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Employability skill development in work-integrated learning: Barriers and best practice

Denise Jackson
Edith Cowan Univesity

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Abstract

Work-integrated learning (WIL) is widely considered instrumental in equipping new graduates with the required employability skills to function effectively in the work environment. Evaluation of WIL programs in enhancing skill development remains predominantly outcomes-focused with little attention to the process of what, how and from whom students acquire essential skills during work placement. This paper investigates best practice in the classroom and placement activities which develop employability skills and identifies factors impeding skill performance during WIL, based on survey data from 131 undergraduates across different disciplines in an Australian university. What students actually experienced during placement, or what they felt was important to their learning, broadly aligns with best practice principles for WIL programs and problems experienced in performing certain skills during placement can be largely attributed to poor design. Implications for academic and professional practitioners are discussed.

Introduction

Work-integrated learning (WIL), the practice of combining traditional academic study, or formal learning, with student exposure to the world-of-work in their chosen profession, has a core aim of better preparing undergraduates for entry into the workforce. WIL encompasses many forms, each one encouraging students to experience authentic work practices and learn and practice applying skills and knowledge in a real-world context. Variants include work placements, internships, field work, sandwich year degrees, job shadowing and cooperative education (Von Treuer et al. 2010). Service learning can also be considered a component of WIL (Clinton and Thomas 2011) whereby students enhance their professional skills through participating in an organised service activity which benefits the community. WIL has developed into an important feature in higher education worldwide and one which is attracting significant funding for future growth (Abeysekera 2006).

WIL is considered instrumental to graduate job-readiness (BIHECC 2007) by building student confidence in their workplace capabilities (Billet 2011a; Clinton and Thomas 2011); providing students with a better understanding of the nature and standard of industry-required skills (Gamble, Patrick and Peach 2010) and a better appreciation of the world-of-work (Wilton 2012). In particular, it is assumed to augment employability skill development in undergraduates (Yorke 2011); a significant aspect of any graduate employability model (see Dacre Pool and Sewell 2007) and one which continues to present challenges in higher education classrooms (Coll and Zegwaard 2006). There are documented improvements in those completing WIL in a range of employability skills including team working, problem-solving, communication, information literacy and professionalism (see Coll et al. 2009; Freudenberg, Brimble and Cameron 2011). These employability skills, among others, are

deemed critical enablers of graduate ability to function effectively in the modern workplace and their development is now considered integral to undergraduate education.

Further, the WIL experience may ease the difficult process of transferring skills from university to the workplace (see Crebert et al. 2004) although there is little empirical reporting of graduate skill transfer and inconsistencies in findings for learning transfer in general (Blume et al. 2010). Distinct from graduate employability, there is some argument that WIL improves graduate employment prospects (Jensen 2009) although, again, evidence is mixed (see Wilton 2012) and prevailing labour market conditions must be considered when evaluating the impact of WIL on job attainment and career progression (Brown, Hesketh and Williams 2003). Another benefit is the positive impact on academic performance among WIL students (Gamble et al. 2010); suggested by Mandilaras (2004) to be due to WIL accelerating maturity and enhancing motivation and accountability in students. Bullock et al. (2009), however, argues the relationship between academic performance and placement experience is confounded by the tendency for more capable students opting to complete placements and the value added to achieved grades is inconsistent across different disciplines.

WIL also fosters partnerships between higher education and industry, essential for designing curriculum which is responsive to the needs of both the community and industry (Smith 2012). As Smith observes, WIL meets the needs of all stakeholders in undergraduate education: it promises a better return on investment to students; meets employer demands for work-ready graduates - as well as providing them with skilled employees at low-cost (Abeysekera 2006) - and enhances national productivity, essential for governments devising strategies to compete with rising global competition in times of economic uncertainty.

Focusing on the impact of WIL on employability skill development, attention remains predominantly outcomes-focused with less attention to the process of what, how and from whom students acquire skills during placements (see Coll et al. 2009; Hu, Abadeer and Husman 2009). Although recent studies, such as Ward et al. (2012), will improve academic and professional practitioner understanding of best practices in WIL design, structure and management to enhance student learning, Smith (2012) laments the lack of framework for systematically evaluating WIL curricula to better understand how outcomes are facilitated. As Beckett (2004) states, 'both competency and its close relation, generic skill, are shaped as much by a sensitivity to "processes" of learning, as they have been shaped in policy and practices up to the present, by concerns over the outcomes of learning' (497).

The purpose of this paper is to investigate the impact of work placement design, content and coordination on developing undergraduate employability skills. The research objectives are to: (i) identify classroom and placement learning and assessment activities in the WIL experience which are considered important for employability skill development; and (ii) identify any factors which impede skill development and performance during WIL. These objectives are addressed using online survey data from 131 undergraduates from different Faculties within a single Australian university. The paper is structured to review recent literature on pedagogical practices in WIL; outline the adopted methodology; and present the results and discuss findings, including implications for practitioners.

Background

Best practice: Skill development in WIL

The ethos of WIL is based on the theory of active (Bonwell and Eison 1991) and experimental (Kolb 1984) learning where learners transition from visualising and listening

and actually attempt to 'do' what they are being taught. One conceptualisation of WIL aligns with Lave and Wenger's (1991) model of situated learning where learning is enhanced when participating in a community of practice, rather than in isolation from it. Students should therefore be able to interact with a real-work context and undertake authentic work activities as part of their undergraduate experience. Effective WIL design requires careful consideration of many factors and is widely acknowledged as both difficult and costly to implement (Abeysekera 2006) although Billet (2011a) emphasises the need for strong pedagogic practices, rather than strategies requiring significant resourcing and infrastructure. For example, host organisations must provide adequate access to supervisors, learning support and induction/preparation processes (Smith 2012) and clearly establish and articulate their expectations of graduates (Patrick et al. 2008). Academic practitioners should ensure WIL design incorporates authentic learning activities aligned to learning objectives with appropriate learning support (Smith 2012); the effective assessment of targeted outcomes (Winchester-Seeto et al. 2010) and effective management of resourcing challenges (Martin et al. 2012).

Billet (2011a) identifies a number of curriculum and pedagogic practices for incorporating WIL effectively into the university setting. Billet emphasised the importance of integration, where learning in the workplace is integrated with on-campus learning so students can make links between their learning in the different settings and better understand what is required for effective practice of targeted skills and knowledge. Here, learners critically appraise relevant learning concepts; practice certain behaviours/procedures; reflect upon these applications and understand how the procedures combine to address complex problems and shape workplace practice. As with learning transfer, there is little explicit effort to formally integrate workplace and campus learning and it is often just expected to occur (Coll et al.

2009) with limited understanding among practitioners on how best to achieve it (Eames and Coll 2010). Billet's general principles for achieving integration include adequate student preparation prior to practice-based activities; support during the placement and opportunities for reflection to connect the two experiences post-activity.

Reflection is vital in implicitly fostering integration and should be incorporated before and after practice-based activities (Coll et al. 2009). Reflection tools such as journals, portfolios and learning circles (Smith, Meijer and Kielly-Coleman 2010) and critical incident analysis (Gray 2007) are all important. Their introduction may not guarantee critical reflection by students (Paku and Lay 2008) but should at least encourage them to identify strengths, weaknesses and future learning needs (Boud 2000). Learning transfer theory also emphasises the important role of reflection in allowing students to put theory into practice (Bransford and Schwartz 1999) and transition their skills successfully across different contexts (Yashin-Shaw et al. 2004). Cates and Jones (1999) argue clearly defined expectations; consideration of skill transfer in the design of assessments and activities; and the use of formative assessment are needed for a successful WIL experience.

Jaekel et al.'s (2011) multi-disciplinary review of WIL in the US highlights the importance of measurable learning outcomes, to both enhance student learning and meet accreditation requirements while Martin Rees and Edwards (2011) stress the importance of mentoring for nurturing employability skills development in students – particularly time management and autonomy – and their ability to successfully apply their skills. Varghese et al. (2012) argue the cognitive apprenticeship model can be applied in the design of effective WIL programs. The model identifies four dimensions: content - the types of knowledge required for expertise in the workplace; method – the ways in which students should be taught

skills and knowledge the WIL context; sequencing – the way skill and knowledge should be scaffolded so there is structure and meaning to student learning; and sociology – a learning environment which will enable students to integrate theory into practice.

Best practice: Assessment in WIL

Knight and Page (2007) assert practitioners must always be mindful of the difficulties in assessing employability skills, which are 'achievements that cannot be neatly pre-specified, take time to develop and resist measurement-based approaches to assessment' (2). The need for a paradigm shift in WIL assessment methodology is required as academics are far more comfortable assessing disciplinary content, for which there are often clearly established norms, than generic skills (Yorke 2011). The benefits of capturing workplace supervisors' perspectives on student work are significant (Patrick et al 2008) and also provide rich information on the effectiveness of WIL design (Hundley 2010). Although employers do contribute to assessment in WIL, there are challenges in ensuring standardisation and quality assurance across different industry settings (Yorke 2011) and they are reluctant to progress beyond awarding pass and fail grades (Woolf and Yorke 2010).

As Yorke (2011) acknowledges, for WIL to be considered synonymous with formal on-campus learning, assessments must be finely graded. In response to the widely acknowledged challenges of measuring skill performance, assessments should clearly define the precise nature of the skill, or behaviours, and the expected level of performance for undergraduates at different stages of their degree studies (see Riebe and Jackson, forthcoming). Their support for the standardised use of rubrics holds significant value here yet should be treated with caution given the variation across different WIL contexts. There is

clearly tension between balancing differing organisational contexts and equity in formal assessments.

Jaekel et al. (2011) compared assessment tools in WIL across different discipline groups and reiterate the importance of constructively aligning assessments to learning outcomes using methods which encourage self-reflection and feedback such as peer assessments, portfolio reviews, self-assessments and checklists. The use of formative methods such as blogs, e-journals, diaries, commentaries and emails are also highlighted by Martin et al. (2011). Recent discussion on WIL assessment also emphasises the need for ongoing, face-to-face dialogue between the student and assessor (Bandaranaike and Willison 2011), termed 'motivational interviewing' where learners reflect on their performance and identify strengths and areas for improvement, evoking lifelong learning through a continual cycle of change and improvement. They argue formative and interactive assessment processes are vital for engaging and motivating learners in WIL.

There are many challenges associated with an effective WIL experience, including difficulties in locating placements and cessation of ongoing arrangements due to the demise of host businesses, particularly problematic in the recent global recession; inadequate environment and design for effective learning during the work placement; and students not meeting required performance standards expected by the host employer (Procter 2011). Further, there is evidence to suggest some undergraduates, in the UK at least, are increasingly choosing to forego work placements to enter the job market earlier (Bullock et al. 2009) in response to rising costs of higher education and economic recession.

Method

Procedures

An online survey was conducted for undergraduates who completed a work placement during their degree studies in 2012 at a university located in Western Australia. Students were invited to participate via an announcement in class, email and/or on the university's learning management system by relevant Unit/Course Coordinators. Information on the nature and purpose of the study, in addition to an electronic link accessing the survey, was disseminated between October and November 2012.

Participants

The sample consists of 131 undergraduates who completed WIL, in the form of a work placement, as a part of their degree studies during 2012. Table 1 summarises data on their demographic, study background and work placement characteristics. There is a broad spread of host organisation type and size and reasonable variation in the hours completed in the workplace. Students are represented from all three Faculties within the university. Business and Law students comprise those completing courses in Business; Criminology and Justice and Sport, Recreation and Event Management. Each opts to complete a work placement as part of an elective unit, other than the latter for whom a placement is compulsory. Placements are also compulsory for the Education, Health and Science and Engineering students in the study. Across all disciplines, the placement is a structured component of the undergraduate program and is integrated with on-campus learning. The university is largely responsible for formalising the placement arrangements across the disciplines although some Business and Engineering students were responsible for negotiating their own placements under the guidance of academic practitioners who direct them to suitable opportunities.

[**Insert Table 1**]

Instrument

The survey comprised a combination of closed and open questions which initially questioned participants on demographic, study background and work placement characteristics. The main body focused on undergraduate perceptions of their ability in a range of employability skills and the pedagogic activities which enhanced skill development during the WIL experience. The investigated skills derive from a framework operationalised in the university's Faculty of Business and Law (see Table 2). The framework comprises ten skills and forty constituent behaviours and was developed from Jackson and Chapman's (2012a) framework of non-technical competencies required in new graduates. Jackson and Chapman's framework itself was based on an extensive literature review of employer perceptions of industry-relevant skills in graduates entering the labour market (Jackson 2010).

[**Insert Table 2**]

Using open question format, participants were asked to identify any specific classroom and placement learning and/or assessment activities in their WIL experience that helped their ability to perform the ten skills in the workplace. They were also asked to outline any problems they experienced when trying to perform each of the ten skills during their placement, in addition to whether they felt any of the ten skills could be better learned in the classroom, rather than on work placement, and vice versa. The open questions did not allow students to comment on the ratings they had previously assigned to their ability to perform the ten skills. Participants were also asked to consider the relative importance of different people assisting them in performing the ten skills during their during work placement. Using a constant-sum rating method, participants allocated 100% across the four 'person categories'

of lecturer, work supervisor, other placement employees and class mates on the WIL unit. Students were also given option of volunteering a different person category and assigning a value to that from the 100%. Prior to launch, the survey was piloted across a small sample of academics to ensure integrity of the survey instrument. A sample of the survey questions is presented in Appendix One.

Analysis

Open questions were analysed using inductive coding and thematic analysis at individual response level, following Mishler's (1990) basic principles of qualitative research. Identified themes were interpreted within the broader theoretical framework of principles and practices in WIL design. Responses were also grouped by degree type to identify any trends in themes by discipline. Data gathered on the relative importance of people categories in skill performance during placement was quantitatively analysed using descriptive techniques.

Results

Classroom activities assisting skill development

Many students across all degree types favoured classroom learning and/or assessment activities which involved planning and goal setting and subsequent self-reflection on performance and achieved outcomes. Students found this motivational and encouraged self-awareness, self-management, critical thinking, problem-solving, communication, professionalism and the ability to work effectively with others. One commented "*setting goals helped me to recognise areas I could improve on and encouraged me to work towards these during my placement*". These activities enabled students to incorporate and reflect on feedback provided by others and to focus on skills in need of further development. Within

Health and Science, certain students acknowledged the importance of specific training tasks for occupation-specific skills; such as first aid, physiological testing and injury prevention.

A small number of students discussed using portfolios for gathering evidence on completed activities. They felt these would be particularly useful in articulating to future employers their capabilities in different skills. Collaborative small-group activities were also deemed beneficial by many across all degree types, particularly scenario-based activities such as role-plays which gave them a clear insight into problems or situations that might arise on placement. One student responded, "*We took part in a variety of role-playing activities that were scenario-based. It was surprising how many of these scenarios actually occurred during placement. Having already mimicked the situation through role-pay definitely helped me when the same or similar situations arose on placement*". Students felt group activities helped build confidence and develop their team working and communication skills, also enhancing problem-solving, critical thinking, self-management, social responsibility and professionalism. Summarising and evaluating the WIL experience in an assessed report or oral presentation was practised in a range of degree types.

Placement activities assisting skill development

On-the-job training, coaching and mentoring were considered particularly beneficial by students from all disciplines. Here, students observed and evaluated other professionals in particular contexts and engaged in feedback and self-reflection to further develop and refine the skills needed for professional success. This fostered their ability to problem solve, think critically, communicate, work effectively with others and develop a better understanding of what constitutes professional and efficient practice in their chosen field. They also felt it enhanced their understanding of social, corporate and personal responsibility and how

technology and data are used within their discipline. As stated by one Education student, "*discussions with my mentor teacher helped immensely. Just the fact that we could be honest and open with each other in what needed to be fixed and what I was already doing well*".

Goal setting and reflection activities, such as defining realistic and measurable goals and evaluating completed tasks and achieved outcomes in a journal, or similar, were considered invaluable for enhancing performance across all the skills and nurturing the overarching goal of becoming a critical practitioner. Regular performance management meetings with supervisors, peers and/or mentors also helped students evaluate their skill performance and identify areas requiring further development. Students found team meetings invaluable for developing communication skills, improving organisational awareness and gaining a better understanding of what was required of them and others within the workplace. A student commented "*the team meetings during the period of the project have allowed for a lot of productive discussion, a greater insight to what each member's perspectives are, and being able to translate this into an ideal outcome for everyone*". Professional development workshops, seminars or similar events in the workplace were also considered to add value to targeted skills. Finally, the construction of professional portfolios assisted students with unpacking the meaning of skills and articulating how they had developed them during their placement.

Skill development: Classroom or placement?

The majority of students did not believe any of the skills could be better learned in the classroom although many acknowledged the benefits of combining and scaffolding development across the classroom and placement settings. One student responded "*it is good to have a grounding or starting point in the skills in order to best take advantage of the*

practical knowledge you get on work placement. It's important to be refining, developing and practicing your skills, not simply starting to learn them". Introducing the skill initially in class, through a discussion of theory and suitable case studies and role play activities, followed by opportunities for practice and further refinement in a professional work environment and subsequently reflecting on performance upon returning to the classroom was considered highly beneficial. Another student confirmed the importance of this: "*practicum solidifies skills learnt in the classroom an enables you to employ and develop them before commencing work full-time*".

The very small minority's preference for skill development in the classroom was attributed to a lack of time and opportunity to develop skills fully during placement and skill refinement being expected by industry partners upon entering the workplace. Prior development in the use of technology, communication, self-management and team working were felt to increase their productivity and acceptance as a valued and respected member of the workplace. Some also believed it important to develop a greater awareness of organisational protocol and industry expectations of their role and responsibilities. One Business student quoted "*having never worked in a five star hotel before, I had to learn to adjust appropriately to my surroundings, although I had some idea from university of what was expected it didn't measure up to the standards expected by the hotel*". Inadequate preparation in these areas augmented a sense of inferiority in some students and impacted on their confidence in performing skills during placement.

Several students criticised their classroom learning as not adequately preparing them for their placement, particularly in their ability to use technology and speak comfortably to a public audience and with clients and co-workers. One stated, "*the more one works in industry,*

it becomes obvious that very little of what is taught in class is applied in the real world". In addition, hypothetical classroom scenarios were often regarded as insufficiently preparing students for the realities of the professional work environment. The use of more realistic case studies with a structured framework to guide reasoning, analysis, diagnosis and decision making was considered by some to enhance valuable critical thinking and problem-solving skills. Many students noted certain skills, particularly working effectively with others through group projects, were sometimes not treated seriously or with fervency in the classroom. Some felt the reality of the workplace and better appreciating the actual consequences which could arise would force students to learn to interact in an appropriate manner. Developing professionalism was also highlighted as being better learned during placement due to opportunities to directly interact with other professionals and gain a better understanding of what constitutes professional demeanour, ethical behaviour and efficient working practices. Some cited time management and multi-tasking; managing work-life balance and career management as skills particularly suited to development on placement.

Increased real world opportunities for authentic practice and refinement of skills considered essential in one's chosen career was an important feature of placements. In the professional work environment, students were able to see how their decisions and actions impacted on others, encouraging students to think more critically, engage in self-reflection, and strive to develop professionalism and social responsibility. Having practical experience in performing career-specific skills and tasks served to increase confidence and a sense of responsibility and accountability in students. A Health and Science student stated, "*on the job experience that involved partnering with a professional mentor (preceptor) and taking a 'patient load' of your own is probably the most valuable part of being on practicum. It is the only way to effectively marry theoretical and clinical skills and knowledge. Areas of time*

management, prioritising and effective communication were enhanced in the real life situation. De-briefing sessions with a clinical supervisor helped to provide a sense of security for me as a student in a professional situation as it is very easy to start to feel out of depth and over-whelmed".

Further, some noted differing expectations between workplace and classroom settings on the nature and standard of skills required. Clarifying the precise meaning of targeted skills and unpacking precisely how they are needed and used in one's chosen field was considered invaluable. One Health and Science student stated "*I am aware now what is needed of me in the workplace. This has given me a greater insight about the formal workplace and how organisational culture can affect you and others around you*" while another stated "*I initially had problems reconciling what I had learnt at university with what I was required to do as a consultant. After a talk with my mentor at my placement, I was better able to see how I could contribute my skills to the organisation*".

Assistance in performing skills during placement

Constant-sum ratings for the relative importance of different personnel in assisting skill performance during work placement indicated the workplace supervisor was, with an average score of 37.8, the most important person in assisting students to perform employability skills. 'Other employees' achieved an average of 25.7, university lecturer an average of 23.5 and classmates 12.6. There was considerable spread in the data and no additional people categories were volunteered by participants.

Problems experienced in performing skills during placement

In addition to a wide range of problems experienced by students, it was evident that some found it difficult to assess the standard to which they completed certain tasks and the degree to which targeted outcomes and goals were achieved. Some found working with very experienced and confident co-workers resulted in feelings of inadequacy and isolation. Unsupportive or 'difficult' co-workers made gaining approval and fitting in harder and it took longer for students to understand important workplace protocols and practices. Others reported difficulties working with culturally, linguistically and ethnically diverse people, often resulting in miscommunication and inefficient performance. Unfortunately, a small number of students in Education and Health and Science witnessed workplace bullying among co-workers. Several noted difficulties with resolving tension or conflict with co-workers during their placement, inflamed by their own low self-efficacy and inexperience; "*the importance of having a supportive environment greatly increases the ability to perform tasks efficiently and confidently*".

For communicating effectively, students experienced difficulties with articulating their viewpoint, instructions and responses to different audiences in the workplace and sometimes struggled to engage others and make their voice heard. A Business student noted "*being a multi-cultural environment it was challenging to adjust to different situations and use language suitable to the recipient*". Some also lacked confidence, particularly for those speaking in front of colleagues or addressing a public audience, and had problems with providing useful and appropriate feedback if required. Learning new forms of communication and their associated protocol, such as radio systems and professional email etiquette, was a problem for a small number of Business students. Finally, several students found receiving

and positively acting upon critical feedback, described by some as 'incongruent', somewhat challenging.

Many noted difficulties in developing aspects of self-awareness due to a lack of time and/or opportunity or elevated stress levels while on placement. In particular, some did not receive adequate support or advice regarding career choices and job requirements while others felt they gained an insight into what their profession entailed on a day-to-day basis, motivating some and prompting others to reconsider their chosen career pathway. For thinking critically, some students cited lack of time, opportunity, support and/or resources for developing this skill as problematic. The availability of suitable professionals with which to discuss ideas and seek advice from was a problem in some placements. Many believed they performed poorly in this skill due to inexperience and an inability to 'think ahead' and conceptualise problems. For example, one student responded "*we had little time for thinking critically, it was more about learning on your feet*".

A significant problem for analysing data and using technology was the lack of experience in certain technology and the need to master this quickly and efficiently to perform effectively in the workplace. A greater focus on, and access to, modern technology typically used by the chosen profession was needed in the classroom prior to placement. Conversely others, although relatively few, commented on the lack of availability of required technological resources which they felt impacted on their efficiency and productivity. For problem-solving, some students felt a lack of support, time and/or resources negatively impacted on their capacity to develop in this area. Others felt their professional inexperience and lack of familiarity with certain processes impeded decision making abilities, particularly finding effective solutions under time pressures. Some Business students felt their

inexperience encouraged bias at times due to an inability to maintain objectivity in reasoning. Lack of knowledge of organisational procedures and protocol sometimes confounded student ability to effectively problem solve during placement.

A small number of students felt their placements offered limited opportunity for developing initiative and enterprise. Several felt the pressure of not wanting to offend co-workers by trying something different and lacked the confidence to challenge dominant and traditional opinions. Resistance to change among mentors or other employees was considered highly dysfunctional and an impediment to creativity. Student comments such as "*trying to find the balance of wanting to show initiative but not wanting to offend mentor teacher*" and "*I thought using initiative came somewhat naturally, however applying this initiative without other people thinking you are a smart ass was a challenge*" highlight these tensions. For self-management, managing a healthy work/life balance during placement was problematic, particularly for Health and Science and Education students. Many were juggling placements with paid employment, university studies and family commitments which proved challenging. An inability to manage stress effectively was cited by several, amplified by inexperience, a lack of confidence and time pressures in the workplace.

For social responsibility and accountability, difficulties in censoring and regulating personal ethics, beliefs and behaviour – such as language use and being attentive to different cultural beliefs – was acknowledged. Some Health and Science students reported discrepancies between their personal ethics and those codes of conduct engaged in by other staff members. Maintaining professionalism outside the practicum experience for Education students, such as ignoring social media requests from pupils, was also difficult. Further, a lack of experience was daunting for some as they had to learn to take responsibility and be

accountable in their role. Finally, problems experienced in developing professionalism included maintaining motivation; developing an understanding of expectations and responsibilities in their assigned role; and overcoming inexperience to develop autonomy and efficient working practices, particularly multi-tasking and time management.

Table 3 summarises the percentage of respondents, by discipline, which did not experience problems when trying to perform each skill during their work placement. In alignment with the individual thematic analysis, the greatest proportion of cited problems was experienced in communicating effectively, working effectively with others, analysing data and using technology and self-management. When analysing trends in the average number of reported problems, there were differences detected among the disciplines. Students from Business and Law experienced relatively fewer problems in all the skills, with the exception of problem-solving. Health and Science students were the next best performers with relatively fewer problems when performing six of the ten skills. They reported higher than average difficulties, however, in working effectively with others; communicating effectively; problem-solving and initiative and enterprise. Engineering and Education students performed least well with reports of an above average number of experienced problems in seven of the ten skills.

[**Insert Table 3**]

Discussion/implications

What students actually experienced during placement, or what they felt was important to their learning, broadly aligned with best practice principles for WIL design. First, the concept of integrating skill development across the two settings is evident with students emphasising basic skill theory with authentic practice opportunities prior to placement;

opportunities to refine skill performance in the workplace; followed by self-reflection and performance review upon their return to the classroom to further cement learning and understanding of what constitutes professional practice. These reflect the broad principles of integration across the two settings (Billet 2011a; Coll et al. 2009). It appears students were explicitly encouraged to make links between their learning at university and what was practiced on placement; comparing commonalities in skill performance and development between class and work settings and developing a critical perspective of their work and learning processes in the realm of employability (Billet 2011b). This point is illuminated by a student who stated the classroom activity which improved their skill development was "*presenting a reflection of my professional practice to my peers upon returning to classes*".

Second, the importance of preparing students for industry expectations of workplace conduct and performance (Billet 2011a; Coll et al. 2009) was highly important to students, although not always achieved which caused elevated stress and anxiety during placement. Unrealistic employer expectations of graduate skills (see Jackson and Chapman 2012a) augment the need to align student expectations of roles and responsibilities with industry's (Billet 2011b; Martin and Leberman 2005). Achieving adequate levels of student ability and confidence to engage effectively in their placement is challenging (Billet 2011a) and is a documented problem in other studies (Coll et al. 2009). Adequately preparing students in certain generic and career-specific skills highlights the need for industry and academic practitioners to maintain an ongoing dialogue of precisely what skills are required, and to what standard, during placement and how they can be proactively refined.

The need for industry input in creating authentic case studies, role-plays and scenarios which articulate the scope, nature and standard of required skills to students whilst

encouraging them to develop some ability and confidence in these areas prior to placement is also important. This preparation should include strategies for managing stress and achieving a healthy life/work balance during placement (Varghese et al. 2012), particularly with increasing numbers of students in paid employment (Robotham 2012).

Students should have a clear understanding of professional ethics and conduct and how to manage situations where these may conflict with personal values; task expectations and responsibilities in assigned roles and strategies in the workplace (Billet 2011b; Coll et al. 2009). Conflict management is one of the most poorly developed skills in graduates (Jackson and Chapman, 2012b) and requires collaborative effort among academic and professional practitioners. Another prominent example of inadequate preparation was students' lack of familiarity with and mastery of relevant and modern technology adopted in the profession. Many students expressed frustration with their poor performance in certain software or hardware; squandering valuable placement time and impacting on productivity.

Third, the importance of accessing supportive mentors for observation, advice and feedback purposes (Martin et al. 2011) was highly visible and a problem for some, as documented in other studies (Varghese et al. 2012). Being able to observe and engage with other professionals is a critical element of placement design, particularly for enhancing critical thinking and problem-solving skills and discussing career choices. It enables students to establish a tangible link between theory and practice; as noted by one Business student: "*prior to going, we had made a list of questions we would be asking. It was quite structured. On practicum, we gathered answers by observation and by asking many, many questions. This made theory back in the classroom more vivid for me*". Further, it encourages students to identify skill areas requiring further development; develop a better appreciation of their

profession's different roles and gain a better understanding of career choices (see Aggett and Busby 2011). This was noted by one student who commented, "*I fear the uncertainty of the future. Having to sit down and seriously think about where I was headed took me straight out of my comfort zone. I am glad I did it though. I have much more direction and subsequently more drive, and now I feel much more at ease when I think about my future*". In alignment with Smith's (2012) and Martin et al.'s (2011), findings indicate the supervisor is instrumental to student learning.   Martin et al. argue the supervisory role may span 'participating in formative assessment, reinforcing theories ... providing career guidance along with encouragement, positive reinforcement, criticism and feedback' (23).

Findings also confirmed the importance of co-workers, lecturers and class peers in student learning (Coll et al. 2009). Host organisations should ensure co-workers are empathetic and responsive to the varying levels of experience and confidence in incoming placement students in order to minimise stress. Familiarising students with relevant procedures and protocols; encouraging them to ask questions and clarify points and also engaging and listening to their ideas and viewpoints are the responsibility of all employees. Findings did suggest some placements lacked integrated learning support in both settings, considered vital for alleviating stress and enhancing learning (Smith 2012).

Further, setting work placement goals which constructively align with academic learning outcomes and formative assessment (Jaekel et al. 2011) and gathering constructive, multi-source feedback to evaluate performance and identify areas for future development was highly important. Again, execution in practice was not perfect with insufficient feedback and/or student difficulty in interpreting and responding effectively to critical evaluations. The importance of on-the-job training, coaching and mentoring (Coll et al. 2009) and professional

development activities and group project work (Martin et al. 2011) also emerged. The value of regular team meetings to cement learning and enhance understanding of organisational culture was also emphasised. Unlike Coll et al.'s (2009) study, there was no feeling among students that placement activities, tasks or assessment were not reflective of their chosen profession or not 'real world' in any way. In contrast, situated learning – as with Varghese et al. (2012) – was highly valued as students enjoyed engaging with other professionals and being part of a community of practice within their work environment.

Finally, specific classroom activities which enhance the WIL experience and subsequent skill development include planning and goal setting activities which, as discussed, should integrate the two learning contexts through a cycle of feedback and review; training for relevant occupation-specific tasks commonly practiced in the workplace; and collaborative small group activities. The latter is of particular interest given undergraduate concerns with small group learning (Marks and O'Connor 2013) although the value of scenario-based learning in enhancing skills is well documented (Pegg et al. 2012).

There was relatively little discussion of assessment by students, the focus far more on learning activities. Aligning with literature on best practice, professional portfolios (Yorke 2011); oral presentations and reports summarising the WIL experience and formative methods such as reflection journals and diaries (Martin et al. 2011) were all considered important. The relatively small numbers discussing the value of skill portfolios as evidence gathering tools was surprising although delays in introducing a university-wide e-portfolio platform may provide explanation. Industry evaluations of student performance were considered vital (Hundley 2010; Patrick et al. 2008) with supervisors/mentors instrumental in ongoing observation, review and feedback to enhance skills development and performance

(Bandaranaike and Willison 2011). There was, however, no formal mention of a learning contract where goals, activities and evaluation strategies for assessing outcomes are negotiated (Fleming and Martin 2007) or competency-based assessments for accredited programs (Martin et al. 2011).

As indicated in Table 3, a significant number of students felt they experienced little difficulty in performing skills in the workplace, conflicting with ongoing reports of skill deficiencies among graduates in developed economies (Confederation of British Industry [CBI], 2011). On average, the least proportion of students experienced no difficulties with communicating effectively on placement; areas students found particularly challenging were public speaking, verbally communicating with peers and clients and giving and receiving feedback. Working effectively with others, cited as the most highly regarded skill by graduate employers (CBI, 2011), was also a problem for many and aligns with comments on inadequate preparation prior to placement and managing diversity among co-workers. Student difficulties in self-management also align with literature on elevated stress, low self-efficacy and poor work/life balance during placement and poor results for analysing data and using technology may be attributed to the lack of preparation cited by many students. The relatively few problems experienced by Business students in skill performance may be attributed to the university's standalone employability skills program, core to the bachelor undergraduate program, which addresses the ten skills in a program of four sequential units delivered via student-centred learning.

Conclusion

This study supports the importance of WIL in skill acquisition and refinement yet not as an alternative to traditional, on-campus learning (Cranmer 2006) but a complement. Here, the work placement builds on the foundation of skills developed in the traditional class setting and enhances student confidence and experience in skill application under the guidance of workplace supervisor and peers (Coll, Lay and Zegwaard 2002). As with previous studies, students largely acknowledged the benefits of WIL as providing opportunities to practice and refine skills in a real world setting (Coll and Eames 2009) and engage with professional practitioners to gain a clearer understanding of the roles, expectations and outcomes of their profession (Smith 2012). The problems experienced by students can be largely attributed to inadequacies in placement as well as course content, structure and design. For example, nurturing a solid foundation in required employability skills, familiarity with relevant workplace technology and mastery of critical occupation-specific tasks prior to placement are essential for student productivity on placements yet must be culminated over a period of time, not just in the unit incorporating WIL. Notwithstanding these are clear principles in placement design which appear to greatly assist students in skill development, such as establishing effective avenues of information exchange and feedback – via goal setting, reflective practices and performance management review – between the work and classroom contexts. Therefore, although this study supports Wilson's (2012) supposition that work placements are fundamental to national economic growth, it also emphasises the importance of establishing both the characteristics of a good placement (Wilton 2012) and undergraduate courses which effectively prepare and support students in their WIL experience. The onus remains on the collaborative efforts of academics and professional practitioners in researching, developing and establishing best practice in these areas.

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Appendix One: Sample of survey questions

1. Please identify any specific *CLASSROOM* learning and/or assessment activities, which were part of your WIL unit's experience, that have helped your ability to perform the 10 skills.

2. Please identify any specific workplace learning and/or assessment activities, conducted *WHILST ON YOUR PLACEMENT* as part of your WIL unit experience, that have helped your ability to perform the 10 skills.

3. Please outline any problems you experienced when trying to perform each skill set (or any of its behaviours in particular) during your work placement.

4. Do you believe any of the 10 skills could be better learned in the classroom, rather than on work placement? Please state which and explain why.

5. Do you believe any of the 10 skills could be better learned on work placement, rather than in the classroom? Please state which and explain why.

6. Please indicate the relative importance of the following people in helping you perform the 10 skills during your work placement.

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Table 1 Participant sample's demographic, background and work placement characteristics

Factor	Subgroup	Respondents	
		n	*%*
	19-21 years	58	44.3
Age Group	22-25 years	35	26.7
	26+ years	38	29.0
Sex	Female	94	71.8
	Male	37	28.2
	Business and Law	38	29.0
Degree type	Education	32	24.4
	Engineering	13	10.0
	Health and Science	48	36.6
	First	16	12.2
Year of study	Second	21	16.0
	Third	74	56.5
	Fourth	20	15.3
	< 100 hours	41	31.3
Hours on placement	100-200 hours	49	37.4
	> 200 hours	38	29.0
	Not answered	3	2.3
	Private	61	46.6
Organisation type	Public	51	38.9
	Not-for-profit	19	14.5
	Small (1-49 employees)	42	32.1
Size of organisation	Medium (50-149 employees)	42	32.1
	Large (150+ employees)	47	35.8

Table 2 Employability skills framework (adapted from Jackson and Chapman, 2012a)

Skill	Behaviour
Working effectively with others	Task collaboration; team working; social intelligence; cultural and diversity awareness; influencing others and conflict resolution
Communicating effectively	Verbal communication; giving and receiving feedback; public speaking; meeting participation; written communication
Self-awareness	Meta-cognition; lifelong learning; career management
Thinking critically	Conceptualisation; evaluation
Analysing data and using technology	Numeracy; technology; information management
Problem Solving	Reasoning; analysing and diagnosing; decision making
Developing initiative and enterprise	Entrepreneurship/ Intrapreneurship; lateral thinking/creativity; initiative; change management
Self-management	Self-efficacy; stress tolerance; work/life balance; self-regulation
Social responsibility and accountability	Social responsibility; accountability; personal ethics; organisational awareness
Developing professionalism	Efficiency; multi-tasking; autonomy; time management; drive; goal and task management

Table 3 Percentage of students not experiencing problems in skill performance

	Business and Law	Education	Engineering	Health and Science	Average
Working effectively with others	42.1	37.5	53.8	29.2	40.7
Communicating effectively	44.7	53.1	30.8	29.2	39.4
Self-awareness	76.3	56.3	46.2	66.7	61.3
Thinking critically	65.8	53.1	61.5	66.7	61.8
Analysing data and using technology	50.0	50.0	23.1	54.2	44.3
Problem Solving	52.6	62.5	61.5	50.0	56.7
Developing initiative and enterprise	68.4	40.6	76.9	60.4	61.6
Self-management	55.3	40.6	38.5	52.1	46.6
Social responsibility and accountability	71.1	59.4	46.2	62.5	59.8
Developing professionalism	57.9	53.1	53.8	58.3	55.8
Average	58.4	50.6	49.2	52.9	