journal of Review,* vol. 3, no. 7, pp 756-765.

Billett, S 2009, 'Realising the educational worth of integrating work experiences in higher education', *Studies in Higher Education,* vol. 34, no 7, pp. 827-843.

Billett, S 2010, *Learning through practice: models, traditions, orientations and approaches,* New York: Springer.

Boud, D & Molloy, E 2013, 'Rethinking models of feedback for learning: the challenge of design', *Assessment & Evaluation in Higher Education,* vol. 38, no. 6, pp. 698-712.

Brown, N 2010, 'WIL[ling] to share: an institutional conversation to guide policy and practice in work-integrated learning', *Higher Education Research & development*, vol. 29, no. 5, pp. 507-518.

Coll, RK & Zegwaard, K 2012, 'An international perspective of cooperative and work integrated education: A synthesis of theme from the second edition of the international handbook for cooperative and work-integrated education', *Collaborative education: Investing in the future.* Proceedings from the ACEN national Conference, Deakin University Geelong, pp. 42-26.

Cooper, L, Orrell, J & Bowden, M 2010, *Work Integrated Learning: A guide to effective practice*, London: Routledge.

Dacre Pool, L & Sewell, P 2007, 'The key to employability: developing a practical model of graduate employability', *Education and Training,* vol. 49, no. 4, pp. 277-289.

Dean, BA, Sykes, C, Agostinho, S & Clements, M 2012, 'Reflective assessment in work-integrated learning: to structure or not to structure, that was our question', *Asia-Pacific Journal of Cooperative Education*, vol. 13, no. 2, pp. 103-113.

Dean, BA, Eady, MJ, Yanamandram, V, O'Donnell, N, Moroney, T & Glover-Chambers, T 2020, 'Leadership that supports an institutional approach to WIL', in S Ferns, A Rowe & K Zegwaard (eds), *Advances in Research, Theory and Practice in Work-Integrated*

Learning: Enhancing Employability for a Sustainable Future, Routledge, New York (in press).

Eames, C & Coll, RK 2010, 'Cooperative education: Integrating classroom and workplace learning', in Billett S, (Ed.), *Learning Through Practice, Professional and Practice-based Learning,* pp. 180-196. Dordrecht, Netherlands: Springer.

Edwards, D, Perkins, K, Pearce, J & Hong, J 2015, *Work Integrated Learning in STEM in Australian Universities [Final report submitted to the Office of the Chief Scientist*], Canberra, ACT: Australian Council for Educational Research.

Harvey, M, Coulson, D, Mackaway, J, Winchester-Seeto, T 2010, 'Aligning reflection in the cooperative education curriculum', *Asia-Pacific Journal of Cooperative Education*, vol. 11, no. 3, pp. 137-152.

Harvey, M, Walkerden, G, Semple, AL, McLachlan, K, Lloyd, K and Baker, M 2016, 'A song and a dance: Being inclusive and creative in practicing and documenting reflection for learning', *Journal of University Teaching & Learning Practice*, vol. 13, no. 2, pp. 1-17.

Hounsell, D 2007, 'Towards more sustainable feedback to students', in Boud, D. & N. Falchikov, (Eds.), *Rethinking assessment in higher education,* pp. 101–113. London, UK: Routledge.

Kaider, F, Hains-Wesson, R & Young, K 2017, 'Typology of authentic WIL activities and assessment', *Asia-Pacific Journal of Cooperative Education*, vol 18, no.2, pp. 153-165.

Kay, J, Ferns, S, Russell, L & Smith, J 2018, *Expanding work integrated learning (WIL) possibilities: enhancing student employability through innovative WIL models*. RMIT, VIC: Australian Technology Network.

Kramer, M & Usher A 2011, *Work-Integrated Learning and Career-Ready Students: Examining the Evidence*, Toronto: Higher Education Strategy Associates.

Lave, J 1996, 'Teaching as learning in practice', *Mind, Culture and Activity,* vol. 3, no. 3, pp 149-164.

Marsick, VJ 2009, 'Toward a unifying framework to support informal learning theory, research and practice', *Journal of Workplace Learning,* vol 21, no. 4, pp. 265-275.

McIlveen, P, Brooks, S, Lichtenberg, A, Smith, M, Torjul, P & Tyler, J 2011, 'Career development learning frameworks for work-integrated learning', in Billett, S & A Henderson (Eds.), *Developing learning professionals: integrating experiences in university and practice settings,* pp. 149-165. Dordrecht: Springer.

Moon, J 2004, *A handbook of reflective and experiential learning: Theory and practice.* London, UK: Routledge Falmer.

Orrell, J 2011, *Good practices report: work-integrated learning*. Strawberry Hills, NSW: Australian Learning and Teaching Council.

Patrick, CJ, Peach, D, Pocknee, C, Webb, F, Fletcher, M, Pretto, G 2009, *The WIL [Work Integrated Learning] report: A national scoping study*. Brisbane: Australian Learning and Teaching Council.

Rowe, A, Winchester-Seeto, T & Mackaway, J 2012, 'That's not really WIL!: Building a typology of WIL and related activities, Proceedings of the ACEN 2012 National Conference, viewed 05 May 2019, http://acen.edu.au/2012conference/proceedings

Sattler, P 2011, W*ork-Integrated Learning in Ontario's Postsecondary Sector*. Toronto: Higher Education Quality Council of Ontario.

Sattler, P, & Peters, J 2013, *Work-Integrated Learning in Ontario's Postsecondary Sector: The Experience of Ontario Graduates*. Toronto: Higher Education Quality Council of Ontario.

Silva, P, Lopes, B, Costa, M, Melo, AI, Dias, GP, Brito, E & Seabra, D 2018, 'The million-dollar question: can internships boost employment? *Studies in Higher Education*, vol. 43, no. 1, pp. 2-21.

Smith, C, Ferns, S, Russell, L, Cretchley, P 2014, *The Impact of Work Integrate Learning on Student Work- Readiness*. Sydney: Office for Learning and Teaching.

Universities Australia 2019a, *Work Integrated Learning in Universities: Final Report*. Deakin, ACT: Universities Australia.

Universities Australia 2019b, *Career Ready Graduates*. Deakin, ACT: Universities Australia.

University of Wollongong 2020, *Work Integrated Learning*, viewed 31st January 2020, https://www.uow.edu.au/about/learning-teaching/curriculum-transformation/work-integrated-learning/

Workman, B 2011, 'Extending and embedding work-based learning across the university: Change strategies in action', *Higher Education, Skills and Work-Based Learning*, vol. 1, no. 2, pp. 106-117.