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From the Editor's desk

Tony Brown

It was not that long ago that adult education and higher education were seen as very distinct sites of education. In the 1980s Jack Mezirow, himself a pioneer of adult education at Teachers College Columbia University, made the point that higher education was not adult education. He was drawing on a very long tradition pioneered at the early Folk High Schools of Nikolai Grundtvig in Denmark, the Swedish study circles, the various British workers' education schools, and then developed by the progressive school of John Dewey and Eduard Lindeman, and the radical implementation by Myles Horton at Highlander. All these sites shared some common practices. Education was aimed at those adults who had missed out on, or were

excluded from, formal schooling, it was non-vocational and non-accredited, learner centred and directed, and often conducted in residential settings.

In more recent decades though there has been a dramatic shift in educational opportunities, as well as expectations and demands. In the advanced economies schooling is available for all and in very recent years has been extended. And beyond school young adults are expected to continue enrolling in formal education whether through universities or colleges, and in the workplace. Debates continue about what underpins this drive, ranging from a liberal belief in the potential of lifelong learning, to a human capital and productivity driven system to increase individual, corporate and national competitiveness.

What is clear though is that the landscape of adult education has changed. Nowadays more and more people are enrolled in education, and many of those are in higher education, which requires us to rethink Mezirow's certainty about a distinction.

In response to Denise Bradley's review of Australian higher education, the Labor government adopted two key targets recommended by Bradley. First, a national target of at least 40 per cent of 25 to 34 year-olds having *attained* a qualification at bachelor level or above by 2025, and second, that by 2020, 20 per cent of undergraduate enrolments should be students from low socio-economic status (SES) backgrounds. These targets, while continuing an already existing trend, are reshaping how education is delivered in higher education.

As higher education becomes more and more a site of mass education, more attention has shifted to aspects of the learning experience in universities. In Australia between 2009-2012 the number of commencing undergraduate students in universities increased by 21.3 percent (43,632 students), a much greater increase than the previous four year period 2005-2008 where growth was 7.8 percent.

Martin Trow began writing about the move from 'Mass higher education to universal access' more than a decade ago. He drew attention to the potential issues involved in creating systems of mass

higher education while also moving towards internet-based universal access. In the more economically advanced societies, institutions and individual educators have to work out the practical means of addressing these issues and the challenges that are emerging.

Recent issues of AJAL have reflected the interest in the breadth of change by contributing to discussion and debate about widening participation in higher education; transition and enabling programs, engaging new older learners, pathway programs for women students, pedagogies for teaching diverse student groups, predictors of attrition and achievement, the challenges involved in combining working and learning and a range of methods utilising new technologies for engagement and reach. This issue continues those discussions.

In the first paper **Paul Williams** takes a close look at the teaching and learning of undergraduate politics subjects taken by business students. Enrolments in business and commerce degrees are growing rapidly and many business students find themselves having to take a subject on politics. Being compelled to enrol in a subject is something increasingly common to adult learners across the sites of learning whether at university or in vocational settings and raises particular pedagogical and ethical issues for teachers. The central focus of this paper however is examining the use of threshold concepts, most notably 'power', in helping students understand political institutions and actors.

Wendy Madsen, Cathy O'Mullan and **Helen Keen-Dyer** evaluate a leadership program in a Queensland rural community, and argue that rural leadership programs have the potential to make a difference in local communities if they can harness the wisdom and learning within those communities. The program they investigate used adult learning practices such as reflecting on participants' unquestioned assumptions about themself and their world; sharing experiences with others to promote learning from each other; respecting and valuing differences; gaining self-confidence to be able to identify and determine future learning directions; and in the process building social networks. They contend that two aspects in particular stood out - the importance of developing self-

understanding and reflection; and the value of Communities of Practice as a means of promoting collaborative learning and building community capacity.

A series of papers follow that are all connected with the changing experience of students in the mass higher education system evolving in Australia. Continuing with a focus on regional Australia **Lisa Andrewartha** and **Andrew Harvey** examine an alternative pathway program being run by La Trobe University in Victoria. The Tertiary Enabling Program (TEP) runs across a number of institutions, campuses and disciplinary areas and is designed to prepare a diverse group of students for tertiary study. The paper considers both the high overall achievement levels arising from the program as well as the variations in achievement between subjects, campuses and student groups.

Kelly Chambers, Robert Whannell and **Patricia Whannell** also turn their attention to a regional university, this time in NSW, and analyse a tertiary bridging program. Their interest is in peer assessment practice and the impact of this approach on student social relationships and the overall assessment experience. Over 100 students were surveyed and the findings presented in a quantitative study that suggested that while students preferred peer assessment it had limited benefit in improving the overall student experience.

The use of e-portfolios for Recognition of Prior Learning (RPL) and Professional Recognition (PR) is the subject of **Roslyn Cameron** and **Allison Miller'**s paper. Through using a series of case studies they aim to build on a conceptual framework involving four types - ePortfolios for Professional Accreditation, Workplace Recognition, Access, and Self-Recognition, and two dimensions – RPL as process and product; and between formal and informal learning.

The final paper returns to the university business classroom. Increasingly first year undergraduate classes in very popular subjects such as business, now have many hundreds in the one lecture theatre. The pedagogy of reaching those students, holding attention, engaging with them and involving them in the session presents particular challenges. One response has been to make use of smartphone apps to

get instant response and feedback from students. **Angelito Calma, Beverley Webster, Stefan Petry** and **Jenny Pesina** studied the use of 'quick polls' on smartphones in large undergraduate finance classes to gauge the impact on student interaction and engagement.

From the next issue AJAL will have a new Book Review Editor, and I'm very pleased to welcome Dr **Tracey Ollis** to the position.

Finally, a reminder that the November 2014 AJAL will be a Special Issue on *Adult Education and Lifelong Learning in the Asian Century*. The Call for Papers is on the following pages as well as the ajal.net.au site. Please consider submitting an article if this is an area of your interest, or please notify others, here and abroad, if you know of colleagues working and researching in this area.

Tony Brown

Call for papers for a special issue on Adult Education and Lifelong Learning in the Asian Century

The 21st-century is often referred to as the Asian century as rapid economic and population growth have shifted attention towards Asia. The Asian Development Bank estimates that the region will account for over half of global output by the middle of this century and an additional 3 billion Asian people could enjoy living standards similar to those in Europe today.

The Australian government has also focussed on Australia's role in the Asian century and set out a strategy for deepening understanding and strengthening relationships throughout the region. This includes building knowledge and capability through trade, cultural exchange, language, and education.

How will adult and lifelong learning contribute to and shape the changes taking place? What opportunities and challenges does this economic growth present for adult educators, policy and research in the field of lifelong learning?

This special issue of the *Australian Journal of Adult Learning*, to be published in November 2014 (vol 54: 3) aims to bring together research on topics such as:

- Extending opportunities for education and training at work, in post-school education, in literacy & numeracy, and within communities, NGOs and social movements
- Economic development and equality
- Health education ranging from challenges associated with rising affluence, to risks associated with low income, disadvantage and under-development
- Learning about climate change and the environment, including management of finite resources such as land, water and food.
- Movements of people and labour as internal migrants to growing cities and between countries

- Understanding traditions and current practices of adult learning in Asian countries.

Of particular interest is research on existing partnerships and projects between educators working across borders within the region.

AJAL is a peer-reviewed journal and encourages a variety of academic, historical, practice-based, critical, and theoretical approaches.

Submissions should be between 5,500 and 6,500 words and conform to the AJAL Style, details of which can be found at www.ajal.net.au

Submissions must be made online at www.ajal.net.au by 30 May 2014.

Further information can be obtained by contacting the AJAL Editor Dr Tony Brown at the University of Technology, Sydney, e-mail: tony.brown@uts.edu.au

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What's politics got to do with it? 'Power' as a 'threshold' concept for undergraduate business students

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Politics courses embedded in business and commerce degree programs have soared in number in recent years. Yet how business students, often compulsorily enrolled in politics courses, learn key politics concepts is an under-researched area. The purpose of this article is to determine where the teaching and learning of political science and business intersects. This research reviews the place of the "threshold concept" in student learning, with particular reference to "power" as a political concept. This article advances three arguments: that the study of political institutions involves a series of "threshold" concepts that students must pass over before moving onto a higher plane of understanding; that the teaching of political institutions should span the three key areas of knowledge, attitudes and skills; and that a real understanding of political institutions allows students to regard business figures, in pursuing self-interest, as "political" actors like any other.

Keywords: *Politics, power, business, threshold concept*

Introduction

The social sciences have featured heavily in higher education since the early 20th century, with political science enjoying a particularly rapid explosion in teaching in the post-war period. This is due largely to the West's conscious intent to highlight democratic institutions and the liberal tradition as a way to reconcile the horrors of European fascism and a threat of an international communism (Ward, 1992: 23-42). This focus has extended even further in the past 30 years to the teaching and learning of business and commerce studies, particularly in the wake of economic rationalism in the 1980s (Pusey, 1992), the Asian currency crisis of the late 1990s, and especially after the Global Financial Crisis of 2008. As government policy has drifted toward increased globalization as indemnity against both economic malaise and anti-democratic post 9/11 forces, higher education providers have responded by offering programs tailored to the new economic and security global order.

This article is a study of the knowledge, skills and attitudes of a small group of adult undergraduate university students. Yet while its context – higher education experiences of five participants – is comparatively narrow, it is intuitive that wider implications can be drawn for all adult learners. For higher education, one reality remains: many students will find themselves compulsorily, and therefore probably reluctantly, enrolled in subject areas outside their primary area of interest. In terms of business and commerce students' experiences, the critical question for teachers is how to make politics meaningful. Three research questions immediately emerge: how do business and commerce students "learn" core politics concepts? How do they value the study of politics as part of their wider business training? How do students use acquired concepts to prepare coursework assignments?

The article advances three arguments: first, the study of political institutions involves a series of "threshold" concepts that students must pass over before moving onto a higher plane of understanding to become truly transformed learners; second, the teaching of political institutions should span *knowledge*, *attitudes* and *skills*; third, a real understanding of power allows students to regard business figures as "political" actors in the exercise of power and in the pursuit of self-interest. The article acknowledges innumerable definitions of "politics" and "power" but, for the purposes of this study, it employs commonly cited definitions, as outlined below, by Heywood (2002) and Lasswell (1936). These include the notion that all politics involves power, conflict and decision-making in the distribution of limited resources, with the corollary being that political relationships, both formal and informal, are ubiquitous. Ultimately, it is argued that a broadened understanding of politics will allow students to take full advantage of commercial opportunities in the "real" corporate world.

Various learning taxonomies support this notion in arguing that students must pass through lower knowledge and skill levels before proceeding to higher planes of cognition. Bloom's taxonomy ([1956] 1984) argues that higher planes such as "Synthesis" and "Evaluation" are hallmarks of student development. Similarly, Anderson and Krathwohl's (2001) taxonomy schedules "remembering" and "understanding" at the base, with "evaluating" and "creating" at the apex. In short, this paper argues that the passing over of key "threshold" concepts facilitates students' upward spiral through these planes.

Literature Review

There is an abundance of literature describing adult learners and their negotiation of "difficult" concepts. Jarvis's *Adult Education and Lifelong Learning* (1983; 2010) argues that adult learners are individuals and it is the "*person* as learner" (emphasis added) that should inform any approach to adult teaching and learning (2010: 1; 106). Invoking Maslow's (1968) hierarchy of human needs, Jarvis argues that people learn about themselves before learning to become members of a civic society – a key conclusion for the purposes of this

study. Mezirow (1997) adds the further dimension of "transformative learning" that he describes as a

> process of effecting change in a *frame of reference*. Adults have acquired a coherent body of experience – associations, concepts, values, feelings, conditioned responses – frames of reference that define their life world. Frames of reference are the structures of assumptions through which we understand our experiences. They selectively shape and delimit expectations, perceptions, cognition, and feelings. They set our 'line of action'.

Many studies of social science education exist, with a substantial proportion dedicated to the teaching of business studies, but with two major limitations. First, US studies are over-represented, and narrow themes such as business ethics dominate the discourse. Useful examples, however, include McDonald's (2004) study of integrating ethics studies, Burton's (2004) work on teaching the "Golden Rule", Morrell's (2004) exploration of ethics and 'Socratic Dialogue', and Lampe's (1997) research into ethics teaching. Other studies more specifically target the pedagogy of business and commerce studies, such as McFarlane's (2000) "Inside the Corporate Classroom", and Mercado's investigation of classroom 'role-play' as a component of "pre-managerial" business education (2000). There is also research on the teaching of public administration and civics. Examples include Davis and Wanna's (1997) "Does the Teaching of Public Administration have a Future?", Chandler's (2002) study of economic deregulation and the decline in public administration teaching, and Weinstein's (2004) analysis of civics education as "learning about the other". In addition, Hill (2003) explores a novel approach to the teaching of civics by linking the physical sciences to politics. Yet it is the literature covering the teaching of more "traditional" political science, such as institutions, that is this article's focus. Critical examples include Belanger's (2004) work on teaching comparative politics, Linser et al's (1999) exploration of web-based "simulations" when teaching politics, and Kehl's (2002) more specific excursion into "indicators" of political science scholarship on the discipline's teaching.

The literature focusing on *interdisciplinary* approaches is arguably the most useful one in terms of exploring students' experiences in courses outside learners' primary discipline. By linking new conceptual material in one curriculum field to previously acquired concepts in a more familiar area, teachers can assist students "jump" cavernous gaps in curriculum, and to move from mere "surface" to "deep" learning (Jacobs, 1989; Hall and Weaver, 2001; Warburton 2003). Johnson (1998) applies this by linking politics to history, while Sherman and Waismel-Manor (2002) explore writing as a strategy to teach political science. Yet there is scant literature dedicated specifically to the teaching of political science to business or commerce students. This paper's secondary purpose is therefore to bridge this gap and offer concrete data on business and commerce students' learning experiences.

Perhaps the most utilitarian model in understanding how students negotiate new concepts is that of the "threshold", a term popularized by Meyer and Land (2003, 2005, 2006) who differentiate "between core learning outcomes that represent 'seeing things in a new way' and those that do not" (2003: 1). Often referred to colloquially as "core concepts", Meyer and Land elaborate the threshold concept as

> a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress (2003:1).

Further described as a "conceptual 'building block' that progresses understanding of the subject", the threshold concept can be equated to Perkins's "troublesome concepts…those things that are "conceptually difficult, counter-intuitive or 'alien"' (cited in Meyer and Land, 2003: 1). The 'threshold' concept is therefore the inverse of "ritual" knowledge – such as historical names and dates – that students invariably find "routine and rather meaningless", and "inert" knowledge that "sits in the mind's attic, unpacked only when specifically called for by a quiz" (Perkins, cited in Meyer and Land, 2003: 6). It is also important to note the "threshold concept" transcend disciplines.

Meyer and Land (2003: 4-5) identify five characteristics within any "threshold concept". First, it will be "transformative", with its effect on student learning "occasion[ing] a significant shift in the perception of the subject". Second, students' "learning behaviours" should be "irreversible" – that is, *permanently* transformed. Third, it will be "integrative", with students ultimately able to "expose the previously hidden interrelatedness of something". Fourth, it will be "bounded" in that the "conceptual space will have terminal frontiers". Last, the threshold concept will often be "troublesome". Importantly, Meyer and Land argue the threshold model is not confined to concepts but can be extended to "ways of [student] thinking and practising" (2003: 9). Examples of threshold concepts include undergraduate law students' grappling with "precedent", accounting students' encounter with "depreciation", the "central limit theorem" in statistics, "entropy" in physics, "irony" in literature, and notions of "pain" and "caring" in medical students' understanding of patient care.

The question of how teachers can assist students to pass over conceptual "thresholds" is central. Ellsworth (cited in Meyer and Land, 2005: 378) suggests a "counter-narrative" that she labels "thinking otherwise", while Halden (cited in Meyer and Land, 2005: 382) suggests teachers must pose for students 'real-world' problems to facilitate conceptual breakthroughs. If teachers ask only the usual 'textbook' questions, they "risk getting responses that mirror verbatim learning only" (Halden, cited in Meyer and Land, 2005: 382). Clouder (2005: 512-14) concurs when she argues that thresholds will be passed over when students are "touched personally by events so that students connect", a process that might also require students being "immersed" in the concept and / or experience. Clouder might also be stating the obvious when she suggests students will pass over thresholds via "discussion" and "knowledge gathering", but it is her context that is important: threshold knowledge can be "gathered" from peers as well as teachers (2005: 512). An equally critical question is how teachers know when students have successfully passed over conceptual thresholds. Meyer and Land suggest threshold concepts are not just part of students' "understanding" but also part of students' "expression" (2005: 380). Like other meaningful instruments of formative assessment, students passing successfully

over a 'threshold' will be capable of *expressing a demonstrated shift in thinking, skills and attitudes*. This article now applies the 'threshold' theory to the author's study of business students' encounter with 'power' as a core politics concept.

Strengths and limitations of the 'threshold' model

There are clear advantages in employing the "threshold" model in course design. Cousin (2006) reminds us, for example, that academic teachers have a tendency

> to stuff the curriculum with content, burdening themselves with the task of transmitting vast amounts of knowledge bulk and their students of absorbing and reproducing this bulk. In contrast, a focus on threshold concepts enables teachers to make refined decisions about what is fundamental to a grasp of the subject they are teaching. It is a 'less is more' approach to curriculum design.

For Cousin, a "threshold" approach offers students an ontological experience of understanding, and even of changed "being", simply because the passing over a conceptual threshold is transformative in how learners identify themselves (Cousin 2006: 4). But the model's limitations must also be acknowledged. As Bowbottom (2007: 267-68) argues, there is a probability of any given threshold being "agent-relative" – lacking uniformity across scholarly disciplines and learning contexts. It is, Rowbottom (2007: 267-68) argues, possible to "play football without understanding all the rules".

Context of this study

As outlined above, many political science courses are delivered within the wider context of business and commerce degree programs, with many political science staff located within business schools, and with students often compulsorily enrolled in "gate-keeper" politics courses in their first year of university study. Moreover, these usually young students will boast several common characteristics: they will often have little working knowledge of political institutions; they will have a negative perception of those institutions; they will probably have low expectations of such courses in terms of personal fulfillment;

and they will usually eschew formal political participation outside the school or university (Carr, 1991; Frazer, 2000; Galston, 2001; Henn, Weinstein and Forrest, 2005). Indeed, many compulsorily-enrolled students have invariably asked: "what politics had to do with business?" (McDonald, 2004: 372). Given this context, the adoption of the "threshold concept" as a research frame is appropriate.

A small sample of five undergraduate business and commerce students, compulsorily enrolled in an introductory "business and government" course at an Australian university, was self-selected to participate in one-on-one interviews with the author. Each student was in his or her first year, and second semester, of undergraduate study. It is acknowledged that self-selection can skew results in favour of engaged, higher achieving students; however, random sampling was rejected owing to very small enrolments. Satisfactorily, there was among volunteers a representative range of age, sex and skill level, with male and female participants ranging in age from late teens to mid 40s, and from 'average' to 'high' scholarly ability. The University granted ethical clearance for the conduct of face-to-face interviews of between 30 and 45 minutes' duration. Questions were initially narrowly framed and discussions were free-ranging thereafter. To maintain anonymity, only students' initials appear in this article. For two reasons, the interviews were conducted in the last quarter of their course: to give students ample lecture topics on which to reflect, and to give students an opportunity to evaluate the role of "power" as a concept in the preparation of a major assignment which required students to research and write an advocacy report, reflecting the "real" commercial world, that either supported or opposed current government policy. Students were therefore required not only to gather facts but also argue a case via their analysis of the likely political and economic impact of their policy position on both government and the community. In short, students were required to think not just "economically" and "scientifically" but also "politically".

Students were assisted over the "politics is power" threshold via a core reading: "What is Politics?" – an introductory chapter to Heywood's *Politics* (2002). After exploring Aristotle's famous quote that "man is, by nature, a political animal", Heywood 2002 canvases four classical

roles of politics: Politics as the "art" of governance; politics as "public affairs" and, most germane to the needs of [this course] – politics as "compromise and consensus" and politics as "power" (2002: 5-12). It is these last two definitions that business students were especially encouraged to deconstruct, with the desired conclusion being that politics ultimately hinges on the relationships – formal or informal – between institutions, between institutions and individuals, and between individuals. Students' were then exposed to Harold Lasswell's famous quote that politics is about "who gets what, when, and how" (1936). It was here that students met their first "threshold" as they grappled with the idea that politics, at its most primal, is based on power and the distribution of resources. Most critically as a "troublesome" concept, politics, under this definition, encompasses virtually every human relationship.

Relatively early in the semester, the lecturer evaluated where each student was located in terms of the "politics as power" threshold. From a list of broadly varying human activities – including business lobbying, the seeking of legal permission for a demonstration, the interaction between a salesperson and a customer, the negotiation between a teacher and a student over assessment requirements, and a friendship group deciding where to dine – students were required to identify which were "political" and which were not. Clearly, those students already equipped to pass over the threshold defined all activities as "political" as they correctly concluded that each involved decision-making, compromise and consensus, and each resulted in "winners" and "losers". Most students, however, were incredulous that all scenarios could be deemed "political". Yet this resistance offered a critical teaching pivot-point at which student understanding could take a productive turn, and where a carefully selected sequence of teacher-led questions lead learners over this conceptual threshold. These questions included: "Are journalists 'political' for attempting to set media and public agendas? If so, are business people 'political' for attempting to do the same?" Group discussions resulted in students broadening their definition of politics.

Research framework & method

This article's research is framed around the need for teachers to determine how their adult students negotiate "threshold" concepts in disciplines outside their primary scholarly discipline. It is also framed around the student "voice" as an example of localized research that assumes (usually young) students

> have unique perspectives on learning, teaching, and schooling; that their insights warrant not only the attention but also the responses of adults; and that they should be afforded opportunities to actively shape their education (Cook-Sather, 2006: 359-60).

The paper's method employs a broader phenomenological approach where researchers "seek our participants' point of view of their experience" (Seidman, 2012: 17). A phenomenological method was selected because, as Moustakas (1994: 46-47) argues, "the investigator abstains from making suppositions [and] focuses on a specific topic freshly and naively". Given that researchers, who are also practising educators, will often be familiar with participants, there is risk of subjectivity, and even "projection", where the interviewer "falsely attribut[es]…thoughts to others" (Drapeau, 2002). A phenomenological approach was therefore chosen to consciously counter this risk.

Yet limits to phenomenological approaches must also be acknowledged. First, as Seidman (2012: 17) asserts, researchers "must be modest about our expectations" because "it is never possible to understand another [person] perfectly". At best, researchers can expect a "reconstruction" of participants' past experiences (Seidman, 2012: 17-18). In addition, Beck (1994: 254) argues that findings can be compromised if the researcher imposes "past knowledge" on the current study. Notwithstanding these potential shortcomings, the phenomenological method – via the "intentional gaze" of in-depth interviewing – was selected for its capacity to "search for the true essence, the real 'is' of another's experience" (Seidman, 2012: 17-18).

Data analysis and discussion

This section presents students' responses and analyses them in context. To reflect this article's research questions, students' responses are divided into three streams: *Knowledge*, *Attitudes*, and *Skills*.

Knowledge

Students were first asked to define politics and power, and to provide examples of each. Students were then asked how they had crossed the "politics as power" threshold, and how they knew they had done so.

The first interviewee, AL, offered his definition of politics:

> Politics is the grease that keeps the engine going. It's the interaction between government and business. All my life I've only looked at things from the business side of things. I've never looked at it from the politics side. [This course] has been good to give me a balanced look at things…

AL's use of the term "grease" indicates an understanding of politics as a "process" rather than an object in itself, and suggests he had genuinely reached a higher plane of understanding. The response also suggests AL understood the nature of "relationships" in defining politics and power – a key step in the cognitive process. Indeed, AL appeared to pass over the threshold easily:

> The first part of the course was like a penny dropping, once I understood how federalism works, I guess. The lobby groups [topic] really weren't of interest to me, but another penny dropping moment was the media part, once I worked out how the Australian parliamentary monster worked. It all ties in with not just how politics works but how it affects the world. The stories you told us about Japan helped me remember that information.

AL's unsolicited use of the phrase "penny dropping" is perhaps the most concrete example of student language demonstrating a student's successful negotiation of a threshold concept. Indeed, its use is so appropriate that perhaps yet another synonym for "threshold concept" might be the "penny drop concept" (see Hays, 2008).

AL expanded upon how he came to understand that politics is also about power:

> I've learnt that power is the game played between politicians at state and federal level, the blame game. Local government blames states, states blame federal. One of the things that opened my eyes is the media and the impact it has. That makes me realise power is everywhere…

Moreover, in likening political relationships to a "game" not unlike the "game theory" of mathematics and economics, AL has concluded that political relationships produce "winners" and "losers". But AL's qualification that the "game" is confined to "politicians", and his lack of reference to people like himself, suggests he does not yet fully comprehend some of the dimensions of "politics as power". But AL's final statement – his acknowledgement that "power is everywhere" – is strong evidence of something of a crossed threshold.

LE was more economical in response. When questioned on how her understanding of power had changed over the semester, LE responded:

> At the start of the course I thought of power as a business concept. I still do, which probably sounds a bit back to front. But I now know that business and politics and power intertwine and work much the same way. I have done industrial relations subjects and it's there we see power plays between people. I've reflected back on things in this course when doing those other subjects.

Like AL, LE's response that she thought of power only in business terms initially suggests a failed attempt to cross a threshold. But her additional comment that "business and politics and power intertwine" does suggest some, albeit limited, acceptance of a broadened definition of "politics as power". Satisfyingly, LE spoke of "reflection" as she independently linked subject matter in one discipline to that in another. This, too, suggests an intellectual transformation not unlike students' passing into "Synthesis", as defined by Bloom (1984).

AD also demonstrated the passing of a threshold:

> Politics is about people; politics is all around us. I now see power as anyone who can say or do something that affects another person. Business has power if they band together, and consumers have power if they band together.

As with other respondents, AD saw politics as universal and involving actors other than politicians. But it is AD's following remarks that were most telling:

> I can see parallels in my [pest control] business. Everything has been lining up between what's happening in my business and what's been taught in the course.

Like LE, AD indicates a link between the theoretical and the "real" world, a step he appears to have taken independently. In short, it appears AD, too, has been "transformed" by his ability to draw conceptual links and, thus, jump across the "power as politics" threshold.

EJ also drew interdisciplinary links:

> I found [the course] particularly useful for my industrial relations course. It links the two areas together and [this course] takes things a lot further. Politics is touching everything, not just what happens in parliament and at election times. Same with power. Power has to do with everything you do. I've learnt that decisions in the High Court have affected my life but before I didn't know how. Understanding pressure groups was also a big one for me.

Satisfyingly, EJ demonstrated an understanding of the politics involved in everyday life, one indicated by the linking of "politics" to "power". Moreover, EJ's reference to the High Court as a site of *political* power, and especially the High Court's *political* role as one impacting on everyday life, indicated a crossed conceptual threshold.

Interestingly, EQ's response went beyond EJ's:

> I've really come to understand how much business really depends on government, how closely business and government are tied. When in business you have to have good relations with government. [This course] relates that to us, and what you're

> going to experience once you leave university. Some core subjects are horrible and you think 'what the hell has that got to do with anything?' whereas politics is in everyday life. It has more to with life than any other subject I've done. This course has brought other subjects, like economics and industrial relations, into real life.

Importantly, EQ not only cites the general relevance of politics and its inherent interdisciplinary nature but she also drew a link often problematic for students: to connect current coursework with "what [one is] going to experience once [one] leave[s] university".

Attitudes

Interviewees were also asked their attitude towards their students' compulsory enrolment in politics subjects. The responses ranged from pragmatic to altruistic. LE, for example, was among the more practical:

> I decided I would just have to do [this course]. I didn't look at it like a politics course. I looked at it like a business course. But I found it really relevant. I had some but not enough knowledge of politics and I needed something to help me. It's information every Australian citizen should have.

LE's approach to what is, for many students, an "alien" course replete with "troublesome" concepts offers teachers of politics unique insight. It may well prove advantageous for instructors to market their politics courses not as discrete political science subjects but as attendant business units. Clearly, encouraging students to cross seamlessly between business and politics not only diminishes anxiety among first year students but allows students to draw links between the political and commercial worlds – a universally desired if problematic teaching objective. LE's response was also noteworthy in that she expanded the value of studying politics beyond self-interest to the community at large. This objective of civic education – in keeping with the democratic principles introduced in this article – is another goal of teachers of political science (Galston, 2001).

AD is another who adopted a pragmatic attitude early in the course:

> I looked at politics as something I needed to learn about. I went into [this course] with an open mind, nothing 'hard core' one way or another. The course did confirm some of my beliefs but the new information I've learnt will also come in useful.

Clearly, AD enjoys a perspective not always shared with peers. In commencing her course with "an open mind", AD was able to look beyond those learning experiences that merely "confirmed" existing "beliefs" toward a bigger picture. AD's comment raises new questions not only of the importance of students keeping an "open mind" when beginning any study but, also, the importance of teaching students how to do so.

EJ's response might be less worldly but it remains consistent with LE's pragmatism:

> I wasn't sure politics would be relevant. I want to be an accountant, but I thought 'I've got to do it and I might learn something from it'. I found out that [this course] is very relevant. I debate with my parents a lot more and have conversations about politics a lot more. I can relate to it and my Dad loves it.

EJ's development of a positive attitude to the study of politics also demonstrates her finding a rightful place for politics in her everyday world. In identifying with family members' interests, EJ – and students like her – enjoyed a genuine cultural and cognitive shift in her value of political knowledge. For EJ, the study of politics has brought not just functional benefits but also a sense of personal fulfillment. This, too, is consistent with civic education goals, and indicates, as Meyer and Land (2003: 4-5) and Cousin (2006: 4) argue, student whose "being" has been genuinely "transformed".

The final two respondents shared an enthusiasm for undertaking a politics course that suggests business and commerce students' antipathy towards political science can be overstated. AL, for example, echoed EJ's sense of personal enrichment:

> I was quite happy to do a course on Australian politics. I'm from New Zealand and the politics [there] are quite different. I had a rough understanding of Australian politics so I wasn't too

> worried about doing a compulsory politics course. I think studying politics makes people feel less powerless. People should be better informed by the end of this course.

AL – in his use of the phrases "less powerless" and "better informed" – demonstrated an understanding of "politics as power" and "civic value" respectively. Importantly, they appear to be 'thresholds' AL crossed easily and enthusiastically, strongly suggesting a positive correlation between student attitude and student success.

EQ revealed an equally positive attitude at course's commencement:

> I felt good about doing a politics course. I was quite happy to do it. I've always been a bit interested in politics. But the course is better than I expected. Originally I wanted to do a marketing degree. But politics would have been more fun.

Critically, AL and EQ each offers strong evidence that a student's prior experiences and knowledge of a subject, no matter how rudimentary, will shape that student's attitude and, in turn, that student's ability to smoothly bridge concept thresholds.

Skills

Respondents were also asked to reflect upon the value of the "politics as power" concept in the preparation of their business submission assignment.

AL reported its value enthusiastically:

> Understanding power did play a big part in how I structured my assignment because you can impact people on both sides. How business can use power to get things done – using leverage to make an impact.

AL's use of such phrases as "getting things done" and "using leverage" suggests his crossing of the threshold allowed him to identify business advantage and, therefore, to think "politically" when compiling a business submission.

Three additional respondents reported the value of the "politics as power" conceptualization in assignment preparation. EJ, for example, acknowledged the importance of pluralism as a core political science concept, but she appeared less sure the concept taught her to think 'politically':

> It helped me somewhat. I'm a lot more aware that different groups have different interests and influences. I also now see a lot of biased information. This course has taught me to be a lot more discriminating. I now try to find the facts as opposed to opinions.

However, EJ's last statement – to have learnt the skill of discriminating between research qualities – meets a key learning objective in itself, and further indicates EJ's progression through Bloom's learning taxonomy from mere "knowledge" and "comprehension" to "analysis" and "synthesis", and even "evaluation".

AD also makes reference to pluralism as a learned concept:

> I think a different look at politics as power did help my assignment. It made me realize there are always three main powers involved – industry, government and consumers. Business tries to have power over the other two. Government is a regulator and tries to have power over the other two.

AD's neglect to cite consumers' power via their own not insubstantial lobby groups – despite mentioning consumers – is curious, but hardly detracts from the AD's essential realization of business acting 'politically' in the same vein as any other actor.

EQ, while suggesting the "politics as power" threshold did assist in the preparation of her assignment, is less forthright as to *how* that assistance was rendered:

> What we learnt in the course gave me ideas and things to think about. It helped me do the assignment because I worked out that life is about power and relationships.

EQ's limited response casts doubt on whether she genuinely found the 'threshold' concept of use in assignment preparation.

LE is another unconvinced of the value of the 'threshold' concept as an aid to assignment research:

> I didn't really focus on power plays, but I did look at influential people. I didn't go into it thinking about power.

If discouraging for teachers, LE's answer is at least consistent with her *knowledge* response that indicated a limited efficacy in passing over the "politics as power" threshold. It is therefore intuitive that any student with limited success in negotiating threshold concepts would be reluctant to cite those same thresholds as useful in assignment preparation.

Conclusion

Educators in a multidisciplinary world increasingly find themselves teaching students compulsorily, and probably reluctantly, enrolled in subjects outside the student's primary area of interest. Becoming aware of how those students – whose knowledge and enthusiasm will likely be low or non-existent – negotiate new and potentially difficult "threshold" concepts is therefore critical for teachers in any educational setting. Questions of how business and commerce students learn core politics concepts, how they value the study of politics as part of their business training, and how they use those concepts to prepare assignments are therefore critical to understanding how any adult student "transforms" as a life-long learner. This article's study of the learning experiences of five adult university students – enrolled in business and commerce degree programs and compelled to undertake a first year politics course – has revealed varied levels of ability among students to cross the key conceptual threshold of "politics as power". While some students had wholly retooled their notion of politics and now defined the term as one where any individual participates in the decision-making over the distribution of resources, others continued to confine their definition narrowly to more orthodox actors. Yet the fact that all students revealed some broadening of their understanding of power as a component of politics, and that business actors do behave "politically", indicates the entire sample passed over a conceptual

threshold. This finding strongly supports this article's theses that the study of political institutions involves a series of "threshold" concepts, that teaching of political institutions should span knowledge, attitudes and skills, and that any real understanding of power allows students to regard business and other figures as genuinely "political" actors. The corollary to this conclusion is that the "politics as power" threshold approach successfully allowed students to develop more positive attitudes to politics, with each appearing to have become genuinely transformed learners committed to participating in a robust democracy.

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Learning and leadership: Evaluation of an Australian rural leadership program

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Leadership programs have been extensively promoted in rural communities in Australia. However, few have been evaluated. The results of the evaluation of a rural leadership program provided in this paper highlight the need for adult learning theories to be more overtly identified and utilised as the basis of planning and implementing leadership programs. Transformative learning theory and social learning theory were used to explain the impact the program had for participants and to provide insight into how similar programs could be enhanced.

Keywords: *rural leadership; adult learning; non-formal learning*

Introduction

Leadership has been hailed as an important element within communities in order to enhance local decision making and responsibility (Gray, Williams & Phillips, 2005) and to build community capacity, cohesiveness and community resilience (Walker & Salt, 2012; Wilson, 2012). As such, leadership programs, particularly in rural communities, have proliferated in Australia over the past 15 years. However, there has been little evaluation of these programs, either in terms of outcomes or regarding the educational principles that underpin the delivery of the programs. This paper examines the delivery of one rural leadership program in rural Queensland, Australia. Using a case based approach, the results provide an avenue of exploring why the participants found this program transformed their understanding of themselves and the way they can work in their communities. In particular, this paper locates these results within a framework of adult learning, drawing on transformative learning theory and social theory of learning, particular the idea of communities of practice. We argue that the effectiveness of this program depended on the success of the facilitator in embedding a number of key adult learning principles in the delivery of the program and use these principles to point to how the program could be enhanced.

Background

Rural leadership programs have been increasingly supported by governments in Australia as part of a shift in political ideology that encourages the development of local solutions to local problems, and thus promoted as part of a strategy for long term sustainability of rural communities (Buultjens, Ambrosoli & Dollery, 2012; Gray, Williams & Phillips, 2005). However, these programs have often fallen short of intended goals, particularly in regards to enhancing adaptive capacity of communities, a key feature in communities gaining the confidence and skills necessary to plan for and implement solutions for local problems (Davies, 2007; Davies, 2009). This relates to an emphasis that has been placed on developing individual skills and knowledge in those who have been identified, or who

identify themselves, as leaders as opposed to developing leadership qualities within the communities as a whole. These different approaches to leadership programs not only have significant implications to how leadership is developed in rural communities, but also draw on very different ways of learning.

Leadership programs, irrespective of whether they build adaptive capacity or contribute to individual skills and knowledge, provide an opportunity for adult learning. Those programs that aim to develop personal skills of participants, known as 'transactional leadership', tend to focus on issues such as problem solving and conflict management and developing grant writing skills. The rationale underlying these programs is that enhancing the skills of individual leaders will result in these people being able to provide solutions for organisational and local problems; a rationale that is based on leaders being 'experts' within their communities (de Guerre & Taylor, 2004; Gray, Williams & Phillips, 2005; Davies, 2007). Other programs take a more community based approach and look to develop personal skills that contribute towards building community networks and cohesiveness so the community as a whole can identify its own problems and solutions (Walker & Gray, 2009; Rasmussen, Armstrong & Chazdon, 2011; Clark & Gong, 2011; Allen & Lachapelle, 2012; Apaliyah et al., 2012; Easterling & Millesen, 2012; Keating & Gasteyer, 2012). There has been considerable debate within the literature regarding the advantages and disadvantages of various approaches to leadership training (Zagorsek, Dimovski & Skerlavaj, 2009; Clarke, 2013). However, regarding those programs designed for rural communities, those that emphasise leadership as a form of building community capacity, known as 'transformational leadership', appear to be more successful (Davies, 2007; Davies, 2009). Unfortunately, rural leadership programs in Australia, as elsewhere, have not been systematically and rigorously evaluated, with a number of researchers calling for more evaluation (Clark & Gong, 2011; Van De Valk & Costas, 2011). Furthermore, few leadership programs, particularly those that are focused on community development, seem to identify what learning principles have been used to guide the development of the programs.

Adult learning in non-formal settings has not had the attention in educational research of other sectors. However, there have been significant gains in understanding in the last four decades. Stephen Brookfield (1986) suggested adults learned as a result of a transaction between adults in which experiences are interpreted, skills and knowledge acquired and actions taken. He outlined six principles that underpinned adult learning: participation; respect; collaboration; praxis; critical reflection; and self-direction. These principles are apparent in a number of adult learning theories, although their emphasis varies: those from the cultural historical tradition; social embeddedness of learning theories; critical theory; communities of practice; political activism learning; and social constructionism (Illeris, 2007). While transformative learning is occasionally identified as providing the underlying theoretical foundation for leadership training (see, for example, de Guerre & Taylor, 2004; Madsen, 2010; Drago-Severson et al., 2011), it is clear transformational leadership programs draw heavily on social learning strategies of discourse, participation, reflection and cooperation even if the learning theories themselves are not overtly identified (Ellis & Scott, 2003; Miller & Kilpatrick, 2005; Kearney & Zuber-Skerritt, 2012).

While there has been much theorising within the field of adult learning, there seem to be fewer advances made regarding evaluation, particularly within non-formal settings. Brookfield (1986) suggested evaluation was not done well in adult learning programs because of a lack of time and resources and because few adult models of learning adequately accounted for evaluation; those that did tended to take a narrow quantitative approach, primarily self-reported questionnaires, based on predetermined objectives, a process in and of itself that does not sit comfortably with the majority of adult learning theories. Evaluations based on quantitative data are very prevalent in leadership programs, particularly those that have focused on developing transactional leadership skills as these can more readily be measured (Van De Valk & Constas, 2011), although mixed methodologies are becoming more apparent (Millitello & Benham, 2010; Clark & Gong, 2011). Incorporating more qualitative approaches to evaluation of leadership programs

is consistent with the more nebulous components of adult learning and transformational leadership alike; aspects such as cooperation, participation and trust.

In addition to a lack of extensive evaluation upon completion of programs, there has also been little attempt to try and capture the on-going outcomes of leadership programs for individuals, organisations or communities. Alice Black and Garee Earnest (2009) provide one of the few attempts to measure the immediate as well as the long-term outcomes of a leadership program. Based on social learning theory and a broad range of adult learning theories, the EvaluLEAD framework put forward by Black and Earnest consider results that reflect episodic, developmental and transformative changes by using both observational and measurable data as well as more subjective data. If one of the outcomes of transformational leadership programs is the development of expanded social networks and civic consciousness and responsibility through taking on more roles and decision-making within the community (Apaliyah et al., 2012), then consideration of the impact of these programs one to two years afterwards, and beyond, needs much greater attention.

Case studies can offer a relevant way to evaluate leadership programs because of the emphasis placed on understanding the particularities of context (see for example Kearney & Zuber-Skerritt, 2012) as well as providing scope to include a range of data collection methods, thus taking a more naturalistic approach to evaluation (Brookfield, 1986). There is also the possibility to return to the community that provided the context at a later date to consider some of the long term impacts of the program, both on the individuals who participated as well as the broader community.

The case outlined in this paper relates to a leadership program designed and delivered by a local economic development consultant within a rural shire in Queensland, Australia. The shire consists of a number of small townships supported by mostly agriculture and pastoral industries, although coal mining is also an important economic provider in some parts. The township where the program was conducted is built on a flood plain and as such is prone to

flooding; it was significantly impacted by floods in the summer of 2010/2011. The program was funded by the local shire as part of community development activities used to promote social recovery of the region after these flood events. The program drew heavily on the Myers-Briggs Type Indicator (MBTI®) framework (Myers et al., 1998) as a means of providing insight into self for the participants. This framework has been used extensively in leadership development programs. However, Michael (2003) cautions against using the tool in a rigid fashion, particularly in a group setting where facilitators are unable to evaluate people individually. As such, in this program, the MBTI® was introduced as a tool to increase self-awareness as opposed to a framework to accurately assess personality types. The program also aimed to encourage participants to work within their own communities and to develop an understanding of leadership as part of a shared vision for their communities; as such, it aimed to develop transformational leadership. The program consisted of 10 full-day sessions, run monthly, and commenced in March 2012. Eighteen people from three rural towns attended the program.

Methodology

Part way through 2012, we were invited to evaluate the leadership program. As the program had already commenced, we considered an interpretive case based methodology would be the most appropriate. Furthermore, we were involved in two other research projects in one of the towns related to understanding community resilience in the wake of natural disasters, and using a case study approach allowed us to incorporate some of the contextual data from these other studies into this evaluation. Merriam (2009) argues case study is an appropriate approach for studies that: 1) relate to a particular situation, event or program; 2) draw on multiple sources of data; and 3) which involve complex phenomena best understood within the context of a particular situation.

Ethical clearance was obtained from CQUniversity Human Research Ethics Committee prior to data collection. All attendees of the leadership program were invited to be a part of the study with sixteen of the eighteen agreeing to participate. Interviews with participants of

the program formed the main avenue of data collection. These were separately undertaken by both of the researchers and guided by a semi-structured series of questions related to how the program was run, what benefits participants gained, and what could be improved. The interviews were conducted on the last day of the program and were digitally recorded. Each interview lasted between 10 and 55 minutes, with the average being around 30 minutes. The interviews were transcribed verbatim and thematically analysed independently by the researchers who then consulted to determine the overall themes.

Consistent with a case study approach, broader contextual data were also drawn upon, most of which was gathered as part of the two other research projects we were involved in; both related to community resilience in the township. These included both qualitative and quantitative data (interviews, focus groups, archival evidence, Photovoice themes, and survey). We also kept a reflective diary to record our own perspectives and thoughts.

Houghton et al. (2013) have outlined a number of strategies that can be used to enhance rigour in case studies, including: prolonged engagement; triangulation; peer debriefing; member checking; audit trail; reflexivity; and thick descriptions. Each of these strategies was used as part of this evaluation. The previous research work that had been undertaken, and from which we drew upon for this study, meant we had been visiting one of the communities involved for over 12 months and were well known, even though we were considered to be 'outsiders'. Being able to draw on other projects provided us with a broad range of contextual data and allowed us to situate the evaluation data within its context and provide opportunities to triangulate the data. We provided an initial report of the evaluation back to the facilitator who circulated to participants for checking and to provide them with an opportunity to question or challenge any aspects of our interpretation they felt were inappropriate or inaccurate. We undertook the thematic analysis independently through the use of NVivo (version 10) and then collaborated to identify data labels and themes. This element, along with keeping a reflective diary, provided an audit trail throughout the evaluation.

These processes also provided opportunities to reflect deeply on the data we had collected across all three projects, but particularly regarding this evaluation. Finally, we have provided thick descriptions in this paper, including extracts from the interviews, to illustrate how the themes were derived allowing readers to decide how transferable the insights gained from this project may be to other locations and situations.

Results

Sixteen, out of a possible eighteen, participants were interviewed. Three themes emerged from the thematic analysis: 1) self-development; 2) building social capital; and 3) workshop processes. The first two themes related strongly to community resilience and have been reported elsewhere (Madsen & O'Mullan, in press). This paper explores in more depth the final theme to better understand the curriculum and mechanics of the leadership program and how these may have contributed to the experiences of learning for the participants. Three separate but overlapping sub-themes featured in the theme: 1) motivation to be involved; 2) structure; and 3) impact of the facilitator. Each will be briefly explored separately.

The motivation to be involved in the leadership program varied from a desire to become more involved in the community to less certain positions such as keeping someone else company. One person thought the program was about learning how to get grants.

I just thought it sounded interesting (05).

I like to expand my horizons (10).

A bit more community orientated and to see who's out there (11).

A lot of people thought they might get a bit of an insight into keeping the committees running a bit more smoothly (12).

You do tend to find the people who have naturally come onto this course are the natural leaders in the community (13).

Some felt that the program could have been better advertised and more overt in relation to what the program was about to encourage others to attend, although it was recognised that many in the community who would really benefit from attending the program did not necessarily see that need in themselves.

In regards to the structure of the program, there was recognition the program required a large time commitment on behalf of the participants and while that was likely to be an inhibitory factor for many, particularly those with young families who only have one day of the week to spend with their families, the timing of the sessions and the length of each of the sessions was considered necessary. *Cause you wouldn't be able to cram it, and I don't think cramming it, it doesn't sink in as much* (10). All agreed that the content was important. By spreading the content over a number of months, and having the workshops supplemented with written materials, participants had time to think about the content. *I really think if they were any closer together … you'd sort of burn out, it might be too much* (12).

A second aspect to the structure of the workshops related to a focus on personal skills. A number of participants had undertaken leadership courses before, but felt this one was different.

Yeah, so they sort of, leadership courses out there are about getting the job done with the resources, but this is more personal. I think it works across everyday life as opposed to this incidence or said incidence (11).

Due to the personal focus of the program, the content needed to be balanced between learning about leadership, including understanding oneself through personal assessment tools such as the MBTIR as in this case, and time to reflect and experience the content. While some participants would have liked to have been involved in more experiential activities – *not so much of that just sitting… I'm not an inside person* (7) – most felt there was sufficient space for exploring the emotional aspects of topics being covered. *There was enough room in there for people to explore the consequences and that type of thing* (11). The program also gradually shifted over time from

information giving at the beginning towards more involvement and direction being provided by the participants, although some felt this aspect could have been greater.

In the initial stages there was too much talk (14).

I thought the program was really good in that it was flexible to what we requested, which whilst still maintaining the course, the direction of the course (13).

I think the people should have more input (16)

Finally, participants felt a large part of the success of the program related to the facilitator himself: his organisational skills and his mannerisms in the way he supported and prompted learning.

Always, always very organised in what he brings and the information he's got so yeah, he's good at being able to sort of get you together and go through the steps (8).

He obviously is not just a parrot man or anything like that as an instructor. He's talking from the heart, you know. He knows what he's saying (9).

He's really approachable (10).

He's been good because I have learned that if we've got a problem, he doesn't give you the answer… he makes it so that you have to solve the problem yourself (16).

But he acknowledged this little group and made us unique and he responded accordingly to the uniqueness of this particular group which was a good thing (17).

For this group, an important aspect of who the facilitator was involved him being from the local community – *the fact that he's somebody within the community I find of benefit* (13). As one participant put it, *local people are very reluctant to get outside help* (14). The facilitator's local employment and long-standing connection with that region meant participants recognised how genuine he was

in what he was teaching because they could witness the consistency between what he said and what he did.

Discussion

In the French countryside in the 16th century, Michel Montaigne mused about the difference between learning and wisdom (de Botton 2001). Learning he associated with the accumulation of facts and figures obtained within formal institutions. Wisdom, on the other hand, he believed related to making the most from everyday life; of living a worthwhile and meaningful life. This wisdom is gained when reflective adults come together with the intention to better themselves and their community. It is a wisdom that was recognised by the participants of the rural leadership program explored here, one that was generated not simply by the presence of particular people in the room, but one that was to a large extent planned for and tapped into intentionally. It may not have been executed perfectly at all times, but examination of the process and content of the workshop allows us to better replicate those aspects that worked well and to modify those aspects that could work better. It is with this in mind that we draw upon contemporary approaches to learning, and more specifically in this context, learning in non-formal settings as a way of better understanding the successes and opportunities of the rural leadership program.

The rural leadership program described above embodied the characteristics of non-formal learning, which is learning through a planned experience that does not necessarily lead to certification, nor is it necessarily evaluated, and if it is, is evaluated in a form that is different to formal approaches to learning (OECD, 2005). When viewed on a continuum, non-formal learning is positioned between formal learning, where you would expect a program of instruction, assessment and certification of some sort, and what is termed informal learning, which is as the result of daily activity (NCVER, 2009). From this non-formal learning position, the rural leadership program was able to avoid the potential pitfalls of the formal learning context (NCVER, 2009). These centre around the links of formal learning to qualification and certification such that

prescribed assessment, highly structured programs and pathways, highly systematised administrative process, and formal methods of instruction leave little flexibility in content or approach to delivery. However, the leadership program provided sufficient structure and support so as to maximise individual and, importantly, group-level knowledge development.

From the participation perspective, the non-formal nature of the program served to encourage a range of participants, some of whom were not entirely sure as to why they signed up, although most came to the program with an attitude of wanting to become more actively involved in their community or to become more effective in their involvement. Alice Black and Garee Earnest (2009) have summarised some of the reasons why adults will become involved in any form of learning, but particularly in regards to leadership program involvement. These reasons include valuing the topic, fulfilling expectations for oneself and others, improving one's ability to service one's community, and for professional advancement. Such reasons are clearly reflected in those who attended the rural leadership program evaluated here, although do not necessarily account for those who were unsure at the beginning of their involvement. This motivation, coupled with the nature of the environment, set the scene for the program: how involved participants were willing to be in activities; and how open they were to new ideas and ways of thinking.

Waynne James and Patricia Maher (2004) argue understanding one's own learning style and gaining such insights into self opens the door to learning. With this in mind, the initial focus of the program was on enhancing awareness and understanding of oneself through the flexible use of the MBTI®. The use of this tool provided space for participants to reflect on their own thoughts, feelings and values, to consider from where these may have been derived, and to explore these with people from their own communities so they were able to gain a better understanding of their own social contexts and their place within those contexts. Self-reflection is evident in most adult learning theories, although perhaps none more so than transformative learning theories. The goal of transformative learning is to produce autonomous, socially responsible thinkers through

a process of becoming more aware of one's own assumptions and by challenging those assumptions (Grabove, 1997; Cranton, 2006; Donaldson, 2009). Critical discourse is central to this process. Promoting conversation amongst the participants was a key feature of the rural leadership program examined here. Participants consistently talked about how they were able to discuss issues with each other during the workshops and to draw on the wisdom and experiences of each other. In doing so, many found their views and perceptions of themselves, each other and how to work in their communities altered significantly.

As the program progressed, participants were encouraged to apply their new understanding to their work and volunteer activities, creating a 'ripple-effect' as participants drew upon new knowledge, skills and insights into themselves and the behaviours of others, and integrated that into their everyday participation in the world (Madsen & O'Mullan, in press). This resulted in people who had not previously seen themselves as having a role in their communities volunteering to be on various committees, while others found themselves recognising the strengths and potential in quieter members of their communities. Learning through participation in the lived world is highly relevant to adults (Wenger, 2000), particularly in the context of non-formal programs. Etienne Wenger's (2009) social theory of learning suggests learning is fundamentally a social phenomenon, and holds social participation as central to the process of learning and knowing. The social theory of learning discussed here is markedly different from many other learning theories, in particular the cognitive and behavioural schools of learning theory thought, where the central focus is on the transformation of cognitive structures and observable behaviour respectively (Merriam, Cafarella & Baumgartner, 2007). Even social learning theory, as originally conceived by Albert Bandura (1977), which takes social interactions into account within cognitive learning processes, is insufficient in adequately capturing and illuminating the richness and potentiality of learning through participation. Participation, in this context, is not haphazard; rather it is concerned with active engagement, in this case with the leadership program and with the group of participants gathered together throughout the program. The notion of positioning learning through

social participation, in a group of individuals that share a common interest, can be viewed through the Community of Practice (CoP) lens, which is synonymous with, and in fact a basic building block, of the social theory of learning.

According to Wenger (2009) and Lave and Wenger (2002), CoPs are groups of individuals drawn together through a shared interest, issue, passion or desire, in order to deepen or change their knowledge and expertise. As a basic building block of the social theory of learning, CoPs are spaces characterised by mutual engagement and joint enterprise, and an environment for building shared and co-created meanings (Wenger, 2009). Here the emphasis is not so much on individuals, as in transformative learning theories, but on how adults interact with each other as part of collaborative learning. This is particularly important for rural leadership programs that are promoting transformational leadership; leadership that consists of forming new and stronger social networks and in generating learning opportunities for capacity building within communities (Davies, 2009). Learning how to learn together cannot be assumed to occur spontaneously when a group of adults come together, even if they have a shared purpose. A specific skills set is needed by individual players consisting of insight and understanding into self and others, tolerance, embracing diversity and valuing different life experiences, in order to effectively build relationships based on open communication and trust (Clark & Gong, 2011; Walker & Salt, 2012). Only when these feature in the CoP is this gathering likely to result in an environment that is conducive to effective co-learning experiences. It is for this reason the leadership program examined here spent considerable time developing such a skills set in the participants.

Against this backdrop of individual and collaborative learning experiences, participants in non-formal learning spaces, and in particular in a CoP, are clear about the role of the teacher or facilitator in the process of learning, particularly in regards to 'doing all the talking': it is not acceptable. The participants of the rural leadership program examined here were no different, and whilst they had expected some of the time would be spent in information-giving activities, found the group work and collaborative activities highly

beneficial and a far richer experience of learning. Indeed, some would have liked even more collaborative opportunities. Furthermore, the participants were not content to have the workshops simply delivered to them; they wanted to have some say in what was included, thereby sharing the responsibility and, therefore, ownership of the learning journey. As a result, the role of the 'teacher' in this context is quite distinct, and is clearly positioned as one of facilitating learning.

Wenger, McDermott and Snyder (2002) discuss the degrees of participation in the CoP context and include a special place in the core of the group for the coordinator or facilitator. Within this view, the role of the facilitator is best occupied by someone who is well-respected and can function as a member of the community – that is, they have their own lived experience to share – and at the same time can play a role in supporting the development of knowledge. As was found in the rural leadership program, it was not the instruction that mattered as much to the participants, but whether the facilitator actually 'walked the talk'. That is, participants were interested in how genuine the facilitator was in his teaching and whether his teachings were also evident in his practice.

This conceptualisation of the facilitator as a member of the CoP has very real implications for the success of rural leadership programs and other similar types of programs that are delivered through rural and regional communities. So often the programs are devised in a capital city by experts, funded either through a government or large organisation, and 'delivered' according to a strict schedule whereby the facilitator drives or flies into communities for one or two days and is never seen of again. This is not to say there is no value in these types of programs, particularly in those communities that have limited services or resources. However, these facilitators are in a position to neither fully participate in, nor contribute to, a CoP in any meaningful sense and therefore cannot develop relationships with the participants beyond a very superficial level. As such, their ability to facilitate real learning according to the adult learning principles discussed above is significantly reduced.

Conclusion

Rural leadership programs have the potential to make a great deal of difference in local communities if they can harness the wisdom and learning within those communities. Transformational leadership programs in particular have been aiming to do just that, but they have not drawn sufficiently on adult learning theories to provide them with a strong theoretical – and one could argue, practical – foundation from which to implement their activities. The rural leadership program evaluated in this paper did not overtly identify an adult learning theory that guided its development and delivery, although it became clear that various principles of learning were important to the facilitator including: reflexivity and uncovering unquestioned assumptions about oneself and one's world; sharing experiences with others to promote learning from each other; building social networks that can be drawn on beyond the bounds of the program; respecting and valuing differences; gaining sufficient confidence in oneself to be able to identify and determine one's own learning directions. We have considered the experiences of the participants of this rural leadership program in the light of transformative learning and social theory of learning precepts as a way of further understanding these experiences. We suggest these theories can provide useful structures to support the development of transformational leadership within communities. While this evaluation reported on learning which occurred throughout the rural leadership program, it is recognised that the full impact of the program may only emerge in the months and years ahead. However, from this evaluation two aspects in particular stand out: the importance of developing self-understanding and reflection; and the value of Communities of Practice as a means of promoting collaborative learning and building community capacity. Understanding how these work can not only enhance the planning and development of leadership programs, but can be used to inform other programs offered in non-formal settings.

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Willing and enabled: The academic outcomes of a tertiary enabling program in regional Australia

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This paper examines the achievement levels of students undertaking the Tertiary Enabling Program (TEP) at La Trobe University. The TEP is an alternative pathway program that traverses multiple institutions, campuses, and disciplinary areas, and is designed to prepare a diverse student cohort for tertiary study. The Program integrates several sources of support, including tutorials, mentoring, and counselling. We found high overall achievement levels, indicating success in teaching and supporting students with variant needs. Nevertheless, there was substantial variation in achievement between subjects, campuses, and student groups. Variable achievement is likely to reflect differing levels of prior educational attainment and preparedness among students. However, results also highlight the complexity in managing a Program across multiple sites, subjects, and institutions. We suggest further comparative research into curriculum and teaching practice of enabling programs nationwide to enable more effective benchmarking and expansion of these pathways.

Keywords: *under-represented students; widening participation; enabling program; tertiary preparation; alternate pathway*

Introduction

La Trobe University's Tertiary Enabling Program (TEP) was expanded in 2012 to operate across all four regional campuses of the University and one metropolitan site. The Program was delivered in partnership with Tertiary and Further Education (TAFE) institutions and catered to students from diverse economic and cultural backgrounds. Given the expected diversity of the student cohort, several sources of academic and student support were incorporated into the Program. This support included: one hour optional tutorials scheduled two days per week; dedicated student and staff mentors to assist in lectures and tutorials and support engagement on campus; and integrated service models where counsellors visited classes, developed a profile and attempted to 'normalise' the counselling experience for students.

The expanded Program was evaluated by the authors to examine progress against multiple objectives, and this paper draws on the findings of that evaluation. Our specific focus here is the academic achievement levels of participating students. In particular, we explore the extent of differences in performance by subject area, campus of delivery, and student cohort. By identifying and analysing variations in achievement, we hope to provide insight into how a cross-institutional, multi-campus, cross-disciplinary enabling program can achieve consistently strong academic results across a diverse student cohort.

The broad policy and funding context for our research is initially outlined, with particular reference to the recent Australian Higher Education Base Funding Review and developments in the area of sub-degree qualifications. While enabling programs are growing nationwide, there remains concern about their level of effectiveness, particularly relative to other transition pathways into higher education. Moreover, while several studies have reported positive achievement and university transition outcomes among enabling

program cohorts, students are typically studying at a single campus and/or within a single higher education institution (Cocks & Stokes, 2013; Trounson, 2012). We maintain a focus on academic achievement when turning to La Trobe University's Tertiary Enabling Program, consistent with previously published studies. However, our particular focus is on isolating and examining contextual factors within the Program, to enable exploration of the effects of campus, institution, disciplinary area, and geo-demographic cohort on academic performance. La Trobe's Program is unique in Australia in its operation across multiple institutions and campuses in regional areas, and this distinction provides an opportunity to explore a range of variables that potentially affect academic achievement.

In examining performance within the Program, we note that overall academic achievement levels were high, indicating general effectiveness of teaching and support strategies. The overall academic success of the cohort supports previous studies highlighting the effectiveness of enabling programs as pathways into tertiary education (Cocks & Stokes, 2013; Trounson, 2012). Nevertheless, there was substantial variation in achievement levels despite the high level of academic and student support offered. In particular, achievement differed between disciplinary subjects and across delivery locations. There was also substantial variation by specific demographic cohorts, with relatively low achievement by Indigenous students and relatively high achievement by students from refugee and non-English speaking backgrounds. Levels of variability highlight the need for ongoing measures to ensure consistent entry standards and pedagogical practice across subjects and institutions. However, the results also indicate several areas for further investigation. These areas include the potential efficacy of cross-institutional relationships; the relative effectiveness of different curriculum models in enabling programs, including the breadth of disciplinary content and the extent of student choice; and the potential impact of demographic background, cultural expectations, and site-specific factors on academic achievement within an enabling program.

Context

In 2008, the Australian Government initiated a comprehensive review of higher education in Australia. The Bradley Review, undertaken by an independent panel, examined the direction of the higher education sector, its ability to meet the needs of the Australian community and economy, and opportunities for ongoing reform (Bradley, Noonan, Nugent, & Scales, 2008). In response to the Bradley Review, the Australian Government outlined ambitious growth and equity targets in a report titled Transforming Australia's Higher Education System (Australian Government, 2009). This report included the objectives that 20 per cent of undergraduate students will hail from low socio-economic backgrounds by 2020, and 40 per cent of all 25 to 34 year olds will hold a qualification at Bachelor degree or above by 2025. These targets will only be met by increasing demand for higher education, in turn by raising educational achievement of under-represented groups. Groups that are under-represented in higher education include low socio-economic status students, students from refugee backgrounds, students from rural and isolated areas, Indigenous students, and students from non-English speaking backgrounds (NESB) (Centre for the Study of Higher Education, 2008). These Government targets renewed interest in alternative pathways to university for students who lack prerequisites for entry into a degree course.

There are numerous alternative pathways to higher education for students who would not otherwise qualify for entry. Many institutions offer alternative entry schemes that take into account short and long-term educational disadvantage (Victorian Tertiary Admissions Centre, 2013a). Students applying through tertiary admissions centres outline the disadvantage they have experienced and receive special consideration. There are also many sub-degree programs that provide pathways to higher education. Sub-degree programs include university diplomas and vocational education and training (VET) pathways and qualifications. Unlike Bachelor degree places, sub-degree places are now capped by the Government, although these arrangements are being reviewed (Ross, 2013). Most sub-degree programs incur some cost to the student and offer a qualification that

is typically counted as credit towards undergraduate study (Lomax-Smith, Watson, & Webster, 2011).

Enabling programs represent an alternative pathway to higher education that has seen a steady growth in student numbers over the past two decades (Lomax-Smith et al., 2011). There are two types of enabling programs: programs that provide a distinct pathway to higher education; and remedial enabling programs which are undertaken concurrently with university education study and cater to students who have qualified for entry but are academically under-prepared. Pathway enabling programs are the most common type and, in 2009, comprised 12,411 out of 19,298 students in enabling programs (Lomax-Smith et al., 2011). While the sub-degree level is increasingly congested, pathway enabling programs occupy a unique space. Such programs typically maintain an academic standard below diploma level, are free for participating students, have a clear equity focus, and aim to equip a diverse cohort of students with necessary academic confidence and abilities to progress to tertiary study (Anderson, 2007; Cocks & Stokes, 2013; Willans & Seary, 2011).

In 2010, the role of enabling programs was examined as part of the Higher Education Base Funding Review (Lomax-Smith et al., 2011). The broad purpose of the Review was to define principles for the long-term funding of Australian higher education and make recommendations for a reformed funding model. The Review noted that 97 per cent of enabling students are in Commonwealth supported places. Universities offering Commonwealth supported places in enabling programs cannot charge a student contribution, as they can for undergraduate students. Instead, universities receive an Enabling Loading in addition to the Commonwealth Grant Scheme funding for Commonwealth supported places. In 2010, the estimated funding for all enabling places was $66 million, with the Enabling Loading accounting for $14 million of this total. While the Enabling Loading is paid per student, the total amount of funding is fixed. This has meant that as enrolments in enabling programs have increased, the amount of enabling funding per student has decreased, from $3,592 in 2005 to $2,044 in 2011. Several submissions to the Review Panel highlighted concerns that this funding structure may provide a

disincentive to universities offering Commonwealth supported places in enabling programs (Lomax-Smith et al., 2011).

Unlike higher education and VET courses, enabling programs are not part of the Australian Qualifications Framework which was established in 1995 to monitor the quality of Australian qualifications (Australian Qualifications Framework, 2013). Furthermore, despite their existence since 1990, enabling programs have never been subject to a targeted review of effectiveness (Lomax-Smith et al., 2011). One recommendation of the Base Funding Review was to examine the effectiveness of pathway enabling programs in comparison with the many other pathways to higher education. This work would be complicated by the diverse nature of enabling programs nationwide, with some operating over a full year, some for one semester only, some delivered to distinct groups (e.g. Indigenous; mature age), and some delivered online (Cocks & Stokes, 2013; Vandyke, Shanahan & Wieland, 2012).

Nationally, enabling programs have demonstrated success in attracting under-represented cohorts. Students from equity groups comprise approximately 50 per cent of students in enabling programs, compared with 30 per cent of all domestic undergraduate students (Lomax-Smith et al., 2011). The University of South Australia (UniSA), for example, runs a rapidly expanding pathway enabling program called Foundation Studies, which catered to 477 students in 2011 and 753 students in 2012 (Cocks & Stokes, 2013). Access and participation rates for equity groups in this program are substantially higher than institutional rates, particularly for low socio-economic, rural, and NESB students (Klinger & Tranter, 2009). Other universities offer specifically tailored enabling programs for distinct student cohorts. The University of Newcastle has been offering free pathway enabling programs for over 20 years and maintains the largest enabling program nationally. This program has provided a substantial recruitment pipeline for the university, particularly in relation to under-represented students. In 2012, around 3,000 students participated across three streams: Indigenous students; mature age students; and 17-20 year olds (Vandyke et al., 2012).

Students in enabling programs may require a high level of support to succeed. Cohorts often comprise students with family and employment responsibilities, low academic confidence levels, social and cultural displacement, and poor English language proficiency (Klinger & Tranter, 2009). To cater to the variant needs of students, programs typically embed numerous sources of academic and social support. In UniSA's Foundation Studies, for example, students can meet regularly with counsellors, language learning advisors, and career advisors, and also have access to other forms of ongoing support (Cocks & Stokes, 2013).

Despite their attractiveness, enabling programs typically record attrition rates of about 50 per cent (Klinger & Murray, 2012). Decisions to discontinue studying are strongly influenced by the difficult personal circumstances and competing demands that are inherent to enabling students (Bedford, 2009). Additionally, attrition rates include 'positive attrition' where students make informed decisions to discontinue after learning that university education is not the right choice for them (Muldoon, 2011).

A significant proportion of students who complete enabling programs transition into further study. Of the 12, 411 students who undertook a pathway enabling program in 2009, 4,061 had progressed into a Bachelor degree level course in 2010 (Lomax-Smith et al., 2011). At UniSA, about 50-55 per cent of students who successfully complete Foundation Studies continue on to undergraduate studies the following year (Cocks & Stokes, 2013). At the University of Newcastle, approximately 70 per cent of students in enabling programs continue on to university study (Trounson, 2012). Importantly, many of these students would not have gained entry into university education without access to an enabling program.

The program

La Trobe's Tertiary Enabling Program (TEP) runs over eighteen weeks in second semester, with a curriculum covering social science, adult learning, mathematics, and science. Students are encouraged to undertake all subjects, and are guaranteed entry into selected La

Trobe degree courses if they pass all four subjects to an approved standard.

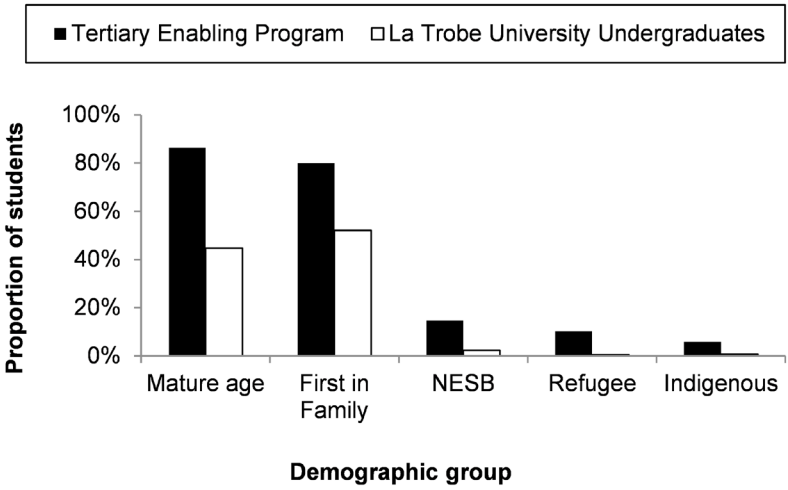
The TEP has been delivered at the University's Albury-Wodonga campus since 1990, catering to approximately 25 mature age students each year, including many under-represented students. In 2012, the TEP expanded to the University's other regional campuses at Bendigo, Mildura and Shepparton, in partnership with local TAFE institutions. In these locations, students spent one day a week at the University and another day at the TAFE. The Program continued to be delivered at Albury-Wodonga and was also launched at the Kangan Institute in Broadmeadows, one of the lowest socio-economic urban areas of Melbourne. In 2012, the targeted cohort was also expanded to include younger students aged 18 years and over. Dedicated mentors were also introduced and integrated into the TEP along with other sources of social and academic support, including optional tutorials and counselling.

The initial TEP target in 2012 was to enrol 150 students, with 30 students at each of the five locations. Enrolment targets were met, or approached, at four out of the five campuses. Specifically, 116 enrolments were confirmed after the census date, with 30 students at Shepparton, 28 students at Albury-Wodonga, 28 students at Bendigo, and 22 students at Mildura. The Kangan Institute recorded relatively few enrolments, with only eight students.

The TEP recruited a relatively high proportion of students from traditionally under-represented groups. Comparisons were made between the TEP cohort in 2012 and the La Trobe University domestic, commencing undergraduate cohort in 2012, where data were available. Figure 1 shows that the TEP students were more likely than their undergraduate counterparts to be mature age (86.3 per cent compared with 44.7 per cent) and first in their family to study at university (80 per cent compared with 52.1 per cent). The TEP also enrolled a considerably higher proportion of NESB students (14.7 per cent compared with 2.3 per cent), students from refugee backgrounds, defined as those holding a permanent humanitarian visa (10.3 per cent compared with 0.5 per cent), and Indigenous

students (5.9 per cent compared with 0.8 per cent). Data on socio-economic status and disability status were not available at the time of writing. Eighty-one of the students in the TEP were female (69.8 per cent) which is comparable to the representation of female students in the undergraduate population (65.3 per cent). Many students had personal circumstances that made studying difficult, including negative secondary school experiences, single parenthood, and mental health issues.

Figure 1: *Proportion of mature age, first in family, NESB, refugee, and Indigenous students enrolled in the TEP compared with undergraduate level at La Trobe University in 2012*



Methodology

This paper draws from a comprehensive evaluation undertaken by La Trobe University's Access and Achievement Research Unit to measure the success of the expansion of the TEP. Our focus is the achievement levels of students, with a specific examination of factors correlated with variability in achievement. By exploring a range of contextual variables, we investigate the ability of a cross-institutional, multi-campus, cross-disciplinary enabling program to achieve consistently strong results across a diverse cohort of students.

Institutional data pertaining to the TEP were analysed, including enrolment numbers and student demographics, withdrawal rates, course weighted average marks, and subject marks. Data were sourced via the Student Information System (SISONE) on 1 February 2013. It is worth noting some caveats around these data. The number of students holding a permanent humanitarian visa was used as an indication of the number of students from a refugee background. Some data were not available in the Student SISONE at the time of reporting, such as low socio-economic status and disability status. In addition, a proportion of students who remained classified as 'enrolled' had actually disengaged from the Program and stopped participating. This trend was evident in the very low Course Weighted Average Marks received by these students.

Results

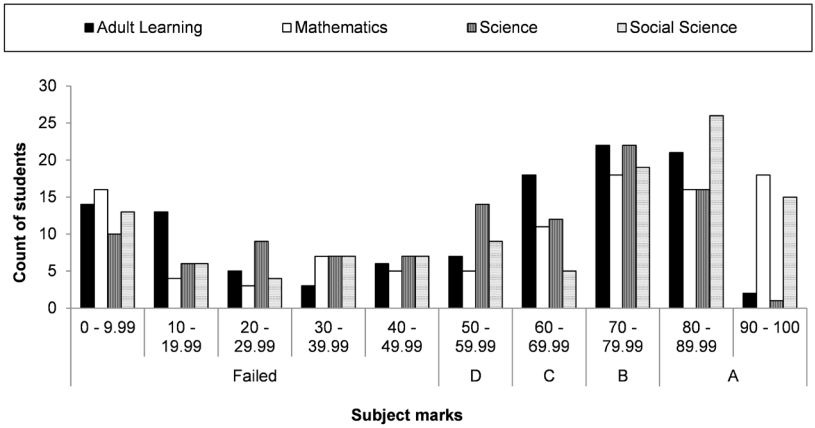
The overall retention rate for participating students was relatively high. Only eight students officially withdrew from the Program, leaving 108 students enrolled (93 per cent). However, additional students disengaged and stopped participating, with 65 per cent remaining active until the final exam. This compares well with the typical retention rate of 50 per cent for enabling programs (Klinger & Murray, 2012), though it should be noted that the La Trobe Program runs for eighteen weeks while some other programs run across two semesters. Many students who left the Program, officially or unofficially, cited personal reasons rather than dissatisfaction with the TEP. This outcome is consistent with previous research finding personal circumstances to have a particularly strong influence on decisions to discontinue studying in enabling programs (Bedford, 2009).

As with retention, achievement levels of the Program cohort were high. The vast majority of students enrolled in all four subjects, and 55 per cent passed all four subjects. Notably, 30 per cent of students passed all four subjects with a mark of 70 or above, guaranteeing them entry into selected courses at La Trobe University. The mean course weighted average mark for the TEP students in 2012 was 58.1 out of 100. While an imperfect benchmark, this result is in

line with the 61.4 mean course weighted average mark for the La Trobe undergraduate cohort for 2012 (domestic, commencing undergraduate enrolments). The general academic success of the cohort suggests the potential for significant Program expansion, and results also suggest its potential value to University recruitment.

Despite overall cohort success, academic outcomes data reveal important disparities by subject and campus. The distribution of subject marks can be examined in more detail in Figure 2.

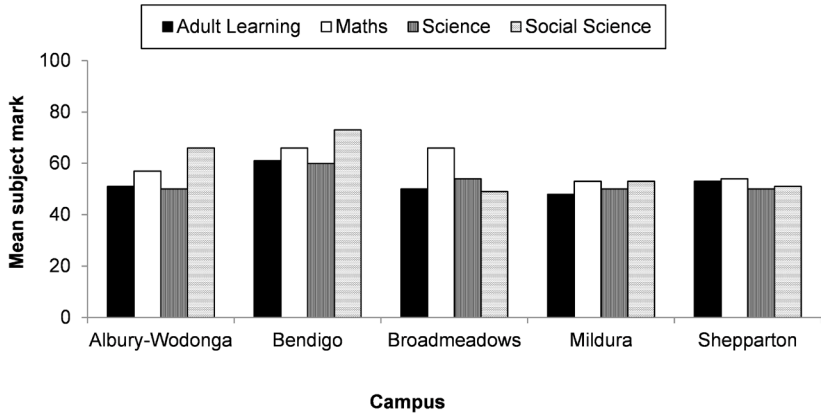
Figure 2: *Distribution of subject marks*



The aggregate distribution of subject marks is fairly typical when compared with undergraduate level at La Trobe. Nevertheless, a substantial proportion of students received very low aggregate subject marks which suggests non-submission of assignments and a lack of engagement.

Despite strong overall performance, there was significant subject variability. On average, students achieved higher subject marks in Social Sciences (60) and Mathematics (58) compared with Adult Learning (53) and Science (52). Further disparities become apparent when results are disaggregated to campus level (see Figure 3).

Figure 3: *Mean subject marks for the TEP by subject and campus*



An examination across campuses reveals that Bendigo students achieved the highest marks for all four subjects. The subject with the highest mean mark was Social Science at Bendigo (73). Two subjects had mean subject marks below 50: Adult Learning at Mildura (48) and Social Science at Broadmeadows (49).

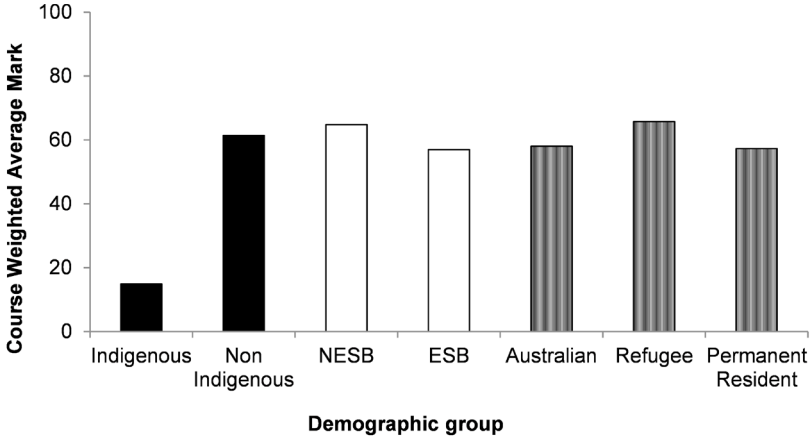
The results reveal an important relationship between subject and campus factors. Variations in mean marks by subject may themselves be mediated by the location of delivery. Thus, Social Science is responsible for both the highest mean mark of any subject in the Program and the lowest mean mark, in Bendigo and Broadmeadows respectively. Further investigation is required to understand the reasons for such variation, which may include different student levels of academic preparedness and/or broader teaching and environmental factors. In addition to subject and campus variability, there was substantial variation by student group.

Indigenous students

There was a high attrition rate among Indigenous students in the TEP. There were six confirmed Indigenous enrolments in 2012, four of whom were enrolled at Shepparton and came to the Program through the Indigenous Student Services Officer at the Indigenous Centre. There was also one Indigenous student enrolled at Albury-Wodonga

and one at Mildura. Only one of these students formally withdrew from the Program. However, Figure 4 shows the course weighted average mark for the five remaining Indigenous students was very low (14.9 compared with 61.4 for their non-Indigenous peers) and these marks suggest a lack of engagement and participation. Further investigation revealed that the marks for at least three of these students were so low as to indicate that they had also discontinued with the TEP (without officially withdrawing).

Figure 4: *Course weighted average marks for the TEP by demographic group*



Students from refugee and non-English speaking backgrounds

The TEP attracted a relatively high proportion of NESB students and students from refugee backgrounds, with substantial overlap between the two groups. These students performed particularly well in the Program. As Figure 4 highlights, NESB students received a mean course weighted average mark of 64.8 compared with 57.0 for students from an English-speaking background. Students from refugee backgrounds received a mean course weighted average mark of 65.7 compared with 58.1 for students from Australian backgrounds, and 57.3 for permanent residents. Most of these students were enrolled at Albury-Wodonga, Shepparton and Mildura, and spoke a

variety of languages such as Arabic, Dari, Hazaraghi, Karen, Korean, and Nepali.

Discussion

Achievement levels of the Program cohort were encouraging. The mean course weighted average mark for the TEP students was consistent with the mean course weighted average mark for the La Trobe undergraduate cohort for 2012. Levels of academic achievement, student retention, and qualification for entry into La Trobe undergraduate courses all indicate the value of the Program in preparing students for tertiary study, including at university level. The results also highlight the potential efficacy of a provision model in which universities and TAFEs share teaching and other responsibilities. The successful adoption of a collaborative enabling program model may have national implications.

Despite overall academic success, significant variability by subject, campus, and student group was found. At a disciplinary level, students achieved higher subject marks in Social Sciences and Mathematics compared with Adult Learning and Science. Disparities highlight a potential limitation with the Program pathways, in that university entry at La Trobe is only guaranteed if all four subjects are passed to a set standard. This requirement might be considered overly onerous in that the four subjects are neither compulsory VCE subjects nor common pre-requisites for degree programs. University entry criteria currently allow little discretion for inconsistency of achievement across TEP subjects, whereas state curriculum and assessment authorities privilege only the best four of five subjects undertaken by VCE students in determining tertiary rank (Victorian Tertiary Admissions Centre, 2013b).

More broadly, the results highlight the need for further interrogation and clarification of the skills and capabilities required for university entry. The curriculum of La Trobe's TEP differs in scope from other enabling programs nationwide, and there appears to be limited consistency in curriculum offerings and limited agreement on the extent to which skills such as mathematical literacy should be

mandated within tertiary enabling programs. The UniSA Foundation Studies program, for example, blends some compulsory units with selective strands, affording students curriculum choice in line with their post-study ambitions (Klinger & Tranter, 2009). The Base Funding Review highlighted a paucity of evidence around the relative effectiveness of enabling programs (Lomax-Smith et al., 2011), and comparative curricular work could improve commensurability and strengthen this evidence base.

Further disparities become apparent when results are disaggregated to campus level. For example, an examination across campuses revealed that Bendigo students achieved the highest marks for all four subjects. Different results in the same subjects across campuses require further interrogation. In particular, it is necessary to understand whether student cohorts held substantially different levels of academic preparedness by region, and/or whether teaching practices or support services were more effective in some locations. It would also be helpful in future to investigate the relationship between university and TAFE teaching practices, particularly given the contribution of multiple TAFEs to the Program across different campuses.

The Program attracted several Indigenous students, and its potential appeal in future years is highlighted by the University of Newcastle's longstanding and successful Yapug program which caters to Indigenous students (Vandyke et al., 2012). Despite these enrolments and the integration of multiple sources of support, high attrition rates and poor completion rates were observed among the Indigenous student cohort. At one level, attrition rates reflect a well-known and ongoing concern in the higher education sector (Centre for the Study of Higher Education, 2008). Undergraduate retention of Indigenous students is relatively poor, but the experience of the University of Newcastle has demonstrated that enabling programs can attract numerous Indigenous students and result in positive academic outcomes and transition rates (Trounson, 2012). Improving recruitment and achievement outcomes among Indigenous student cohorts will be a challenge as the expanded Program develops.

By contrast, the Program attracted a relatively high number of NESB students and this cohort performed extremely well academically. The number of students from refugee backgrounds attracted to the Program was also significant, and their academic achievement was above average. The number of participating students from refugee backgrounds was likely influenced in part by the location of the Program sites in regional areas of high recent immigration, but also by the attractiveness of the offering, particularly in its availability free of charge to students. Nationally, there is some evidence that the demography of enabling programs has recently changed with increased take up by NESB students and students from refugee backgrounds (Centre for the Study of Higher Education, 2008). Results from our study indicate that the Program is not only attractive to students from a refugee background, but that these students record relatively high academic achievement. If expanded to further regional areas of high immigration, tertiary enabling programs may thus provide a valuable strategy to recruit an academically prepared yet under-represented student cohort into university.

Conclusion

La Trobe's Program produced strong academic outcomes for a diverse cohort of students, despite some variability across delivery sites, disciplinary areas, and student groups. Most notably, students from a refugee background recorded impressive achievement levels, highlighting the potential of the Program to attract disadvantaged cohorts who are academically prepared and committed. Achievement levels were particularly encouraging given delivery into regions characterised by low university transition rates and high recent migration, such as Shepparton and Broadmeadows. The Program may be uniquely placed to benefit some student cohorts who are currently under-represented in tertiary education.

Many broader benefits of the Program require further evaluation to confirm. In establishing a cross-institutional delivery model, the TEP allows students to become familiar with both TAFE and university environments. Breadth of experience is likely to improve participating students' understanding of the full tertiary sector, though exploring

this potential benefit lies outside the scope of our paper. Moreover, ongoing evaluation is required to establish the extent to which Program achievement is translated to university transition and other tertiary outcomes.

As the Base Funding Review notes, there also remains room for further research into the relative effectiveness of enabling programs nationwide. Variability in achievement levels by subject, cohort and delivery site within the La Trobe Program likely reflect broader sectoral issues around curriculum, standards and expectations. What entry standards should be adopted for enabling program applicants? What breadth of disciplinary knowledge should we expect enabling program completers to hold for successful university admission? How might we articulate the academic capabilities expected of program completers, particularly within a model of joint tertiary provision? The diversity of national enabling programs provides rich potential for comparative study, but also highlights the present difficulty in benchmarking achievement, curriculum, and student outcomes.

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Note

This paper draws from an unpublished management report: Harvey, A., Andrewartha, L. & Luckman, M. (2013). *Evaluation of the La Trobe University Tertiary Enabling Program*. Access & Achievement Research Unit, La Trobe University, Melbourne.

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The use of peer assessment in a regional Australian university tertiary bridging course

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This paper presents the findings from research on peer assessment practice that was specifically focussed on improving the student experience in a tertiary bridging course. The objective of the study was to examine the impact of this assessment approach on student social relationships and the overall assessment experience. The study also examined whether peer assessment provided a valid and reliable method of assessment at the tertiary bridging level and whether students were equipped to be able to engage with this form of assessment. Data were collected from 107 students

enrolled in a tertiary bridging program at a regional university in Australia using a custom designed questionnaire. Four subscales, Task Experience, Feedback, Peer Relationships and Process Understanding, were identified and analysed. The initial results suggest this model of assessment did add value for students in the positive attitude toward the task and the feedback they received from their peers. The participants did not report a preference for peer assessment over other traditional forms. Improvements in the quality of peer relationships were also not identified. It was concluded that, while there are benefits provided by peer assessment in improving the students' understanding of the process of assessment, there were limited benefits in its use in relation to improving the overall student experience.

Keywords: *tertiary bridging education, peer assessment, peer relationships*

Introduction

There is a current focus in Australia to increase the number of non-traditional students studying at the tertiary level of education (Bradley, Noonan, Nugent, & Scales, 2008). A number of universities in Australia provide tertiary bridging programs that may be accessed by students for the purposes of academic qualification and/or to improve preparedness for tertiary study. Many students entering these programs have been demonstrated to be ill prepared for undergraduate study, with nearly 50% having failed to finish secondary school (Whannell, Allen, & Lynch, 2010). The quality of peer relationships has also been demonstrated to play an important role in student retention during the initial transition into a tertiary bridging program (Whannell, 2013).

It was considered that peer assessment may provide a vehicle through which these factors could be addressed and positively influence the experience of tertiary bridging and mature age students during the initial transition into study at the tertiary level.

The aim of the study was to determine the potential of peer assessment to improve the student experience in a tertiary bridging course by developing innovative assessment tasks that promote social relationships, metacognitive awareness and an appreciation for academic processes. It was also hoped that the use of such an assessment task would facilitate benefits in peer relationships through the necessary interaction involved. The study also examined the validity and reliability of peer assessment for students with a history of poor academic achievement and engagement, such as students enrolled in a tertiary bridging program.

Peer assessment

Peer assessment has been extensively researched over many years with many academic writers supporting its use from as early as the 1970s (Kane & Lawler, 1978). The debate as to its usefulness at the tertiary level of education is a much more recent development (Friedman, Cox, & Maher, 2008).

A number of methods of peer assessment have been described in the academic literature. Early methods included peer nomination, peer ranking and peer rating (Kane & Lawler, 1978). Peer rating involves the ranking of peers against a known external set of criteria, while peer ranking involves a ranking of peers against each other in terms of their ability to perform a behaviour or task. Peer nomination is similar to peer ranking, with the exception that only a limited number of peers are ranked at the top and/or bottom in relation to their performance. While the different approaches to peer assessment are appropriate in differing circumstances, 'it appears that peer ranking may prove to be the best among the peer assessment methods for achieving discrimination throughout the entire performance range' (Kane & Lawler, 1978:583). Liu and Carless (2006) have argued that an emphasis on grading in peer assessment reduces the quality of student learning through a reduction in the peer feedback provided.

The use of peer assessment is often resisted at the tertiary level where a lack of reliability and validity is considered to exist (Falchikov & Goldfinch, 2000) or its use is perceived as shifting responsibility from

the academic to the student giving students a much greater role in the assessment process (Searby & Ewers, 1997). Students who are inexperienced in the use of peer assessment also show a lower level of approval in its use (Searby & Ewers, 1997), while student assessment gradings have also been demonstrated to be consistently higher than that awarded by tutors (Langan, et al., 2005). The issues associated with validity and reliability have been tested empirically and have been demonstrated to provide adequate reliability and validity in discriminating student academic performance (Cho, Schunn, & Wilson, 2006; Kane & Lawler, 1978; Stefani, 1994; Topping, 1998) with peer assessment demonstrating positive formative effects which are "as good as or better than the effects of teacher assessment" (Topping, 1998:294). The positive effects of using peer assessment have been enhanced where high quality feedback has been provided (Boud, Cohen, & Sampson, Peer learning and assessment, 1999; Liu & Carless, 2006). The validity and reliability of peer assessment has also been demonstrated to be consistent over a range of year levels within tertiary education (Falchikov & Goldfinch, 2000). The reliability and validity of peer assessment has been enhanced where the number of peers involved per assessment group is small, the assessment uses global approaches to marking and students are involved in the development of the criteria used (Falchikov & Goldfinch, 2000).

Peer assessment has a number of advantages associated with its use, including improving the critical faculties of students and giving them a greater ownership of the assessment process (Nulty, 2011; Searby & Ewers, 1997; Tiew, 2010). Students have also been encouraged to become more responsible and reflective in their learning practices through the use of peer assessment (Dochy, Segers, & Sluijsmans, 1999; Nicol & Macfarlane-Dick, 2006; Nulty, 2011). Topping (1998) described a number of disadvantages in the use of peer assessment, including that poor academic performers may not accept the accuracy of peer feedback and that students may not be prepared to accept the responsibility associated with peer assessment.

The practice of having students develop the assessment criteria applied to peer assessment tasks has also been examined. This approach has been found to cause difficulty for students when

discriminating between the marking criteria and to produce different learning outcomes than that obtained by the use of teacher developed criteria (Orsmond, Merry, & Reiling, 2000). For this reason, it has been found that it is important for students to develop ownership of the assessment criteria when implementing peer assessment (Pond, Ul-Haq, & Wade, 1995).

The perception of students towards a student-centred approach to assessment, such as peer assessment, can be a motivating exercise that is more effective than conventional models of didactic teaching (Lea, Stephenson, & Troy, 2003). There is some resistance to this approach where a lack of structure, guidance and support can produce anxiety in the students and a lack of confidence in the outcomes (Lea, Stephenson, & Troy, 2003). Students tend, however, to be favourable towards peer assessment processes (Cho, Schunn, & Wilson, 2006; Falchikov & Goldfinch, 2000; Hammond, Bithell, Jones, & Bidgood, 2010; Kingsley, 2010; Lea, Stephenson, & Troy, 2003; Searby & Ewers, 1997; Tiew, 2010; Vickerman, 2009). Research conducted by Wen and Tsai (2006:27) supported the view that students held positive attitudes towards the activities involved in online peer assessment, but that this approach was "a technical tool to facilitate the assessment process, rather than as a learning aid".

Gatfield (1999) identified no differences in the level of satisfaction of peer assessment based on age or gender. Gender-based differences in relation to the stress experienced while undertaking peer assessment have been demonstrated (Pope, 2005), where females demonstrate higher levels of stress than males.

There are a number of potential benefits identified for students participating in peer assessment, including the promotion of critical thinking, improved awareness of assessment procedures, development of constructive criticism skills, encouraging self-reflective practices, and the supporting of collaborative learning environments (Nulty, 2011). Given these potentials, peer assessment appears to offer a transformative experience for students, driving a knowledge of academic processes, social interactions and metacognitive awareness (Boud & Falchikov, 2006; Nulty, 2011).

It was Mezirow's (2000) contention that transformative learning is both an outcome and a process that incorporates problematic impasses, self-reflection, and critical assessment of assumptions. Peer assessment appears to offer these opportunities in the early development of tertiary bridging students.

The context of the current study, when considered in relation to the literature reviewed, gave rise to the following research questions:

- Do tertiary bridging students view peer assessment as a valid and reliable method of assessment?
- Is peer assessment an appropriate method of improving peer relationships in a tertiary bridging program?
- What role can peer assessment play in improving tertiary bridging student awareness of the assessment process?
- What influence do demographic factors, such as age and gender, have on the tertiary bridging student experience of peer assessment?

Research method

Participants

Participants for the study were students enrolled in two courses in a tertiary bridging program at a regional university in Australia. Enrolment is available to any person over the age of 17 and there are no academic requirements. The final questionnaire was completed by 107 participants representing a 45% response rate. The participants comprised 72 (67%) females and 35 (33%) males ranging in age from 17 to 56, with a mean age of 30.1. Fifty eight (54%) participants reported having finished secondary school. These demographics were representative of all students who were enrolled in the bridging program.

Peer assessment procedure

A peer assessment task was included in two different courses in the bridging program. One course was a compulsory computer skills course which was completed by all enrolled students, while the

other was an optional humanities course. The process adopted in both courses in relation to the development and completion of the assessment task was the same. The academic rules at the institution where the study was conducted limits peer assessment to a maximum of 10% of the overall course grade. This presented the task as a low stakes item in the overall assessment program.

The assessment task was presented to students using the *Blackboard* learning management system. *Blackboard* includes a variety of assessment tools, including one entitled Peer and Self-Assessment. The tool enabled the anonymous peer review of online submissions by two peers and a self-assessment. The assessment process was conducted in two stages. The first stage required the submission of responses to a number of questions over the first 5 weeks of the semester. The second stage involved the evaluation of responses where students evaluated two peer submissions, as well as their own, marking each question out of ten possible marks based upon a rubric created jointly by students and the academic coordinating the course. Additional space for text that could be used to provide written feedback was also available.

The literature suggests that peer assessment is most productive when students are engaged in the creation of criteria and marking rubrics (Kingsley, 2010; Pond, Ul-Haq, & Wade, 1995; Rust, Price, & O'Donovan, 2003). An in-class activity was utilised in week 2 of the semester where students created the marking rubric by analysing the course outline, assessment description and intended learning outcomes for this assessment task. Students were encouraged to write criteria that reflected their expectations, but also allowed for constructive criticism. A collaboratively developed rubric was used.

Following the finalisation of the grading of the peer assessment tasks, students were given the opportunity to complete the data collection instrument in a tutorial of each targeted course.

Instrument

A custom designed questionnaire was developed comprising an introductory section which obtained demographic and study

behaviour data, followed by a number of Likert-style items. Items were included which addressed the participants' knowledge of the peer assessment procedures, student perceptions of peer assessment and the feedback received, and the relationship to other students in the class. The Likert-style items used a five point scale ranging from Strongly Disagree to Strongly Agree, with the neutral position given as Unsure. A further 3 qualitative items were added to ascertain student ideas to the advantages, disadvantages and potential changes about the peer assessment approach. The questionnaire was trialled by 17 students and examined by a number of academics to ensure face validity of the items.

A Principal Components Analysis using Direct Oblimin rotation and Kaiser normalisation was completed using the Likert-style items to allow for the development of Likert scales for use in analysis. A four factor solution was identified which accounted for 70.4% of the shared variance in the factor items. The four scales comprised a total of 17 items giving a 6.3:1 response-to-item ratio. Factors were named based upon their constituent items and are summarised in Table 1.

Table 1: *Questionnaire scales*

Scale	No Items	Cronbach's Alpha	Scale Range
Task Experience	4	.858	4 – 20
Feedback	5	.916	5 – 25
Peer Relationships	4	.810	4 – 20
Process Understanding	4	.841	4 - 20

All items loaded on their respective factor with a minimum of .627 with all inter-item correlations for a given factor being statistically significant ($p<0.01$). The Cronbach's alpha values demonstrate a high level of internal consistency for each scale.

The task experience scale included items which described the participants experience such as "I found the peer assessment tasks interesting" and "I enjoyed the peer assessment tasks". The items in the feedback scale referred to the quantity and quality of feedback

received during the task and included items such as "The quality of feedback I received from peers on the tasks was of a high quality" and "The amount of feedback I received on the tasks was appropriate". The peer relationships scale included items which described the quality of the peer relationships between the participants and his/her fellow students in the course and included items such as "I have good relationships with other students". The process understanding scale described the participants understanding of the how the peer assessment task was to be completed and included items such as "I understood what was required to complete the peer assessment task/s" and "I understood what was required of me as a marker on the tasks".

Results

Each of the Likert scales was analysed with the results shown in Table 2. The data distributions were examined using box plots and cases identified as outliers or with missing data were removed from the analysis.

Table 2: *Likert scale distributions (n = 77 to 104)*

Scale	Midrange	Mean	Standard Deviation	Number
Task Experience	12	13.7	3.46	97
Feedback	15	16.3	4.73	86
Peer Relationships	12	16.4	2.85	104
Process Understanding	12	15.1	3.00	99

A number of specific Likert-style items relevant to the student experience of the peer assessment tasks are shown in Table 3.

Table 3: *Likert-style item responses (n = 93 to 103)*

Item Text	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
The peer assessment tasks were helpful to me as a student.	8	13	28	36	12	3.32
I question the reliability of the peer assessment results that I received.	18	22	27	13	13	2.80
I prefer the peer assessment approach to other methods of assessment.	30	22	28	15	9	2.52
I feel that peer assessment gives me a voice in the assessment process.	5	9	34	35	16	3.48
I think it is important that I do not know whose work it is that I am marking in peer assessment.	2	3	13	17	66	4.41
I do not think that students are qualified to mark other student's work.	8	26	22	23	24	3.28
I have gained a greater appreciation of other students as a result of peer assessment.	9	20	35	26	13	3.14

Table 4 shows the Pearson's correlation coefficients between each of the Likert scales, the participant's age and their mean result on the peer assessment tasks.

Table 4: *Pearson's r correlation coefficients*

Scale	1	2	3	4	5	6	7
1. Task Experience	-						
2. Feedback	**.306****	-					
3. Peer Relationships	**.210***	.109	-				
4. Process Understanding	**.368****	.173	**.365****	-			
5. Age	-.090	-.012	.092	-.127	-		
6. Course 1 Result	-.054	.004	.011	**.248***	.112	-	
7. Course 2 Result	.138	.129	.370	.082	.184	-.435	-

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed). Sample size scales 1 to 5 was 83 to 104. Sample size scale 6 was 75 to 81. Sample size scale 21 was 27.

The correlation analysis reported in Table 4 indicates that the quality of the peer assessment experience was associated with the quality of the feedback received ($r=.306, p<.01$), the quality of relationships with peers ($r=.210, p<.05$) and the participants' understanding of the process involved in completing the task ($r=.368, p<.01$). A standard multiple linear regression was conducted to determine the relative strength of influence of feedback, peer relationships and process understanding on the level of task experience. Prior to the regression the distributions were examined using box plots and no outliers were identified. The regression model was statistically significant ($F(87,3)=6.441, p<.01$) and accounted for 18% of the variance in the participants' task experience. The quality of feedback ($\beta=0.14, t=1.859, p=.07$) and process understanding ($\beta=0.35, t=2,997, p<.01$) made significant contributions to the model. This result, while only accounting for a relatively low level of variation in the model, indicates that the level of process understanding had the greatest influence of the student experience of the peer assessment task.

Tables 5 shows tests for significant difference for each Likert scale using an independent samples *t*-test. Gender, whether the participant had finished secondary school and whether the participants' age was greater or less than the median age of 28 were used as the grouping

variables. Where a statistical difference was identified, the degree of difference is shown using Cohan's *d*.

Table 5: *Likert scales independent t-test results*

Scale	Gender			Age			Finished School		
	t	*p*	*d*	*t*	*p*	*d*	*t*	*p*	*d*
Task Experience	0.7898	0.4313		0.9979	0.3204		0.3545	0.7236	
Feedback	0.7898	0.4313		0.3822	0.7031		0.4671	0.6415	
Peer Relationships	2.150	0.0336	0.41	0.4475	0.6553		0.5927	0.5545	
Process Understanding	0.9483	0.3449		2.4683	0.0159	0.51	0.6490	0.5176	

The only significant difference identified in Table 5 relevant to the peer assessment experience was the understanding of the peer assessment process based upon age ($\bar{X}_{(Age\geq 28)}=14.4, s_{(Age\geq 28)}=2.6; \bar{X}_{(Age<28)}=15.9, s_{(Age<28)}=3.2; df=96$), where younger students report a higher level of process understanding.

Discussion

The mean values for each of the Likert scales shown in Table 2, all of which are close to the mid-range for each scale, indicate that the participants did not report a particularly positive attitude in any of these dimensions. The mean for the overall task experience ($\bar{X}=13.7$) indicates that the participants did not view the peer assessment task with great enthusiasm. The data in Table 3 supports this view with participants as a group ambivalent in relation to the helpfulness of the assessment tasks ($\bar{X}$=3.32) and failing to indicate a preference for peer assessment in relation to other assessment forms ($\bar{X}=2.52$). The participants also demonstrated reservations about the reliability of peer assessment results ($\bar{X}=2.80$), which supports previous research (Lea, Stephenson, & Troy, 2003). This reservation about reliability may be associated with the perception that fellow bridging students are not qualified for the task of assessing other students' work, with only 47 (45.6%) reporting agreement with this view.

The data presented in Table 5 presents an analysis of the differences in the peer assessment experience based upon age, gender and whether the participant had finished secondary school. The only significant difference identified was age on the level of process understanding, where younger participants reported a better understanding the process involved in the task.

The quantitative data analysis indicates that participants were rather ambivalent in their attitudes towards peer assessment following their experiences and did not demonstrate a preference for peer assessment over other traditional forms. The correlational analysis indicates that the participants' experience of the peer assessment tasks was associated at a moderate level with the understanding of the process involved in the task and to a lesser extent with the quality of feedback received. The role of feedback in the positive experience of peer assessment supports previous research (Boud, Cohen, & Sampson, Peer learning and assessment, 1999; Liu & Carless, 2006). The multiple regression shows that the principal influence on the overall experience of the peer assessment task was the understanding of the process involved in its completion.

A number of themes were identified in the comments made by the participants which may have implications for the implementation of peer assessment for tertiary bridging students. Students reported that the feedback was of a high quality, understandable, and fair. Conversely though, they questioned the reliability of the results. This could be due to the fact that enabling students are less confident in their knowledge of expectations within academia and therefore, while they reported the feedback to be helpful, they were also unsure of their peer's ability to assess the learning outcomes. It follows that as enabling students, and also as this is an early assessment task, their ability to identify standards and criteria is in the early stages of development; something peer assessment can aid. As Nulty (2011:497) points out such abilities are dependent to a large degree on individuals' ability to be self-reflective and perhaps this is "less well developed in first-year students".

A number of participants who made comments stated that they enjoyed the assessment task and that it was challenging and interesting. Conversely, a number of participants reported that they did not prefer this type of assessment over other methods of assessment. Research suggests that students report to be overwhelmingly supportive of the peer assessment process (McLaughlin & Simpson, 2004; Nulty, 2011; Pond, Ul-Haq, & Wade, 1995), although here the data analysis suggests that there are some concerns for enabling students with this form of assessment and the reliability of the results. One student reported the following points as disadvantages in using the peer assessment:

> *The students are not well qualified. Some people are new to authority and can abuse it. Some peers are condescending or critical but not constructive (MA)*

This was indicative of many comments. Yet, this could be due to the innovative nature of peer assessment in contrast to the student's level of familiarity with conventional methods of assessment. The concern in relation to the quality of feedback was also a common concern for students, as the engagement and validity was questioned in regard to their peer evaluators. Another student suggested:

> *That sometimes the people whom are not particularly engaged in the subject are called on to assess peers whom are (MB)*

While students were concerned with the marks received, they did however see the value in seeing other students work. A student reflected on the advantages in using peer assessment as:

> *Probably seeing the quality of work and depth of understanding that other students have attained, so that I can establish where I sit within the academic process. Especially as this was done in the first few weeks where any skill level was still "the great unknown". (PA)*

This comment illustrates the view expressed by Boud and Associates (2010:2), that assessment has the greatest effect when "students develop and demonstrate the ability to judge the quality of their own work and work of others against agreed standards".

One of the intentions behind implementing a peer assessment process was to produce a supportive peer learning environment. In the results to date the students did not perceive this to be a peer learning exercise. A number of participants reported that they had 'an improved' understanding of and a 'greater appreciation' for other class members through their involvement in the peer assessment. Yet conversely, they also reported that as a result of the peer assessment they had 'not improved' their relationships with other members of the class. The data shown in Table 3 supports this view where only 39 of 103 participants reported an improvement in their appreciation for their peers as a result of their completing the peer assessment. This could be due to the method of implementation of the peer assessment where students retain their anonymity throughout the process of submission and evaluation. The learning activities in class are supportive of collaborative processes and establish progressive peer learning environments, but they do not directly affect the assessment task and therefore was perceived as not supporting positive social relationships. Anonymity was supported, however, where students reported that they thought it important that they do not know who it is they are marking and also, they do not like the idea that markers know whose work it is they are marking.

The overall experience for the participants on the peer assessment tasks is considered to have been adversely influenced by a number of possible issues which arose during the process. One challenge which caused some distress for participants and the course coordinator was the process of distribution of the tasks to students. Because the task was completed in the first half of the semester when attrition is highest, a number of the allocations to students went to those who had dropped out of the program. This situation was not able to be identified until after the date for marking assessment had passed and the marking had not been completed. The re-allocation of tasks was then not feasible and some students were not able to receive student feedback. Completing the evaluation phase of the task as an in-class activity would overcome this problem, but this introduces issues in relation to anonymity.

Students reported to be supportive of the criteria and rubric creation. They reported that this helped them to 'understand assessment' and 'knowing what to do' in tasks. One student reported that it 'makes you feel more involved' with the task. The collaborative criteria development was not something that was addressed in the questionnaire directly, neither was it something that directly affected the assessment submission or evaluation. Much of the learning in peer assessment, however, is through the process rather than the outcome. Students' reported that they had learnt from analysing the intended learning outcomes, specified in the course outline, and had found it helpful to align these with the criteria of the assessment. One student commented: 'Makes you more aware of what is required to receive high marks'. Students were able to see the correlation between intended learning outcomes, assessment tasks and marking procedures, a view also supported by Boud and Associates (2010:2) who stress the importance of having students "inducted into the assessment practices and cultures of higher education".

Conclusions

Prior to presenting the findings and conclusions, it is appropriate to consider the limitations applicable to the research. The primary limitation is that the study has been conducted with one cohort of students at a single university and has utilised a relatively small sample size. While this limits the capacity for generalisation of the findings, the study provides some initial insights into the value of implementing peer assessment for this atypical student cohort. The conducting of similar research in other contexts and institutions would be necessary to further develop our understanding of the use of peer assessment in this context. The findings of Searby and Ewers (1997), that students inexperienced in the use of peer assessment report a lower level of approval, are also considered relevant here. Tertiary bridging students will very likely fall into this category and this may adversely influence the experience being reported.

The primary conclusion of this study is that the participants appear as being very ambivalent in relation to their experience of the peer assessment process. The hoped for improvements in peer

relationships, which had been identified as one justification for undertaking the peer assessment process early in the semester, did not eventuate. Likewise, the favourable attitude towards peer assessment that has been identified in other research (Cho, Schunn, & Wilson, 2006; Falchikov & Goldfinch, 2000; Hammond, Bithell, Jones, & Bidgood, 2010; Kingsley, 2010; Lea, Stephenson, & Troy, 2003; Searby & Ewers, 1997; Tiew, 2010; Vickerman, 2009) was not identified. While some participants reported positive attitudes and experiences, there was a lack of evidence to support peer assessment as an approach which will have great influence improving bridging students' attitudes towards assessment, at least when used in fashion that was utilised in this study. It is concluded however, that, similar to other research (Nulty, 2011; Searby & Ewers, 1997; Tiew, 2010), the participants' metacognitive awareness of the assessment process was positively influenced.

The self-reflective nature of peer assessment and the intrinsic nature of assessment that involves applying criteria, ranking or grading others, and making judgements certainly suggest that it is a suitable assessment approach for a tertiary bridging course. The potential of peer assessment is that its value is built into the actual task process as well as the final results. The approach used in this study is a process that will support the tertiary bridging student's future success in higher education where it is essential to be able to critically analyse assessment processes and engage with the academic requirements in a shared learning environment.

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Case studies in e-RPL and e-PR

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The use of ePortfolios for recognition of prior learning (e-RPL) and for professional recognition (e-PR) is slowly gaining in popularity in the VET sector however their use is sporadic across educational sectors, disciplines, educational institutions and professions. Added to this is an array of purposes and types of e-RPL and e-PR models and practice. The aim of this paper is to build on the conceptual framework developed by Cameron (2012) for e-RPL and e-PR and to provide case studies for each of the four types developed within this framework: e-PR for Professional Accreditation; e-RPL for Workplace Recognition; e-RPL for Access and; e-RPL for Self Recognition. We use the case studies to explore the four types and the two dimensions or continuums central to the framework. The vertical dimension is a continuum between RPL as process and RPL as product and the second horizontal dimension is a continuum

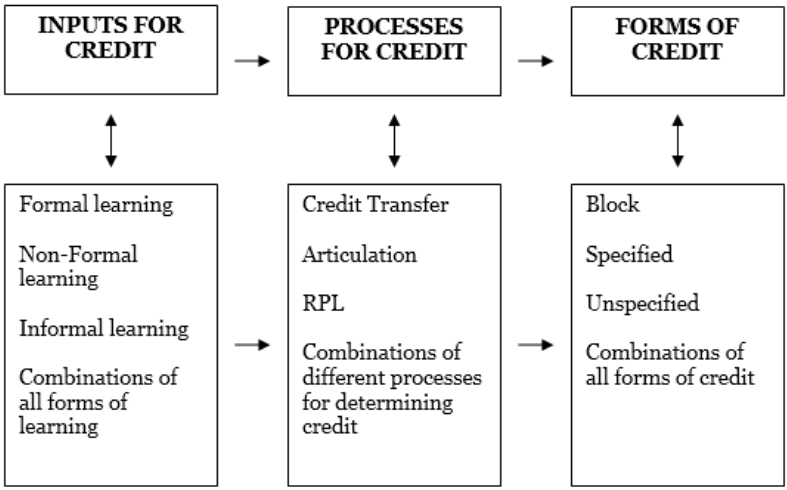
between formal learning contexts and low learner control as opposed to informal learning contexts and high levels of learner control. The case studies have aided the further development of the framework and its theoretical and practical applications.

Keywords: *e-RPL, e-PR, recognition of prior learning, professional accreditation, eRecognition, VET, ACE*

Introduction

Recognition of prior learning (RPL) has been a mainstay of the national qualifications framework since its inception in the late 1990's. All vocational education and training (VET) providers offering accredited training must also offer RPL. In 2009 RPL became subsumed into the Credit terminology framework as one of three types of processes for credit (AQFC, 2009). 'Credit' becomes the principal overarching concept for recognising learning, supported by 'credit inputs', 'forms of credit' and 'credit processes'. 'Credit inputs' provide the basis for credit through the different forms of learning that can be recognised. 'Forms of credit' are the different credit options and outcomes. 'Credit processes' are used by training providers to determine credit decisions (AQFC, 2009:9).

Figure 1: *Credit terminology framework*



Source: Adapted from AQFC (2009)

The AQF (2011:97) defines RPL as follows:

Recognition of prior learning is an assessment process that involves assessment of an individual's relevant prior learning (including formal, informal and non-formal learning) to determine the credit outcomes of an individual application for credit.

Increasingly ePortfolios have been used to assist learners undertake RPL processes (Cameron, 2011). This has now spread to professional recognition (PR) with ePortfolios becoming the tool used by many tertiary education providers to map professional competencies acquired during professional education for professions such as engineering, teaching and nursing. As a result, the use of eRPL and ePR is an emerging field of practice which deserves greater scrutiny and analysis. In relation to the use of ePortfolios for recognition, we note a lack of critical engagement within the literature thus far, and a preoccupation with descriptive accounts of adoption issues, operability and barriers to implementation. We wish to examine these eRecognition practices using a recently developed eRecognition framework, which assists the analysis of these practices along several dimensions (product versus process; formality versus informality; learner control and voluntary or mandated use). We also argue that RPL is not only another form of assessment or credit process but can be utilised for several other purposes such as workplace recognition and self-recognition or personal development.

Due to the emergent nature of this practice and associate pedagogies this study has adopted an exploratory approach to build on the conceptual framework developed by Cameron (2012) for e-RPL and e-PR, and to provide case studies for each of the four types developed within this framework: e-PR for Professional Accreditation; e-RPL for Workplace Recognition; e-RPL for Access and; e-RPL for Self-recognition. We have used a case study methodology to explore the four types of eRecognition and the two dimensions or continuums central to the framework.

First, we introduce the eRecognition framework before briefly describing the methodology employed in this study. This is followed by a presentation of the selected case studies aligned to the four types of eRecognition in the framework. The paper concludes with some recommendations for the further development of the framework and its theoretical and practical applications.

An eRecognition framework

A framework for e-RPL and e-PR was been developed by Cameron (2012) and will now be referred to as the eRecognition framework in this paper. The purpose of this paper is to test the eRecognition framework by applying authentic cases against each of the four types of eRecognition within the framework.

The following are definitions for the key terms (e-RPL and e-PR) embedded in the eRecognition framework taken directly from Cameron (2012:99):

e-RPL *is defined as the unique practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning acquired either formally, non-formally or informally or a combination thereof.*

e-PR: Professional Accreditation *is defined as the unique practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning and continuing professional development against the professional standards of a specified profession as determined by that profession's accrediting body.*

Cameron (2012) developed this framework by combining concepts from work undertaken by Cameron and Miller (2004) on models of RPL, and in particular the concepts of *RPL as process* and *RPL as product*. These concepts were extracted and added to the Smith & Tillema (2003) typology of portfolios as additional dimensions. The additional dimensions of *level of learner control (high and low)* and the *learning continuum (from formal to informal)* from the Cameron and Miller (2004) models of RPL were also incorporated into the new

eRecognition framework. These added dimensions have resulted in three types of e-RPL: e-RPL for Access, e-RPL for Self Recognition and e-RPL for Workplace Recognition. Definitions for these types of e-RPL are as follows:

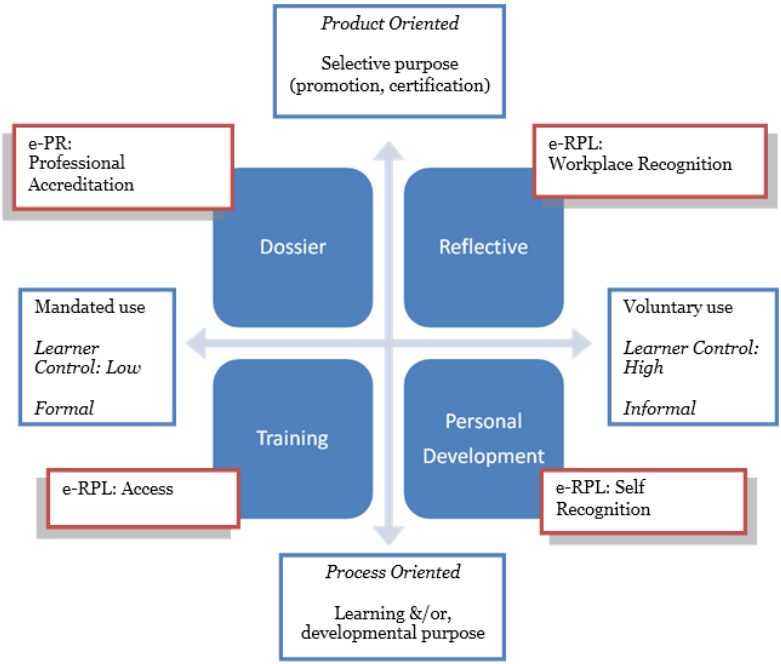
e-RPL for Access is defined as the unique practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning (acquired either formally, non-formally or informally or a combination thereof) for access to a course or programme of formal learning that leads to an accredited qualification. This process is formalised by mandated processes as determined by the provider of the accredited qualification which is usually an institution of formal learning.

e-RPL for Self Recognition is defined as the unique and voluntary practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning acquired either formally, non-formally or informally or a combination thereof. The purpose(s) for this type of activity is determined by the learner who has complete control over the process.

e-RPL for Workplace Recognition is defined as the unique practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning and current competencies that are required by an organisation/employer. These purposes could be related to human resource management issues (job design requirements, occupational and industry standards, job related competencies, knowledge and skills) or for human resource development related issues such as: skills audits; skills gap analyses; performance appraisal; promotion; and recruitment (Cameron, 2012:99-100).

Figure 2 below provides a visual depiction of the eRecognition framework and its types and dimensions.

Figure 2: *Expanded Typology of Portfolios for e-RPL and e-PR*



Source: Cameron (2012:100)

Methodology

The approach taken in this study is exploratory and utilises a qualitative case study design involving four cases which reflects the nature and structure of the eRecognition framework. The study aims to test the eRecognition framework against authentic case studies of e-RPL and e-PR practice. A collective case study (Johnson & Christenson, 2012) or what Yin (2014) refers to as a multiple-case design has been chosen. In these types of case study research, several cases are studied to enable the researcher to obtain 'greater insight into a research topic by concurrently studying multiple cases on one overall research design' (Johnson & Christenson, 2012: 397).

The research questions posited for this study are as follows:

RQ1: What authentic e-PR and e-RPL practices can be applied to the eRecognition framework?

RQ2: How can the eRecognition framework be utilised by practitioners to assist them in e-PR and e-RPL approaches and associated pedagogy?

Zikmund, et al. (2010) explain that 'case studies simply refer to the documented history of a particular person, group, organization, or event' (Zikmund, et al., 2010:140). Case studies are known as methods which are commonly applied in business and educational research. Burns (1997:365) describes the utility of a case study methodology as follows:

While a case study can be either quantitative or qualitative, or even a combination of both, due to the constraints of a sample of one or a single unit being studied, with the restrictions that brings for statistical inference, most case studies lie within the realm of qualitative methodology. Case study is used to gain in-depth understanding replete with meaning for the subject, focussing on process rather than outcome, on discovery rather than confirmation…The case study is the preferred strategy when 'how', 'who', 'why' or 'what' questions are being asked, or when the investigator has little control over events, or when the focus is on contemporary phenomenon within a real life context.

Snowball sampling has been used to select the cases as one of the authors has detailed knowledge of e-PR and e-RPL practices across the Australian VET sector due to her previous and current professional roles and employment. Snowball sampling is also known as network, chain referral or reputational sampling (Neuman, 2006) which uses the metaphoric image or analogy of a moving snowball which gets bigger and bigger as it descends a hill (Johnson & Christenson, 2012; Neuman, 2006).There are limitations to the sampling undertaken in terms of wider coverage across other educational sectors other than the VET sector however, the emergent nature of these practices means their capture tends to be through

knowledge of innovative practice, small funding opportunities and a small but growing community of practice.

eRecognition case studies

One case study for each of the four types of eRecognition from the eRecognition framework has been selected as depicted in Table 1 below. Three of the four cases are derived from the Australian VET sector. The fourth is from the Australian adult and community education (ACE) sector.

Table 1: *Summary of Case Studies*

e-PR for Professional Recognition Case Study 1: • TAFE NSW, Sydney Institute - Australian teacher registration application processes for overseas trained teachers (migrant teaching professionals).	**e-RPL for Workplace Recognition** Case Study 2: • TAFE NSW, Western Sydney Institute – ePortfolios for Hairdressing apprentices. Using ePortfolios in informal work based learning contexts.
e-RPL for Access Case Study 3: • WideBay Institute of TAFE –Creative Arts students using ePortfolios created during a course for purposes outside and beyond the course (personal learning record).	**e-RPL for Self Recognition** Case Study 4: • YNH Services Victoria - 'Connect & Reflect' training using ePortfolios to develop a personal learning network.

We have presented each of these cases using a series of sub-headings which has allowed us to present each case in a consistent manner as well as, align the cases to the dimensions of the eRecognition framework.

Case Study 1: e-PR for Professional Accreditation

TAFE NSW, Sydney Institute - Australian teacher accreditation for overseas trained teachers

Description of project:

In this case study ePortfolios were used with overseas trained teachers (OTTs) looking to prepare themselves for a specific English proficiency test by creating their own professional, updatable and portable reflective ePortfolios in English at TAFE New South Wales (NSW) – Sydney Institute (Cross, 2012). Overseas trained teachers must undertake the Professional English Assessment for Teachers (PEAT) as part of the process to become registered teachers in NSW. This case documents a pilot course for OTTs in which they can undertake full time study in a course titled Career Development (PEAT) in which the ePortfiolio is embedded. The OTTs also enhanced their professional and personal self-esteem by being empowered through the introduction to and training in a range of emerging technologies for the purpose of creating their own Reflective ePortfolios (Cross, 2011). Table 2 provides a summary of the project.

Table 2: *e-PR Summary*

Educational Sector	**Project Type**	**Funding**	**Learners**
Vocational Education and Training (VET)	One off	Funded by the Australian Flexible Learning Framework as an Innovations Project in 2010	Overseas trained teachers (OTTs)

Purpose:

The purpose of this project was to assist overseas trained teachers (OTTs) to prepare for their Professional English Assessment for Teachers (PEAT) through the use of an ePortfolio. The PEAT is an extremely challenging test with only a 15% pass rate, and is only one of the first steps involved in gaining approval to teach in NSW public schools (Cross, 2012).

Description of students and or cohorts:

This project involved four overseas trained teachers (OTTs) who were described as coming from culturally and linguistically diverse backgrounds (CALD), and were:

"...non-native speakers of English and predominantly female migrants. Usually they are also already experienced teachers of Language, Mathematics, Science, and other key learning areas in their first homelands. More often than not, they have migrated to an education system considerably different from the one in which they were educated and to a life in suburbs that are geographically widely dispersed" (Cross, 2012:39).

Technology used:

The technology used in this case study was the Mahara ePortfolio (Eskills Mahara) system. The project originally looked at Adobe Acrobat Pro 9 to create the students' ePortfolio because of the professional and sophisticated interface as they found Mahara quite cumbersome. However, the cost of Adobe Acrobat Pro 9 software and having free access to the Eskills Mahara site meant the project ended up using Mahara. The participants (OTTs) also investigated alternative e-tools for their ePortfolio (e.g., wikis).

Any interesting features or aspects of the project:

This approach to using ePortfolios offered the learners an interesting and relevant alternative to developing their English literacy skills, while at the same time developing their educational ICT knowledge. This ensured multiple outcomes for the learners in terms of their future professional practice.

Relationship to the eRecognition framework:

Why this case is considered e-PR?

This case study was considered an example of e-PR as the OTTs already had prior teaching experience but needed to demonstrate to the NSW Education Department that they had the English proficiency to be registered as a teacher in NSW. The OTTs used their ePortfolios to incorporate a record of their professional qualifications, achievements, lesson plans, methodologies and reflections.

What elements of the e-PR typology are present? (product oriented, mandated use, low learner control and formal)

The learners in this particular case were tasked with developing a reflective ePortfolio to support their English proficiency training. Initially they were expected to produce this using the Eskills Mahara ePortfolio system, and then moved to using more user-friendly free online sites for ongoing use beyond the project.

This case demonstrated the elements of the e-PR type as the activities involved professional registration, and the learners would be judged on the evidence provided in the end product (the ePortfolio). The end product (the ePortfolio) would represent the evidence on which these OTTs would be assessed as passing this first stage in Teacher Registration. Cross (2012: 39) notes the stringent nature of this aspect of the PEAT:

> the International English Language Testing System (IELTS), are not accepted by the NSW Department of Education (DET) as alternatives to the PEAT, even though this option does exist for other professions (Medicine, Nursing, Psychology) in NSW and also for teaching in other states of Australia. The PEAT is, in other words, an extremely challenging test (pass rate of 15% or less per administration) with vocational language requirements seemingly more stringent than presently exist to gain access to other professions or a teaching career in other educational institutions and states in Australia.

The use of the ePortfolio was not mandated for the PEAT by the NSW Department of Education however enrolment in the Career Development (PEAT) course option was. There is very little learner control over what is to be assessed for the PEAT however the TAFE teachers of this pilot course demonstrated a level of flexibility in terms of the pedagogy they used in this pilot:

> A minority elected to study full-time in order to have the opportunity to be supported in developing their careers whilst preparing for the twin requirement of the PEAT: accuracy and appropriacy. They consciously opted for a course of study encompassing more than test preparation: they signed up to a program in which they would develop their career prospects by preparing for the PEAT via a process of learning to use emerging

> technologies as teachers and by creating their own reflective ePortfolios (Cross, 2012: 42).

The project received funding based on utilising an ePortfolio and this amounted to mandated use, reduced learner control and involved formal learning activities. However, the move to more user-friendly free online sites presents an element of flexibility which catered to the learners' ongoing learning and recognition needs.

Case Study 2: e-RPL for workplace recognition

TAFE NSW - Western Sydney Institute – ePortfolios for Hairdressing Apprentices

Description of project:

The case study involves teachers from TAFE NSW Western Sydney Institute (WSI) who have been using an ePortfolio tool with their Hairdressing Apprentices since 2010. The Hairdressing Apprentices use their ePortfolio to capture on and off the job evidence of their competence (Baihn & Hobbs, n.d). Table 3 provides a summary of the project.

Table 3: *eRPL for Workplace Recognition Summary*

Educational Sector	Project Type	Funding	Learners
Vocational Education and Training (VET)	*On going	Internal with some National VET E-learning Strategy Funding in 2012	Certificate III in Hairdressing students

** TAFE NSW Western Sydney Institute initial use of eportfolios with hairdressing apprentices started in 2009. They are now in the process of scaling up and out the use of eportfolios across their institution.*

Purpose:

The use of ePortfolios was originally internally funded by TAFE NSW WSI, but received National VET E-learning Strategy Funding in 2012 to review their existing provision and support processes around learners use of an ePortfolio for assessment and to achieve

progression though their learning pathway. The outcomes of the review enabled WSI to document and share institutional lessons learned during the implementation of the WSI ePortfolio as well as share good practice models of ePortfolio usage.

In the Certificate III in Hairdressing, learners create ePortfolios to address the knowledge component of design elements and principles unit of competency WRHHC307A – Combine haircut structures for traditional and classic designs on men. This unit explores the styles of hairdressing for men, and requires the learner to demonstrate competence in communication, analysis, planning and then selecting and applying tools and equipment to create finished hair designs.

Technology used:

The technology utilised in this case was the Mahara ePortfolio tool (Foliospaces), an external service on which the WSI ePortfolio is hosted and support services are provided as TAFE NSW does not have an official ePortfolio system/service. WSI also utilises CLAMS – (Classroom Management System) and (SIS), the TAFE NSW Student Information System for recording and reporting of assessment (Stowell & Lamshed, 2011).

Any interesting features or aspects of the project:

This is an effective example of the use of ePortfolios in assessment of hairdressing apprentices. The ePortfolio is being used for both on-campus (formal learning) and off-campus (work based learning) assessment tasks to collect evidence and record it in a secure way. Photographs are also used to collect assessment evidence (Stowell & Lamshed, 2011).

Relationship to the eRecognition framework:

Why this case is considered e-RPL for Workplace Recognition?

The apprentices are required to undertake on and off-the-job training and assessment. The ePortfolio tool allows both the on-the-job supervisor and off-the-job assessor to have a better means of communicating with one another regarding the learner's progress

through the program of study via the ePortfolio. This provides on-going feedback mechanisms to the learner about their leaning and assessment.

What elements of the e-RPL typology are present? (product oriented, voluntary, high learner control and informal)

This case is product oriented as the ePortfolio (product) becomes crucial to assessment and judging the learner's progress. Templates are provided to learners initially to enable them to be clear about the assessment pieces they need to include in their ePortfolio as this must align with the unit of competency. However, the learner has the opportunity to customise their ePortfolio and become creative in how they provide the evidence. This aspect of the case study means there is opportunity for the learners to have some control over what types of evidence they provide. The unit of competency however are not open to negotiation. The following excerpt is testament to the level of learner control:

"Learners have control and are able to share their learning progress and outcomes with current and future employers, workplace supervisors, family and friends if they choose to do so. Employers and workplace supervisors can provide feedback within the ePortfolio where permission has been granted by the learner. This allows for easy verification of authenticity and collaboration with teachers and the individual learner" Baihn, N & Hobbs, E (n.d.).

The levels of formality and informality in this particular case are interesting as the ePortfolio is used for both on- and off-job-training. The on-job training is conducted in the workplace and has relatively higher levels of informality as compared to the formal learning which takes place in the off-job training in an institutional setting. This means it is the off-job training component which most suits this particular form of e-RPL, as the workplace learning setting is informal compared to the institution based off-job training component. The voluntary use aspect from the eRecognition framework is not present in this case as it is an assessment requirement that the learner completes an ePortfolio or at least a paper based portfolio. This case introduces a problem in the use and application of the eRecognition

framework when, such as in this case, not all aspects (*product oriented, voluntary, high learner control and informal)* of the type or form of e-RPL are present.

Case Study 3: e-RPL for access

Wide Bay Institute of TAFE - Creative Arts students gaining access to HE, exhibitions and grant funding opportunities

Description of project:

Since Semester 2, 2010, the Wide Bay Institute of TAFE, Queensland has been using the VUMI ePortfolio system with students enrolled in the Certificate IV and Diploma in Visual Arts in core and elective units (Miller, 2011).

Learners use their ePortfolio to present work for assessment tasks, as well as, for stand-alone projects. The ePortfolio allows the learners to collect electronic evidence which demonstrates the learner's abilities and self-expression. The ePortfolio is also used by the learners as a 'personal learning record' for assessment, RPL (recognition of prior learning), grant applications, employment and higher education course admissions and networking (Breikers, 2010). It is this "out of course" use of the ePortfolio which is the focus of this particular case (e-RPL for Access). Table 4 provides a summary of the project.

Table 4: *eRPL for access summary*

Educational Sector	Project Type	Funding	Learners
Vocational Education and Training (VET)	*Ongoing	The initial trial was internally funded by Wide Bay Institute of TAFE	Visual Art students - Certificate and Diploma in Visual Art

** This activity was initially started as a trial and has now gone on to be a continued activity within the Visual Arts Department at Wide Bay Institute of TAFE.*

Purpose:

As well as using their ePortfolio for set assessment tasks, some learners used their ePortfolio for an array of purposes including: to apply for grants; applications to do further visual art study at university; presenting their work for inclusion in an online gallery and; negotiating with a local gallery to have their work included in an exhibition (Miller, 2011). Breikers (2010) stated that it was unknown whether the grant funding or applications to university had been successful at the end of the 2010 trial, however, the learners' application for exhibiting both online and in a local gallery had been successful. The focus of the case study is on these out of course activities and processes that the ePortfolio are being applied.

Technology used:

The technology utilised in this case is the VUMI ePortfolio system. In addition to this software, the TAFE Queensland learning management system (my.tafe) and videoconferencing (Breikers, 2010) are also utilised.

Any interesting features or aspects of the project:

Wide Bay Institute staff encouraged students to use their ePortfolio beyond the need for recording and evidencing formal learning and assessment through fostering a life-wide approach to collecting and presenting information for different audiences.

Relationship to the eRecognition framework:

Why this case is considered e-RPL for Access?

This case has been identified as e-RPL for Access as the ePortfolio is used to enable learners to represent themselves online and outside the confines of the course. The ePortfolio has allowed the learners to present themselves to a variety of audiences for a variety of purposes. These include RPL into further education, RPL as evidence in grant writing and for exhibition opportunities.

What elements of the e-RPL typology are present? (process oriented, mandated use, low learner control and formal)

Although the ePortfolio was introduced as a mandated tool for assessment, the process of allowing the learners to use the ePortfolio in other formal settings (RPL and evidence for grant writing) provides an extended process orientation to the case. However, the use of the ePortfolio as a product is also evidenced in this case as the ePortfolio is a product submitted as evidence to support application processes and to display visual works. Low learner control and formality is attached to the assessment use of the ePortfolio, however the extended use of the ePortfolio in the evidence for exhibition applications and the use of the ePortfolio as a personal learning tool outside the course, breathes aspects of learner control and informality into the activity. As in Case Study 2 this particular case does not completely sit within the model and highlights issues in trying to match applied cases to theoretical frameworks. This also highlights the multiple uses of the ePortfolio and how some providers wish to encourage students to utilise and continue to utilise the ePortfolio as a lifelong learning tool beyond the formal training course or original engagement with the ePortfolio.

Case Study 4: e-RPL for self-recognition

YNH Services - Reflect and Connect – Encouraging the use of ePortfolios in adult and community education

The fourth and final case study to be presented is from an organisation whose core business is focused on the adult community sector (ACE). This organisation is also a registered training organisation (RTO) and the case study involved the delivery of VET a unit of competency from a primarily ACE sector provider: Yarrawonga Neighbourhood House (YNH) Services, based at Yarrawonga in north eastern Victoria.

Description of project:

ePortfolios were used in two projects to provide evidence for assessment in a nationally accredited VET course in an attempt to make a difference in the way teachers/trainers used e-learning

in their classes and to assess their learners' work as the uptake of e-learning and ePortfolios in small ACE organisations was traditionally quite low.

The first project undertaken by YNH Services enabled people training as teachers/trainers for the VET sector with e-learning skills to better equip them in delivering e-learning and to assess their students' work using ePortfolios. Part of this course involved these developing teachers/trainers creating an ePortfolio using Mahara to present as evidence for a unit of the course.

The second project is the focus of this case study and was the online delivery of *Reflect and Connect* using Moodle and Mahara. This second project was a natural progression from the first and aimed at further extending the teacher/trainers' e-learning skills through embedding the practice of using ePortfolios as a means of assessment (Wilson, 2011a).

After the completion of both projects, a small number of learners continued to use their ePortfolios for self-promotion by gathering further evidence of their learning beyond the formal training. Table 5 provides a summary of the project.

Table 5: *eRPL for self-recognition summary*

Educational Sector	Project Type	Funding	Learners
Adult and Community Education (ACE)	Offered yearly in 2010, 2011 and 2012.	The 2010 program was a fee-for-service program ($270). The 2011 program was funded by the Australian Flexible Learning Framework's Victorian Innovations funding.	**ACE participants

** This program has been run in 2010, 2011 and 2012 as part of the Certificate IV in TAE at YNH Service.*

***Participants were local and international business professionals and educators who wanted to learn how to become digital citizens with their own personal learning network and to develop their own ePortfolio. The*

professionals were in the fields of micro tourism, health and community services.

Purpose:

The main activity represented in this case was a six week intensive course in professional development for teachers/trainers. The *Reflect and Connect* course was designed to empower people to build their own personal learning network (PLN), e-Portfolio, and to manage their digital identity as a responsible digital citizen (McCulloch, 2011a).

The *Reflect and Connect* learners researched why networking was so important and how they could keep current with the ever changing world of technology by developing their PLN. The course helped the teachers/trainers recognise the importance of being responsible for their own training and development and how their PLN could assist them to maintain their professional standing. The teachers/trainers were encouraged to form action partnerships and build a community of practice around their networks. Teachers/trainers were empowered and provided with the necessary skills to enrol in other totally online courses offered locally and internationally (McCulloch, 2011b).

Upon satisfactory completion of the course, YNH Services issued participants with a Statement of Attainment for: CHCORG428A *Reflect on and improve own professional practice*.

Wilson (2011b) listed the benefits of the ePortfolios for the learners as follows:

- documenting Continuing Professional Development (CPD)
- presenting assessments from remote locations
- can be used again by participants for other purpose such as another course of study or for an RPL application/s
- employment applications

Technology used:

The technology utilised in this case was totally online, incorporating an ePortfolio approach course in Mahara, Moodle and Blackboard Collaborate.

Participants accessed their learning materials via a Moodle course and had access to a Mahara ePortfolio system (eWorks Mahara). They also participated in virtual classroom sessions using Blackboard Collaborate on a regular basis to communicate with their group and action partners in real time in their own virtual classroom.

Any interesting features or aspects of the project:

The learning approach was through collaborative, learner-generated experiences supported by action partners and group facilitation. Participants also developed their own PLN spaces and ePortfolios, guided by templates and scaffolded by their facilitators. The ePortfolio approach to learning used a guided process of reflective practice. Forums provided advice shared by all involved and a sense of community was built which resulted in a network of colleagues and teams that emerged from these programs.

Relationship to the eRecognition framework:

Why this case is considered e-RPL for Self recognition?

Participants used a range of e-tools to gather and collection evidence about themselves. The purpose of the course/training was to reflect and connect informally with no accredited qualifications sought, although a Statement of Attainment and ongoing use of the ePortfolio was provided to the participants as a means of encouragement and recognition.

What elements of the e-RPL typology are present? (process oriented, voluntary use high learner control and informal)

Participants commenced using their ePortfolios to support their understanding of reflecting and connecting. Some of the participants have continued to use their ePortfolio from the program and/or developed another ePortfolio. This case is very much about the

process as opposed to the end product however the end product becomes organic and a constant work in progress. This case is also a strong example of voluntary use with very high learner control and informality as the participants continued to utilise their ePortfolio as a tool to gather evidence about their ongoing skills development, to pursue career goals and to connect with others. To this extent it can be concluded that the *Reflect and Connect* program is a very atypical case of the e-RPL for Self Recognition type from the eRecognition framework.

Conclusion

The small but increasing popularity of e-RPL and e-PR across educational sectors, disciplines, educational institutions and professions requires closer examination in terms of purposes, practices and pedagogic implications. This paper aimed to study authentic cases of e-RPL and e-PR against a conceptual eRecognition framework developed by Cameron (2012) for each of the four types developed within this framework: e-PR for Professional Accreditation; e-RPL for Workplace Recognition; e-RPL for Access and; e-RPL for Self Recognition. Case studies were used to explore the four types and the two dimensions or continuums central to the framework. The vertical dimension is a continuum between *RPL as process* and *RPL as product* and the second horizontal dimension is a continuum between formal learning contexts and lower learner control as opposed to informal learning contexts and high levels of learner control. We found that the cases selected did have varying degrees of the dimensions present.

Case Study 1 in e-PR was linked to professional registration and did hold true to the typology however there was a degree of flexibility within the program that allowed learners to engage with more user-friendly software without compromising the product oriented focus. Case Study 2 in e-RPL for Workplace Recognition was complicated by the dualism of both on-the-job and off-the-job training and assessment. As a result, this case study demonstrated how one program/course could have both elements of informality and formality and corresponding degrees of learner control within,

whilst maintaining a product orientation. This Case highlighted the problems of trying to match authentic cases to theoretical frameworks and provide insights into how to further progress the development of the framework to take issues like this into account.

Case Study 3 in e-RPL for Access was interesting in that the ePortfolio was utilised for several purposes ranging from assessment to personal presentation of work. This case demonstrated how the ePortfolio could be said to typify more than one of the types in the framework depending on the purpose. Case Study 3 also highlighted the fact that some providers encourage students to utilise and continue to utilise the ePortfolio as a lifelong learning tool beyond the formal training course or original engagement with the ePortfolio. The last case study in e-RPL for Self Recognition was a very atypical example of this type of e-RPL where the focus is on the voluntary process with high levels of informality and learner control.

The application of these authentic cases taken from the VET and ACE sector has allowed for the authors to identify ways in which the framework could be further developed through its theoretical and practical applications. In particular Case Studies 2 and 3 have demonstrated how there maybe multiple purposes for e-RPL practices within one program or course and outside or beyond the original course or engagement with the ePortfolio. It is argued this adds to the value and of the learning experiences for those participating in the programs and encourages lifelong learning. Participants can be engaged in mandated product oriented practices and pedagogy but can also be exposed to more informal practices and pedagogic processes which provide them with opportunities for high levels of learner control in more informal settings supporting both lifelong and lifewide application of ePortfolios and the dynamic nature of learning. The framework allows researchers and practitioners to better reflect levels of flexibility and innovation in applying ePortfolios across these various eRecognition purposes as represented in the framework.

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Improving the quality of student experience in large lectures using quick polls

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A quick polling initiative was tested in finance classes using multiple choice questions to determine whether it can improve student interaction and engagement in a large class. Students (n = 446) responded using either a smartphone app (53%) or by using pen and paper (47%). Immediate feedback was provided to students using charts that were generated from the responses of those who used the app. The sample included 41% males, 59% females, 76% undergraduates and 24% graduate students. Student perceptions of the usefulness of quick polling in relation to their engagement in and preparation for the classes and their understanding of the subject content were evaluated using a questionnaire. Results indicate that females perceived they were more prepared for and engaged in class than males. Graduate students felt they were more engaged in classes, prepared for classes, and that their understanding of the subject improved than undergraduate students. There were limited differences between those who used the app and those who used pen and paper.

Keywords: *student engagement, audience response system, personal response system, large class, mobile learning, quick poll*

Introduction

Internationally, research suggests that student engagement is a critical component of success in university study (Kuh, 2003; Tinto, 2005). Student engagement in large lectures, in particular, may play a significant role in helping to achieve set learning outcomes, by providing students with an environment that fosters active learning. However, there are reports internationally that student engagement has declined in recent years (e.g. Barnett & Coate, 2005 for the UK experience). Cole (2009) observes that the underlying factors relate to increases in student numbers, student diversity, and increased financial cost of higher education in the UK. In the US, reports suggest students have decreased their study time (Babcock & Marks, 2010), particularly business students (National Survey of Student Engagement , 2011). Similar to the UK, the NSSE study in the US also notes financial cost as a factor as well as study time, learning strategy, preparedness, and the challenging nature of materials.

In Australia, according to the *Australasian Survey of Student Engagement* 2010 *Institution Report* (Australian Council for Educational Research, 2010) and *The first year experience in Australian Universities: Findings from 1994 to 2009* (James, Krause & Jennings, 2010), issues continue to persist around student engagement. Lecturers report the challenges they have in encouraging participation and engagement, particularly in large lectures, amidst a broader higher education landscape characteristic of declining rates of lecture attendance, students spending less time at university, and doing more paid work (James, Krause & Jennings, 2010).

The traditional lecturing approach has also been criticised for not providing a range of opportunities for students to become active learners (McKeachie, 2002). Simply transmitting information promotes passive learning. Thus, increasing student engagement must shift focus from what the teacher does to what the student does

(Biggs & Tang, 2007). This focus should encompass conditions and activities that contribute to student learning (Krause, Hartley, James & McInnis, 2005), such as interacting with peers and university staff inside the classroom and within the wider university context and collaborating with people from diverse backgrounds (Baker & Devlin, 2009). Particular emphasis is placed on the teaching techniques used in the lecture theatre, the organisation of teaching for the course, opportunities for learning outside the classroom and assessment (Exeter et al., 2010).

Fortunately, technology- and multi-device supported environments are available in the 21st century for universities to leverage in support of learning and teaching. Students use laptops, tablets and smartphones and are increasingly familiar with apps, SMS, and the internet. Universities enrich their learning and teaching environment by providing opportunities to use existing technologies, for example by providing wireless connection and learning management systems, and using SMS technology and other innovative ways to communicate with students. One way to bridge the student-teacher gap and address issues surrounding increasing student participation and engagement in large lectures is to conduct quick polls using a mobile application.

Thus, this study recognised that student participation and engagement in large lectures can be problematic, however, using quick polls via a smartphone app can offer a solution. Following implementation in a large finance class, students who used that app reported that their participation improved their understanding of subject content and interaction with other students than those who used pen and paper. Females also indicated a more positive experience than males in relation to preparedness and engagement.

Benefits of using quick polling

Quick polling is an interactive way to engage students in classes by asking them to respond to quick questions and provide immediate feedback. The technology that supports quick polling is not new. Clickers, or student response systems, have been popular in the US for the past decade or so, although the technology behind audience

response systems has been around since the 1960s (Keller, 2007). They are widely used, and their benefits for enriching the classroom experience have been widely reported (Caldwell, 2007; Kay & LeSage, 2009; Laxman, 2011; Lin, Liu & Chu 2011). Caldwell (2007: 11) emphasises that "many instructors have adopted clicker technology to compensate for the passive, one-way communication inherent in lecturing and the difficulty students experience in maintaining sustained concentration". Laxman (2011: 1291) also reveals that "clicker technology offers great promise in promoting more collaborative and engaging learning environments and innovating instructional delivery, provided lecturers apply sound pedagogical principles in their teaching". Simpson and Oliver (2007) also argue that both practice and research on this topic has 'matured' in recent years.

Quick polling has the ability to increase student interest and participation, and can be used as a formative feedback tool. Using quick polling, students – particularly those who are shy – will be given the opportunity to test their understanding or express their views in complete anonymity during lectures. They can instantly respond to questions, and some applications, similar to the one referred to in this article, automatically summarise and present the results. Lecturers can then gauge instantly students' views or understanding of concepts or topics, and adjust their teaching accordingly. Furthermore, use of quick polling can help with student attention shortfall during the lecture. Kay and LeSage (2009: 821) note that "one technique for addressing student attention deficits during a class is to present questions at 20 min intervals, thereby requiring students to shift their attention and actively participate in the learning process." Another benefit of quick polling is the students' ability to compare their responses to those of their peers. Quick polling may thus promote a competitive atmosphere during the lecture. On the other hand, as Kay and LeSage (2009: 823) observe, "some students may want to monitor their progress, while others may want assurance that they are not alone in their misunderstanding of key concepts."

Challenges of quick polling

Some educators, new to teaching or those established in their own traditional teaching practices, might encounter difficulties in introducing quick polling into their teaching style. A certain level of preparation is needed for educators to successfully embed it in their teaching. Furthermore, notes Penuel (2010: 135) "not all subject matters lend themselves well to the kinds of factual and conceptual questions that response systems are designed to accommodate." One might also argue that quick polling enhances social engagement more than helping with students' deeper understanding of the topic. Use of quick polling requires sound pedagogical underpinning. This means that consideration of the appropriate teaching and learning context, the interactivity that takes place, and the self-monitoring and feedback that can exist need to be taken (Biggs, 2012; Cutts & Kennedy, 2005). In doing so, instructors also need to align the learning objectives they wish to achieve, the sorts of technology-supported learning and teaching activities that take place and the kinds of assessments that are required to achieve those objectives. Adoption of this technology on its own "will not bring you enthusiastic, actively engaged learners" (Murphy & Smark 2006: 188). Instructors need to be familiar with the hardware and software and should work the interactive components into their presentations in ways that follow and add to the structure of their lectures (Preis, Kellar & Crosby, 2011).

Despite these challenges, the use of clickers in classrooms continues to benefit staff and students. However, the cost to use and upgrade them can be high. In some universities in the US, this cost has been distributed to students. Universities have also developed their own in-house quick polling tools. There are web-based applications available that use SMS technology and the internet. Then there are also free and paid smartphone apps available for both iOS and Android devices. Thus, cost to students being one of the considerations in this study, we searched for an app that is free. The following section briefly introduces the app that was used in the study.

About the app and its use in this study

We investigated the potential of Zwoor, a free app for both Android and Apple devices. Devices were tested and showed applicability in the most common smartphones and tablets used by students, including Samsung, iPhone and iPad devices. As claimed by the developers, Zwoor comes in both event and survey apps. Conferences, trade shows and business events are to the event app as mobile surveys are to the survey app, including classroom surveys used in the present study.

The following research questions were investigated in this study:

(1) How do students perceive the benefits of a quick polling activity in relation to their engagement in and preparation for the classes and their understanding of the subject content?

(2) What are the differences in the students' perception of the usefulness of participating in quick polling between those using a Zwoor app and those using pen and paper?

(3) What are the effects of gender and level of study on the perceptions of the usefulness of participating in quick polling?

Institutional background

The Zwoor app was used in two corporate finance courses. One course was at the third year undergraduate level. The other course was at the first year level of a master's degree. Each course was split into two streams. A total of four lectures were given per week. The content of the undergraduate and the master's course was comparable.

The two courses differed in terms of size and composition. The undergraduate corporate finance class consisted of a total of 560 students while the corporate finance master's course comprised approximately 160 students.

The topics covered in the first five weeks included raising equity and debt capital, capital structure and the weighted average cost of capital, payout policy, and advanced topics in capital budgeting. In the very

first lecture, the lecturer informed the students about the app, how it would be used in class, and how it would benefit the students. The students were also asked to download the app.

At the end of each class, the lecturer provided the students with one survey code for that class. Each app survey consisted of five multiple choice questions, each with five possible answers of which only one was correct (Fig. 1). The questions were also shown on a big screen so that students without mobile access could also participate.

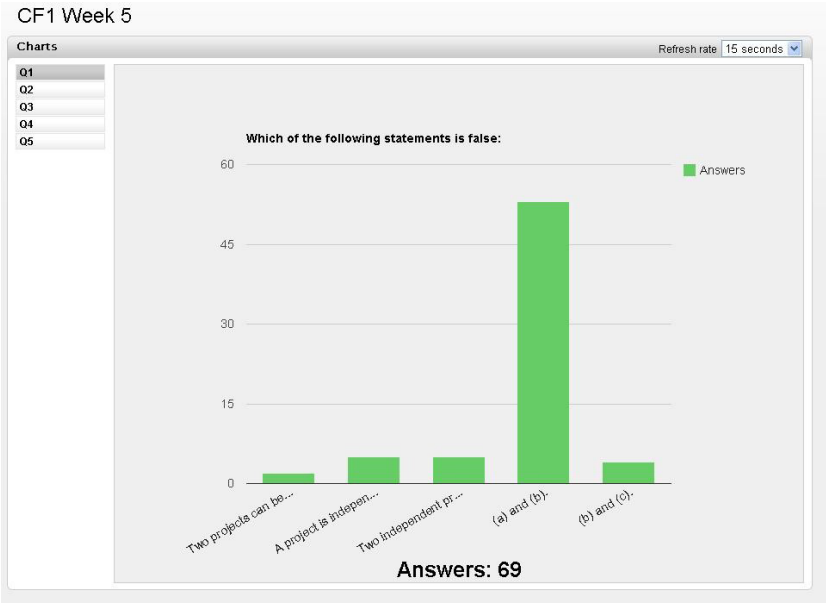
Figure 1: *Student view of the quick poll using an iPhone*

Part of the assessment in both courses was a multiple choice mid-semester test. It was communicated to the students that making use of the app in class would not only help them to understand the material better, but it would also provide them with valuable test questions for the mid-semester test.

Students who did not have smartphones or tablets were asked to do the multiple choice questions on paper. The lecturer displayed the questions via the projection screen. After letting the students spend between one to two minutes per question, the lecturer then logged into the online portal of the app to show the results. With the app, it is possible to see what fraction of the students chose a particular answer

via a histogram (Fig. 2). The results are displayed on a website, which was projected on screen so that all students could see the results. The lecturer then went through each question and explained to the students why a particular answer was correct or incorrect.

Figure 2: *Example of a bar chart on a single quick poll question*



After each class, the five multiple choice app questions were made available to the students on PowerPoint slides via the class LMS system.

Method

A total of 720 students from four finance classes in a semester participated in this strategy using quick polling to assess their understanding of the content of the classes. The data was collected within the specific context of an undergraduate and postgraduate Corporate Finance subject in a large business faculty in a research-intensive university in Australia. Respondents included local and

international students, mostly from Australia, China and Southeast Asia, who were undertaking a Master of Management course. From these classes, 446 students at the end of the semester completed a questionnaire. Of those students who completed the questionnaire, 76% were undergraduate students, 24% were graduate students, 41% were males and 59% were females. Each week, five multiple choice questions were administered during the lecture. Students were able to respond using either an app on their mobile device (53%) or by using pen and paper (47%). Immediate feedback was provided to students using charts that were generated from the responses given by students who chose to use the mobile app. Students who did not use the app to respond to the questions were able to look at their own responses and see how they went on the questions. At the end of the semester a questionnaire was used to evaluate the student perceptions of the usefulness of quick polling in relation to their engagement in and preparation for the classes and their understanding of the subject content.

Instrument

The 18-item questionnaire that was developed for the purpose of this study included 13 items asking students to report on their perception of the effects of the experiences of using the quick polling as a strategy in their large classes, within broad areas of interest such as engagement in and preparation for the classes and understanding of the subject content (see Appendix 1). These items used a 5-point Likert response format (strongly agree to strongly disagree). There were two demographic items (gender and level of study), one item specifically asked about the ease of using the app for providing quick poll answers and one item to determine if students used the Zwoor app or they used a pen and paper to participate in the activity. Table 1 shows sample items categorised under area of interest.

Table 1: *Example items*

Area of interest	Number of items	Example items
Preference	4	I would prefer that my other classes also used quick polling I would like to have more opportunities to participate in quick polls during the lecture
Improvement	4	My participation in quick polls improved my understanding of the subject content My participation in quick polls improved my performance in this subject
Preparedness	2	I spend more time preparing for this class so that I can participate in quick polls Using quick polls improved my attendance in this subject
Engagement	2	My participation in quick polls improved my interaction with my lecturer My participation in quick polls improved my interaction with other students

Method of analysis

All quantitative data from the 446 participants were analysed using IBM SPPS® 20. Multiple analyses were used including chi-square tests of independence and factor analysis. The chi-square test was used to test if groups of students differed significantly, such as the experience of males and females, app users and non-users and graduate and undergraduate students. Because some questions can be related, factor analysis was used to determine whether some underlying factors can be explained by a group of related questions. An alpha level of 0.05 was used for all statistical tests.

Results

Overall, there was strong positive experience in participating in quick polls either using the app or by using pen and paper (Table 2). Students generally indicated that they enjoyed participating in quick

polls (85%) and that they would recommend using it again in the subject (86%).

Table 2: *Overall distributions and summary statistics for participating students*

			Distribution of responses*					
			1	*2*	*3*	*4*	*5*	*NA*
Item	*N*	*M*	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Q2. It was easy to use the Zwoor app in or out of class	439	4.60	5 (1.1)	31 (7.1)	32 (7.3)	151 (34.4)	67 (15.3)	153 (34.9)
Q3. I enjoyed participating in quick polls using Zwoor app, or by writing my answers on paper	434	4.03	4 (0.9)	21 (4.8)	41 (9.4)	259 (59.7)	109 (25.1)	-
Q4. I would recommend using quick polling again in this subject	439	4.11	5 (1.1)	18 (4.1)	40 (9.1)	239 (54.4)	137 (31.2)	-
Q5. I would prefer that my other classes also use quick polling	441	3.90	7 (1.6)	25 (5.7)	82 (18.6)	217 (49.2)	110 (24.9)	-
Q6. I would like to have more opportunities to participate in quick polls during the lecture	441	3.72	12 (2.7)	37 (8.4)	95 (21.5)	216 (49.0)	81 (18.4)	-
Q7. My participation in quick polls improved my understanding of the subject content	440	3.95	7 (1.6)	12 (2.7)	85 (19.3)	230 (52.3)	106 (24.1)	-
Q8. My participation in quick polls improved my interaction with other students	440	3.16	19 (4.3)	113 (25.7)	134 (30.5)	129 (29.3)	45 (10.2)	-
Q9. My participation in quick polls improved my interaction with my lecturer	440	3.50	14 (3.2)	51 (11.6)	130 (29.5)	194 (44.1)	51 (11.6)	-
Q10. My participation in quick polls improved my performance in this subject	439	3.54	4 (0.9)	19 (4.3)	194 (44.2)	179 (40.8)	43 (9.8)	-

Q11. I anticipate that my mark in this subject will improve by participating in quick polls	437	3.50	6 (1.4)	24 (5.5)	196 (44.9)	171 (39.1)	40 (9.2)	-
Q12. Using quick polling improved my attendance in this subject	439	2.97	37 (8.4)	126 (28.7)	130 (29.6)	112 (25.5)	34 (7.7)	-
Q13. I spend more time preparing for this class so that I can participate in quick polls	439	2.76	42 (9.6)	152 (34.6)	130 (29.6)	100 (22.8)	15 (3.4)	-
Q14. Receiving feedback from the lecturer about the solutions of the quick polls helped me to better understand how to answer multiple choice questions.	436	4.27	5 (1.1)	9 (2.1)	23 (5.3)	226 (51.8)	173 (39.7)	-

** 1 = Strongly Disagree; 2 = Disagree; 3 = Unsure; 4 = Agree; 5 = Strongly Agree; NA = Not Applicable*

Chi-square tests of independence

As mentioned, students had the option of participating in the quick polling activities by using the Zwoor app or using pen and paper to complete the questions. Chi-square tests were used to determine the differences in experiences for students who used the app to participate compared to those who used pen and paper (Table 3). The results indicate that students who used the Zwoor app were more likely to agree that they would like to have more opportunities to participate in quick polling during the classes. They also were more likely to agree that they felt participating in the quick polling activities improved their understanding of the subject content and the activities improved their interaction with other students. For other areas of interest such as interaction with teachers, improved attendance and being more motivated to do the preparation, there were no significant differences between those who used the app and those who used pen and paper.

Table 3: *Chi-square test of independence use app versus paper based quick polling**

	Chi-square test		
Item	**x^2**	**df**	**sig**
I would recommend using quick polling again in this subject	7.997	4	0.092
I would prefer that my other classes also use quick polling	13.482	4	0.090
I would like to have more opportunities to participate in quick polls during the lecture	*18.621*	*4*	*0.001*
My participation in quick polls improved my understanding of the subject content	*10.932*	*4*	*0.027*
My participation in quick polls improved my interaction with other students	4.770	4	0.312
My participation in quick polls improved my interaction with my lecturer	*11.641*	*4*	*0.020*
My participation in quick polls improved my performance in this subject	4.298	4	0.367
I anticipate that my mark in this subject will improve by participating in quick polls	5.451	4	0.244
Using quick polling improved my attendance in this subject	6.345	4	0.175
I spend more time preparing for this class so that I can participate in quick polls	5.236	4	0.264
Receiving feedback from the lecturer about the solutions of the quick polls helped me to better understand how to answer multiple choice questions.	3.841	4	0.428

* *italicised indicated significant differences at the 0.05 level of significance*

Factor analysis, reliability and discriminant validity

Principal components analysis with oblimin rotation was selected based on there being a hypothesised correlation between each of the dimensions of the questionnaire (preference, improvement, preparedness and engagement). Results of the factor analysis showed a clear four factor structure with no significant cross loadings (Table 4). The four-factor account for a total of 70.51% of the total variance. These four factors were assessed for internal consistency using

Cronbach α (Table 3) and the reliability estimates ranged from 0.631 to 0.848, which indicates acceptable to excellent internal reliability (George & Mallery, 2001), and an estimate of 0.60 has long been regarded as a threshold of acceptable reliability for research purposes (Nunnally, 1978).

Table 4: *Factor analysis and reliability estimates**

Factors	1	2	3	4
	0.870			
1	0.833			
Preference	0.770			
	0.717			
		0.747		
2		0.712		
Improvement		0.588		
		0.562		
3			0.826	
Preparedness			0.817	
4				0.852
Engagement				0.714
Eigenvalues	4.92	1.95	0.84	0.75
% Variance	41.01	16.21	7.04	6.25
α	0.848	0.776	0.718	0.631

* *Factor loadings below 0.5 are not reported.*

Item-scale correlations (being between .200 and .500) confirmed that all items have been identified in the appropriate factor and made an appreciable contribution to that factor. The mean correlation of each of the five dimensions with all other dimensions supported that all dimensions make a unique contribution (Table 5).

Table 5: *Item scale and mean correlations*

Factor	1	2	3	4
1. Preference	1.00			
2. Improvement	0.579			
3. Preparedness	0.240	0.434		
4. Engagement	0.322	0.476	0.489	1.00
Mean Correlation	0.380	0.496	0.388	0.429

Experiences of quick polling

Independent samples *t*-test were used to determine if there were differences in the way males and females and undergraduate students and graduate students perceived the experiences of quick polling in their finance classes (Table 6). Results indicate that there is a difference in the way females see the use of quick polling in class than males. Females indicate they are significantly more prepared for class ($t = 3.85$; $p = .000$) and more engaged with teachers and other students ($t = 2.66$; $p = .008$) than males feel they are. There are no significant gender differences in student preferences for using quick polling in class, nor their perception that participating in quick polling can improve their understanding of the subject content. In this sample, there are significant differences in the way postgraduate students perceive the use of quick polling in class to undergraduate students. Postgraduate students feel that participating in quick polling makes them more prepared for class ($t = 4.85$; $p = .000$), are more engaged with teachers and other students ($t = 3.24$; $p = .001$) and feel that quick polling activities do improve their understanding of the content ($t = 2.10$; $p = .036$).

Table 6: *Tests of differences between gender and level of study*

Gender	Males		Females			
	Mean	SD	Mean	SD	*t*-value	*p*-value
Preference	4.00	0.736	3.90	0.692	1.44	0.150
Improvement	3.81	0.654	3.81	0.566	0.086	0.931
Preparedness	2.66	0.981	3.00	0.867	3.85	0.000
Engagement	3.20	0.956	3.42	0.764	2.66	0.008

Level of study	UG		PG			
	Mean	SD	Mean	SD	*t*-value	*p*-value
Preference	3.94	0.727	3.92	0.667	0.335	0.738
Improvement	3.78	0.594	3.92	0.617	2.10	0.036
Preparedness	2.75	0.924	3.21	0.872	4.58	0.000
Engagement	3.26	0.873	3.56	0.751	3.24	0.001

Discussion

The results suggest that students' use of quick polling in class generally had a positive experience but that whether the students used the Zwoor app or used pen and paper to participate made little difference in this sample. However the immediate feedback is only possible if students used the app to complete the activity and whilst we have no data on this, it is possible that even for students who used pen and paper it is the immediate feedback that is most helpful for them. We do know that the majority of students (76%) who participated indicated that receiving instant feedback helped them better understand the concepts being covered in the class (Table 2). This would justify the use of the app over pen and paper for such an activity. There was no such compelling case for improving interaction with other students, with only 40% of students agreeing with this statement. This could be explained in that students generally did the polling activity on their own. If having students work together to consider the questions made a difference in this respect, then it would be recommended to have students work in pairs or small groups and agree on an answer to select. If there is disagreement in the groups, students could be asked to convince the other members that they have the correct response.

The students who participated in this study generally had positive experiences, but there were gender differences in students' perception of the usefulness of the quick polling activity with females indicating more positive experiences in relation to preparedness and engagement. There were significant differences in the experiences of graduate students and undergraduate students with graduates having more positive experiences in the areas of improvement, preparedness

and engagement. Whilst no significant difference by gender or level of study, most students felt strongly that they preferred the use of quick polling and would like to see it in other classes (Preference; $M = 3.94$, $SD = .712$). Generally, quick polling activity was perceived to have many positive benefits for the students who participated in this study. Furthermore, this is a simple and low resource activity that is easy to implement.

Limitations

We were aware of the equity issues as some students may not have smartphones or tablets or simply prefer to use pen and paper. A couple of options were given to students to address this issue. They were encouraged to use pen and paper; or to borrow devices from their peers. This worked quite well. Even those that did not have smartphones found participating in quick polling useful.

The implementation of quick polling was not without issues. Wireless internet connection was reported by students as being fairly unstable at times. Blackberry devices also were not supported by the university Wi-Fi system.

Longer questions were also truncated when viewing the questions on their devices. This was discovered early on, thus the complete questions were shown on lecture slides. A few students also thought that having the survey results shown after class would be a good idea.

Implications

Though this app was used in a corporate finance classes only, the results have implications for large classes in general. The Zwoor app offers a simple yet powerful solution to providing students with the motivation to follow subject content more attentively. It also gives students the opportunity and motivation to engage with the lecturer.

We believe that the findings have implications for a wide range of courses which attract large student enrolments (e.g., business, science, information technology, engineering) and types of higher education institutions. Given the high demand for education, it is

unavoidable that universities need to pool together students from different subjects and create large classes. This is particularly so in capstone subjects that overlap with many areas of study. It is in these large mixed classes, with students from different academic and ethnic backgrounds, that the traditional strategies used to engage students, via direct questioning or group work, becomes increasingly difficult to implement. Our results suggest that the use of innovative new technologies can help improve the learning experience of students.

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Disclaimer

The authors are not affiliated, associated, authorised, endorsed by, or in any way officially connected with Zwoor or any of its subsidiaries or its affiliates.

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Appendix 1

Corporate Finance Quick Polling Survey

Please answer all questions.

Q1. Did you use the Zwoor app for the multiple choice quick polls?						
☐ Yes, I used Zwoor app						
☐ No, I did not use Zwoor app but still did the quick polls						
	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	NA
Q2. It was easy to use the Zwoor app in or out of class (select NA if you answered 'No' to Q1)	☐	☐	☐	☐	☐	☐
Q3. I enjoyed participating in quick polls using Zwoor app, or by writing my answers on paper	☐	☐	☐	☐	☐	
Q4. I would recommend using quick polling again in this subject	☐	☐	☐	☐	☐	
Q5. I would prefer that my other classes also use quick polling	☐	☐	☐	☐	☐	
Q6. I would like to have more opportunities to participate in quick polls during the lecture	☐	☐	☐	☐	☐	
Q7. My participation in quick polls improved my understanding of the subject content	☐	☐	☐	☐	☐	
Q8. My participation in quick polls improved my interaction with other students	☐	☐	☐	☐	☐	
Q9. My participation in quick polls improved my interaction with my lecturer	☐	☐	☐	☐	☐	

Q10. My participation in quick polls improved my performance in this subject	☐	☐	☐	☐	☐	
Q11. I anticipate that my mark in this subject will improve by participating in quick polls	☐	☐	☐	☐	☐	
Q12. Using quick polling improved my attendance in this subject	☐	☐	☐	☐	☐	
Q13. I spend more time preparing for this class so that I can participate in quick polls	☐	☐	☐	☐	☐	
Q14. Receiving feedback from the lecturer about the solutions of the quick polls helped me to better understand how to answer multiple choice questions.	☐	☐	☐	☐	☐	
Q15. I participated in quick polls (times):	☐ 1-2	☐ 3-4	☐ 5 or more			
Q16. Sex	☐ Male			☐ Female		
Q17. Level of study	☐ Undergraduate			☐ Graduate		
Q18. Overall, how would you describe your experience using quick polls in Corporate Finance?						

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NOTES FOR INTENDING CONTRIBUTORS

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5 Authors are required to include, in the online submission form:
a) the title of the article, names(s) of the author(s) and your institutional affiliation(s);
b) up to 6 Keywords
c) an abstract of between 150-200 words;
d) a five-line biographical note on present position and any information of special relevance such as research interests;
e) complete contact details, including postal and email addresses, and telephone and fax numbers; and
f) a clear indication of whether you want your paper to be refereed (that is, blind peer reviewed by at least two specialist reviewers from Australia and/or overseas) - if there is no indication, the paper will be considered as a non-refereed contribution.

6 Any complex tables, figures and diagrams are to be supplied in camera-ready copy, in a separate file with an indication of the appropriate location in the text.

7 Papers are accepted on the understanding that they are not being considered for publication elsewhere. Authors of main papers accepted for publication in the Journal will receive one copy of the Journal and five reprints of their paper. Other authors will receive two reprints of their contribution.

8 Brief research reports and book reviews (of approximately 800 words) relating to adult and community education are welcomed.

10 Some issues of the Journal are thematic. While papers published in a particular issue are not restricted to the theme, intending contributors are encouraged to submit papers on themes announced from time to time.

Further information about possible articles can be addressed to the Editor,

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