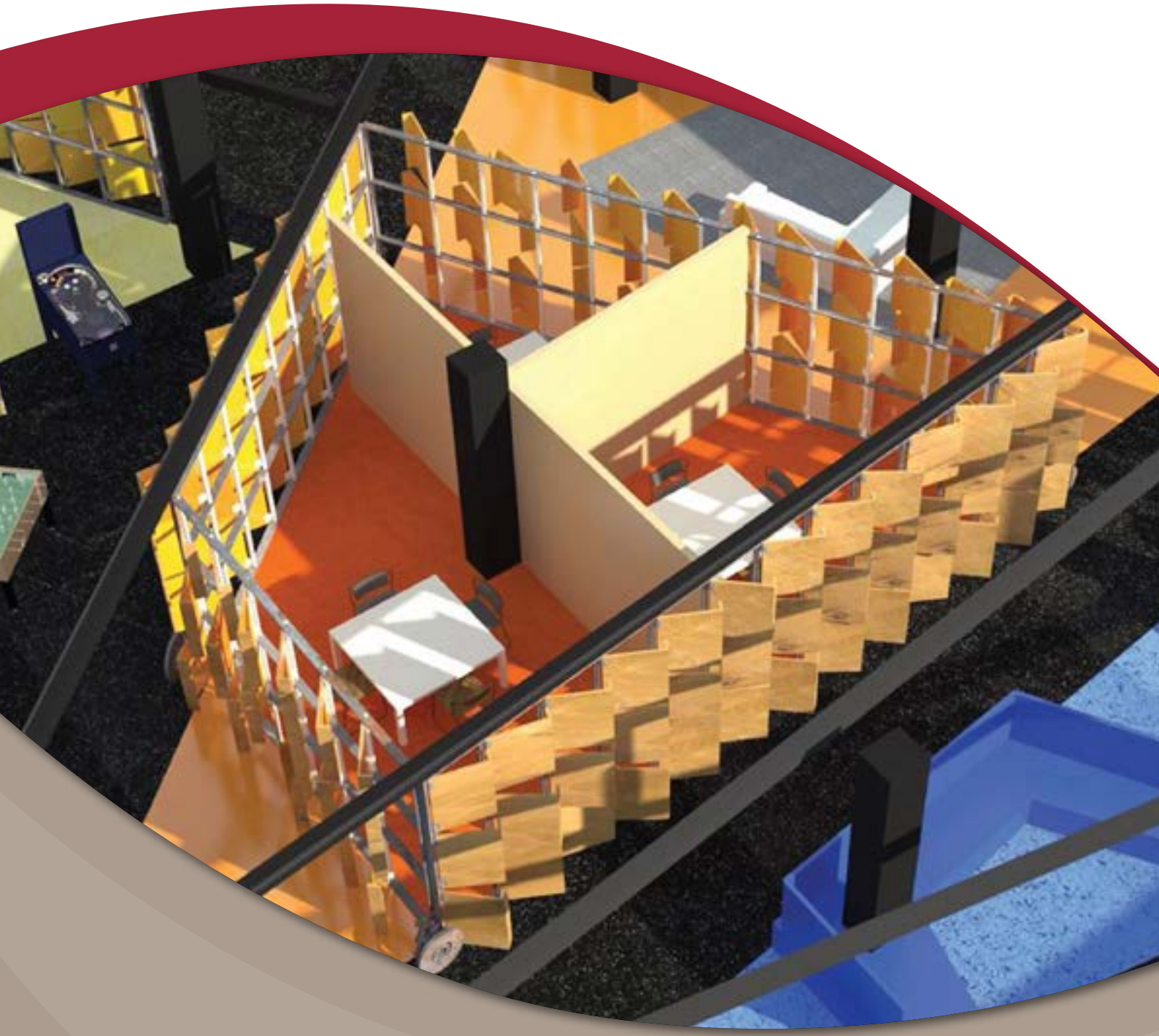
OUR UNIVERSITY OUR FUTURE

MACQUARIE UNIVERSITY



SELECTED RESEARCH

from Learning and Teaching Week 2013

Theresa Winchester-Seeto • Elizabeth Shoostovian • Vanessa Fredericks

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Edited by

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MACQUARIE UNIVERSITY
LEARNING AND TEACHING CENTRE

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MACQUARIE UNIVERSITY

LEARNING AND TEACHING CENTRE

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FOREWORD

Learning and Teaching Week is now well embedded into the calendar of activities of the University. It continues to grow and thrive, demonstrating that learning and teaching is a central part of the intellectual heartland of Macquarie University. Innovation is a fundamental element of learning and teaching in higher education and the use of technology to deliver, record and enhance the student experience and improve learning outcomes has become part of the leitmotif of the contemporary university.

The theme for the 2013 Learning and Teaching Week - *Our University, Our Future* signals a focus on the future of learning and teaching at Macquarie University.

This is the first time that MQ has produced an eBook from Learning and Teaching Week. It has started modestly with six contributions in total from a range of faculties and centres from across the university (Human Sciences, FBE, Science, LTC & PACE) and the papers cover a number of current issues that shape learning and teaching practice and delivery including PACE, Session 3 and eLearning.

In a research intensive environment, the scholarship of teaching and learning plays an important role in the academic and research profile of the institution; it also reinforces the importance of continuous improvement through reflection and debate. Quality and rigor are fundamental to the academic enterprise and everything that goes with it. Accordingly, each of the papers presented here has been peer reviewed.

The work and effort of the reviewers who come from a range of faculties (Arts, Human Sciences, FBE, Science) and the LTC is greatly appreciated. They have given generously of their time and their input has provided the contributors with an opportunity to access experts in Learning and Teaching from across the campus. It also allowed reviewers and the LTC editors an opportunity to share their expertise, and for the contributors to share good practice. The process for developing and reviewing the eBook has fostered a truly collaborative spirit.

Readers will notice that the papers in the eBook are short, with the writing instructions limited to 1500 words. This short format fulfils a number of functions including:

- capturing snapshots of practice that may not be enough for a full paper elsewhere, but that are still useful for practitioners;
- reporting on emerging research;
- recognising that scholarship in learning and teaching is not every academic's speciality and allowing an opportunity for academics to hone ideas, theoretical background, methodology etc.

The eBook is thus a useful vehicle for promoting and fostering a scholarship of learning and teaching by providing a platform for academics to launch into a wider community of research in learning and teaching. It certainly reinforces the spirit of Macquarie where *'And gladly teche'* is an integral part of the DNA of the University.

Professor Judyth Sachs
Deputy Vice-Chancellor (Provost)

INTRODUCTION

Our University, Our Future: Selected Research from Learning and Teaching Week 2013

Learning and Teaching Week is an annual event at Macquarie University, and is a celebration of pedagogy and scholarship. The theme for 2013 was *Our University, Our Future* and derives from the Vice Chancellor's recent strategic vision statement *Our University: A Framing of Futures*, which aims to provide a blueprint for shaping strategic direction in the coming years. The papers presented in this collection pick up on these themes and present research and evaluation of current practice and future directions.

Each year presenters are encouraged to publish their work as a way of sharing practice and furthering research in this area. For 2013, an eBook option was offered for the first time as a platform for short, 1500 word papers. All papers included in this publication have been double blind peer reviewed, and we are grateful for the generous contribution of our reviewers.

The six chapters in this book deliver two overarching themes. The first three chapters detail aspects of pedagogical innovation for existing courses, staff and students, whereas the second three articulate nuanced evaluation of the early stages of the PACE (Professional and Community Engagement) initiative involving multiple stakeholders from both within and outside the University.

In Chapter 1, Cavanagh et al present a case study from the School of Education in *A community of practice for teacher education academics* which explores individual teaching and assessment practices. Through collaboration, they identify the benefits to pedagogical culture. Sin and McGuigan from the Faculty of Business and Economics acknowledge in Chapter 2 the challenges in graduates' preparedness for the workplace. In *Nine graduate capabilities, A highly diverse student body, A place to start,* they target potential key capabilities in an innovative first year assessment task for a mixed cohort with surprising results. Whillier et al from the Department of Chiropractic propose in Chapter 3 a 'Flipped Classroom' as an alternative teaching model when offering a compressed curriculum in Session 3. *Development of an intensive mode Neuroanatomy unit utilising the Flipped Classroom* describes innovative ways to deliver the entire course content without compromising learning outcomes.

With an estimated 10,000 enrolments in PACE units by 2016, the University is scrutinizing pedagogical and education opportunities for students and staff. In *Work integrated learning and student satisfaction: a qualitative study in a business school,* Carter and Romero from the Faculty of Business and Economics question what, if any, are the contributing factors to the relationship between Work Integrated Learning (WIL) and student satisfaction. Rowe and colleagues examine the implications for workload for ten academics in one teaching session using a diary style survey instrument in *Workload implications of teaching and administering work-integrated learning: The Macquarie University experience through PACE.* This collaborative paper incorporates the expertise from the Learning and Teaching Centre, the Office of the Provost, and the Department of Statistics. Finally, Rowe and Winchester-Seeto from the Learning and Teaching Centre determine both the roles of and the benefits to multiple stakeholders in *What makes a good student placement: Recognising the importance of people.*

As Macquarie approaches its Golden Jubilee, its future is framed in pedagogical excellence.

CHAPTER 1

A community of practice for teacher education academics

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ABSTRACT

This paper reports on the formation and early development of the Secondary Teacher Education Program (STEP) group. Throughout 2012 six teacher education academics participating in the development of STEP each gave a 60-minute presentation about the learning and teaching activities in their units and how they assessed students. Then at the start of 2013 each academic wrote a 500 word personal reflection and these were used to reflect on the impact of the presentations and consider possible future directions for the program. A research assistant, who was not a STEP member, interviewed each participating academic individually for about 20 minutes. The research assistant then analysed the reflections and interview responses in terms of Wenger's (1998) three defining features of a community of practice; namely, mutual engagement, a joint enterprise, and a shared repertoire. Results indicate that the STEP group enhanced collegiality by enabling a better understanding of the challenges faced by others, strengthened common purpose and inclusion, and provided a rich opportunity to reflect on pedagogy and improve practice. The paper offers positive insight into a collaborative pedagogical culture for academics.

KEYWORDS community of practice, teacher education, self-study, higher education

Our University, Our Future: Selected Research from Learning and Teaching Week 2013. Theresa Winchester-Seeto, Elizabeth Shoostovian, Vanessa Fredericks (Eds.) http://hdl.handle.net/1959.14/278552

INTRODUCTION

Higher education is in a state of change. Government policies designed to make tertiary study more accessible to a range of students have been accompanied by funding cuts (Lea, 2005). These changes can impact on the work of academics so there is a need for a more scholarly approach to teacher development in higher education (James, 2007). In particular, secondary teachers face a variety of challenges in transitioning to university teaching. The shift typically involves moving from a shared staffroom to a private office working alone in a discipline so opportunities for collegial discussion are less frequent. Yet a more collegial approach provides "appropriate opportunities for academic staff to develop their approaches to the scholarship of learning and teaching, through action, reflection and evaluation of their current practice" (Stefani, 2006, p. 121).

In 2012, six teacher education academics considered how to address some of these challenges. A key focus for the group was to develop greater curriculum alignment in the secondary teacher education program and share best practice from across the methodology units of study. After preliminary discussions about the need to create a forum for dialogue and reflection focused on pedagogical knowledge, practice and experiences, the Secondary Teacher Education Program (STEP) group was formed. The underpinning approach for the group was the notion of a community of practice (Wenger, 1998). The aim of the paper is to demonstrate how the STEP model enhanced collegiality among members and highlight how this was achieved.

THEORETICAL FRAMEWORK

Wenger, McDermott, and Snyder (2002) define communities of practice as "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and experience in this area by interacting on an ongoing basis" (p. 4). Wenger (1998) identifies three key features of communities of practice: *mutual engagement* when people share a common interest and are sufficiently knowledgeable about it so that they can learn with and from each other; a *joint enterprise* which includes interactions among members that help to build relationships centred on the common interest; and a *shared repertoire* of resources that are used to develop and negotiate meaning among the members of the group. In the case of the STEP group, these shared resources took the form of participants' reflections on the STEP activities.

Communities of practice emphasise co-participation in shared activities and practices, since individuals learn through social relations to other members (Fuller, 2007) and it is through interacting that members build relationships with each other to form a community around the domain (Gray, 2004). Such an approach can inform the scholarship of learning and teaching as academics "use increasingly diverse and sophisticated techniques to examine the effectiveness of their educational strategies, making their work more compelling to more colleagues" (Nelson & Robinson, 2006, p. 80). This paper reports how the STEP group was formed (mutual engagement), negotiated (joint enterprise) and sustained (shared repertoire) as a collaborative pedagogical forum for a group of teacher education academics. This community of practice approach informs current research by examining how the collective work of a group of teacher education academics might influence the capacity to reflect critically and meaningfully with peers, and to contribute to an agenda of capacity building and professional growth.

METHOD

Throughout 2012, each of the academics in the STEP group gave a 60-minute presentation about the learning, teaching and assessment used in the methodology unit. The presentations were informal with much discussion about the ideas. In 2013 common issues from the presentations were examined, especially the need to align student assessment practices.

At the start of 2013 the idea of sharing experiences about teaching in the methodology unit was discussed. Ethics approval to conduct the study was obtained and each STEP member wrote a 500 word personal reflection about the impact of the group activities. An interview schedule was created by the group to investigate how the 2012 presentations had shaped thinking and practice, how the STEP group might evolve, and how the STEP model might be broadened to other contexts. A research assistant who was not a STEP member conducted a 20-minute interview with each person. She audio-recorded and transcribed the interviews and analysed the data by a close reading of the personal reflections and transcripts to identify examples related to Wenger's (1998) three key features of communities of practice. These written and interview responses not only provided the data for our study but have also served as a means of analysing our experiences as members of the STEP group.

RESULTS

The results are reported in terms of Wenger's three key features of communities of practice.

Mutual engagement *(collaborating with colleagues)*

Although the participants' offices are nearby and they see each other regularly, there are few opportunities for professional dialogue. P1 commented on this in the personal reflection,

> *Isolation and a feeling of not knowing what you don't know is a challenge! Having a group of colleagues you can discuss common issues with has helped to address this issue.*

At the start, participants wanted to "know we're on the right level with everyone else" so they could see if what they were doing was comparable. As they shared their experiences, it was comforting to discover that each faced similar difficulties, as P2 commented in the interview:

> *I've learnt that there are lots of other people in the same boat as me. That makes me feel comfortable about having a work in progress rather than a perfect finished product.*

The presentations were an honest and open exchange of ideas about what participants did well and issues of concern. Peer feedback affirmed the work each person was doing and showed that the group has far more in common than they had previously imagined. All of this helped to establish a sense of mutual engagement in the group.

Joint enterprise *(learning from each other)*

Despite the fact that participants teach across different subject areas, they quickly discovered participants could learn much from each other in terms of (i) immediate practical matters to solve, such as how to use technology more effectively in our teaching; and (ii) the need for broader learning, which P3 characterised as a desire "to make my practice visible against my colleagues' practice, to gain a more complete picture of our shared endeavour" (personal reflection).

Negotiation was a feature of the joint enterprise as they were challenged by the variety of approaches and discourses in each other's presentations. These included the language used to describe practice and how priorities were shaped by syllabus demands. P2 and P3 both noted that this sharpened their sense of difference, even isolation, in their curriculum areas, and P3 was sometimes "struggling to find similarities". At the same time, however, this tension also highlighted what each person valued in his or her own field: "It made me realise how highly I regard accurate and meaningful content and pedagogical content knowledge" (P2). Individual backgrounds and perspectives shaped the perceptions of peers' approaches while also affirming the relationship between each person's area of curriculum content and pedagogy in pre-service teacher education. Yet this potential source of tension enabled participants to learn a great deal from each other and "turned out to be a positive growth outcome, in that these extra discourses expanded my teacher education understanding and repertoire" (P2).

The shared endeavour of teacher education was crucial to the learning which took place in the STEP group. A question which often arose in discussions was articulated by P2, "In what way can my teacher education students be best prepared to take their place within the profession?" P2 also spoke about the way the STEP activities had helped in "becoming more responsive to the needs of my students".

Shared repertoire *(reflecting on our common practice)*

All participants recognised the opportunities in STEP meetings to reflect on individual practice. As P1's personal reflection noted, "One of the key benefits of presenting to colleagues in this forum was the opportunity to reflect on my own practice". P4 spoke in the interview about how the STEP group activities "allowed me to stand back from my daily work and reflect more deeply on my pedagogy; it has provided me

with a space to grow and develop professionally". The STEP group provoked each participant to contemplate his or her own practice in light of colleagues' ideas. As P3 commented in the interview:

> *I think it affirmed my practice. It suits my own field, in what I'm doing, so I felt reasonably good about that. But I did think there are some strategies here that I could use.*

Individual reflection also occurred in preparing the written responses and participating in the interviews for this paper. These activities afforded the chance to look back on the activities of the STEP group and think about what was learned. As P2 commented:

> *I began to view my endeavours with students as part of a wider mentoring activity – shared with my colleagues at university and also with the classroom teachers supervising my students.*

CONCLUSION

The results of this chapter demonstrate the encouragement and support that academics can offer each other when they make their practice visible to colleagues. The STEP model was successful because members were willing to share information about their units and respectfully challenge each other to enable a better understanding of the secondary teacher education program. STEP meetings provided rich opportunities to reflect on pedagogy and learn from each other as members developed a common purpose for learning and teaching. This process has allowing for a greater inclusion of ideas across the different methodology units and enhanced a sense of collegiality among the group. The STEP group is now well established and will continue to meet into the future.

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Dr Kathy Stewart lectures in science and environmental education in the teacher education program at Macquarie University. A teacher of some 40 years, she enjoys collaboration with colleagues to share and make experiences more explicit to build a collective understanding of practice in an ever-changing world. Student engagement at all levels, with meaningful, robust content and contexts is of utmost importance to her.

Michael Stevenson is a doctoral student in the School of Education at Macquarie University. His research explores the role of collaborative knowledge building as a key component in the development of online Personal Learning Networks. Michael has been involved in Connected Communities 21, an evaluation research project for ABC Splash and a current project for the Australian Independent Schools (AIS) network exploring the impact of the National Broadband Network on teacher pedagogies and professional learning.

CHAPTER 2

Nine graduate capabilities, A highly diverse student body, A place to start

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ABSTRACT

The global higher education environment is becoming increasingly complex with the internationalisation of curricula, development of graduate capabilities and the standardisation of measurement taking priority. This is coupled with increasing demands for employable graduates with sufficiently developed technical and soft skills to ensure workplace readiness. Educators are currently presented with an extremely complex environment. This article showcases a curriculum resource for Accounting that addresses such complexity by building the foundations for developing complex graduate capabilities for a highly diverse student cohort. The context in which the study takes place is described, highlighting the issue of assessment validity for complex graduate attributes that invariably encompass skills, dispositions and values – beyond technical knowledge. The chapter then draws on trans-disciplinary research and principles of best practice to describe and reflect on a framework used for the design and implementation of innovative assessment practice.

KEYWORDS graduate capabilities, assessment, accounting education.

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INTRODUCTION

This article provides a reflective account of a larger project, funded through a Macquarie University Innovation and Scholarship grant. The aim was to create an assessment framework for complex graduate capabilities that would meet the national accounting academic standards and the Australian Qualifications Framework (AQF).

A distinctive feature of study at Macquarie University is the interdisciplinary learning experience where incorporating diverse units (subjects) in study programs is possible, encouraged and often required. The authors have identified a large first-year accounting unit within the Department of Accounting and Corporate Governance (ACG) as an ideal place to commence building the foundations for graduate capabilities. This unit was chosen for its integral position within introductory accounting, acting as a core unit within a number of degree programs and comprising a large student cohort (approximately 1000 students per semester). The

unit was first offered in Semester 2, 2010 servicing Computer Science, Engineering, Actuarial Studies, Applied Finance, Business Administration, Marketing, Creative Arts and Biology.

This unit consists of a diverse student cohort, with backgrounds outside of accounting and individual majors ranging from core business studies such as economics and marketing through to engineering and communication majors. Students comprise both full and part-time, with and without prior work experience, varying GPA levels and a high proportion of international students. Thus, the project provides a unique opportunity to explain the relevance of Macquarie graduate capabilities and emphasises their importance to many students from diverse disciplines at the commencement of their degree program.

While universities in general have provided graduate attributes on their websites, very little guidance is provided in terms of how to develop and assess them (Barrie, Hughes, & Smith, 2009). Thus, there is a need for innovative assessment approaches to address the issue. This project developed an innovative assessment framework that integrates peer feedback, critical self-reflection and proactive formative assessment to promote development of the Macquarie graduate capabilities and to assess student learning outcomes. Innovation is achieved through the incorporation of key educational theories used to support the development of a set of assessment and learning activities that target graduate capabilities.

The present assessment and grading system in ACG is essentially summative in nature and aims mainly at certifying knowledge acquisition. A recent mapping of unit guides, undertaken in 2012 in the department, shows evidence of an over reliance on invigilated assessment such as final and mid-semester examinations. Formative assessment, characterised by activities aimed at enhancing student learning processes through systematic feedback and progressive learning development (Carless, Slater, Yang, & Lam, 2011), is largely lacking. This is not unique to accounting education and has been identified as a prevalent issue in higher education (Boud & Falchikov, 2006).

DEVELOPING AND ASSESSING COMPLEX GRADUATE CAPABILITIES

In general, graduate capabilities subsume knowledge and skills and extend to 'certain kinds of human dispositions and qualities' often making them difficult to develop and assess within degree programs (Barnett, 2006, p. 61). The characteristics of graduate capabilities are highly complex (Jones, 2009) and are to a large extent influenced by discipline context (Jones, 2010). The learning outcomes related to graduate capabilities are usually divergent, indeterminate and can rarely be specified fully (Knight, 2002). It is also posited that the learning of graduate capabilities is a long-term process, usually spanning several years (Knight & Page, 2007).

The accounting curriculum is largely content-based with a strong focus on the certification of knowledge. Sin and McGuigan (2013) argue that accounting academics are not ready to meet the challenge of incorporating graduate capabilities into the curriculum and assessing them validly and in defensible ways. Their view is supported more widely in a national study across disciplines (de la Harpe, Radloff, David, & Associates, 2009) which reports that only a minority of academic staff are able and willing to undertake the complex and sophisticated task of developing and assessing graduate capabilities.

Macquarie University's broad and encompassing graduate capabilities framework integrates the skills, knowledge, values and dispositions that the University aspires to for its graduates. These will enable students to contribute professionally to a rapidly changing environment. There are nine graduate capabilities in the framework and the University and each of its programs are committed to engender these capabilities in students.

While not all of the graduate capabilities can be taught in every unit, each student must be provided an opportunity to develop the full range of graduate capabilities during their candidacy. As of 2012, the unit guide ensures mapping of assessment tasks and learning outcomes to the relevant graduate capabilities. While mapping is important for transparency, there is no assurance that the capabilities are actually developed; furthermore, mapping does not, in itself, constitute sufficient evidence of meeting learning and teaching standards for external quality assessment and accreditation. The concept of graduate capabilities is

both complex and relatively new to the academic community (Barrie et al., 2009; de la Harpe et al., 2009). The authors therefore urge the provision of continuous professional development for staff and research to inform the design and development of quality assessment tasks that emphasise both the developmental process and outcomes (Price, O'Donovan, Rust, & Carroll, 2008).

A theoretical framework for developing and assessing graduate capabilities is presented in Sin and McGuigan (2013). It embraces a social constructivist perspective of learning and essentially requires a shift in the philosophy of learning from 'being taught' to student-centred and self-regulated learning. The framework has two critical elements. The first is student engagement with assessment and with each other in the learning process, whilst the second is the provision of a learning environment that is conducive to cooperation and engagement.

One of the principles adopted in this study is the design of the assessment and the associated learning activities to promote dialogical feedback among peers about the task and feedback on the quality of each other's work (Nicol, 2010). This enables an interactive exchange in which interpretations are shared, meanings negotiated and expectations clarified. The onus therefore, rests not solely on the teacher to transmit feedback, but for the students to critically reflect on and self-regulate their learning in a truly student-centred learning environment (Sadler, 1989). This type of feedback or complex appraisal is particularly relevant for supplementing the indeterminate and divergent learning outcomes of graduate capabilities (Sadler, 2010).

INNOVATIVE ASSESSMENT REDESIGN

In 2012, a group-based assessment task adopting the framework principles was developed and trialled. The task aimed to develop the graduate capabilities of: research capabilities, effective communication, creativity, continuous learning and social and environmental responsibility. Various aspects of the student learning experience are reported elsewhere, however the intention of this chapter is to describe and reflect on the assessment activities and how they can provide a foundation for the future development of Macquarie University graduate capabilities for large and diverse cohorts.

The unit's overall assessment components comprised a series of invigilated tests (consisting 50% of final grade), unit course work participation (10%), group-based assignment (30%) and related oral presentation (10%). The redesigned assessment asked students to conceptualise an investment project that benefits society and/or the environment. Students were then asked to complete an independent loan application requesting funds to finance the project. The topic was interesting and relevant to the diverse student cohort in the unit, regardless of discipline background. In fact, such group diversity enhances the richness of ideas and discussion, with some very interesting and creative ideas emerging. Examples included a project for manufacturing a car powered with garbage fuel, another for growing and processing algae for use in oil manufacturing, convincingly arguing the projects viability and profitability.

A project gaining significant attention and led by a special needs student, discussed the upgrade of hospital facilities through the installation of functional MRI (fMRI) machines, clearly evidencing a vast amount of research completed on fMRIs, patient care and hospital needs. This was most impressive for first-year students and testimony that when educators are able to provide an opportunity and stimulate an area of interest or a passion, the limit for creativity, innovation and student engagement remains boundless.

A key feature of the assessment was provision for interim submissions, which required students to describe their project, the business entity and how they planned to collate diverse sources of information. Critical peer feedback was then sought prior to a classroom presentation. These presentations needed to incorporate that feedback and to clearly articulate the improvements that were made. The presentations were impressive and professionally executed. Students enjoyed this assessment immensely as they had the freedom to discover a common interest amongst group members, guidance and support to engage in constructive criticism, and encouragement to discover and develop their graduate capabilities. This resulted in a contextual appreciation of core business principles and their relation to specific discipline areas. Students were engaged, enthralled

and a sense of excitement prevailed. The authors observed informally a true collaboration and sense of friendship being developed amongst students, laying the foundations for lifelong learning. They are currently undertaking formal evaluation of the assessment tool and its use within the course, in order to make further enhancements and modifications.

CONCLUSION

The higher education sector is a complex environment and there is enhanced pressure as a result of reforms and scarce resources. There is also the need to comply with detailed standards and guidelines for learning assurance. Attention has been drawn to the challenges associated with developing complex graduate attributes, which are diverse, indeterminate and require quality judgement from multiple perspectives. This case study furthers development of graduate capabilities, illustrating that academics should not succumb to the pressures of the current resource scarcity and demanding education environment. Nor should they compromise professionalism and integrity under the weight of pressing compliance requirements. Perhaps a solution lies in the need to be innovative and think collaboratively to bring out the best in ourselves as educators.

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CHAPTER 3

Development of an intensive mode Neuroanatomy unit utilising the Flipped Classroom

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ABSTRACT

In 2011, Macquarie University opted for an intensive mode session three during the summer break, which compressed a traditional teaching program of 13 weeks into a shorter block session of five weeks. In that year, the Department of Chiropractic ran an intensive mode neuroanatomy unit. To do this, the traditional offering for that course was offered in the compressed timeframe without change to curriculum, learning outcomes, teachers or format of the course.

The pre-recorded lectures were made available online, and the practical and tutorial content and time was retained. The outcomes that were collected and compared with those attained that year in the traditional offering were the standard numerical grades (SNGs) and the results of a questionnaire that measured student satisfaction with the course. The cohort in session three did significantly worse *($p = 0.001$)*. However, the overall satisfaction with the course was the same for the two cohorts. This experience demonstrated the necessity for considerable change in teaching strategy when transitioning a unit taught traditionally to intensive mode delivery. Without such change, the quality of the learner experience may be severely impacted.

We have looked to the Flipped Classroom teaching model to redevelop this unit for the upcoming session three, 2013, and will compare the same outcome measures of this cohort to the first session three and to the traditional mode session two cohort of 2013, with the aim of measuring whether this is an effective way to improve learning and teaching in an intensive mode delivery of the course.

KEYWORDS intensive mode delivery, flipped classroom, neuroanatomy education; accelerated learning, compressed curriculum

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INTRODUCTION

The third semester as an intensive mode course over summer is already a successful venture at a number of academic institutions (Ho & Polonsky, 2009; Laves, 2010; Scott & Conrad, 1992). Over 320 US institutions provided such courses in 2005 (Davies, 2006). The intensive mode course offers multiple advantages for university students, including: a chance to make up failed units and graduate on time, spreading out units and reducing the load of units over the year, and accelerating student learning.

With the time being more than halved, the third semester relies on intensity to cover the learning outcomes and achieve the same level of content (Scott & Conrad, 1992). For this reason, the intensive mode delivery is also referred to as: fast tracking, block delivery, accelerated delivery, compressed curriculum, summer school, immersion or session three (Davies, 2006; Ramsay, 2011). One major disadvantage given for this mode of teaching is the perceived lack of depth in understanding achieved when content is crammed in this way (Rowan, 2010; Traub, 1997; Wolfe, 1998). This can pose a particular problem in a unit such as neuroanatomy, which is high in content as well as conceptual understanding. The challenge is to find a mode of delivery that can attain both in such a compressed span of time.

In 2011, the Department of Chiropractic at Macquarie University introduced a three session academic year. The neuroanatomy unit ran for 13 weeks in session two, and five weeks in session three. The structure of the unit, learning outcomes, and mode of delivery were unchanged. In effect, the traditional mode of delivery was retained, but the time to master the content was shortened. The outcomes were measured via standard numerical grades and responses to a questionnaire on satisfaction with the course, and this was compared with the session two cohort of the same year. The cohort in the intensive session did significantly worse ($p = 0.001$) (Whillier & Lystad, 2013). It was clear that this was not an effective approach to delivering the material in intensive mode.

Consequently, a 2013 Macquarie New Staff Grant was obtained to redevelop the neuroanatomy unit for session three. We aimed to design a more interactive model of teaching, with the idea of improving the grade outcomes. This decision followed recommendations for successful teaching in the intensive mode and aimed to maximise active engagement with the students, create discussion, engage in reading material, learning activities, problems and exercises (Kucsera & Zimmaroa, 2010; Nandi, 2000; Ramsay, 2011; White, 2010).

Because active learning has been shown to enhance learning outcomes and improve higher-order thinking, problem solving and critical analysis, our intention was to follow a format that engaged students in teamwork that fostered interactive engagement (Bonwell & Eison, 1991; Bransford, Brown, & Cocking, 2000; Freeman, O'Connor, & Parks, 2007). The Flipped Classroom model has been shown to effectively engage students in learning activities. In this approach "content is offloaded for students to learn on their own, and class time is dedicated to engaging students in student-centred learning activities" (McLaughlin et al., 2014, p. 1). In actuality, the work the students do on their own is well-structured and the student is guided through the material. The Flipped Classroom has been described in various ways. For example, in Tucker (2012) the model is said to centre on active learning and student engagement, where the traditional lecture is replaced by interactive tutorials. In Tune, Sturek, and Basile, (2013), the model is described as engaging the student in significant pre-class preparation, including watching prerecorded lectures, while traditional time is reserved for discussion and problem solving. Most descriptions suggest the use of various forms of recorded lectures which students work through out of the classroom, which frees up classroom time for student-centred interactive activities that apply the knowledge acquired in their own time (Pluta, Richards, & Mutnick, 2013).

The essential research question we asked is whether using face-to-face time with the students in interactive engagement on exercises based on independent pre-work, is an effective form of learning and teaching in the intensive mode of delivery. What follows is a methodological paper in which we describe the unit and the reasoning applied in its formulation. The aim was to consider an alternative mode of delivery to impart the content, ensure grade equivalency with the traditional mode of delivery, but not compromise the learning experience or student satisfaction with the course. The unit thus formulated will be tested in the summer of 2013-2014, and the student academic results will be compared to those of the previous offering to determine if it is indeed a more effective mode of delivery.

METHOD AND DISCUSSION

The intensive unit in neuroanatomy runs over five weeks; two weeks in December (10th - 20th, 2013) and three weeks in January (7th - 25th, 2014). The breakdown of topics scheduled in the period of five weeks is given in Table 1. The key concepts in neuroscience presented in Table 1 are based on the textbook Neuroscience (Lippincott's Illustrated Reviews Series) (Krebs, Weinberg, & Akesson, 2012).

Table 1: *Course Content*

FIVE WEEK PROGRAM BREAKDOWN	
WEEK OF STUDY	CONTENT COVERED
ONE	Introduction to the course and to neuroanatomy. Classification of the central nervous system. Axes of orientation.
TWO	The brain fluid (CSF) and the spinal cord.
THREE	Cerebellum and brainstem.
FOUR	Cerebrum, basal ganglia and blood supply to the brain.
FIVE	Limbic system, autonomic nervous system. Integration.

Before the tutorial and practicals, students are expected to work through prescribed readings, complete worksheets and listen to pre-recorded lectures. Both practical work, which runs in the wet labs, and tutorials, which run in an interactive lecture theatre, are organised in weekly four-hour sessions. The practical manual used in the traditional unit is to be used in the intensive unit. The tutorials, which are student-driven, are shaped around relevant clinical case studies, where tutors are expected to have the role of facilitator.

Students are expected to arrive at tutorials following completion of the recommended reading, prerequisite worksheets and online quizzes. They are then presented with a clinical scenario that will consolidate their knowledge and extend their understanding of the topic. The tutorial is an interactive exchange within groups of students, as well as between tutors and the class as a whole, small groups and individual students. The tutor has time to help individual students with specific areas of difficulty. At the end, the tutors highlight the important learning outcomes. An example of a tutorial case study follows:

> *Jack is brought to the emergency department with a stab wound to his lower back, conscious and responsive. The on-call surgeon-organised scans in order to plan the removal of the knife. Meanwhile, Jack recalls how a drunken person attacked him over a girlfriend argument. CT and MRI scans showed that the knife cut through the right half of his spinal cord, at approximately T12/L1. After the successful removal of the knife, Jack was examined by a neurologist who found that Jack could not move his right lower limb, and could not feel pain or temperature on the left from mid-thigh to below. In addition, Jack was not able to sense light touch, pain and vibration on his right lower limb.*

In the students' preparation for this tutorial, they would have learnt about the main pathways in the spinal cord that control muscle activity (motor pathways), and the pathways that carry sensory information from the periphery to the brain via the spinal cord (sensory pathways). With this knowledge, the student can understand the symptoms and signs presented in the case study.

Thus, the order of work is flipped, in that students construct their knowledge initially from well-designed course materials that lay the foundation of knowledge. Students extend their understanding in the social

interaction of the classroom by solving interesting, probing and challenging problems discussed in case studies. The anticipated outcome is that the reduced time available in the compressed unit focuses on providing the depth of knowledge required, whereas building foundation knowledge that previously occupied many hours of lectures is now completed by students prior to face-to-face teaching time.

Student knowledge is assessed in multiple categories which include: online quizzes (15% of the total mark), practical worksheets (10% of the total mark), a practical exam (25% of the total mark) and the final theory exam (50% of the total mark). The online quizzes and practical worksheets are issued on a weekly basis. The standard numerical grades (SNGs) attained in the 2013-2014 cohort will be compared to those achieved by the students in the 2011-2012 cohort. In addition, the same questionnaire that was given to the earlier cohort will be completed by the 2013-2014 cohort and the student satisfaction with the course will be compared.

Teaching in a compressed format is a huge challenge. Exhaustive workloads for teaching staff, and the risk of delivering a unit that lacks depth, cramming rather than understanding the content due to time constraints, are the greatest disadvantages (Rowan, 2010; Traub, 1997; Wolfe, 1998). The Flipped Classroom model tries to overcome this by using the face-to-face time most effectively. Case studies and problem solving exercises have to be chosen carefully so they provide a solid platform to launch interaction and discussion that will generate the desired learning outcomes. The dangers include: (a) students do not get sufficient foundational grounding; (b) students are not motivated to do the work prior to class; and (c) students form misconceptions when going through the preparatory work which are not noticed in the subsequent interactive work groups. The success of the Flipped Classroom approach depends very much on how well the material is prepared and how well the teaching staff are able to deliver it.

CONCLUSION

Failure to reach the same mean SNGs achieved in the traditional mode of delivery of a unit of neuroanatomy in session three 2011, prompted a redesign for the 2013 summer material. The expectation is that the questionnaire on student satisfaction and the SNGs for the 2013 cohort will be compared to that of 2011 and to the 2013 traditional mode results. The outcome will inform best practice in the delivery of intensive mode units, and will lead to further modification in the way this unit will be taught in session three.

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CHAPTER 4

Work integrated learning and student satisfaction: a qualitative study in a business school

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ABSTRACT

A greater appreciation of Australia's labour and skills challenges, combined with a deeper recognition of a workplace as a unique and valuable learning environment for students, has resulted in a shift in strategic decision-making by Australian universities. Accordingly, work integrated learning (WIL) has recently received increased attention in Australian universities as they strengthen their commitment to this pedagogy. This has led to demands for higher education management to consider student employability and work readiness as well as aspects of student satisfaction. In order to evaluate student satisfaction of WIL in universities, a review was made of a Professional and Community Engagement (PACE) unit delivered by the Faculty of Business and Economics. Semi-structured face-to-face interviews of 21 students from the 2011 and 2012 academic years form the basis of this research. The use of qualitative research methods reflects the need for more in-depth analysis of the antecedents relating to student satisfaction and intention. The research questions consider whether there is a relationship between WIL and enhanced student satisfaction and what the contributing factors might be that lead to this increased satisfaction. The findings identified a positive relationship between the WIL subject and student satisfaction. The emerging themes indicate that the levels of awareness, industry engagement, employability skills, word of mouth, and academic factors are all important variables that lead to student satisfaction. Future research may investigate the strength of these associations in other programs across the curriculum, with the view to improving student satisfaction the overall university experience.

KEYWORDS student satisfaction, work integrated learning (WIL), industry engagement, higher education, employability skills

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INTRODUCTION

The consideration of student satisfaction is appropriate for universities in times of turmoil in the higher education marketplace (Thornton, 2008; Zemke, 2000). Work integrated learning (WIL) is one area that indeed may enhance student satisfaction. WIL is an all-encompassing term for a range of approaches and strategies that integrate theory with the practice of work within a purposefully designed curriculum (Patrick et al., 2008). The basis for this study focuses on the following research questions:

RQ1: Is there a relationship between WIL and enhanced student satisfaction?

RQ2: What are the contributing factors leading to increased satisfaction?

A number of studies have raised concerns over the work-readiness of graduates in relation to their generic employability skills (ACNielsen, 2000; Precision Consultancy, 2007). The Precision Consultancy report (2007), prepared for the Business, Industry, and Higher Education Collaboration Council (BIHECC) listed clear recommendations emphasising the role of WIL in advancing employability skills in higher education (Rikard, 2010).

There is evidence that common variables of a WIL programme promote student satisfaction (Keaveney & Young, 1997). Given the importance in the current climate of higher education, further research will be the key to improving overall student satisfaction in universities for gaining a strategic advantage in the face of a competitive environment.

Past studies indicate that WIL programs can lead to increased student satisfaction. (ACER, 2008; Browne, Kaldenbery, Browne, & Brown, 1998; Gibson, 2010). Other variables that may also lead to increased student satisfaction include specific aspects of the educational experience, including academic staff, advising, classes/curriculum, outcomes, and skills developed for the future (Delaney, 2001; DeShields, Kara, & Kaynak, 2005). WIL programs target practical employability skills as universities attempt to integrate organisations into the curriculum (Woodley, Russell, & Faux, 2011). These employability skills are also considered in light of student satisfaction. In the unit (or course) described in this paper, students undertake a research project for organisations to solve a particular business issue.

METHODOLOGY

Macquarie University has initiated a Professional and Community Engagement (PACE) program, which connects students with partner organisations to give students the chance to contribute their learning, enthusiasm and fresh perspectives to the professional workplace. Given this focus, a PACE unit was selected as the case study for this research. A qualitative design comprising 21 in-depth face-to-face interviews was chosen, which was approved by the University's ethics committee. Interviews were conducted in November and December, 2012. All volunteer interviewees had been students at the university for more than two years, were third year students, and were all undertaking a marketing major as part of a commerce undergraduate program. See Table 1 for sample demographics.

Table 1. *Sample Demographics*

Case no	Year of study	Working status
1	2011	Student
2	2011	Working full-time
3	2011	Working full-time
4	2011	Working full-time
5	2011	Student
6	2011	Working full-time
7	2011	Working full time
8	2011	Working full-time
9	2012	Student
10	2012	Working full-time
11	2011	Working full-time

Case no	Year of study	Working status
12	2011	Working full-time
13	2012	Student
14	2012	Student
15	2012	Student
16	2011	Working full-time
17	2012	Student
18	2012	Student
19	2012	Student
20	2012	Student
21	2011	Student

Interviews lasted from twenty to thirty minutes and were voice recorded and transcribed. The transcripts were then checked for validity by simultaneously listening to the recorded tapes and checking the transcripts for any discrepancy. These interviews comprised the main source of data for this study and were conducted until it was felt that the theoretical saturation had been reached (Mason, 2002). Questions were open-ended in nature, and interviews were conducted face-to-face in order to preserve contextuality and to get at deeper meanings (Yin, 2009). Examples of the questions in the semi-structured interview guide are included in Appendix 1.

The transcripts were reviewed by two trained independent researchers who were asked to judge the extent to which the variables identified in the literature were supported by the data (Delaney, 2001; DeShields, Kara, & Kaynak, 2005; Keaveney & Young, 1997). Using NVivo, each researcher independently coded all the instances in which the specified variables had been mentioned or inferred as contributing to student satisfaction. Coding was then compared to ascertain consistency. For the 21 cases the two researchers were in agreement (observe/observe) and (not observe/not observe) for 81% of all evaluations of the transcripts.

FINDINGS AND EMERGING THEMES

The emerging themes resulting from analysis of the interviews are presented and relate to previous literature identified above. The following analysis and interpretation discusses the relationships identified between WIL and student satisfaction. The key themes from this study are: awareness of the different teaching approach, industry engagement and employability skills, word of mouth and academic factors.

AWARENESS OF DIFFERENT TEACHING APPROACHES IN WIL UNITS

Most students enrolled tended to expect that this unit of study would simply be more of the same university style of traditional theory in lectures. Typical opinions are captured in this quote of the expectations of the unit,

> *"I didn't expect us to be assigned such a task of actually using real data. Usually we use the textbook……..other subjects don't have that aspect".* (Respondent 10)

This was the sentiment expressed by 67% of students, despite this being clearly specified in the university handbook and unit guides that are publicly available. The lack of prior knowledge of the WIL elements (e.g. corporate engagement activities) within this unit meant that student expectations were that this unit would be similar to all other units previously undertaken. As the WIL aspects became apparent, student expectations were exceeded for more than half of the cohort. This misalignment of expectation about typical units and the enrichment from WIL is demonstrated by this respondent:

> *"This unit was very different to a typical marketing subject. It was really good".* (Respondent 14)

INDUSTRY ENGAGEMENT AND EMPLOYABILITY SKILLS

Whilst the experience with companies was well received, and satisfied the students' interest in a real world experience, there is still a realisation that they were working in a protected set of circumstances. This is expressed by a respondent who indicated:

> *"(It's) not 100% of what will happen in the workforce but it was realistic enough. Being able to speak to company representatives and understanding that meant expectations were reasonably well met".* (Respondent 6)

There was a definite appreciation for the skills that were applied and learned from this WIL experience (Mackaway, Winchester-Seeto, Coulson, & Harvey, 2011; Woodley, et al., 2011). The exposure to realistic tasks and expectations that may be placed on students after they graduate was appreciated by 71% of respondents.

WORD OF MOUTH

Over 95% of students indicated that they would recommend this unit to other students. This is a great endorsement for the unit as well as a strong indicator of student satisfaction (Browne, et al., 1998; DeSheilds, et al., 2005). The reasons underpinning this attitude were largely due to the fact that this unit assisted them with knowledge for a career in marketing, provided realistic business issues to resolve, and helped to develop skills for their future employment. This can be summarised by this respondent:

> *"It's more real life and it becomes easier to understand. Analysing a real life company and looking at all the marketing strategies and culminating everything you've learnt through uni into case studies"* (Respondent 12)

However, there were some dissatisfied students who felt that the unit workload was too high and the challenges of working with industry were not fair. It was considered by two students not to be a useful teaching and learning strategy.

ACADEMIC FACTORS

It was agreed by 95% of respondents that industry engagement in the unit was the best aspect of the course. Previous studies have demonstrated the value of the contribution of the lecturer, especially in guiding learning. (Delaney, 2001; DeShields, et al., 2005; Gibson, 2010; Mackaway, et al., 2011). This sentiment was reflected by two respondents asked about the best and worst aspects of the unit:

> *"Lecturer X and picking his brain on his experience"* (Respondent 1) *and "Tutors were really helpful. Gave a lot of real life examples from professional career"* (Respondent 11)

Other comments indicate that the flexible delivery without lecture attendance, the reduced focus on marks, and the emphasis on getting the right business solution was a "refreshing change". Furthermore, students noted that connections were be made between theory and practice (Delaney, 2001; DeShields, et al., 2005; Gibson, 2010). This sentiment is summed up as:

> *"Coming up with our own campaign and no restraints on our own ideas gave us a lot of freedom which I didn't see much throughout uni"* (Respondent 21)

The WIL activities and associated assessment tasks in this unit, provide students with invaluable lessons that will be instrumental for their future careers (Mackaway, et al., 2011; Woodley, Russell, & Faux, 2011). When compared with other university experiences, the following quote is indicative of respondents' opinions:

> *"It is one of the more interesting subjects. After 3 years of marketing, you think it will be the same but this was a great breath of fresh air to take everything you've learnt and apply it rather than having to learn even more to fit something else in".* (Respondent 11)

DISCUSSION AND FURTHER RESEARCH

There is evidence to suggest a relationship between the WIL experience and enhanced student satisfaction (Browne, et al., 1998; DeShields, et al., 2005). The emergent themes of this study have been categorised as levels of awareness of the different teaching approach, industry engagement and employability skills, word of mouth and academic factors (Keaveney & Young, 1997). The practicality of this unit is well endorsed by 95% of the respondents. More than 50% of respondents labelled it as the "most interesting" unit students have ever undertaken. There is evidence to suggest that incorporating these WIL activities into other units may lead to improved overall student satisfaction (Brown, et al., 1998; DeShields, et al., 2005).

Future research may consider a longitudinal study to track students after graduation comparing the WIL experience with their career experiences. Quantitative research may be undertaken to identify the importance of variables that are antecedents to student satisfaction in a WIL context. In addition, further studies may investigate the strength of these associations.

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APPENDIX

EXAMPLE OF INTERVIEW QUESTIONS

- *Did this unit help to develop skills that are important for your future? If so how?*
- *Did this unit help provide you with insight of the types of tasks you might do in your field of work and in first year of professional work?*
- *What were your expectations of this unit? Were they met? Why/why not?*
- *Would you recommend this unit to other students? (Why/why not)*
- *What were the best and worst aspects of the unit?*
- *What is your overall satisfaction of learning in this unit?*

AUTHORS

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CHAPTER 5

Workload implications of teaching and administering work-integrated learning: The Macquarie University experience through PACE

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ABSTRACT

Macquarie University's Professional and Community Engagement (PACE) program is an initiative designed to provide work-integrated learning (WIL) opportunities to all undergraduate students. The size and scope of PACE, and its thorough embedding into the curriculum across multiple disciplines, differentiates it from other university work-integrated learning initiatives. These characteristics also portend a number of workload implications for staff. While previous research and anecdotal evidence suggest that WIL units (i.e. courses, subjects) are more time consuming and resource intensive to administer and teach than 'traditional' classroom-based subjects, few studies have systematically collected empirical data on an institution-wide basis to test these assertions. This chapter presents preliminary findings of the first phase of a research project examining the workload involved in developing and delivering PACE units at Macquarie University. More specifically, we report data obtained using a diary-style survey instrument administered to ten university staff over one teaching session. Initial findings suggest that there is considerable variability in the workload involved in teaching and administering WIL units (particularly in terms of overall hours worked). The main drivers of this variability appear to be the number of students enrolled in the unit, and aspects of its mode of delivery. Some commonalities were also identified, most notably peaks and troughs in workload, atypical session structures and similarity in the types of tasks that were most time-consuming.

KEYWORDS experiential learning, higher education, work-integrated learning, workload

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INTRODUCTION

Macquarie University's Professional and Community Engagement (PACE) program is an initiative designed to provide work-integrated learning (WIL) opportunities to all undergraduate students. It incorporates many diverse forms of practice- and experience-based learning including community development projects, service-learning, practicums, clinical placements, internships, fieldwork with a partnership component, and community/industry reference panels with project mentoring. Learning is firmly embedded within a rigorous academic framework, and WIL activities must serve the mission and goals of a community, government or industry partner if the unit is to be classified as 'PACE'. What differentiates PACE from other work-integrated learning initiatives is its size and scope. The program offers a vast range of experiences to undergraduate students in multiple disciplines right across the university. Over 3,600 students are enrolled in the 51 PACE units on offer in 2013 and it is estimated that around 10,000 students will participate in PACE each year when the program is fully operational in 2016.

Previous research suggests WIL units are more time consuming and resource intensive to administer and teach than 'traditional' classroom-based subjects, largely because of the different approaches to curricula and pedagogy required, and complex administrative and pastoral responsibilities involved in placing and supporting students before, during and after their WIL activities (Bates, 2011; Sattler, Wiggers, & Arnold, 2011). There is also a tendency to view WIL as an 'add on' task staff are expected to do in addition to their regular duties (Emslie, 2011; McCurdy & Zegwaard, 2009). Surprisingly, few systematic studies involving large-scale empirical data sets have been undertaken to validate these observations. Hence, there is a need for more empirical research to capture and explore workload complexities associated with a diverse range of WIL activities and units.

STUDY DESIGN

The current study was conceived to address gaps in the literature and to better understand the type and quantum of workload involved in implementing WIL, on the scale envisaged for Macquarie University through PACE. This article presents preliminary findings of data analysed from the first phase of data collection (March-June 2013). Specific research questions are: (1) what kind of tasks are involved in the development and delivery of PACE units (2) how much time is spent on these tasks (3) which types of staff currently do this work, and (4) do workloads differ systematically across different modes of delivery, and if so how?

A diary-style survey instrument was designed to capture data on the type and amount of work involved in teaching and administering PACE units offered across the university. All academic convenors and other staff involved in teaching or administering PACE units in Session 1, 2013 (n=25), were invited to participate in the study. Ten academic and professional staff (across eight units) volunteered, representing a response rate (measured on a unit basis) of approximately 30%. Participants completed the survey instrument through the online survey software Qualtrics. Data was collected over 20 weeks, covering all teaching weeks, as well as the mid-semester break and five weeks after the end of classes. At the end of the data collection period, nine participants had completed all the surveys (one had withdrawn). Data from another participant was unable to be used due to a misinterpretation of the survey questions.

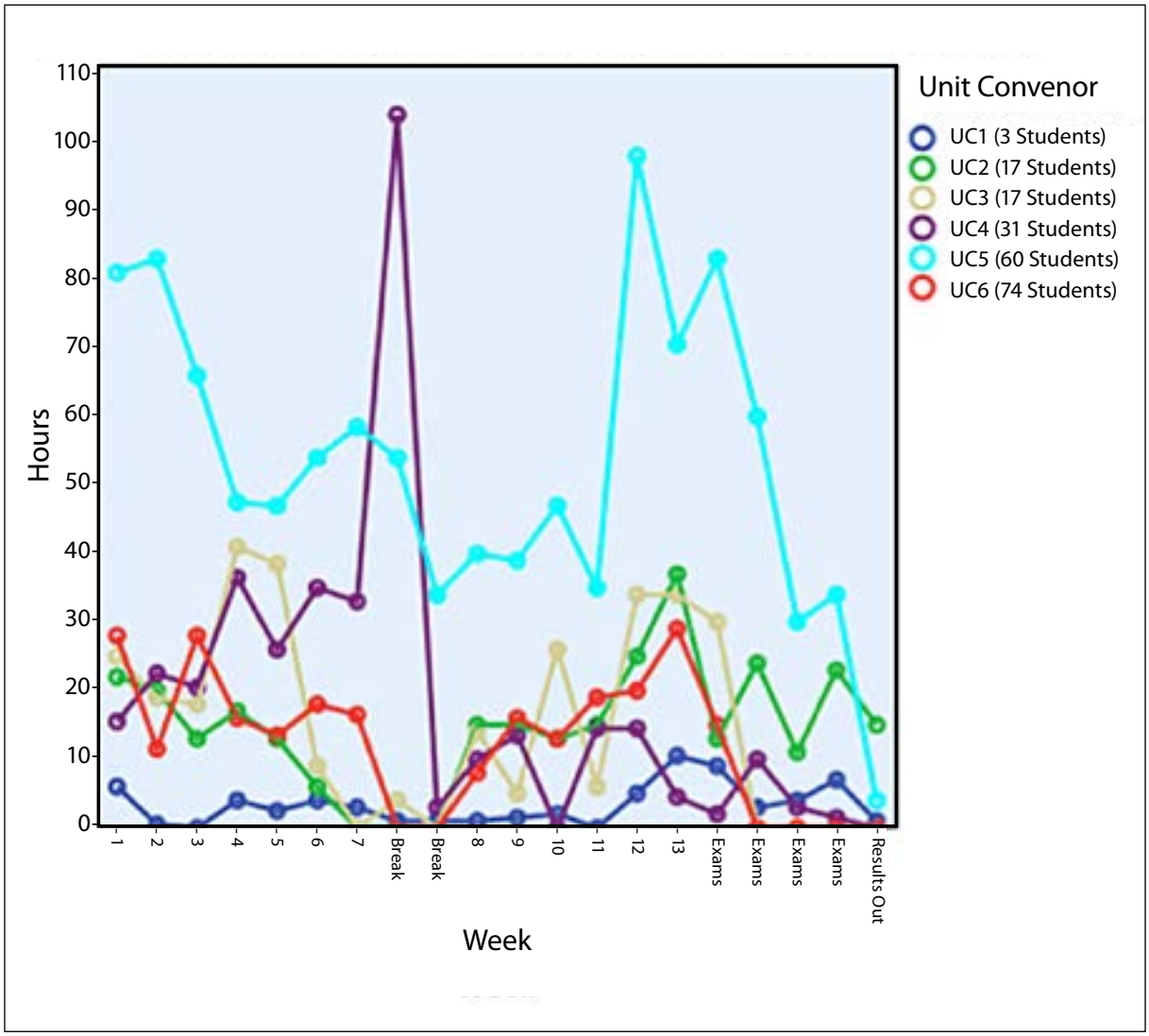
RESULTS

Descriptive statistics were generated using SPSS – as the final data set only represented six units, inferential statistics could not be reliably used. The focus of the results reported here is on unit (course) convenor data, as there were insufficient numbers of professional staff in the sample to draw reliable conclusions on their workload.

UNIT CONVENOR WORKLOAD

Figure 1 shows the diversity that exists among PACE units in terms of both total workload and the distribution of that workload over the course of the session. Total workload for unit convenors over the course of the session ranged from 65 hours to 1050 hours with a median of 300. Two unit convenors entered particularly high values for workloads, with a few cases exceeding 80 hours in a week. In each of these cases the research team contacted the participant to confirm data had been correctly recorded (i.e., one unit contained a fieldwork activity, and another had a higher number of enrolments with individual placements).

Figure 1: Weekly Workload Hours for each Unit Convenor



Despite these differences, workload for the majority of PACE units in the sample, exhibits features that would also be expected in traditional units. Specifically, unit convenors are busiest at the beginning of the session and then again towards the end when a significant amount of assessment takes place. Most convenors also reported a noticeable drop in workload around the mid-semester break. However, in contrast to a traditional classroom unit, there was a long period of preparatory work. Although not shown in Figure 1, the majority of convenors reported that they began unit preparations between 1–4 months prior to start of the session, and in two cases work started as long as eight months in advance.

Figure 2 shows a breakdown of the types of workload tasks that unit convenors are undertaking, specifically the percentage of time spent on these tasks. Tasks that take up the most time are: assessment of student learning, curriculum delivery and other student-related tasks. While the first two of these are characteristic of traditional units, the third category is less so. 'Other student related tasks' covers the workload involved in activities such as conducting pre-semester information sessions for students, pre-semester consultations with students, matching students to PACE activities, monitoring/liaising with students during PACE activities, problem-solving, troubleshooting, conflict resolution, and post-activity follow-up with students.

Figure 2: Percentage of Time Unit Convenors Spent on Each Category of Task

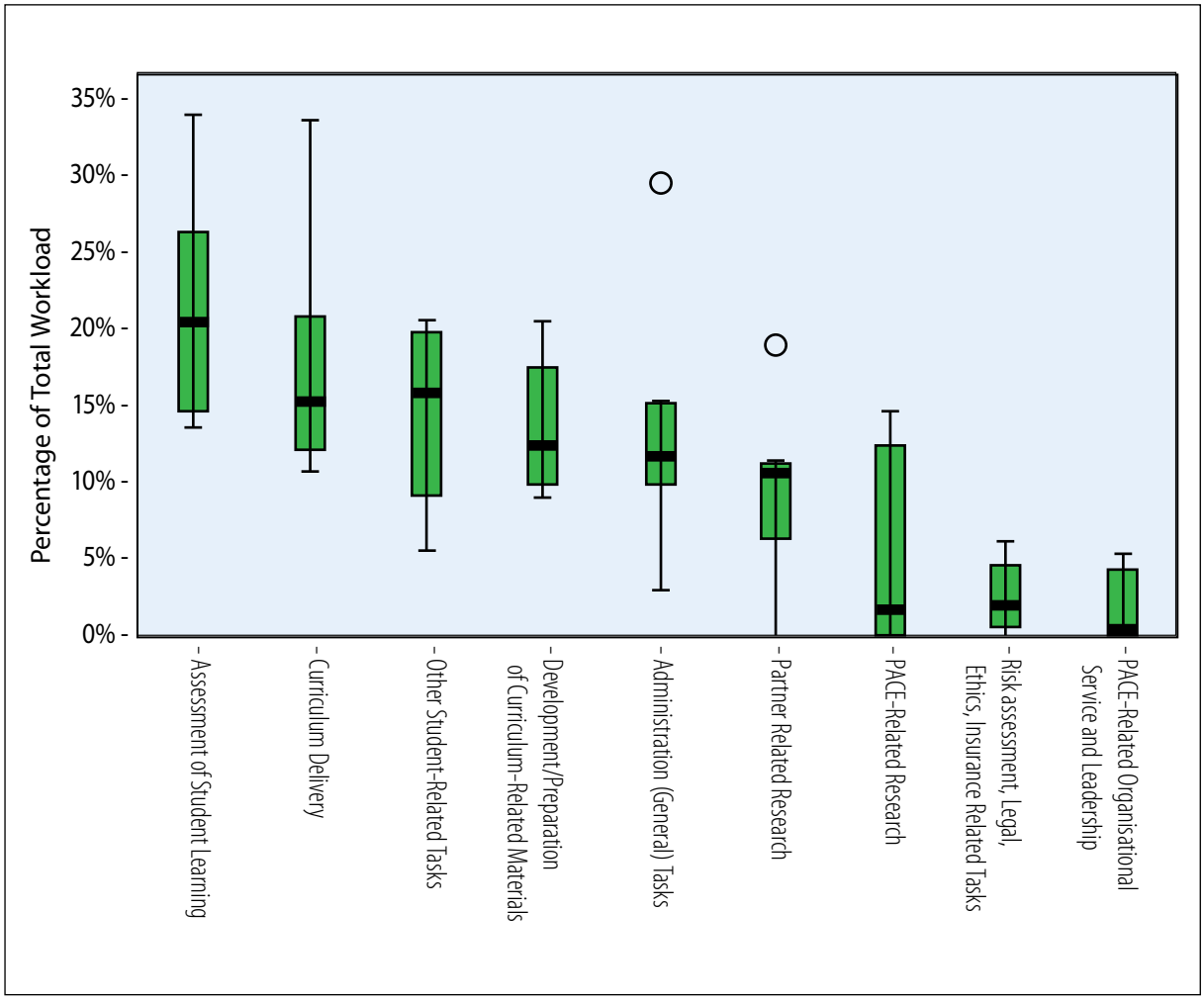
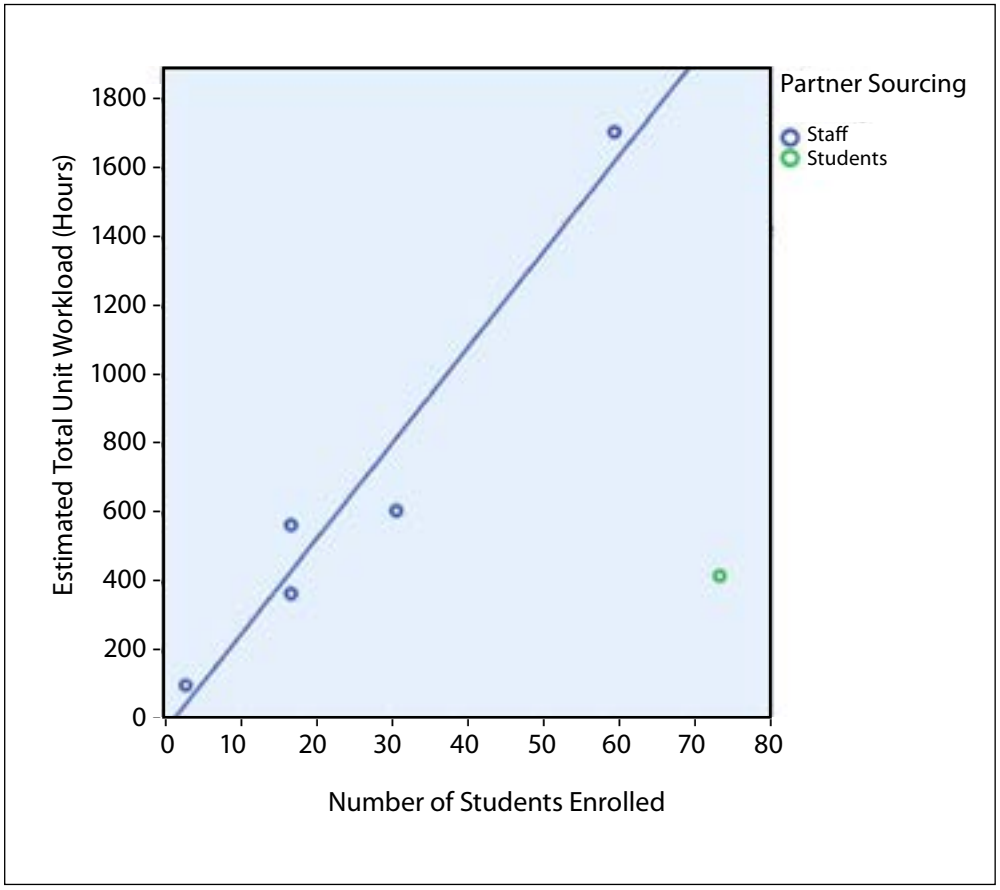


Figure 2 also indicates the diversity of workloads among different PACE units. Most notably curriculum delivery was taking anywhere from 11% to 34% of unit convenors' time, while administration tasks took 3% to 30% throughout the course of the session. The amount of time spent on unit development and partner-related tasks is also variable. If this session was the first time the unit had run as a PACE unit, development work took 17-20% of convenors' time, compared to 11% on average for those which had previously run as PACE units.

TOTAL UNIT WORKLOAD

As noted earlier, results reported here do not include data from professional and other support staff. Despite the sample size, it is possible to make initial estimates of the *total* workload involved in teaching and administration of these units, by summing all the work done by individual unit convenors, then dividing this figure by their estimate of the percentage of work they personally did for their unit. These calculations were used as the basis for Figure 3. Interestingly, unit convenors estimated the work done by other staff to range from between 0% to 33%.

Figure 3: Total Unit Workload by Student Enrolments



Analysis was undertaken to determine which unit characteristics (if any) had a meaningful impact on the amount of work required. It is evident from Figure 3 that five of the six units lie approximately on a straight line indicating a linear relationship between student enrolments and total unit workload (r^2 = 95%). While the sixth point may simply be an outlier, it also happens to be the only unit where students are responsible for sourcing their own partners and WIL activities. This could indicate a second variable with a strong impact on workload, however more data from similar units is required to make this determination.

DISCUSSION AND CONCLUSION

Preliminary results indicate there is considerable variability in the workload involved in teaching and administering WIL units. Student enrolments are a key driver of workload, at least for unit convenors. Whether staff or students are responsible for sourcing partners and WIL activities also appears to be important, but more data is required before definitive conclusions can be drawn. Further, potential drawbacks of relying on students to source partners need to be taken into account, especially reputational risks to the university. Commonalities across WIL units include: peaks and troughs in workload, atypical session structures (early starts and late finishes), and the main time-consuming tasks, viz: assessment, curriculum delivery, and other student-related tasks. While the first two of these are common to traditional classroom teaching, the latter are fairly unique to WIL units.

Limitations to the current study need to be kept in mind when interpreting these results. First, the majority of units surveyed were small to medium in terms of enrolment size, and the patterns observed here may not be apparent with respect to units with larger class sizes. Second, there is a great diversity in the modes of WIL delivery. The relatively small sample size of the first tranche of the study means the full extent of this diversity has not yet been captured. Third, the limited number of professional staff participating in the current sample prevents us from reporting the workload of non-academic staff, which is likely to have an impact on results for some units. All of these limitations will be addressed as the two-year study progresses. Two potential sources of bias should also be considered. Over two-thirds of PACE unit convenors opted not to participate in the current phase of the study. It could be that a particularly high workload prevented these unit convenors from participating, which would imply a systematic underestimation of the total workload in results reported here. On the other hand, knowledge that the results of this study could be used to inform future workload and resourcing models could create an incentive for participants to overestimate workload.

Analysing workload patterns of different types of tasks across the session, identifying other potential factors to explain the variability in workload across units and analysis of professional staff contributions will be undertaken as a next step. Over the course of the next two years, all staff involved in the teaching and administration of the 50+ PACE units offered at Macquarie University will be invited to participate in the study, with the aim of building a robust evidence base to address the four research questions. The ultimate goal is to use this evidence base to address gaps in the literature and to inform future workload and resourcing models for WIL in higher education.

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CHAPTER 6

What makes a good student placement: Recognising the importance of people

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ABSTRACT

Student placements have a long history in higher education. Despite the documented benefits of placements and work-integrated learning more broadly, there is very little scholarship addressing multiple stakeholders' perspectives on placement quality. Thirty-seven stakeholders (university staff, students and host supervisors) were asked to describe the top three things that, in their view, made a good student placement. Responses were thematically analysed using a grounded theory approach. Student skills and attributes, host attributes and supervision, relationships and communication, and matching and alignment (relating to expectations and stakeholder needs) were key areas identified. Results clearly show that people factors, particularly hosts and students, are perceived to be the most important in making a good placement. Practical and research implications are discussed.

KEYWORDS higher education, student placements, qualitative research, stakeholder perceptions, work-integrated learning

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INTRODUCTION

Student placements, as a part of work-integrated learning (WIL), have a long history in higher education. WIL is now an integral part of university business, which, inter alia, seeks to improve the work-readiness of higher education graduates (Patrick et al., 2008). Despite the benefits of placements and WIL more broadly (Harvey, Geall, & Moon, 1998; Keating, Jeffries, Glaisher & Milne, 2010; Patrick et al., 2008; Weisz & Smith, 2005), there is very little scholarship addressing multiple stakeholders' perspectives on placement quality, particularly the factors that contribute to successful placements.

Available findings tend to fall within four broad areas. 'Placement characteristics' provide the focus of much of the literature, with well-designed placements aligning with student's coursework, thought to promote better student outcomes (Keating et al., 2010; Patrick et al., 2008; Smith, 2012; Smith, Mackay, Challis, & Holt, 2006). 'Communication and effective partnerships' emphasise the importance of open relationships, responsive communication and good working relationships between stakeholders (Keating et al., 2010; Roger, Fitzgerald,

Davila, Millar, & Allison, 2011). 'Pedagogical practices' refer to the need for WIL to be underpinned by reflective practices and supported by scaffolding (Keating et al., 2010; Martin & Leberman, 2005; Weisz & Smith, 2005). 'Resourcing', emphasises the need for adequate resource allocation, funding and opportunities (Patrick et al., 2008; Weisz & Smith, 2005). The aim of this paper is to identify key features of a good placement as perceived by a range of WIL stakeholders. This research is part of a larger study exploring stakeholder perspectives of WIL (Rowe, Mackaway, & Winchester-Seeto, 2012; Winchester-Seeto, Rowe, & Mackaway, 2013).

METHOD

Participants were asked to describe the top three things that, in their view, made a good student placement. Semi-structured interviews were conducted face-to-face, via the telephone or in a focus group. The interviewees, from one Australian university, represented several disciplines (e.g., business, early childhood, psychology) with a variety of different placement lengths and practices. The cohort included a majority of host (workplace) supervisors (*n*=22), as well as academic and professional university staff (*n*=9) and students (*n*=6). Interviews were transcribed and uploaded into QSR NVivo 9 for coding and analysis.

A grounded theory approach was used for coding themes that emerged from the interview data (Glaser & Strauss, 1967). An inductive and iterative approach was chosen because little is known about the views of stakeholders on this topic (Patton, 2002). Emerging themes were reviewed and refined over several cycles, and grouped into three key categories: *People, Placement* and*, Matching and Alignment*.

Table 1 lists the number of interviewees (sources) and the number of times a particular theme was mentioned (coding references). The table includes the percentage of all participants who mentioned the theme (e.g., 35% of 37 sources mentioned r*elationships and communication*) and all material that was coded for a theme (e.g., 10% of 189 coding references refer to *relationships and communication*). The number of coding references serves as a proxy of the importance of the theme.

Table 1. *Themes as measured by number of sources and coding references*

Key themes No.	No. sources (*N*=37)	% of total sources	No. coding references (*N*=189)	% of total coding references
People				
Student attributes, skills and knowledge	22	60%	35	19%
Host attributes and supervision	15	41%	26	14%
Relationships and communication	13	35%	19	10%
Workplace organisation and culture	9	24%	10	5%
				48%
Placement				
Authentic and meaningful placement	12	32%	16	9%
Placement planning, design and time	9	24%	12	6%
Mutually beneficial	8	22%	11	6%
Support for student learning	2	5%	5	2%
				23%
Matching and alignment				
Expectations and commitment	10	27%	21	11%
Stakeholder attributes, interests, needs	15	41%	16	8%
Placement and coursework	9	24%	13	7%
Host/placement requirements/student skills	5	14%	5	3%
				29%

RESULTS

Of the three categories used to group themes, *People* accounts for just under half of the coding references (48%), followed by *Matching and Alignment* at 29%. The following quote emphasises this point:

> *"First and foremost the people, the people that you know and the people you don't know and the people you get to know."* (Student D)

Somewhat surprising, given the prominence in the literature, is that less than one quarter of coding references refer to aspects of *Placement* (23%) in the top three things that made a good placement.

Student attributes, skills and knowledge is clearly a significant theme, referred to by 60% of the interviewees and is the most common aspect mentioned, accounting for 19% of all coded comments. Student attributes include qualities such as having a positive attitude, showing interest and enthusiasm, a willingness to learn and engage. Student skills are predominantly generic skills such as team work, reflection, organisation, initiative, as demonstrated in this quotation.

> *"[a student] who is willing and capable. Don't necessarily have to be genius level. But they do have to have a fairly good street intelligence."* (Host supervisor P)

Host attributes and supervision is the second most frequently cited theme (14%) and is included by 41% of interviewees. Host attributes include: having a positive attitude, being knowledgeable, flexible and patient, and demonstrating an understanding of student diversity. Aspects of supervision such as being accessible and available to the student, providing feedback, and guiding and supporting students featured strongly, especially with students.

> *"constant feedback…confirmation that what you're doing is good."* (Student E)

Many interviewees highlighted matching and alignment factors in successful placements. There is however, no clear agreement on what needs to be matched or aligned. More interviewees mention matching attributes, interests and needs of the student and host supervisor or organisation (41%), but the interviewees talked more about the matching and alignment of expectations and commitment (11%). Differences may be related to different WIL models and practices, and may also reflect specific prior experiences of the interviewees. Although all aspects may need alignment, it would be useful to know if careful matching of one or two aspects had a bigger impact on ensuring successful placements.

> *"I think what makes a good placement. …is really commitment by all parties. So that the host supervisor really wanted to contribute; they had the time and they had the knowledge of what was expected of them."* (University staff A)

Interviewees also indicated that placements can't flourish without close and productive relationships based on communication (35% of sources), supporting other research (e.g., Keating et al., 2010; Roger et al., 2011). The relationships mentioned are predominantly between hosts and students, but academics are also mentioned in this section for the first time. The fifth most common theme mentions placements that are authentic and meaningful, and this echoes the findings of many studies (e.g., Harvey et al., 1998; Smith, 2012). It is, however, surprising that in terms of both number of sources, and coding references that this is the first mention of any aspect of placement design.

Other factors that make a good placement, but are much less commonly mentioned can be viewed in Table 1. Interestingly there is very little mention of academics and the university. This may be influenced by the larger number of host supervisors amongst the interviewees. Previous work (Winchester-Seeto et al., 2013) shows that hosts have very little understanding of the work that academics and professional staff do, especially in education and support of students.

DISCUSSION

The results clearly show that factors around the people involved in WIL, particularly hosts and students, are perceived to be the most important in making a good placement. The outcomes of a good placement, however, may vary in the eyes of different stakeholders and this may explain some of the differences that occur in the literature and in this study.

The higher number of host participants may have contributed to the strong emphasis on student attributes. Hosts might be more likely to emphasise student abilities/skills than other stakeholders, because of a lack of knowledge or awareness of other aspects of the placement such as curriculum design. Because of this sample bias, care needs to be taken in interpreting these findings.

Themes found by Rodger et al. (2011) and Smith et al. (2006) also feature in our research (Table 2). It should be noted however, that within these themes there are differences. Rodger et al. (2011) mention student skills, but their focus is on the preparation of disciplinary skills, whereas our data highlights student attributes and generic skills. There are also a number of themes that do not appear in our research, including a consistent approach and expectations between supervisors (Rodger et al., 2011). This can mostly be explained by the nature of the particular discipline and the kind of placement model explored by Rodger et al. (2011). Differences between our findings and other studies (e.g., the lack of reference to detailed orientation in our data) may also be an artefact of disciplinary variations in placement models and terminology differences. Slightly different emphases in the questions asked by researches may also have contributed to the disparities.

Table 2. *Comparison of our themes with similar studies*

Themes from our research	Comparable themes from other studies
Student attributes, skills and knowledge	Student skills[a]
Host attributes and supervision	Supervisor experience and skills; Quality feedback[a]
Relationships and communication	Open honest relationships[a]
Alignment of stakeholder attributes, interests, needs	
Authentic and meaningful placement	Purposeful work; focused work; variety[b]
Alignment of expectations and commitment	*[Detailed orientation]* and clear expectations[a]
Workplace organisation and culture	Welcoming learning environment[a]
Placement planning, design and time	
Alignment of placement and coursework	Learning (technical training, business processes/ generic skills)[b]
Mutually beneficial	
Alignment of host/placement requirements and student skills	
Support for student learning	University preparation and placement procedures[a]
	Graded program of learning experiences; Quality modelling and practice; Consistent approach and expectations (between supervisors)[a]
	Risk taking; Enhanced employability[b]

Note: Italicised text refers to themes not identified in our findings; a= Rodger et al., 2011; b = Smith et al., 2006.

Resourcing and student support were barely mentioned by participants in our research, despite several recent reports and academic papers highlighting the need for adequate resource allocation and funding (Patrick et al., 2008; Weisz & Smith, 2005). Similarly our study showed a comparative lack of emphasis on reflective practice in WIL discussed in other studies (Keating et al., 2010; Martin & Leberman, 2005). These findings might be the result of the sample being dominated by host supervisors. Alternatively, in the case of resourcing, it could be that funding was adequate and so was not identified.

There are a number of practical and research implications. For example, our findings can inform student (or indeed host) preparation programs, e.g., to raise student's awareness of the importance of showing interest and engagement, as well as developing their teamwork and organisational skills. In terms of research, matching, while promoted strongly in literature, is largely anecdotal and there is little direct evidence supporting its effectiveness. More research is needed in to evaluate the value of matching in WIL, and to determine which aspects of matching are most important.

CONCLUSION

This research reinforces the importance of host supervisors, supervision and the relationship between host supervisors and students as crucial components of a successful placement. It contrasts previous research in demonstrating that student attributes, as well as skills and knowledge are also critical to placement success. These results point to the necessity of spending time not only on preparing the activities and designing the placement but, perhaps even more importantly, on the preparation of the individuals involved.

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