

Report on WIL workshop held at the ALTA Forum 2015

Tanya McGill, Murdoch University

Background

Work Integrated Learning (WIL) is generally used as an umbrella term to describe a variety of applied learning approaches that formally integrate theory with the practice of work. These approaches can range from industry placements (paid or unpaid), through industry-linked final year projects, to other forms of simulated work experience.

A number of ALTC and OLT projects have focussed on WIL recently and have highlighted the potential benefits of WIL to students, universities and industry WIL (e.g., Billett, 2011; Orrell, 2011; Patrick et al., 2014; Patrick et al., 2009; Smith et al., 2014), and the current project on WIL being undertaken by the Office of Chief Scientist promises to provide a strong foundation for further discipline specific WIL improvement.

WIL is particularly important in ICT education. Employers and graduates have identified deficiencies in the workplace readiness of new graduates and WIL is seen by graduates, universities, and employers as having the potential to address these deficiencies (Australian Workforce and Productivity Agency, 2013; Koppi et al., 2013; Pilgrim & Koppi, 2012).

The importance of WIL to ICT graduates is also strongly emphasised by the Australian Computer Society (ACS), and its Guidelines on Professional Practice (ACS Accreditation Committee, 2014) state:

The program should provide students with an authentic learning experience in relation to its intended professional outcomes. It should enable students to understand, and preferably engage in, the type of professional experiences that they are likely to encounter following graduation from the program. In many cases, this will be achieved through Work-Integrated Learning (WIL), which is very strongly encouraged, and / or an industry project conducted in conjunction with an industry partner or client.

Consistent with this current recognition of the value of WIL both for ICT education and more broadly, ALTA has prioritized enhancing WIL (along with benchmarking of learning outcomes) for 2014 – 2015 (ALTA, 2014). As part of this focus the 2015 ALTA forum included a number of speakers who emphasised the value of WIL in general and reported on initiatives and studies across a range of disciplines. These speakers included: Ian Chubb, the Chief Scientist; Judy Kay, the ACEN President; and Roselyn Prinsley, the National STEM Advisor in the Office of the Chief Scientist. An ICT specific workshop was also held to allow ICT Learning and Teaching Champions to reflect on how WIL is implemented in their courses and to share experiences between universities, and the information that was shared during the workshop is summarised below.

The Workshop

As the two current ALTA priorities are enhancing WIL and benchmarking of learning outcomes, one of the goals of the WIL workshop was to start to identify the range of learning outcomes associated with the two key kinds of WIL (industry placements and

industry-linked team projects) and to explore the ways in which they are assessed. An opportunity to highlight examples of best practice was also provided.

Representatives from 27 universities attended the forum, and after a brief introduction to WIL in ICT education (www.acdict.edu.au/documents/TanyaMcGillWILworkshop.pdf), small groups representing at least 2 different universities worked together to discuss the questions in the table below and this was followed by a plenary discussion.

For each university:

- Are industry placements a formal part of IT degrees? (either required or optional)
- Are final year projects for industry clients a formal part of IT degrees? (either required or optional)
- What learning outcomes are sought from each of these types of WIL?
- Do learning objectives differ between placements and industry group projects? (In terms of the both the objectives and how explicit they are)
- How are learning outcomes assessed for these kinds of WIL?
- What input does local industry have into learning objectives and assessment?

How do the universities represented differ?

- What issues emerged?
- Examples of 'good practice'?

A number of key points emerged from the discussion and from notes made by the attendees, and these are discussed below. The centrality of team based final year projects as an approach to WIL was very obvious. For the vast majority of Australia ICT students their WIL experience is achieved via a final year team based project for a client. All of the universities represented offered a project unit of this kind, and in the majority of courses all students were required to take it (78%). In courses where the project unit was optional it appeared that the alternative was often to undertake an industry placement.

A wide range of types/sources of projects were described. In addition to using industry clients sourced by the university, some universities required students to find their own project, and some projects utilised internal clients. Use of an academic as a proxy for an industry client was also mentioned. One university included more research focused/academic projects as an alternative to industry ones. There were also substantial differences in how tightly the projects are defined and how closely delivery is monitored.

The majority of courses also made provision for industry placements (78%) but these were mostly optional, with only 11% of those reported on requiring an industry placement. Some universities offered a course that required an industry placement as well as one that did not, and it seemed that the courses with a mandatory placement were viewed as elite courses with higher entry standards, and/or scholarship options.

It was also noted that when placements are an option in the course structure relatively low numbers of students choose to take the opportunity. One attendee commented that in their

Bachelor of IT only approximately 2% of student chose to do a placement in preference to the capstone project and another said 'students who are academically qualified for IBL are often not able to get through application/interview process despite being supported by the university thru the process'. The challenges associate with sourcing and attaining placements were cited for this. In fact, one university reported changing the course structure to no longer require an industry placement because of the challenges associated with supporting it. Universities are also conscious of the reputational risk in allowing lower ability students to undertake industry placement – for example one attendee commented: 'Difficult not to just place high performing students. This is because of university reputation and capability of lower WAM students'.

A very wide range of different learning outcomes were associated with WIL offerings. The most notable differences between courses were in the balance between aiming to foster achievement of technical ICT skills, professional/soft skills such as project management, the ability to work independently, team work skills and communication skills. There were also differences in how specific the intended learning outcomes were. Despite the wide range of learning outcomes for both types of WIL several groups of attendees noted that the learning outcomes for their industry placement units are less explicit than for their project units, and as one attendee said about industry placements 'as they are not constantly supervised it is less realistic to focus on tight/inflexible project and learning outcomes'.

Assessment of learning outcomes was also discussed. A relatively low number of attendees had copies of the unit guides available for sharing, but of those that were provided it was encouraging to see that most had mappings of assessment items to learning outcomes available for students. The learning outcomes of the WIL units were assessed in a very wide variety of ways, ranging from multiple online self-assessments through to fine grain marking of software deliverables. Not surprisingly, industry tended to have more input into assessment of the learning outcomes of placements via the industry supervisor, but in many universities client assessment of team based projects also occurred.

Attendees at the workshop were also asked more generally about the contribution of industry to setting learning objectives and assessment criteria, but the only mechanisms for this that were mentioned were input via the industry advisory board for higher level direction, and via individual industry supervisors for specific placements/projects.

In addition to the differences between types of WIL and between different universities highlighted above, several other issues emerged. These included:

- Issues associated with placing international students
- Over-dependency on individual academic staff members who coordinate WIL units, as this can lead to variability and vulnerability - for example, within one university 'Learning outcomes vary with each unit as developed by different unit coordinators'
- Difficulty in sourcing projects in regional areas.

Best Practice

Those attending the workshop did not appear to have a strong sense of what 'best practice' is for WIL in ICT. The most consistent message was that a substantial amount of university support is required for WIL units to run successfully and achieve their objectives. However,

there were mixed opinions about the best location/level for this support. Some attendees saw the faculty as best placed to understand the requirements and provide the necessary levels of support for sourcing sites for internships and projects for capstone units, whereas others believed that university level structures are effective.

The value of sharing the outcomes of projects via both internal and external 'showcase' events was also noted by multiple attendees. This showcasing raises the profile of WIL within the university, potentially helping to attract funding for support both in terms of staff to source and manage placements and projects, but also for acquisition of software and hardware. It can also lead to employment outcomes for students as industry is invited, and contributes to further opportunities for project and placements from industry members who attend these events.

The importance of scaffolding the skills required for successful project or placement work via pre-requisite units was noted by several attendees. One interesting new initiative that was mentioned involves 'cross year level "sprint" projects' where 1st, 2nd, 3rd year students work together on projects, thus allowing the necessary skills to develop over several years.

Summary and conclusion

Practices and issues raised by workshop participants included:

- It was common to have a final year team-based WIL for a client
- The 'client' was wide-ranging, internal or external
- Placements on a national level appear to be for the minority of students
- Students tend to choose non-placement options
- Difficulty of specifying, guaranteeing, and assessing learning outcomes for placements
- WIL requires faculty or central structured and financial support
- Other issues include: international student placements; workload of academic WIL coordinator; sourcing projects in rural areas; preparing students for placement.

Whilst this workshop provided a valuable initial opportunity for sharing, it was clear that further opportunities to discuss and share good practice with respect to WIL would be welcome. This would allow ICT Learning and Teaching Champions to further reflect on the practices in their own universities and help identify the approaches worth sharing.

References

- ACS Accreditation Committee. (2014). *Accreditation Management Manual* (Vol. 2, Application Guidelines – Professional Level Courses).
- ALTA (2014). *ALTA 2014/15 Plan*. <http://www.acdict.edu.au/documents/ALTApplan2014-15IM.pdf>
- Australian Workforce and Productivity Agency. (2013). *ICT Workforce Study*. <http://www.awpa.gov.au/publications/Documents/ICT-STUDY-FINAL-28-JUNE-2013.pdf>.
- Billett, S. (2011). *Curriculum and Pedagogic Bases for Effectively Integrating Practice-Based Experiences*. <http://www.olt.gov.au/resource-integrating-practice-based-experiences-griffith-2011>.
- Koppi, T., Ogunbona, P., Armarego, J., Bailes, P., Hyland, P., McGill, T., . . . Roberts, M. (2013). *Addressing ICT Curriculum Recommendations from Surveys of Academics*,

- Workplace Graduates and Employers.*
http://www.olt.gov.au/system/files/resources/PP9_1274_Ogunbona_Report_2013.pdf.
- Orrell, J. (2011). *Good Practice Report: Work Integrated Learning.*
<http://www.olt.gov.au/resource-work-integrated-learning-2011>.
- Patrick, C., Fallon, W., Campbell, M., Devenish, I., Kay, J., Lawson, J., . . . Tayebjee, F. (2014). *Leading WIL: A Distributed Leadership Approach to Enhance Work Integrated Learning.*
<http://www.olt.gov.au/project-leading-wil-distributed-leadership-approach-enhance-work-integrated-learning-outcomes-2011>.
- Patrick, C., Peach, D., Pocknee, C., Webb, F., Fletcher, M., & Pretto, G. (2009). *The WIL [Work Integrated Learning] Report: A National Scoping Study.* <http://www.altc.edu.au/resource-wil-work-integrated-learning-griffith-2009>.
- Pilgrim, C., & Koppi, T. (2012). Work Integrated Learning Rationale and Practices in Australian Information and Communications Technology Degrees. *Proceedings of the Fourteenth Australasian Computing Education Conference.* pp. 25-32.
- Smith, G., Ferns, S., & Russell, L. (2014). *The Impact of Work Integrated Learning on Student Work-Readiness.* <http://www.olt.gov.au/resource-impact-work-integrated-learning-student-work-readiness>.