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An institutional framework to guide the comparison of work-integrated learning types

Mollie Dollinger[1] and Jason Brown[1]

molliedollinger@gmail.com; jason.brown@latrobe.edu.au

Corresponding author: Mollie Dollinger
[1]La Trobe University

Abstract

Work-based placements, site visits, field trips and embedded industry-informed curriculum are employability strategies frequently applied by universities, and clustered under the umbrella term – work-integrated learning (WIL). Referring to each of these strategies as WIL can complicate comparisons (e.g. long-term placements vs. field trips) and can lead WIL related research to diverge in multiple directions. To support comparison and help guide institutional decision-making relating to WIL, the positioning of this article aligns with a recent stream of literature that attempts to outline, contrast and differentiate between various activities aimed at enhancing graduate employability. Four distinct WIL case studies from three Australian universities are described in this article: (a) students working in teams with industry partners (n=23), (b) students co-creating learning resources (n=7), (c) a student-staff partnership (n=2), and (d) students acting as peer-learning advisors (n=5). The cases were considered across five key factors: 1) ease of implementation, 2) barriers, 3) scalability, 4) authenticity, and 5) proximity. Using empirical data, the findings within the article contribute an institutional framework that highlights the benefits and drawbacks associated with differences across WIL types, intended to support good WIL practice among administrators, teachers and staff.

Keywords: work-integrated learning, student employability, higher education, graduate outcomes, work-based learning

Introduction

The Australian government recently indicated that it intends to introduce performance measures that will determine partial funding of the higher education sector related to the transparency, accountability, affordability and responsiveness to the aspirations of students and future workforce needs (Higher Education Reform Package, 2017). The Department of Education and Training (DET) further echoed that university funding will be assessed based on performance objectives such as low attrition, enrolment and completion of students from a low socio economic status (SES), as well as workforce preparedness of graduates (DET, 2018). However, the details about how future workforce needs and the workforce preparedness of graduates will be assessed are yet to emerge. Will performance measures evaluate university curriculum, co-curricular opportunities, internships, and/or job placements of graduates? Furthermore, it is unclear whether performance measures will account for students' previous work experience or social capital, and whether both domestic and international student workforce preparedness will contribute to the overall assessment. What is clear from the announcement, is that the notion of 'graduate employability' and the subsequent mechanisms to measure employability are to grow in prominence and importance.

While employability is generally accepted as an integral part of the student experience in higher education (Harvey, 2005; Morley, 2001), the term has been plagued by issues relating to measurement since its inception. Starting in the 1970s, the British higher education system

frequently relied on league tables to shed insight into graduate employability through measures on first destinations of university graduates (Taylor, 1986). Yet while this measure is still used today, for example in the Graduate Outcomes Survey (Guthrie & Edge, 2014; QILT, 2017), there are problems with using first destination as the proxy for employability. For example, non-responders may be significantly different from those graduates that do respond, and short-term ability to gain employment does not necessarily indicate the potential to have long-term job success (Taylor, 1986). Harvey (2001) writes that while employment rates of graduates are often considered to be the 'magic bullet' for measuring employability, they are not appropriate, nor nuanced, measures. This is due to two issues. The first is that the measure of 'first destination' does not adequately take into account the responsibilities of the university. For example, the measure does not incorporate the curricular and/or co-curricular interventions that were used to develop students' employability attributes, such as opportunities for students to participate in work-based learning placements (Harvey, 2001). By solely measuring the first destination of the graduate, we overlook that employability is a shared responsibility between the institution and the student/graduate. The second issue is that the measure of first destination does not consider the numerous environmental and contextual factors (e.g. labour markets, location), as well as personal experiences of the student before entering university that are likely to impact the graduate's first job. This second aspect, rather than highlighting the responsibility of the university, emphasises factors that may be out of the university's control (Oliver, 2015). Therefore, taking a step back, we can see that measuring graduate employability is complex terrain. If the government seeks to link funding to the workforce preparedness of graduates, we will first need to better understand what the appropriate measures are for assessing universities' responsiveness to the aspirations of students and future workforce needs.

One area that could be used to understand the university's specific role in preparing graduates for work is that of work-integrated learning (WIL). WIL is a broad term that includes various activities or types of WIL, such as work-based placements, field trips, and embedded curriculum interventions. Consistent across WIL types is the intent of the university to support graduate employability through opportunities to develop and apply generic and transferable skills (McLennan & Keating, 2008). Future measures of workforce preparedness of graduates could measure various indicators relating to WIL such as number of students who participated in a WIL activity (or type) and students' perceptions of the quality of the experience. However, alongside these measures, institutions will also need a framework to develop and assess various WIL types in relation to their costs and benefits. To address this need, in this article we will introduce an institutional framework to help guide the comparison of WIL types across five key factors: 1) ease of implementation, 2) barriers, 3) scalability, 4) authenticity, and 5) proximity. The article aligns with previous research that has aimed to help compare and distinguish various types of WIL (e.g. Jackson, 2015; Oliver, 2015). We will use the framework to compare four distinct case studies of WIL to showcase how the framework could help support institutional decision-making across types. Case studies include: (a) a WIL subject with an industry (i.e. external) placement, (b) a subject where students co-create learning resources to support employability attributes (i.e. no placement), (c) a student-staff co-curricular partnership, and (d) students acting as peer learning advisors (PLA) in a co-curricular environment. Through the various types, discussion will highlight the different approaches universities can consider when developing or expanding WIL opportunities in the future.

Various types of WIL

Work-integrated learning (WIL) is a term used by universities to describe a *range of approaches and strategies that integrate theory with practice of work within a purposefully designed curriculum* (Patrick et al., 2008, p. iv). Key in this definition is the emphasis on WIL as being designed purposefully by the university. Therefore, unlike other indicators of graduate employability (e.g. social capital), WIL is something that universities can offer to help students

become more workforce ready. While WIL is not a new concept in higher education, it is becoming increasingly widespread (Brown, 2010; Patrick et al., 2008). Factors such as the massification of higher education, rising student fees, and growing job automation (Gleason, 2018; Goldin & Katz, 2018; Jorre de St Jorre & Oliver, 2017; Mok & Neubauer, 2016), has meant that many students are concerned about their employment outcomes (Tomlinson, 2008; Tymon, 2013). This in turn has led to many universities rethinking how they support employability and the future careers paths of their students (Kinash, Crane, Capper, Young, & Stark, 2017). WIL is one mechanism to achieve this, as it often allows for students to gain experience in the workplace and/or grow networks which they see as important to gaining employment (Freudenberg, Cameron, & Brimble, 2010; Harris, Jones, & Coutts, 2010).

The breadth and variety of what encompasses WIL is both a strength and a determent to the term. Research is far from conclusive on the best approach to embedding employability within the student experience. Allowing for a wide range of WIL types provides a foundation for future exploration and openness to a range of student (and staff) preferences. However, the fuzziness of the term also means research relating to WIL can include various types as diverse as work placements, internships, field work, sandwich year degrees, job shadowing, cooperative education, service learning, embedded curriculum and so on, making the structure, or comparison of WIL difficult to assess (Kaider, Hains-Wesson, & Young, 2017; Von Treuer, Sturre, Keele, & McLeod, 2010). Notably, the benefits of many of these WIL types are similar, including, for example, student confidence in their workplace capabilities (Clinton & Thomas, 2011) and a deeper understanding of future job expectations and experiences (Wilton, 2012). Select research has further found that WIL may positively impact a students' academic performance by instilling motivation and maturity in students (Gamble, Patrick, & Peach, 2010). These positive outcomes, as well as students' expressed interest in employability, have elevated WIL to a new level of importance in many universities and contexts (e.g. see Shirley, Davies, Cockburn, & Carver, 2006; Staehr, Martin, & Chan, 2014). Yet research has only just begun to try to frame and compare the various types of WIL to develop graduate employability (e.g. Jackson, 2015; Oliver, 2015).

This study aimed to compare four types of WIL, while recognisng that many other various WIL types also exist. To illustrate, placements in industry are a common type of WIL (e.g. over the course of semester), but WIL can also occur on-campus, either inside (i.e. curricular) or outside of a formal subject (i.e. co-curricular). For example, students can work in partnership with staff (i.e. on-campus placement), students can co-create research and/or resources for the university, and students can work for the university, such as through various peer learning or peer mentoring programs. However, that is not to say that all work and/or volunteer opportunities offered by the university constitute WIL. Instead, what defines WIL is the intentional integration of theory (i.e. what the student has learned) with the practice of work (Patrick et al., 2008). Therefore, while this article includes two case studies of WIL that occur outside of a subject (i.e. co-curricular spaces), in both cases the university supervisor intentionally sought to create a WIL experience for students.

Methodology and sample

The data collected for this study was qualitative in nature and was compiled in accordance with ethical standards (1647289.2), obtained through a research-intensive university in Australia and extended to include data collection at two other universities. We utilised a grounded theory approach, common in qualitative exploratory studies (Glaser & Strauss, 2017), as our research perspective was that how WIL is perceived by participants (for example, through ease of implementation or barriers) is based on individual perspectives (socially constructed). To explore WIL across various types, we used a selective or purposeful sampling method through word of mouth and distributing information about the study to find relevant case studies. Once the cases were selected, all involved participants (students and staff) were invited to participate in a qualitative online survey administered through Qualtrics

and/or an interview with the lead researcher (approximately one hour in duration, with the same interviewer across all interviews). Participants were able to elect to have the interview in-person (i.e. face-to-face) or over a recorded video and/or audio chat, with most participants electing recorded video (9 out of 13 interviews). All data was stored anonymously and kept on a password protected hard-drive. To limit subjective interpretations, qualitative data was transcribed and coded by the lead researcher and an external academic. Data was thematically coded throughout the study, a process which involved listening to the audio, reading transcripts, comparing to qualitative survey results and re-coding (Creswell & Creswell, 2017). The co-coder comparison method we used (adopted from Hruschka et al., 2004) began with a random sample of responses from participants, followed by independent coding by each coder. As the number of responses was limited, we were unable to run an intercoder reliability test and instead met to discuss our codes and then co-created a codebook for future coding. We then repeated the process until the coding aligned.

The four case studies included: (a) a WIL industry placement (n=23), (b) students creating learning resources (n=7), (c) a student-staff partnership (n=2), and (d) students serving as Peer Learning Advisors - PLAs (n=5). In each case, one of the research/practice participants was the university staff member supervising and/or teaching the activity. All participants were invited to participate in both the survey and follow-up interview. While all participants chose to participate in the survey (see participation rates above), not all participants volunteered to participate in the interview: WIL industry placement (n=3), students creating learning resources (n=5), student-staff partnership (n=2), and students serving as PLAs (n=3).

Of the cases, the WIL placement and creation of learning resources counted towards course credit while the other two were co-curricular opportunities. Students were paid for their work in the student-staff partnership as well as in the PLAs. Important to note, is that the research here presents only one case study within each type of WIL and as such, the research should be considered pilot rather than conclusive. Further, while all cases included in this research took place in the Australian higher education context and all were in research-intensive universities (n=3), future research could test the framework in international contexts and/or in vocational settings (i.e. non-university settings). A summary of each of the cases is presented below.

Case 1: Work-integrated learning subject with industry placement

In this example of WIL, the subject (unit) was a management consulting subject based within a school of business that was open to business and non-business majors. To enroll in the subject, students were required to submit an application and undergo an interview. The student selection process for the subject was very competitive and each semester roughly three times more students applied than were accepted. Once enrolled, students were put into teams of four to five, based on the similarity of their grades from previous semesters. For example, all students averaging a grade of 80 per cent were grouped together and all students averaging 70 per cent were grouped together. Students were then assigned industry partners, with major global and local companies participating. The students worked with their coach (i.e. tutor) to help pitch a project to the industry partners, which the industry partners then approved. The teams spent four hours a week at the industry placement (over 11 weeks) and prepared a final report at the end of the semester.

Case 2: Work-integrated learning subject with students creating learning resources

In this subject, students could opt for traditional assessment (i.e. an individual report) or choose to be involved in a team-based project aimed to improve the employability of science students. The team-based project required students to create a video communications artifact about a disease for a non-academic audience (in this case, truck drivers). Students were from a school of science, but were paired with students from journalism to help complete the project (who also received credit, but in a different subject). Students met once a week with academic

staff from both science and journalism to check-in and also met up several times a week with each other to complete the project. All students who participated in the video were assessed based on a rubric provided by the lecturer. The project finished post-semester because the students underestimated the amount of time it was needed to complete.

Case 3: Student-staff partnership in program implementation

In this case, a PhD student studying student partnership and a professional staff member were paired, at the request of the university leadership team, to initiate a student-staff partnership program (i.e. co-curricular internal placement). They each had specific expertise to bring to the project, with the PhD student contributing knowledge of pedagogical frameworks and of partnership programs in the sector, and the professional staff member contributing expertise on project management. They worked together to encourage academic staff to design and integrate student partnership projects within their various subjects. Both the professional staff member and the PhD student were paid for their time.

Case 4: Students as peer learning advisors (PLAs)

This case was a program within a university that hired high-achieving students to serve as PLAs. These peer mentors were available for students to talk to on a drop-in basis, or students could book an appointment with a mentor based on a specific question or discipline. Mentors also ran workshops on specific topics requested by other students. Students who had worked as advisors for a long period of time helped manage the other advisors. All students in this program were paid for their time.

Factors for analysis

In this section, we will compare and contrast the four cases of WIL across five factors: ease of implementation, barriers, scalability, authenticity and proximity. This analysis builds on the existing work that has posited that WIL requires more discernment between various types (see Jackson, 2015; Oliver, 2015). Oliver (2015) argued that as WIL is often implemented as a mechanism to enhance employability, two critical factors for the analysis of WIL activities are authenticity, or how the activity resembles similar professional level challenges, and proximity, or how closely the context resembles a professional environment. From these factors, Oliver maps the indicators along two axes to create four quadrants for assessment: high level WIL, moderate level WIL, low level WIL, and not WIL. This work was further expanded with examples mapped within the quadrants by Kaider, Hains-Wesson and Young (2017). This made a critical first step towards conceptualising how WIL can be compared, and highlighted the various types of WIL. However, for WIL comparison to develop, factors that help inform an institution's perspective to initiate WIL are also needed (Kaider et al., 2017). Below, we argue that three other factors (ease of implementation, barriers, and scalability) are also important for assessing WIL types to create a total of five factors for analysis.

Ease of implementation

In an educational intervention study, Lesaux, Kieffer, Faller and Kelley (2010) defined ease of implementation as the uptake of the activity in addition to the teachers' insights. As many of the cases included here were voluntary (e.g. subjects were not required), environmental factors (e.g. promotion of the activity) may have skewed participation levels, so we used both student and teachers' perceptions of uptake ease of implementation to analyse this factor.

In all four cases we found that there was some difficulty in implementing the activity both generally and with new students each cycle (varying times across cases). Most cases had been running before the data collection for this study began. In all cases, staff said that significant institutional buy-in had been needed to support the programs at first. For example, in the case of the WIL subject with an industry placement, the program was spearheaded by a Dean who believed this was an important undergraduate experience (they had a similar

subject in the master's program already). The process towards implementation then began with a subject application and approval, as well as approval of companies that could support the students' placements. Similarly, the subject where students created learning resources not only required subject approval, but also research and curriculum design on behalf of the participating staff to support the activity for students. As these staff members did not have any external incentive to add the extra work, the impetus to initiate the activity was internal. They noted that their first attempt at the activity did not succeed and students did not complete the learning resource. In a second attempt (when this study began data collection) staff integrated a more structured approach which was deemed successful. Contrary to what the researchers expected, the case with more localised decision making (University Deans and/or leadership were less involved) was the hardest on the staff, and thus, resulted in a higher difficulty for implementation.

Ease of implementation of the co-curricular cases was smoother, but again required institutional buy-in, as budgets had to be approved and programs were tied to specific institutional strategies. From the student perspective, there was a period of confusion in all cases as they adjusted to new expectations and roles. However, confusion did not last, and many students reported feeling comfortable in their roles as time went on.

Ease of implementation also relates to uptake. As the WIL placement subject had a very competitive enrolment application process, uptake was not an issue, rather, staff were concerned about how to expand the subject to allow for more student participation. In the learning resources and the peer-learning cases, staff wanted more diverse groups of students to participate as they acknowledged that most of their participants were already highly engaged students. In the case of student-staff partnership, uptake was not relevant for the initial partnership because the student was selected internally, but participants spoke of the struggle of encouraging others to engage in partnership throughout the university:

> *We sent out emails asking for expressions of interest and we had mixed responses and fairly low responses from staff, but the response from students was overwhelming. [Staff said they did not want to participate] primarily due to workload and also not being able to justify their involvement to their bosses and as it was outside of the scope of their job descriptions*. (Student, Student-Staff Partnership Case)

This sentiment relates back to the earlier discussion of staff not having an external incentive to take on the extra work that accompanies designing for non-traditional classroom activities (such as students co-creating learning resources). It also signifies that for some, engaging in extra-role behaviour, such as designing a WIL-related activity in class, does not garner extra respect or acknowledgement and is considered outside the scope of academic job descriptions. Therefore, it makes sense that in the cases where the manager was also the source of encouragement to initiate the project (e.g. for the industry placement subject), the ease of implementation and the corresponding recognition was greater. As such, our analysis of ease of implementation suggests that WIL activities may be easiest to implement when they have high-level leadership support and offer financial rewards and/or recognition for students and staff.

Barriers

Barriers are a common factor for analysing program interventions or effectiveness (e.g. Jamelske, 2009; Seidman, 2005). Consequently, we have added barriers to help analyse typical challenges or issues that may arise in certain types of WIL. Barriers could include students' role confusion, limitations on student or staff time, and/or lack of necessary resources. Our analysis suggests that the case with the least barriers detected was the WIL industry placement subject. This likely related to the sample of students involved in the subject, who were all high achieving students because of the competitive application process required to enrol in the subject. Therefore, in this case, very few students experienced any confusion over their roles and/or the processes needed to complete the task. Similarly, the student-staff

partnership and the PLAs also drew from academically high achieving students, and thus resulted in less role confusion. The case that reported the least role clarity for students was that of students creating learning resources. This may be related to this instance encouraging all students, regardless of previous academic performance, to participate. As students were not grouped based on previous academic grades, there tended to be a wide range in self-performance expectations (the final grade they hoped to achieve from the subject), which appeared to lead to some internal group disagreements. In this case, students were also expected to find times to meet and work together (e.g. at the library) as opposed to have mandated times blocked off in their schedule, such as within the placement subject, which made it harder for students to find mutually acceptable times to meet. As one student noted:

> *The only downside though is [the project] is becoming bigger than Ben Hur. No one had [any] idea just how big this was going to get. It's still going. [The] semester is long gone. I'm still mostly motivated but [the] last few weeks we've been struggling. After [the] break, it was hard. Students here and there had work or study abroad commitments. So we're just starting to get going again now.* (Student, Learning Resources Case)

Notably, despite this apparent lack of role clarity, students were overwhelming positive about their involvement. One student remarked:

> *[In the project] I felt heard, I felt that we could grow in our expression of ideas and creativity, receive constructive feedback and criticism, and get real world training.* (Student, Learning Resources Case)

Benefits that were mentioned by students included: opportunity to engage in their subject, experience that pushed them beyond their comfort zone, and confidence to go out into the workforce. One student said that she was now considering becoming an entrepreneur. This highlights that even in cases where substantial barriers may occur, the self-perceived benefits for students often outweigh the challenges.

Notably, both the student-staff partnership case and the PLA case had tensions arise over how best to recruit other students and staff (i.e. encourage students to attend a study skills workshop, encourage staff to host a student partner). This finding may relate to the challenges that occur when designing for scalable WIL types (see below).

Scalability

The third factor included within our analysis was scalability. As Oliver (2015) noted, it may be unrealistic to require all universities in Australia (or globally) to support all students with a placement during their degree. This is because placements often require significant resourcing (i.e. university staff to help support matching processes and oversight) as well as costs related to maintaining formal placement pathways (i.e. compensating local schools who sponsor education students). Therefore, our study which included both a traditional placement type of WIL and other types of WIL provided a diverse sample to consider how some WIL types could be more scalable than others.

Except for the learning resources case, all cases required significant resourcing. In the WIL work placement, the department along with the subject coordinator and tutors, employed two professional staff to help organise the placements for students and organise an end of semester showcase event (along with other non-related responsibilities). In the case of the student-staff partnership program and PLAs, the university was required to budget for both of these programs, as students were paid, as well as employ staff to manage the programs. In the context of declining government funding in higher education, these initiatives might be considered costly.

It is likely that the two cases that are the most scalable are the work-integrated industry placement and the learning resources case. For the placement, the two staff had a structured customer management process they employed for recruiting and managing participating

companies that they could extend if the subject were to expand. This included templates, contracts and other support documents. Additionally, unlike some placements such as those in education and nursing, these external industry placements in business did not require the university to pay the industry partner. The learning resource case could also be scalable, because once the curriculum has been planned and structured, the staff involved could continue to utilise the program every semester, and perhaps extend to it to other subjects by using the curriculum developed as a template.

The two cases that may be less scalable included the student-staff partnership program and the PLAs. This was due to the high costs associated with both programs and perhaps the limitations on the number of students and/or staff who would be interested in these types of activities. Further, as the student partnership projected was dependent on academic staff hosting students, if this program would to continue long-term the university would need a formal structure of recognition for staff engaged in the extra-role behaviour (workload allocation models). Additionally, as the university paid the student partners, there is obvious cost to this. Similarly, for the PLAs, costs are crucial to the current set-up. There may also be limited scope to hire new students as there are only a set number of student-mentors needed at any given time. As the staff member involved noted:

> *The manager, me, the PLAs would all like to expand it and we've had many discussions about how we could expand it. But we aren't sure about funding next year and whether it will even exist. And so we aren't sure… we aren't overly optimistic about where it will sit.* (Staff, PLA Program)

Notably, none of the cases included in this study had a technology-supported element. However, previous research has found that technology may be key for supporting large-scale co-creation or partnership with students in the future (Dollinger, 2018).

Authenticity

The framework also incorporated authenticity and proximity as factors of analysis, as first developed by Oliver (2015). Oliver defined authenticity as how similar *the task and/or activity resembles those required in professional life* (p.62). It is important to mention that authenticity is difficult to assess, as even the students themselves do not yet know what careers they will have. However, some cases still displayed a higher degree of authenticity than others. In the case of the student-staff partnership, the authenticity of the task was high, as the student employed in the case sought to hold a similar position post-graduation. In this case, she frequently mentioned that the opportunity was perfectly aligned to her future career aspirations. She said*, I've never had a job or area of study where I've been this passionate… it just puts me over the moon*. Future research may seek to further explore how internal WIL opportunities could allow for students to modify their placements and/or intended tasks to their specific career goals that may not be available through an external placement.

Another case with relatively high authenticity was the WIL industry placement subject, as students were placed with established consulting companies and most students reported hoping to work in, or consult to, such companies. The other cases, including the learning resources and PLAs, appeared to offer lower levels of authenticity for students. In the learning resources case, few students were interested in working in video production, learning resource production, or marketing. However, all students did report the benefit of the project-based work within a team. Similarly, in the PLA case, few students saw themselves pursing mentoring and/or teaching work, while recognising their experience as teachers/tutors as more useful than other common student jobs. One student noted:

> *I think the experience has given me a bunch of skills and experience that I'll be able to go out and look out for jobs within academia or education settings… so I feel like I have these really transferable [skills] that enhance my skill set. Like, working in retails gives you*

experience too, like dealing with customers, but it doesn't give you the experience of teaching. (Student, PLA)

To match WIL activities to meet the needs of students, it is likely that the tasks need to have a degree of flexibility that allow students to modify the activity to suit their interests. Notably, for each of the activities, research respondents acknowledged the value of transferable learning opportunities such as teamwork, regardless of the career of the participant, clear communications, and planning and development.

Proximity

The final factor of analysis across WIL types was proximity or, in other words, how closely the environment resembles a future workplace (Oliver, 2015). In the case of a subject-based activity with no placement component, such as the learning resources case, the proximity is low, as students were still in the traditional environment of a classroom. When students were asked if they learned more about the work environment and staff responsibilities, one student noted, *Not really, staff roles were briefly discussed during the initial introductions, but I couldn't actually tell you what most of them do* (Student, Learning Resources Case). In cases where the activity took place on campus but outside of a classroom, such as the student-staff partnership program and students as PLAs, the proximity was medium, as the students were outside a classroom, but still within a university environment. For example, one student in the PLA program noted, *I often have meetings with academic staff*. A staff member in the PLAs also noted that while the students are within the university environment…*students still learn a lot about different roles in the teaching and learning components of the university as they work very closely with staff in managing the program.* Yet, interesting to note is that even in the case where the proximity was the highest (i.e. the industry placement), the benefits echoed by the students were still similar to the other cases. For example, one student in the WIL placement subject noted:

> *For me [a benefit] was working in a team environment where the accountability was put on myself, but there wasn't someone keeping an eye always on what we were doing. The environment was unfamiliar and [we needed to] meet new people and work on a project with a broad scope… it was an opportunity to really develop my analytical and business skills.* (Student, WIL placement subject)

As working in a team environment was a benefit reported across all cases, this highlights that much of the reported levels of proximity by students is based on perceptions. To increase proximity in other cases, the activities could be designed where students are treated more similarly to staff (regardless of their location inside a classroom) and where they are asked to then network with others outside of the immediate group.

Summary of results

As shown in Table 1, the various cases spanned a spectrum of results from the five selected factors of analysis. From our analysis, it appears that industry placements in subjects has the most reported benefits, with medium ease to implement, low barriers, medium scalability and high authenticity and proximity. In the other subject-based activity, where students co-created learning resources, ease to implement was low and barriers were high. This perhaps related to a lack of an application process and minimal support for staff engaged in the extra-role behaviour. Further, as the task was located with a classroom and did not closely resemble real-life work tasks, authenticity and proximity were low. These results may highlight that when embedding WIL within a subject, a more structured approach that includes a formal placement may maximise benefits in relation to costs.

In the cases outside of the classroom (i.e. co-curricular), results were very similar, with medium ease of implementation and barriers, and low scalability found in both student-staff partnership program and students as PLAs. The only difference found between these two

cases was regarding authenticity, as the student-staff partnership program aligned more closely with future work tasks. Yet as noted by participants, teaching, while not necessarily a chosen career path for many of the students, does offer a wide range of skills transferable to other careers.

Table 1. Comparison of WIL types

Type of WIL	Ease of Implementation	Barriers	Scalability	Authenticity	Proximity
Work-Integrated Learning Subject with Industry Placement	Medium	Low	Medium	High	High
Work-Integrated Learning Subject with Students Creating Learning Resources	Low	High	Medium	Low	Low
Student-Staff Partnership in Program Implementation	Medium	Medium	Low	High	Medium
Students as Peer Learning Advisors	Medium	Medium	Low	Medium	Medium

Discussion and conclusion

This article provides a framework to develop and assess the suitability of WIL types through the consideration of five factors: ease of implementation, barriers, scalability, authenticity, and proximity. While there is not necessarily one best type of WIL to implement at an institution, this framework allows for institutional staff to reflect on what WIL factors may take priority. For example, if the aim of the institution is to provide all students with a WIL opportunity (i.e. scalability), placements and/or embedded WIL projects within a subject could be more desirable options than co-curricular casual work (e.g. PLAs). Notably, none of the four cases from our analysis displayed a high potential for scalability. This aligns with previous research that has questioned how WIL variations could be made more scalable, and also more equitable across all diverse student cohorts (Peach et al., 2016).

One limitation of this study is that we did not investigate each type of WIL in regard to the specific financial costs (e.g. cost per student). WIL subjects and activities often require academic staff to teach and guide the activity and necessitate professional staff to build relationships with industry (e.g. to identify placement opportunities) and/or manage information technology systems that are often required to keep records for regulatory and compliance purposes. Additionally, while the aim of this paper was to explore variations of WIL types from an institutional perspective, future work could link how an institutional perspective of WIL compares to the student perspective (e.g. their enjoyment from various WIL activities, perceptions on how the experience impacted their employability). As noted in the methodology section, we also acknowledge that in this article we have only showcased the usability of the framework in four case studies of WIL types. In the future, this framework could be applied to further compare other types of WIL as well as explore variations within WIL types (e.g. differences in industry placements).

The timeliness of this article is significant as there is increasing discussion regarding how Australia may implement performance-based funding in higher education and how performance will be determined (i.e. measured). As the introduction of this article explained, the ability to assess graduate employability is a mixture of individual, university, and contextual factors, not all of which can be controlled by the university. It may be inappropriate therefore

for the government to use ‘first destination’ as a measure of graduate employability without recognising the significant differences across student cohorts in various universities (i.e. some universities have a much higher proportion of low SES students). Instead, it is critical that performance-based funding consider primarily what aspects of employability can be supported through the university, such as through providing students with WIL opportunities. If this area was to become a measurable output of performance, university leaders and administrators would need more scholarly work to help inform decision-making about various types of WIL. This paper was intended to spark a consideration of these factors and issues.

Our research results suggest that industry-based placements within formal subjects (i.e. curricular) may be the optimal form of WIL as they have relatively lower costs to the university and high benefits for the students. This finding aligns with previous research that has found that work placements (including industry-based placements, internships and practicums) often have the highest levels of authenticity and proximity (Kaider, Hains-Wesson, & Young, 2017). Future research should continue to unpack this finding, and explore what institutional processes (e.g. leadership, management, evaluation) can further support the WIL subject-based placements.

Furthermore, future research might continue to explore good practices to support various WIL types. This includes making the intended graduate capabilities more transparent and clear to students (Kinash et al., 2017; Jorre de St Jorre & Oliver, 2017), adopting systematic approaches throughout the university (Jorre de St Jorre & Oliver, 2017; Oliver, 2015) and encouraging students to also take responsibility for their own skill development (Bowden, Hart, King, Trigwell & Watts, 2000).

References

Australian Government. (May 2017). The Higher Education Reform Package. Retrieved at https://docs.education.gov.au/system/files/doc/other/ed17-0138_-_he_-_glossy_budget_report_acc.pdf

Bowden, J., Hart, G., King, B., Trigwell, K., & Watts, O. (2000). *Generic capabilities of ATN university graduates.* Canberra: Australian Government Department of Education, Training and Youth Affairs.

Brown, N. (2010). WIL [ling] to share: An institutional conversation to guide policy and practice in work-integrated learning. *Higher Education Research & Development, 29*(5), 507–518.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: qualitative, quantitative, and mixed methods approaches.* Sage publications.

Clinton, I., & Thomas, T. (2011). Business students' experience of community service learning. *Asia-Pacific Journal of Cooperative Education, 12*(1), 51–66.

Department of Education and Training (DET) (2018). Performance-based funding growth for universities. Accessed September 20th at https://docs.education.gov.au/documents/performance-based-funding-growth-universities.

Dollinger, M. (2018). Technology for the scalability of co-creation with students. In M. Campbell, J. Willems, C. Adachi, D. Blake, I. Doherty, S. Krishnan, S. Macfarlane, L. Ngo, M. O'Donnell, S. Palmer, L. Riddell, I. Story, H. Suri, & J. Tai (Eds.), Open Oceans: Learning without borders (pp. 346–350). *Proceedings ASCILITE 2018.* Geelong.

Freudenberg, B., Cameron, C., & Brimble, M. (2010). The importance of self: Developing students' self-efficacy through work integrated learning. *The International Journal of Learning, 17*(10), 479–496.

Gamble, N., Patrick, C. J., & Peach, D. (2010). Internationalising work-integrated learning: Creating global citizens to meet the economic crisis and the skills shortage. *Higher Education Research & Development*, *29*(5), 535–546.

Glaser, B. G., & Strauss, A. L. (2017). *Discovery of grounded theory: Strategies for qualitative research*. New York: Routledge.

Gleason, N. W. (2018). Singapore's higher education systems in the era of the fourth industrial revolution: Preparing Lifelong Learners. In N. Gleason (Ed.), *Higher Education in the Era of the Fourth Industrial Revolution* (pp. 145-169). Singapore: Palgrave Macmillan.

Goldin, C., & Katz, L. F. (2018). *The race between education and technology.* US: Belknap Press for Harvard University Press.

Guthrie, B., & Edge, N. (2014). Graduate Destinations 2013: A Report on the Work and Study Outcomes of Recent Higher Education Graduates. *Melbourne: Graduate Careers Australia*.

Harris, L., Jones, M., & Coutts, S. (2010). Partnerships and learning communities in work-integrated learning: Designing a community services student placement program. *Higher Education Research & Development*, *29*(5), 547–559.

Harvey, L. (2001). Defining and measuring employability. *Quality in Higher Education, 7*(2), 97–109.

Harvey, L. (2005). Embedding and integrating employability. *New Directions for Institutional Research*, *2005*(128), 13–28.

Hruschka, D. J., Schwartz, D., St. John, D. C., Picone-Decaro, E., Jenkins, R. A., & Carey, J. W. (2004). Reliability in coding open-ended data: Lessons learned from HIV behavioral research. *Field Methods*, *16*(3), 307–331.

Jackson, D. (2015). Employability skill development in work-integrated learning: Barriers and best practice. *Studies in Higher Education, 40*(2), 350–367.

Jamelske, E. (2009). Measuring the impact of a university first-year experience program on student GPA and retention. *Higher Education*, *57*(3), 373–391.

Jorre de St Jorre, T., & Oliver, B. (2018). Want students to engage? Contextualise graduate learning outcomes and assess for employability. *Higher Education Research & Development*, *37*(1), 44–57.

Kaider, F., Hains-Wesson, R., & Young, K. (2017). Practical typology of authentic work-integrated learning activities and assessments. *Asia-Pacific Journal of Cooperative Education*, *18*(2), 153–165.

Kinash, S., Crane, L., Capper, J., Young, M., & Stark, A. (2017). When do university students and graduates know what careers they want: A research-derived framework. *Journal of Teaching and Learning for Graduate Employability, 8*(1), 3– 21.

Lesaux, N. K., Kieffer, M. J., Faller, S. E., & Kelley, J. G. (2010). The effectiveness and ease of implementation of an academic vocabulary intervention for linguistically diverse students in urban middle schools. *Reading Research Quarterly*, *45*(2), 196–228.

McLennan, B., & Keating, S. (2008, June). Work-integrated learning (WIL) in Australian universities: The challenges of mainstreaming WIL. In *ALTC NAGCAS National Symposium* (pp. 2-14).

Mok, K. H., & Neubauer, D. (2016). Higher education governance in crisis: A critical reflection on the massification of higher education, graduate employment and social mobility. *Journal of Education and Work, 29(*1), 1–12.

Morley, L. (2001). Producing new workers: Quality, equality and employability in higher education. *Quality in Higher Education*, *7*(2), 131–138.

Oliver, B. (2015). Redefining graduate employability and work-integrated learning: Proposals for effective higher education in disrupted economies*. Journal of Teaching and Learning for Graduate Employability, 6*(1), 56–65.

Patrick, C. J., Peach, D., Pocknee, C., Webb, F., Fletcher, M., & Pretto, G. (2008). *The WIL (Work Integrated Learning) report: A national scoping study.* Queensland University of Technology.

Peach, D., Moore, K., Campbell, M., Winchester-Seeto, T., Ferns, S., Mackaway, J., & Groundwater, L. (2016). *Building institutional capacity to enhance access participation and progression in Work Integrated Learning (WIL).* Final Report for the Office of Learning and Teaching. Retrieved from https://eprints.qut.edu.au/98925/1/98925.pdf

QILT. (2017). 2017 Graduate outcomes survey: National report. Retrieved from https://www.qilt.edu.au/docs/default-source/gos-reports/2017/2017_gos_national_report_final_accessiblea45d8791b1e86477b58fff00006709da.pdf

Seidman, A. (2005). Minority student retention: Resources for practitioners. *New Directions for Institutional Research*, *2005*(125), 7–24.

Shirley, M., Davies, I., Cockburn, T., & Carver, T. (2006). The challenge of providing work-integrated learning for law students-The QUT experience. *International Journal of Clinical Legal Education, 9*, 134–147.

Staehr, L., Martin, M., & Chan, K. (2014). A multi-pronged approach to work integrated learning for IT students. *Journal of Information Technology Education: Innovations in Practice*, *13*, 1–11.

Taylor, J. (1986). The employability of graduates: Differences between universities. *Studies in Higher Education, 11*(1), 17–27.

Tomlinson, M. (2008). 'The degree is not enough': Students' perceptions of the role of higher education credentials for graduate work and employability. *British Journal of Sociology of Education*, *29*(1), 49–61.

Tymon, A. (2013). The student perspective on employability. *Studies in Higher Education*, *38*(6), 841-856.

Von Treuer, K., Sturre, V., Keele, S. & McLeod, J. (2010). Evaluation methodology for work integrated learning – placements. A discussion paper. *Paper presented at 3rd Biannual ACEN National Conference,* September 27–October 1, in Perth, Australia.

Wilton, N. (2012). The impact of work placements on skills development and career outcomes for business and management graduates. *Studies in Higher Education, 37*(5), 603–620.