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From the Editor's desk

> 'Education…is a painful, continual and difficult work to be done in kindness, by watching, by warning, by praise, but above all, by example.'
>
> *[John Ruskin, 1819–1900, who began his involvement in education in the mid-1850s teaching drawing at the Working Men's College in the UK, and strongly supported the idea that through education workers could achieve a crucially-important sense of (self-)fulfilment.]*

It was George Bernard Shaw who proclaimed, 'To me the sole hope of human salvation lies in teaching'. Most of us can vouch for the positive impact of an educator in our lives. We can name them, and often vividly recall what it was about them that played such a significant role in our development. Sometimes it is personality with which we strongly identified or attention paid to us at those times when we desperately needed it. Sometimes it is belief in and respect for us, even when we did not believe in or respect ourselves. And sometimes it is special behaviours and actions which we warmed to and greatly appreciated, and which have helped us along our life's journey. As Plutarch once said, 'The mind is not a vessel to be filled, but a fire to be ignited' and Anatole France reinforced, 'Awaken people's curiosity. It is enough to open minds, do not overload them. Put there just a spark.'

This journal issue focuses on what individuals do that has educational influence on others. The papers are about adult *educators*—in more formal situations such as literacy and numeracy classes in a further education institute (Widin et al.) and bridging programs for university entrants (Whannell et al.), as well as in less formal situations such as programs for recently arrived immigrants (Brooker et al.) and community-based 'diabetes literacy' learners (Black). Two other papers continue this theme in quite informal environments—individuals catalysing 'educative-activism' within social movements (Walter) and Torres Strait Islander Community members passing on mathematical knowledge and skills to their children through sorting shells and giving fish (Ewing). We can delight in reading between the lines in each paper what it is that these adult educators do that stimulates the learning of others. Robert Frost put it simply in this way, 'I am not a teacher, but an awakener'.

In the first paper, **Jacquie Widin**, **Keiko Yasukawa** and **Andrew Chodkiewicz** examine the way experienced educators shape and reshape their practices within the 'tricky and treacherous terrain' of changing economic imperatives and challenges to beliefs about good teaching practice. Their particular domain is adult language, literacy and numeracy, though their overarching theme is universal and establishes the theme for the remaining papers in this issue. Drawing on Bourdieu's tools of field and habitus as a theoretical framework and Kumaravadivelu's notion of post-method pedagogy as a lens for observation and interpretation, they analyse the work of four experienced teachers as they strive to create transformative learning for their learners. They find that key attributes are resilience and robustness, yet the dilemma lurks in the risk that, in being responsive to learners' needs, they may be being de-legitimated within their institutions.

The influence of an educator is also investigated by **Patricia Whannell**, **Robert Whannell** and **Bill Allen** within a tertiary bridging program at a regional university. The issue that they

were investigating was participants' lack of knowledge of what was required to be successful learners in terms of academic and study behaviours, which was hindering their successful transition into the bridging program. The authors found that educational intervention in the first six weeks of semester did result in significant improvements in academic self-efficacy and study behaviour of learners. However, they highlight two areas for further study. One is the problematic role of assessment during the early transitional period of tertiary bridging programs, and the second is the greater risk of attrition among younger students who had had negative previous experience of education and had lower levels of self-expectation, commitment and academic skills.

Still on a bridging program, albeit of a quite different type, **Abi Brooker** and **Jeanette Lawrence** locate their study in a college for recently arrived immigrants and analyse the educational and cultural challenges of bicultural adult immigrant and refugee students. Using self-administered, online computer interviews with 35 participants, the research rated their exploration and commitment to their heritage and Australian cultures—the development of their 'bi-cultural identities'. It also examined how they handled the challenges they faced, and in particular how their cultural and educational challenges related to each other. In doing so, they show that there are at least two distinct patterns of bicultural development, and that it is those who commit to both heritage and Australian cultures who appear to have advantages in how they deal with their challenges. In this case, then, the influence of the educator in assisting students to develop their bicultural identities may well help them to cope with their educational and personal challenges more positively and productively.

The pedagogy employed with culturally and linguistically diverse (CALD) learners in a series of 'diabetes literacy' programs is investigated by **Stephen Black**. The programs were jointly delivered in local community sites by qualified nutritionists from a public

health service and adult literacy teachers from a technical and further education institute. The main contribution of the paper lies in its exploration of how these two partners managed to work together effectively within an integrated literacy approach. They appeared to share the aims of individual and community empowerment, and worked collaboratively using pedagogical approaches that encouraged empowerment. Though essentially a pilot study, the project revealed the potential for adult literacy teachers and health practitioners to work together effectively. The paper thus builds a case for the further development of similar partnerships and pedagogical approaches in health literacy projects.

The next paper moves to a very different setting, that of 'educative-activism'. The paper by **Pierre Walter** investigates how cultural codes in environmental adult education can be used to 'frame' collective identity, develop counter-hegemonic ideologies, and catalyse 'educative-activism' within social movements. He analyses three examples. One involved Mr. Floatie and his fight for sewage treatment in urban Victoria, British Columbia, Canada; the second, Julia Butterfly Hill and her 738-day squat in a redwood tree in northern California; and the third, the grassroots organisation, Save Our Surf, on the coral reefs and beaches of Hawai'i. Using interpretive historical analysis, the author demonstrates how social movements facilitate individual and collective learning, and, conversely, how adult learning and activist-educators can advance social movements. Each of the three cases illustrates the power of 'frames' or cultural codes to transform and radicalise popular understandings of environmental issues, to develop local knowledge and to provoke social change.

The following paper is a very different context again—a Torres Strait Islander Community, and the passing on to the next generation of a body of knowledge and skills essential for their functioning and well-being. Using data collection techniques that included digital photography, field notes and audio-recordings, **Bronwyn Ewing**

provides insights into parents' funds of knowledge that are mathematical in nature, such as sorting shells and giving fish. The idea of funds of knowledge views people as competent and having knowledge that has grown and developed through their life experiences. The paper has implications for the nature of the teaching that parents engage in and for the pedagogy within classrooms when children begin school. Teachers need opportunities where they can engage with parents to learn what funds of knowledge exist among their students because they provide an important part of the teaching and learning process when materials and resources are limited. Conversely, funds of knowledge can be considered as enriching as the curriculum where such resources are available.

The final refereed paper, by **Ian Chaston**, slides away from the main theme of educators and how they promote learning in various contexts to consideration of knowledge management systems and open innovation in United Kingdom universities. A mail survey of staff in social science and business faculties in second tier institutions indicated that certain key factors influence the effectiveness of knowledge management systems. Universities engaging in open innovation appear to have developed more effective systems. The author concludes that universities seeking to survive in the face of government spending cuts could benefit from optimising the effectiveness of their knowledge management systems and giving greater emphasis to the acquisition of new knowledge by exploiting open innovation.

Two practice papers conclude this issue. The first by **James Athanasou** examines the performance of eight major occupational categories across the four skill areas of the *Adult Literacy and Life Skills Survey*. His detailed analysis indicated that some 38–64% of employed Australians were below minimal competence (at Level 1 or Level 2) in one of the four skill areas of prose literacy, document literacy, numeracy or problem-solving skills. Moreover, the pattern of greatest need was identified amongst

two occupational groups, namely, machinery operators/drivers and labourers. The author concludes that there are pockets of low levels within occupations that policy-makers may seek to address through targeted workplace English programs.

The second practice paper by **Sean O'Toole** and **Belinda Essex** is, in contrast to the previous paper's quantitative detail, more of a conceptual paper on the adult learner as 'a neglected species', invoking the notion from Malcolm Knowles' book of the same name in 1973. The authors detail some of the differences between educating adults and children, and conclude that 'the key to improving the adult learning experience is to acknowledge that adults do have very different needs, expectations and limitations in what they want and need to know, and how they are prepared to experience it'.

A reminder...

The 52nd Annual ALA Conference will be held in Byron Bay, NSW 11th and 12th October, 2012

Hosts

The conference will be hosted by Byron Region Community College, the 2011 winner of the national Adult Learning Innovative Program Award.

Theme: Lifelong Learning = Resilient Communities

Resilient communities withstand and respond creatively to adversity. Building community resilience means valuing respect and cooperation between all groups including Indigenous Australians, an economy that works for all, and living in harmony with the natural environment. This conference will explore ways that Lifelong Learning nurtures this resilience in the face of challenging times. This is also an opportunity to renew your personal resilience in a beautiful environment.

Roger Harris
Editor

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Teaching practice in the making: Shaping and reshaping the field of adult language, literacy and numeracy teaching

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The field of adult language, literacy and numeracy in Australia is a site of struggle as policy changes, new learner groups and new economic imperatives challenge teachers' expertise and beliefs about good teaching practice. This article examines the ways in which experienced adult language, literacy and numeracy teachers shape and reshape their practices within this tricky and treacherous terrain. Using Bourdieu's analytical tools of field and habitus as a theoretical framework, and Kumaravadivelu's notion of post-method pedagogy as a lens for observation and interpretation, the paper analyses the ways in which four experienced teachers shape and reshape their classroom practice to create transformative learning for their learners.

Introduction

This paper looks at a much examined, historical practice—teaching. Specifically, we seek to explore how expert teachers of adult language, literacy and numeracy continue to learn their practice. Teaching practice is a slippery term: on one level, it may be seen as a mechanistic or prescriptive action, on another, it is taking up the role as a facilitator, and on yet another level, it is an eclectic blend of different approaches. How do teachers navigate across the tricky and treacherous terrain of an arguably much maligned practice? The setting of our study is the adult language, literacy and numeracy (LLN) classroom. Our interest is in the way teaching practice shapes and is shaped by: the particularities of the social space of the classroom, the participants (teachers and learners), the external social and political context, and the teachers' and learners' interaction with the external world, and how this shaping and reshaping creates possibilities of transformative learning for the participants.

The teachers whose practice we examine are highly experienced and have university degree qualifications in a relevant discipline. They are part of the generation of Australian adult LLN teachers who were a component of the professionalisation of a previously more loosely organised and structured field (Scheeres 1993; Black 1992). They would be described as 'expert teachers' using the three dimensions of the expert teacher identified by Tsui (2009:424). Firstly, they demonstrate capabilities to integrate various aspects of knowledge in relation to the teaching act; secondly, they relate to their contexts of work and their understanding of teaching so constituted; and thirdly, they exercise their capabilities to engage in reflection and conscious deliberation.

In an examination of how expert teachers continue to learn their practice, we cannot help but look at the power relations within the teaching field and the ways in which legitimacy is bestowed on certain kinds of knowledge (meeting systems requirements and vocationally

focused courses) and practices (approaches to teaching and modes of work).

Priya, an English for Speakers of Other Languages (ESOL) teacher team-teaching in a Vocational Education and Training (VET) program, is highly attuned to the changes in the field of LLN. While she spoke to us about the strangeness and newness of working in a more subordinated position as a language support teacher to the now more valued vocationally focused program, she demonstrated her capacity to embrace this change. Peter and Jean are also team-teaching, but in a vastly different program, working with young people excluded from school and work. Ann is a literacy and numeracy teacher in a further education college and her adult learners are struggling to learn concepts and skills they missed at school. These teachers described the dynamics of the field, the relations between and across the dispositions they as teachers carried with (in) them, the valued stakes—in these cases—the credentials that the participants were working towards, and the emerging practices of both the teachers and the students.

The above snapshots of changing/learning practices appear painless when observing the teachers in their classrooms; yet the teaching field is a highly contested and uncertain arena. Teachers are engaged in a struggle over the scarce intellectual resources in the field, that is, legitimacy in terms of voice and participation, intellectual and academic credibility, economic stakes and educational resources. The struggles the teachers in this study engage in are both internal and external to the classroom. On the one hand, a key issue is that of the ways in which professional expertise, that is, intellectual or knowledge capital (or in Bourdieu's (1992) terms, symbolic capital) is accumulated. The teachers' expertise is recognised from within the field; they were highly recommended by their professional colleagues. However, the field is changing and there are credentials that are required by policy that have little perceived value by experienced

teachers themselves (for example, a Certificate IV in Training and Assessment that is mandated in VET policy). On the other hand, there is the struggle to maintain and strengthen the particularity of the teaching, to keep the learners in a pivotal position.

We examine this field of practice with the help of Bourdieu's heuristic devices of field, capital and habitus (these concepts are described in more detail in the next section) and Kumaravadivelu's notion of teacher's sense-making, that is, the way teachers reflect the relationship between theory and practice in practical ways through their pedagogy. Central to our analysis are the ways in which teachers shape their practices by negotiating, managing and sustaining the interrelationship of student agency and teacher contingency (Baynham 2006). We focus on the four experienced and expert LLN teachers mentioned above to understand the ways their teaching practices are enacted. This is a timely investigation, because in Australia where this study is located, there is a significant impetus for reform in workforce development of the vocational education and training workforce (Productivity Commission 2011; Wheelahan & Moodie 2010), and a new national strategy for adult literacy and numeracy is in the making (Foundation Skills Working Group Secretariat 2011). This comes after more than a decade of waiting for a new policy (Castleton, Sanguinetti & Falk 2001; Black & Yasukawa 2010). However, the reforms need to be informed by studies such as this that examine the ways teachers' interpretations of the policies in their practices are shaped and reshaped by a number of variables, including their beliefs about teaching, the theories that inform their teaching, their interests in the field, and most of all the relationships between themselves and their learners.

As demonstrated above, the inhabitants (or agents) of the teaching fields we explore here are a diverse group of expert teachers in an equally diverse range of settings: an adult numeracy class in a further education college, an English language course integrated

into a vocational education program with recently arrived migrants from a range of cultural and linguistic backgrounds, and a program for re-engaging young learners who had dropped out of school. Our initial work with these teachers gathered interview and video data on effective adult language, literacy and numeracy teaching (Widin, Yasukawa & Chodkiewicz 2008; Chodkiewicz, Widin & Yasukawa 2010). This data set is rich in portraying an array of highly contextualised and contingent teaching practice along with the teachers' stories about their practices. While learners' voices were necessarily part of our research data, this article focuses on the teachers and their negotiation of their practice.

We, the writers, are also positioned within the field; two of us are teacher educators in the ESOL and Literacy and Numeracy field, and one is a researcher with a long history of researching within community-based linguistic and culturally diverse educational settings.

A framework for analysing teaching practices

Teaching practice is complex, as mentioned earlier. It can be seen as a collection of mechanistic skills or at another extreme as a highly contextualised and nuanced socio-cultural activity (Cross 2010), with many variations between. We ventured into this territory understanding some of its complexity and feel that Bourdieu's 'thinking tools' are useful, explanatory devices for what is evident in the field. Bourdieu sees practice as a result of the interplay between three dimensions: field, capital and habitus. The field here is the teaching space, although the boundaries are not set; they shift according to the relationship with the field of power and other related fields. Capital (the valued resources in the field) is both symbolic and material. In the LLN field, the valued resources include funding, qualifications, language skills, experience and professional networks. Habitus is a way of discussing the deep embodied tacit

understandings, the dispositions, of the agent in a particular field. Bourdieu describes habitus as more an acquired sense of when and how to use cultural knowledge in a profitable manner, rather than as a set of propositions, beliefs or adherence to rules. He (1992: 184) writes that 'practice is the product of the habitus, which is itself the product of the embodiment of the immanent regularities and tendencies of the world'. The teachers' dispositions, which derive in part from their lived experiences and their own social and cultural history, form their personal narratives (Cross 2010). All inform and influence their practice.

Bourdieu's work is of particular value in examining a teaching context and practice. His central concerns rest on the notion of relational practice, the relationship between the three 'thinking tools' outlined above. Teaching exemplifies this relationship between the social structures and the individual participants who continually shape and reshape each other according to the accumulation of the valued resources and relations of power. Bourdieu's analytical tools help to make visible the invisible relations of power and to unearth those 'naturally' occurring regularities that become known as 'the norm'. This study of teachers in the adult LLN field endeavours to uncover the invisible webs of dominant and subordinate relationships which cause the practices to be carried out in a certain way. Given that the field of publically-funded, adult LLN education is wrought with struggles around funding, qualifications, intellectual legitimacy and public perceptions of teachers and teaching practices, in particular the on-going devaluing and de-professionalisation of teachers' practices (Black 2010), Bourdieu's concepts allow us to understand how this socially important endeavour changes and endures.

In a field, inhabited by powerful artefacts and participants as alluded to above, teachers are most often beholden to the 'doxa', that is, the dominant set of beliefs and values of the field. In Bourdieu's (1998: 57) words, this is 'a particular point of view, the point of view

of the dominant'. In the adult LLN field the doxa is represented by the funding policies and curriculum and it is unlikely that classroom teachers' (localised) knowledge or practices can change the structure of dominant practices and legitimate knowledge (Bourdieu & Eagleton 1992: 119). An issue of great interest in this study is how the teachers are able to comply with the dominant view projected by their institutions, while at the same time practise in ways that recognise their unique situation. The range of 'knowledges' accumulated by the teachers in our study come from their ability to attend to the particularities of their teaching context and to be open to adapt and change (learn) their practices which are conceived and developed through their own sense making (Kumaravadivelu 2003). But how is this learning recognised and valued?

Bourdieu provides the relational framework to examine the power relations and features of the field, while Kumaravadivelu (2003) offers us a way to examine teacher learning at the level of the classroom and interactions with the students. His framework for teacher development contests the traditional notion of locating teacher 'training' within the master-apprenticeship model and the transmission of knowledge as a key teaching approach. He puts forward an approach which equips teachers with the resources to devise a personal theory of practice based on an hermeneutic principle of 'situational understanding', that is, that all pedagogy is local and teachers must be aware of local exigencies which impact on their teaching. He is centrally concerned about the 'once-and-for-all set of authorized practices' (McMorrow 2007: 375) that some teachers take away from teacher training programs; for many teachers, these set up a framework of the way to engage in any further professional development and build (or not) relationships with their students. These 'authorised practices' often take the form of a particular teaching methodology.

Kumaravadivelu's (2003) 'postmethod pedagogy' dispenses with the idea that there is a teaching method that will suit all contexts at all times. His broader teacher development framework rests on three pedagogic parameters: particularity, practicality and possibility. The parameter of particularity takes into account the particular needs and particular context of the learners when making decisions about how and what to teach. That of practicality recognises and acknowledges the teacher's sense-making, that is, the teacher-generated theory of practice which informs and is informed by teaching. This sense-making sees the classroom walls as permeable; the learners are situated within the context that exists outside of the classroom. The third parameter of possibility takes account of the socio-political world and is the dimension which is concerned with identity and social transformation. The teacher cannot fulfil their pedagogic obligations without at the same time fulfilling their social obligations. They must be aware of both the socio-political and cultural reality that shapes their lives and of their capacity to transform their own and their students' realities.

Kumaravadivelu's parameters are interwoven and overlap; they each shape and are shaped by the other (2003: 34–36). These parameters assist us to analyse and discuss the struggles and tensions in the teaching field and how they shape (reshape) teaching practice. It is clear that all the teachers in this study intuitively operated from within the three dimensions of Kumaravadivelu's framework. Our brief introduction of Priya above shows how she operated from the particularities and practicalities of her teaching context; further on, we examine the possibilities. What are the valued resources that Priya has accumulated in the field? How do they enable her to shape and reshape her practice? What other resources come into play? Baynham (2006) provides a complementary analytical tool in his examination of the ways teachers bring in, negotiate and mediate the learners' external worlds. He uses the terms student agency and

teacher contingency to describe the way teachers are able to identify and respond to the student 'irruptions' (Baynham 2006); these allow teachers to open up the learning space, inviting 'irregular artefacts' into the classroom and reshaping the teaching practices.

All of the teachers in this study had developed considerable cultural capital (qualifications, professional development) to draw on from the disciplinary knowledge that they gained in their formal study, as well as their knowledge and ways of navigating through the official institutional, policy and curriculum requirements. But what all the teachers said they valued and relied upon most was their knowledge and experience of dialogic approaches to learning, in order to respond in contingent and practical ways to the needs of their learners as they arose. This was exemplified through their willingness to use what the learners brought from their worlds of work, community and home as teachable moments in their classes, or in exercising timely and spontaneous division of labour with the team teacher in response to unexpected situations.

The willingness and skills of the teachers to respond to the particularities of the situations in practical ways was also seen to lead to creating new possibilities for both the learners and the teachers themselves. In a Bourdieuian sense, the teachers are attempting to counter the symbolic violence inherent in any teaching situation. Symbolic violence is described as being carried out by imposing meanings as 'legitimate by concealing the power relations which are the basis of its force' and at the same time communicating a logic or rhetoric of disinterest (Bourdieu & Passeron 1977: 4). Therefore, when teachers teach English or are taught to teach English, they are fundamentally trying to impose 'culturally arbitrary' conditions by an arbitrary power (p.18) under the guise of legitimate order. Later in this paper, we give an opportunity for the teachers to speak about how their practices continually evolve and transform, and in turn transpose, in some cases, their teacher dispositions.

Learning in a changing field

Our inquiry here focuses on how teaching practice is shaped and in turn shapes the field. Current research which investigates how language, literacy and numeracy teachers learn their practice often focuses on the teacher's prior beliefs, the teacher's course work (teacher training) and field experience; and what teachers do during their first years of teaching (Morton, McGuire & Baynham 2006). Research on teacher learning is also divided into two major research fields (Richards & Placier 2001): the first has a focus on the individual teacher learning, and the second focuses on the school as a context for teaching and learning. These two fields of research are most often kept separate, and so far the research does not show how they interrelate (Hoesktra et al. 2009), whereas in our current study these two fields are seen together, involved in a dynamic relationship. Hoesktra et al. (2009: 280) draw attention to whether the 'conditions for learning' are available to teachers in their workplaces and that teachers' perceptions of learning are contingent on conditions such as teacher status, teacher autonomy, teacher collaboration, reflective dialogue, receiving feedback and experience of shared norms and responsibility in the teaching site.

Groundwater-Smith and Mockler (2009) identify four aspects of the current orthodoxies in Australian education including the rise of audit cultures, the standardisation of practice, the diminishment of teacher professional judgment, and the 'quality' agenda in education. In the field of adult literacy and numeracy, Tusting (2009) examines the struggles teachers in the UK experience in a field similarly characterised by these orthodoxies, while in Australia Black (2010) focuses on the phenomenon of the rising 'audit cultures' and examines the different ways in which Australian teachers are responding to increasing pressures for compliance in areas such as curriculum development and assessment, aspects of their work on

which teachers in the past were able to exercise greater professional judgement and autonomy.

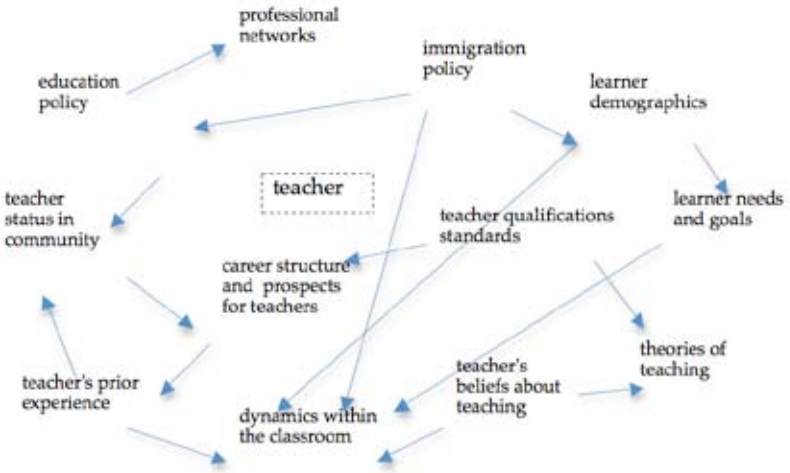
Groundwater-Smith and Mockler (2009: 136–7) propose different models of practitioner-based inquiry as ways in which teachers can make sense of the orthodoxies and 'close the gap' between their own 'moral authority and moral agency' and the external pressures imposed upon them. However, as Hoekstra et al. (2009) point out, variables such as teachers' employment security and the culture of the workplace in which they are located can significantly limit the influence and the possibilities of such forms of professional learning. In light of these observations, the ways in which the teachers in our study make sense of their complex terrains seem even more remarkable.

In their research on change and teaching practices in the Teaching English to Speakers of Other Languages (TESOL) field, Burns and de Silva Joyce (2007) posit the curriculum as the artefact which shapes and reshapes LLN teaching practices. This artefact is the realisation of struggles within government policy, ideology, legitimation of knowledge and positioning of the learners and teachers. The curriculum has taken many forms over the last four decades in Australia—from text-book to skeletal outlines to detailed specifications that focus particularly on externally-validated assessment.

The above research points to significant features of the adult LLN field as a broad entity; within the classrooms studied here, key features interact and help to shape teaching practice. They include teacher's beliefs, their training and experience, the context of the teachers' work, and the curriculum. These features are often seen to operate as single elements in the field, and not necessarily as dynamics or as 'shifting variables' as they often are.

The concept of 'figured worlds' (Holland & Bartlett 2002; Baynham 2006) is useful here to refer to the classrooms. These worlds exist within a field and they are constructed and populated by agents and artefacts that, through their interactions, invoke practice. Artefacts have the possibility of being fleeting (for example, spoken language) or long-lasting (for example, teaching resources). Student irruptions can be viewed as a transient artefact, but they are artefacts that together with teacher contingency can become a powerful force in shaping practice. We conceptualise the LLN field (both the classroom and the broader field) as a complex entity with sets of both competing and contrasting forces and interests. Figure 1 displays the variables, including the agents and artefacts in the teaching space.

Figure 1: Conceptualising the LLN field



It is difficult to capture the position of the variables and the way they shift in a two dimensional diagram. However, this multifaceted, though not exhaustive, map provides some insight into the complexity of the field and the influences and forces which act upon the teacher and which the teacher in turn acts upon. We have not mapped the

field in a manner that is similar to Bourdieu—this is beyond the scope of this paper. Rather, the figure is an attempt to show that teaching practice is not an isolated or neutral act. In fact, it is a dimension of this particular field and teachers are beholden to changes in the field and subsequently 'learn new practice' in ways that are sometimes difficult to name. We do not claim to capture all the elements of the field, of which teaching, from another research perspective, may also be an element. The elements in Figure 1 are not static; they are impacted and influenced by the shifting dynamics and boundaries of other fields. Policy is a significant artefact in this field, a key 'socio-cultural tool' (Cross 2010: 441) that is in play with the social activities within the 'cultural-historic domain' (Cross 2010: 441); policies influence the way teachers do what they do. Clearly, changes within institutions resulting from policy changes, such as a shift from an access and general education focus to a more vocational education and training focus due to broader labour market shifts, mean that teachers have to learn continually how to work with new learners with previously unfamiliar cultural, linguistic and/or educational settings and goals. Our analysis of this field aims, as stated earlier, to make these forces of change visible. The teachers in our study show how they navigate their ever-changing terrain and how their practices shift with the boundaries of the field.

The agents in the field

Figure 1 shows that the teachers whom we are studying are situated in a dynamic field and are creating and renewing their practice within a particular policy context, bringing with them their particular dispositions, their histories and beliefs about what it means to be a teacher, and what LLN learning can mean for the learners with whom they work.

The current picture of the field, one that is dominated by discourses of competencies and outcomes, accountability audits, employability

and credentials, is in sharp contrast to the ways of working that many of these teachers first encountered in the field when Adult Basic Education (ABE) and English language education 'felt like a grassroots movement—a band of people working together towards a common good' (NSWALNC 2009: 28). The field is now far from what could be called a grassroots movement. LLN teachers' professional autonomy is challenged by a culture of internal and external audits that legitimise teacher compliance over agency (Black 2010). The curriculum that was in the past a process of negotiation between the learners and the teacher has increasingly become a 'product' based on units of externally determined competencies and outcomes emphasising vocational and employment outcomes. As mentioned earlier in this paper, curriculum is often seen as the driver of change and teacher learning; however, as we demonstrate, the field is complicated and, while curriculum is a powerful element, it is mediated by the dispositions that teachers bring to and take on in the field. For example, when a 'national snapshot' of the adult literacy and numeracy field was taken in 2001, it was found that teachers held strongly to a view of literacy as 'a fundamental human right and a means of empowerment for individuals' (McGuirk 2001: 3). Many teachers continue to find ways to create meaningful learning for their learners with the diminishing degree of autonomy they have (Yasukawa 2008).

An overarching feature of this dynamic field is how the teachers' and learners' dispositions transpose in relation to the shifts in the valued stakes (capital). Clearly, the teachers and learners take on the doxa of the field: vocational outcomes, certification/credentialing, and movement between types of provision for specific purposes. What do these teachers retain and sustain across these changes in the valued capital? Our study shows that the teachers' core values and beliefs around the particularities of the learners and the teaching sites and their continued sense-making (learning), the practicality and their opportunities to open up possibilities were the key

sustainable elements; they exhibit in the practice the parameters of what Kumaravadivelu calls 'post-method pedagogy' (2003: 23). In the following sections, we examine the teachers' practices through this lens.

A practice of continual renewal and reshaping

A strong, common theme emerged in our interviews and observations of the experienced teachers in this study—an ESOL teacher on a VET program, two teachers team teaching with young people who had dropped out of school, and a literacy and numeracy teacher in a technical college. Although expressed in slightly different language, in response to the question of what makes good practice in adult LLN/ ESOL, all of these teachers spoke about particularity, the establishment of a productive and inclusive relationship with their learners as the primary concern and aim of their practice. None of the teachers referred to any specific method or theory as defining or determining their practice. Using the words of Noddings (2003: 249), these teachers saw teaching as a 'relational practice', that is:

> Teaching is thoroughly relational, and many of its goods are relational: the feeling of safety in a thoughtful teacher's classroom, a growing intellectual enthusiasm in both teacher and student, the challenge and satisfaction sacred by both in engaging new material, the awakening sense (for both) that teaching and life are never-ending moral quests.

However, the relational practice for these teachers is not a-theoretical or arbitrary. Our data provide evidence of these teachers' practice as being formed, reformed and challenged by differing accumulations of capital and interactions with the habitus in the field.

The aspect of responding to the particularity of the policy and learner contexts was exhibited in different ways in the three sites. Overall, a striking characteristic of the teachers was the way their habitus had become finely attuned to the stakes (valued capital) of the field to

operate strategically. Priya found herself working in the increasingly vocationally-focused environment where language and literacy teaching and learning was integrated into the teaching of vocational knowledge and skills. Priya's habitus has clearly been one of an ESOL teacher; the changes in the field meant that she had to learn new ways of working. Previously she taught alone, focusing on general English language skills and knowledge; in this new role, she was positioned as a learner support teacher, team-teaching with the vocational teacher in an accredited vocational course. Peter and Jean were learning to work with people who are often spoken about as 'at risk' students in a community youth centre. Here the learning also involved team-teaching as a way to provide greater degrees of responsiveness to learners with multiple learning needs, and working with volunteers who provided further support and enabled each learner's individual goals to be negotiated and achieved. At the third site, Ann was clear in her philosophy of teaching. She showed that teaching was about knowing and responding to learners' individual goals and needs. What was specified in the syllabus was important, but it had to be balanced against the needs and abilities of the learners. In all three sites, the teachers demonstrated how they were attuned to the changing circumstances of their learners, and how they gained a sense of the game, or in other words, a sense of (a particular) reality.

What follows are some selected observations from the three sites to illustrate the manifestations of the aspects of particularity, practicality and possibilities in the teachers' pedagogy. We also point to the ways the teachers act contingently by bringing in the learners' external worlds and encouraging student agency.

Reshaping habitus in a VET classroom

The first site that we studied was at a community college where Priya, an ESOL teacher, was team-teaching with Amy, a vocational teacher in the children's services course. Their students were recently arrived young migrant women who were studying towards a vocational

qualification in children's services. Although Priya had many years of experience as an ESOL teacher, working in several different countries with students from diverse cultures, her team-teaching with Amy involved a process of learning a new teaching practice. This practice reflected both the current policy focus on LLN providers forming partnerships with VET providers, community services and industry, and on supporting the integrated development of LLN skills within VET programs. Both teachers saw the value of working together as a way of supporting the students' learning:

> Both of us have been able to work well as a team I think because both of us have a great passion for helping our students … and both of us have a common goal… It's taken a lot of trial and error for me because it was one of the first courses where I was team-teaching, but I think at the end of it I can see that it's been really valuable … it's been really interesting, challenging at times, especially at the beginning because I've been so used to just being out there in the front… I've got to really sit down and understand the needs of the students, that's really important. It can be challenging at times but it has been fulfilling because we can see them working towards the common aim of achieving two certificates. [Priya]

> I work very hard to make everyone feel part of the group. When I start I find it difficult. I don't get a lot of feedback from them … I'm not sure if I'm getting through my points or not … I don't have time to stand and explain everything. I have to explain course content, so that's where Priya's been excellent. She will pick up and take notes if I have mentioned something and the girls don't understand. She will take that on board and come in her session with detailed information. [Amy]

While the particular policy context of the field might have pushed Priya to work in this new way, her practice in this team-teaching context drew heavily on her own prior experience and knowledge of working with culturally diverse learners (her habitus). They enabled her to make sense of the learners' situations and experiences:

> My awareness of the Chinese culture, Indian culture and other cultures has helped me greatly, because when I teach them the language aspects I'm able to relate always to the cultural aspects. [Priya]

Along with her cultural awareness and knowledge, Priya recognised the linguistic capital held by her bilingual students. Priya gave explicit value to this capital. Students were encouraged to use their first languages in class, as she saw that this facilitated greater communication and understanding within groups of students. It enabled those more proficient in English to explain unfamiliar concepts to others and the students could more easily compare and contrast practices in the Australian VET context with those in their home country. In this way, she was encouraging and facilitating student agency. She also responded to the pressures in the external worlds on these students' lives throughout the program: listening, modifying and negotiating with learners as issues arose that impacted on their ability to attend or do follow-up work. In many ways she acted contingently, balancing multiple sets of factors both within and outside the classroom. The distribution of the linguistic resources here also helped reshape the field, especially when students were using their first languages.

The dynamic nature of the field is also reflected by the VET teacher's position also changing: Amy's dispositions as a teacher were altered, and Priya, proficient in some of the languages of the students, took up a new position. The team-teaching practice, based on a vertical hierarchy with Amy as the main teacher and Priya as the support teacher, shifted over the time of their working together. While Priya was obviously open to the changing dynamics of the field and saw some value in working with the more vocationally-orientated curriculum and the benefits that recognised (legitimated) credentials can bring to the learners, she was however uncompromising in her beliefs about teaching and sought to maintain the learners' needs as a prime driver of her practice.

In Priya's position of providing language and literacy support, what we saw was both a teacher whose own habitus was being transposed from that of the sole English language teacher to a team teacher in a VET course through the particular policy context in which she found herself, and a teacher who was contingent and keen to encourage student agency, drawing on her strong identification with different cultural groups to create new possibilities for the learners from diverse cultural backgrounds to learn, live and work in Australian society.

Creating possibilities of a new habitus for the learners

The second site of our research took us to a community youth centre where an ABE teacher, Jean, worked with an Outreach coordinator, Peter. Both Jean and Peter were experienced in teaching literacy and numeracy to a range of young and older adult learners. At this site, Jean and Peter were working with a group of young, mainly Indigenous learners who had disengaged from formal schooling. The learners were taking part in the program with the clear aim of completing school subjects and working towards gaining formal school qualifications, including their year 10 School Certificate. As discussed more fully in an earlier paper about this particular site (Chodkiewicz, Widin & Yasukawa 2010), the program at this site was one that had what Noddings (2003) would call 'moral' or internal value for the teachers and the learners, but not necessarily one that carried externally recognised value.

The program was a partnership program between two sections of a further education college and a local community youth centre, and was funded in part by a philanthropic organisation. The community youth centre was physically designed and furnished with the colours of the Australian Aboriginal flag, with an indoor basketball area, and different kinds of learning spaces to allow learners to work in different configurations according to their needs. Both teachers expressed a strong commitment to helping learners overcome the

negative experiences that most of them had encountered during their school years:

> … we actually offer an opportunity for students to come here and maintain or renege without the necessity of meeting the traditional year 7 or year 8 scheduling … so we would then say, OK, we have a student who has walked in who doesn't want to be out there on the street, who cannot survive in the normal school environment. What we will do is just facilitate their learning and promote their learning and bring them slowly back to the path of a proper education… Our key ingredient for success is you can walk in eight months into the year and we will take you in and look at your literacy, numeracy and your vocation pathway, try and establish a firm footing from which to rebuild. [Peter]

> … and some students are a little bit reticent to speak out when there's other louder kids. [We] give them a chance and encourage them to participate. [Jean]

Their practice was consistent with their expressed beliefs about teaching—the dispositions that they brought from other teaching contexts. However, their practice also had to change and they had to learn new ways of working in this context, responding to the particularities and possibilities at this site. Their dispositions were such that the learner was central to their teaching practice. In one sense, this was familiar territory for both teachers and they continued to focus on how to remain contingent and accommodate the learners' needs in this new context—one that was often impacted on directly by the learners' external world. This often meant dealing with confronting learner behaviours and trying to find ways that responded positively for the learner, other learners and themselves. This involved learning new ways of working, in particular, how to engage more fully in a partnership with each other, the learners and the volunteers, and to work with materials and approaches that were seemingly antithetical to a learner-centred approach. Another important feature of this site was that learners took on a more determining role. Initially they had requested that the centre offer a

program where they could work towards a school certificate credential and it was often their interests and concerns that were the key to the shaping of new teaching practices in this teaching site.

The teachers explained that sometimes they had to throw away the methods or theories they had learned in their teacher education diplomas 'and react in a certain way to a certain situation' [Peter]. This was because their teaching environment was impacted by the regular and on-going instabilities and pressures in the learners' lives outside the classroom. The practice of team-teaching that they were developing made a significant difference to how they coped in these situations.

> I think we work well as a team. We bring different strengths, weaknesses, also different experiences … And I think we complement each other. It's also again a matter of trust between us. Sometimes Peter has an idea and I think I hadn't thought about that … go with that … give it a try and mutually like that. And I think we can also do a little division of labour now in the group. I'd be working with the students more on the literacy and numeracy, and Peter will be working more with the students doing distance ed., then we bring them all together … I think that works pretty well. [Jean]

> I think Jean might look at me more as the deliverer sometimes, certainly Jean gives me the material to deliver … And I think because of my experience of working with kids from this age bracket for such a long time, you can hand me something and I can just take off with it. [Peter]

Jean and Peter also talked about how they learned as a team to deal with situations when learners might arrive expressing a lot of anger and frustration. Often they were the result of extreme events that occurred in their lives outside the teaching space.

> And sometimes there's issues of anger management, too, and that's very good when we're a team … We have little cues; … sometimes Peter might say that we'll leave that or [we] might sort

> of have a word to one another ... I feel very supported by Peter in those situations. [Jean]
>
> There are times, I know, that when a student is angry with me and Jean can sense it, obviously at the same time and I can move the student towards Jean or Jean can move the student towards myself. [Peter]

We saw at this site the practicality of their teaching practice. The teachers both had a strongly articulated philosophy of teaching that was based on supporting their learners to engage productively in learning. This philosophy was translated into their practice through the relationship that they had built between the two of them, which in turn strengthened their relationships with the learners. Throughout each session in one-on-one and group work, both teachers showed a high degree of contingency in their awareness and response to student 'irruptions'. This in turn created possibilities for the learners to exercise agency and assume the kind of academic identity that they had never experienced prior to engaging in this program.

Building teaching practice from knowing the learners

The third site was an ABE class consisting of six learners being led by Ann in a course on numeracy. The class consisted of five men and one woman, whom Ann described as being very weak in their literacy and numeracy skills, some with mild learning difficulties, and who had experienced disrupted school learning. In this site, we saw how the teacher was continually shaping and reshaping her practice in response to what she was learning about her learners:

> The main thing really is to know my students, to really know and understand where they're coming from, what their learning difficulties are, where their weaknesses and their strengths are.

A few minutes before her Monday class started, we saw Ann talking to the students who were waiting outside the classroom, greeting each student by name and asking them what they had done on their weekend. During the class, she often acted contingently—looking

for and creating further opportunities for learners to exercise agency by eliciting their knowledge and experience from outside the classroom, of the concepts and skills she was teaching, for example, measurement of different kinds of quantities: time, length and temperature. In these instances, the learners revealed not just what they knew, but also who they were. This relationship legitimated the learners as valued participants in the field. A discussion about analogue versus digital clocks prompted one student, Ahmed, a recently arrived refugee from Guinea-Bissau, who had fled his homeland, spent years in a refugee camp and only recently taken up formal study, to pull out a watch and launch into a story about the very personal significance of the watch because it was a very special watch to him.

> It's a present from my dad, long time ago. That's why I keep it good. I never even wear it … someday, I might give it to my son. [Ahmed]

Ann allowed time for Ahmed to tell this story, giving non-verbal cues of her respect for the significance of this artefact to the learner. She then walked to each of the other learners in the room to allow them to say something about their watch to the other members of the class. She then used the uncertainty shown by the last learner about the kind of watch he had to take the group back to the official curriculum of 'measuring time'. In a later stage of the same lesson, when she introduced the topic of measuring lengths, she turned to the learner Jim:

> Ann: Jim, you've done quite a lot of measurement, haven't you?
>
> Jim: Yeah, when I did my horticulture course, measuring garden beds and stuff.

Through each of these exchanges, Ann is building and testing her own knowledge about the learners in order to shape her practice to meet the learners' needs, because as she says in her interview:

> I have in my head exactly what I want to do and on paper I'll have a very brief flowchart just to remind me on the areas that I want to address for the lesson and I have resources prepared for that. But I know that, once the lesson starts, the students' needs will come to the surface and their interests will start to surface and I need to go with that … It's about being relevant and responsive to the students … it's about being very subtle and, I suppose, gentle with the students. I think one of the really important things that underpins my teaching is the fact that I'm teaching students and I'm not teaching the syllabus. If I come from the point of view of the students, it'll all fall into place because that's the underpinning theory that I work on. [Ann]

Ann's explanation of her teaching practice reflects what Kumaravadivelu (2003:35) says about the need for a 'continual cycle of observation, reflection, and action as a prerequisite for the development of context-sensitive pedagogic theory and practice'. The coherence between Ann's espoused theory and her practice means that her theory of a learner-centred pedagogy has practical manifestations. Her pedagogy shifts the learners, in Bourdieu's terms, to a much less subordinated position in the field and affords value to the knowledge and skills they bring to the class, while at the same time creating new possibilities for the learners. From the learners' perspectives, the classroom as a field may operate in a very different way to their external worlds where they may occupy much more subordinated positions. In interviews, the learners talked about the benefits of both the self-confidence they had gained as well as the skills and knowledge that they had learned for their future—in further study, in employment and in their everyday life. And beyond the confidence, skills and knowledge that the learners were building through this course, Ann and the students were building a safe learning space in which the learners talked about each other as

> … very good. We have a very friendly class, very nice people … I'm very comfortable. [Marie]

> My classmates are really friendly people. They are very good people. So since I come to this class, I meet all these people and are so good for me… they're my friends. When I come to school, I'm happy. [Ahmed]

At this third site, what we saw was a teacher whose practice was strongly anchored in her belief about teaching as a relational activity. She balanced what she knew her students needed to learn (exchange of cultural capital), and the ways they could learn, with the needs of the syllabus. Ann's strong grounding in her particular practice, her confidence and accumulated cultural capital allowed her to work outside of the doxa of the field; she allowed the learners a central position and did not feel inhibited by the more narrowly-defined, official curriculum.

In a field with so many variables to deal with, and where events unfold in ways that are unpredictable, it is not surprising that inexperienced teachers may feel a lack of control over their teaching practice. However, starting from her knowledge and work with the learners, Ann's practice was clearly a result of the relationship between the various capitals and habitus in the field. She was unwilling to compromise and was clear about when and where she could and should be flexible and responsive to her learners. This in turn provided possibilities of a transformative learning environment, Kumaravadivelu's third parameter, for her and her students.

Conclusion

It is axiomatic to say that the teaching field is complex and that teachers' struggles are many. This paper has raised questions and illustrated ways in which teachers shape and reshape practice in the field. The adult language, literacy and numeracy classroom is a complex field. The doxa of the field suggest that learners' goals are narrowly defined to meet employability criteria, but many teachers recognise the various other pressing learning and social needs that

learners present. In responding to the learners' needs, the teachers can risk being de-legitimated within their institutions.

We have shown that teachers are involved in a dynamic process of interaction with a range of inter-related elements. Teachers' learning is contingent on certain conditions—both material and not material. We contend that some teachers' habitus are better attuned to the relations in the field and hence are more able to acculturate to new circumstances. This leads us to the notions of resilience and robustness. While these have not been explored in depth here, they are clearly attributes that help teachers to maintain and sustain their practice, particularly in challenging contexts.

When a teacher's habitus is highly attuned to the field, they are as Priya, Peter, Jean and Ann demonstrate, able to respond contingently to student irruptions. These irruptions can shift or evolve into new dispositions, repositioning the agents in the field. This inevitably shifts practices. We have examined moments of opportunity offered through the students' agency and teachers' contingency. The practices that emerge are contingent on a particular response at a particular point in time.

We also saw teachers in this study engaged in struggles to continually democratise the field. In Bourdieu's terms, this is an attempt to redistribute resources and to address the symbolic violence underlying all teaching practice. The teachers drew not only on their own professional resources (capital) to support the learners, but as Priya explained, their social and linguistic capital and other cultural resources to connect with and give benefit to the learners. Ann actively drew out the resources that the learners brought with them and facilitated the redistribution of these resources in the classroom.

How is teachers' learning valued and/or legitimated? There is no formal legitimation of continued teacher learning through practice in the adult language, literacy and numeracy field. Currently, there

are no formal requirements for teachers in this field to participate in continuing professional learning. Teachers can only value this through their own internal legitimation and through their interactions with their peers. This study suggests that much of this is contained in their teaching and learning relationships with students. This means that the value has to be recreated or reactivated each time a new group of learners arrives. There is a struggle and a tension between the official notions of practice and their invocation of practice through relationship of particularity, practicality and possibility. It is also important to be mindful that this study focused on expert teachers who had the benefit of a more vibrant and connected field in its earlier days. What of the generation of teachers entering the field now, and in the future?

In this paper, we were able to examine what 'expert' teachers might be capable of, in terms of negotiating this complex terrain. Being involved in the field as teacher educators, we have vested interests to see the continuing emergence of these 'expert' teachers. We, too, have an interest in influencing the field.

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Investigating the influence of teacher strategies on academic self-efficacy and study behaviour of students in a tertiary bridging program

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This article describes the findings of an action research project which examined the link between academic self-efficacy and the study behaviours of students in a tertiary bridging program at a regional university in Australia. It describes the gap which exists between students' instruction in, and knowledge of, being a self-directed learner and the enacting of study behaviours which demonstrate that instruction and knowledge. The intervention employed in the study resulted in significant improvements in many areas of academic self-efficacy and study behaviours and demonstrates the effectiveness of the tertiary bridging program in this regard. The appropriateness of using traditional forms of assessment in tertiary bridging programs is discussed.

Introduction

The purpose of this study was to examine the effectiveness of an intervention designed to improve the academic self-efficacy and study behaviours of students in a compulsory academic skills course in a tertiary bridging program at a regional university. The university where the study was conducted provides an on-campus, tertiary bridging program as an alternative pathway for prospective students who do not possess the necessary academic qualifications for direct entry. The particular challenges associated with the student cohort which had been identified were a diverse age range, educational and work backgrounds and, generally, the poor quality of the students' previous educational engagement and outcomes achieved. Course data showed that approximately 26% of students who commenced the program did not submit the first assessment piece, while the majority of students who dropped out of the bridging program did so within the first six weeks after commencement.

A particular problem which appeared to be hindering these students to successfully transition into the bridging program was their lack of knowledge of what was required to be a successful student in terms of academic and study behaviours. It was considered that a short-coming existed in the bridging program, in that students were instructed in relation to the theory of academic skills, but were not adequately assisted to develop the associated academic behaviours. This study planned to identify and understand the needs of new students entering the bridging program and determine how much influence a teacher and course designcould have on their academic self-efficacy and study behaviours.

Theoretical background informing the study

Previous research (Whannell, Allen & Lynch 2010) in relation to the bridging program which is the subject of the current study examined the secondary school experiences of students up to the age of 23

years. The Whannell et al. study concluded that these students had experienced negative secondary schooling experiences, largely fostered by teachers who did not seem to care or did not provide the required support. The consequences associated with a lack of confidence and belief in academic self-efficacy which would be expected to result from these experiences are described by Pajares (1996). He observed that 'efficacy beliefs help determine how much effort people will expend on an activity, how long they will persevere when confronting obstacles, and how resilient they will prove in the face of adverse situations—the higher the sense of efficacy, the greater the effort, persistence, and resilience' (p. 544).

Phillips and Gully (1997: 792) observed that 'self-efficacy and need for achievement were positively related to goal level, which was positively related to performance in combination with ability and self-efficacy'. A sense of self-efficacy has been shown to play a major role in how students approach goals, tasks, and challenges. The concept of self-efficacy is at the centre of Bandura's social cognitive theory (Bandura 1989, 1993). According to Bandura's theory, people with high self-efficacy are more likely to view a challenge as something to be mastered, rather than something to be avoided. Those students who identify themselves as having a high level of self-efficacy also tend to aim for more complex challenges and have a firmer commitment to a final process (Bandura & Wood 1989; Wilhite 1990; Woolfolk & Margetts 2010). Students tend to pre-organise their goal setting initially by thinking about what tasks need to be accomplished. Individuals who have a 'high sense of efficacy visualise success scenarios that provide guides for performance and they cognitively rehearse good solutions to potential problems' (Baharudin & Jan 1998: 14). Students who do not perceive their level of efficacy to be high may tend to see new challenges as problems and dwell on the idea of not knowing how to handle such scenarios. Self-doubt and fear of failure are common thought processes for students who perceive themselves as possessinglow self-efficacy.

Much of the literature available on self-efficacy and the importance of such ubiquitous psychological processes for students has been gathered seemingly more as a theoretical notion rather than a teaching tool. Bandura (1999: 29) states that a‘major function of thought is to enable people to predict events and to devise ways toexercise control over those that are important to them’. This type of skill requires a multifactorial, and often abstract, level of cognitive development and the ability to think predictively. Woolfolk and Margetts (2010) refer to self-efficacy as different from other self-specific ideas such as self-concept, self-worth or self-esteem, as they argue that self-efficacy is specific to a particular task and is future orientated. Bandura (1989) described how students constantly need to plan new actions and weigh up priorities so to achieve the required outcomes. He noted that these original ideas then need to be tested, and often revised, against immediate or later consequences of their actions. This would allow students to begin building a bank of past experiences of self-efficacy and goal planning formulas.

While the literature to this point has described some of the psychological aspects involved in being a successful student, an important aspect to consider is how these psychological factors influence the actual behaviours that the student engages in. Biggs (1979: 381) described the circumstances that surround students and their study behaviours as ‘the relationship between study processes and the structural complexity of their learning’. He considered study processes under three individual elements: utilising, internalising and achieving. Each of these elements was identified as having both cognitive and affective components, suggesting that educators cannot ignore the emotional experience of students. Watkins (1982) and Biggs (1979) both described study processes as being based on the personal characteristics of the student and conclude that students notice when teachershave a level of enthusiasm and proficiency that they believe are optimum for learning. Students who were interested in the subjects also tended to be inherently highly organised, using

scheduled study periods to complete tasks on time, so that they had a deliberate process for their progress.

Purdie, Hattie and Douglas (1996) identified the characteristics of good self-regulators of learning. They noted that self-regulators are characterised as purposeful, strategic and persistent in their learning, engaged in behaviours such as self-evaluation and goal-setting, and understood the long-term relevance of outcomes. Zimmerman and Martinez Pons (1986: 625) found that '93% of the students could be correctly classified into their appropriate achievement track group through knowledge of their self-regulation practices'. The particular role of tertiary bridging programs in providing students with the 'academic literacies they need in order to transition to the next level of study as independent, critical learners—as students who know "how to learn"' (Rae 2008: 30) has also been identified in a study in New Zealand.

The concepts of Bandura (1997), Phillips and Gully (1997) and Zimmerman and Martinez Pons (1986), when merged, provide a comprehensive list of factors associated with the self-regulated learner. However, educators must distinguish between the teaching of these study behaviours and the students' actual understanding and demonstration of them. Simply because students have been instructed on the importance and techniques of goal-setting does not mean they actually know how to self-regulate or how to engage in the associated behaviours as a consequence of such instruction.

Method

Participants in the study were students in a compulsory academic skills course in the bridging program at the university where the study was conducted. A custom designed questionnaire was utilised and was completed in weeks 1 and 10 of the semester in the lecture of the compulsory academic skills course. The questionnaire comprised an initial demographic section, followed by a number of Likert-style

items offering five options ranging from strongly disagree to strongly agree. The questionnaire was completed by 246 respondents in the week 1 data collection, representing a 71% completion rate. The gender composition was 36.7% male and 63.3% female. Respondent ages ranged from 17 to 59 years, with a modal age of 18 and mean age of 26 (s = 10.1). Forty-three percent of respondents indicated that they had not finished secondary school. The demographic composition of the respondents matched the historical enrolment data. The questionnaire was completed by 102 respondents in the week 10 data collection, with 79 having completed the questionnaire on both occasions allowing for test-retest analysis.

Students were instructed in relation to the theories of academic self-efficacy and self-directed study behaviours over the first six weeks of the semester. Weekly classes in the course involved a one-hour lecture and two-hour workshop. The lectures introduced theory in relation to a range of topics intended to facilitate an improved academic self-efficacy in the students. The subsequent two-hour tutorials involved students in activities and learning experiences which required them to apply and demonstrate appropriate behaviours that reinforced the theoretical content of the lectures. Further tasks were set each week which required the students to engage further with self-directed study behaviours during their home study prior to the next lecture. The focus of each week is listed below.

Table 1: Course content coverage

Week	Content Coverage
Week 1	Challenges of transition
	Goal setting
	Importance of a supportive work/study/life balance
	Difference between study processes taught and the study behaviours which students need to demonstrate
	Previous bridging program student presentation
Week 2	Locus of control and luck
	Positive self-talk
	Motivation and commitment in the face of adverse experience
Week 3	Consolidation of weeks 1 and 2
	Exercises to consolidate previous work on motivation, goal-setting and self-talk
Weeks 4 and 5	Preparation for the first assessment task in the academic skills course
	Explanation provided to scaffold task with formal drafting completed
	Application of academic behaviours addressed in weeks 1 to 3

Results

Study participants reported the number of hours they would engage with study and paid work. The responses for both of these variables demonstrated substantial skewing from a normal distribution and the Wilcoxan Signed Rank Test was used to determine if any differences existed in the test-retest data. A statistically significant increase was demonstrated in the number of hours of weekly study ($Z = -3.37$, $p = 0.001$), indicating that the commitment of time for study had improved for students. The commitment to paid work ($Z = -0.23$, $p = 0.818$) demonstrated very little change.

The first nine Likert-style items addressed aspects relating to academic self-efficacy beliefs. Appendix 1 shows the mean result obtained for both data collections. Items 10 and 43 to 65 were included to address the study behaviours of the participants with

the results shown in Appendix 2. Both tables include the result of a Wilcoxan Signed Ranks Test with bold entries to indicate statistically significant differences.

A Principal Components Analysis was completed of the Likert-style items using direct oblimin rotation. A five-factor solution was identified with a Kaiser-Meyer-Olkin Measure of Sampling Adequacy of 0.862, which exceeds the suggested minimum of 0.611 (Tabachnick & Fidell 1996), while the Bartlett's Test of Sphericity ($p < 0.001$) indicated that the correlation matrix was suitable for factor analysis. The final five-factor solution accounted for 65.997% of the shared variance in the items making up the factors, as shown in Table 2. The response to item ratio for the final five-factor solution was 12.3:1.

Table 2: Variance accounted for by five factors

	Initial Eigenvalues		
Component	**Total**	**% of Variance**	**Cumulative %**
1	6.176	30.881	30.881
2	3.055	15.275	46.155
3	1.422	7.110	53.265
4	1.394	6.971	60.236
5	1.152	5.761	65.997

Each factor was named based upon its constituent items. Table 3 shows the factors and their respective Cronbach's alpha values, which indicate a satisfactory level of internal reliability.

Table 3: Questionnaire scales

Scale	No. of Items	Cronbach's Alpha
Social behaviours	6	0.857
Assessment confidence	3	0.791
Organisation	3	0.720
Behaviour responsibility	5	0.819
Capacity to cope	3	0.844

Summative scales were generated by assigning a value of 1 to strongly disagree up to 5 for strongly agree and then adding together each of the items identified by the Principal Components Analysis. The social behaviours scale described academic behaviours which were of a social nature and included items such as: 'I look forward to meeting my peers', 'I will be part of a study group' and 'I will communicate with teachers'. The assessment confidence scale was comprised of the items: 'Writing assignments is easy', 'I do not need much guidance when writing my assignments' and 'Examinations are easy to pass'. The organisation items described the participant's ability to organise themselves in relation to academic activities and included the items: 'I plan ahead', 'I enjoy being organised' and 'I know what it means to be organised'. The behaviour responsibility scale included a number of items which described independence and responsibility which had been addressed in the academic skills course, such as: 'I understand that the outcomes of this course are my responsibility', 'I will go to class and lectures' and 'I will look after my health'. The capacity to cope scale included three items which described the participant's ability to cope with the content of the bridging program and included: 'I should be able to keep up with the amount of work in the [bridging program]' and 'I should be able to understand the content of workshops in [the bridging program]'.

Discussion

Participants reported a high level in relation to their capacity to cope with the bridging program contentin both weeks 1 and 10, where all means are at least 4 (See Items 1–3, Appendix 1). This contrasts with the responses in relation to those items which ask them to assess a particular academic skill. In week 1, the items which require the writing of assignments ($\overline{X}_{Item\ 6}$ = 3.10, $\overline{X}_{Item\ 7}$ = 2.87), passing examinations ($\overline{X}_{Item\ 8}$ = 2.99) and doing oral presentations ($\overline{X}_{Item\ 9}$ = 2.77) demonstrated particularly low perceptions of academic ability. Statistically significant improvements are shown between the two data collections for all items related to academic self-efficacy, with the exception of Item 8 ('Examinations are easy to pass') and 9 ('Oral presentations in workshops do not concern me'). The mean result for both of these items reduced slightly between the data collections. This would suggest that, while the students' perception of their academic self-efficacy has improved as a consequence of the completion of the course, the participants still report challenges with the completion of examinations and oral presentations. Of particular interest is that a statistically significant improvement has been identified in relation to the completion of assignments. Academic writing and referencing is one particular focus of the academic skills course and the improvement in this area demonstrates positive outcomes. Debenham and May (2005: 89) describe a similar situation where the 'first milestone in an enabling program for both students and lecturers is the submission and return of the first assignments [and] it can be asserted … that the first assignment is surrounded on all sides by anxiety'.

An independent samples *t*-test was conducted to assess if any significant changes had occurred over the course of the semester for those participants who had completed both data collections, with the results shown in Table 4.

Table 4: Paired samples t-test summative scales

Scale	$\overline{X}_{week1}$	SD_{week1}	$\overline{X}_{week\ 10}$	$SD_{week\ 10}$	*t*	*p*	*df*
Social behaviours	24.72	3.045	25.26	2.90	-1.412	.162	71
Assessment confidence	8.37	1.90	9.57	2.57	-3.855	.000	75
Organisation	12.31	1.74	12.58	1.76	-1.743	.085	76
Behaviour responsibility	22.61	2.08	22.82	2.10	-.781	.438	75
Capacity to cope	12.40	1.42	13.33	1.43	-5.253	.000	77

It is apparent that the participants' belief in their capacity to cope with the curriculum in the bridging course and their confidence to complete assessments has increased significantly. Of interest is that no significant change has been demonstrated in the behaviour responsibility result. The behaviour responsibility scale has a range of possible values of 5 to 25. The very high mean result for the participants who have completed both data collections indicates that they have commenced the course possessing an understanding of the responsibilities required to be a successful student. The result for the organisation scale is just outside the cut-off for significance at the 95% level. This would indicate that the participants have also improved their organisational capacity.

Of the items which addressed academic behaviours (see Appendix 2), only five demonstrate a statistically significant improvement in the period between the two data collections: Item 10 ('I intend participating in class discussions'), Item 44 ('I believe that study techniques are individual to each student'), Item 49 ('I will study regularly and consistently'), Item 60 ('I will take up drafting options') and Item 65 ('I will complete my assessment on time'). A number of items have demonstrated marked improvements but are just outside the cut-off for significance at the 95% confidence level, which would be expected to change given a larger dataset: Item 45 ('I enjoy being

organised'), Item 50 ('I have organised a study, work, life balance'), Item 55 ('I will be active in class'), Item 57 ('I know I need to be an independent learner') and Item 61 ('I have organised a quiet study area').

While there is clear evidence for a significant improvement in the participants' perceived academic self-efficacy, the translation of this into academic behaviours is not as clear. The significant improvements in academic behaviour appear to involve personal activities relating to study and participation. However, there have been no significant improvements in aspects relating to those behaviours associated with peers and academic staff, with no significant change in Item 56 ('I look forward to becoming involved in…campus activities'), Item 62 ('I will communicate with teachers'), Item 63 ('I look forward to meeting my peers') and Item 64 ('I will be part of a study group'). The paired samples t-test result for the social behaviours summated scale ($\overline{X}_{Week\ 1}$ = 24.72, $SD_{Week\ 1}$ = 3.045, $\overline{X}_{Week\ 10}$ = 25.26, $SD_{Week\ 10}$ = 2.9, $t(72) = -1.412$, $p = 0.162$) also demonstrated no significant change. Considering the importance that social and academic integration is proposed to play in supporting students in tertiary study (Cabrera, Nora & Castaneda 1993; Evans 2000; Tinto 1975), it would appear that this area may need development within the bridging program.

The data from the questionnaires were coded to include whether the participant had completed the bridging program. Mann-Whitney U tests were conducted to identify any differences in the response patterns for single, Likert-style items based upon program completion. This approach was taken in preference to the independent samples *t*-test due to the ordinal nature of a single, Likert-style item. Participants who had dropped out of the program demonstrated a lower response pattern for Item 1 ('I should be able to keep up with the amount of work in the [bridging program]') (U = 4411.5, $N_{Dropped\ Out}$ = 74, $N_{Completed}$ = 140, $p = 0.041$), indicating that

these participants had a lower perception of their ability to cope with the amount of work involved in the curriculum. Tests of the items relating to study behaviours identified a number of significant differences in response patterns. The items which demonstrate a statistically significant difference may be divided into two groups: those relating to academic organisation and those relating to course expectations and commitment. Table 5 lists those items relating to organisation which demonstrate substantial differences.

Table 5: Organisation-related item differences based on program completion

No.	Item text	Mann-Whitney U result
43	I plan ahead	U=4454.4, p=0.055
46	I know what it means to be organised	U=4393, p=0.041
49	I will study regularly and consistently	U=4377.5, p=0.031
50	I have organised a study, work, life balance	U=4111, p=0.006
61	I have organised a quiet study area	U=4008, p=0.015

Table 6 lists those items relating to course expectations and commitment.

Table 6: Course expectations and commitment item differences based on course completion

No.	Item text	Mann-Whitney U result
58	I have high expectations of myself	U=4334, p=0.030
59	I have high expectations of my outcomes of this course	U=4070, p=0.004
66	I am committed to my study	U=3722, p=0.001
67	I am excited to begin the new challenge of tertiary study	U=4136.5, p=0.026

These results indicate that the participants who leave the bridging program perceived themselves as possessing poorer organisational capacities and have lower expectations and commitment to their tertiary academic endeavours.

An independent samples *t*-test was conducted of the summated scales for the week 1 data collection based upon program completion with the results shown in Table 7.

Table 7: Independent samples t-test questionnaire scales

Scale	$\overline{X}_{Complete}$	$S_{Complete}$	$\overline{X}_{Atrtit}$	S_{Attrit}	*t*	*p*	*df*
Social behaviours	24.64	3.165	24.26	3.165	-.826	.410	207
Assessment confidence	8.79	2.04	9.04	1.95	.857	.393	212
Organisation	12.38	1.73	11.82	1.75	-2.227	.027	211
Behaviour responsibility	22.62	2.01	22.03	2.10	-1.971	.050	207
Capacity to cope	12.76	1.56	12.32	1.44	-2.060	.041	159

Similar high levels are recorded for the social behaviours required to support academic study and confidence in being able to cope with assessment for both groups, irrespective of whether the individual dropped out of the bridging program or not. However, significant differences are seen for the level of organisation, behaviour responsibility and capacity to cope with the curriculum.

The data were also coded to include the mean result obtained on the first assessment tasks. A correlational analysis was then conducted of the data from the week 1 data collection to examine the associations between variables. Some of the variables involved, for example, age, hours of study and hours of weekly work, demonstrated substantial deviation from a normal distribution (using Spearman's rank order correlation coefficient). The correlation matrix is shown in Table 8. Sample sizes ranged from 213 to 243 for measures 1 to 8, and 155 to

168 for measure 9. The lower sample sizes in measures 8 and 9 were due to the non-reporting of hours of study and failure to complete the first assessment task.

Table 8: Initial data collection Spearman's rank order correlation matrix

Measure	1	2	3	4	5	6	7	8	9
1. Social behaviours	-								
2. Assessment confidence	-.026	-							
3. Organisation	**.358****	.098	-						
4. Behaviour responsibility	**.602****	.070	**.435****	-					
5. Capacity to cope	**.219****	**.388****	**.297****	**.361****	-				
6. Age	.037	**-.204****	-.037	-.099	**-.146***	-			
7. Hoursstudy	**.150***	-.126	.106	.084	.056	**.278****	-		
8. Hours work	**.143***	-.057	.016	.045	.019	-.080	**-.149***	-	
9. First task achievement	.020	**-.181***	.056	-.015	-.100	**.484****	**.180***	-.042	-

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

The correlations indicate strong associations for the behaviour responsibility scale. The correlations indicated that participants who entered the bridging program with a high level of responsibility for their own academic behaviours would be expected to be more organised (ρ = 0.435), demonstrate a higher level of social interaction with staff and peers to support their academic endeavours (ρ = 0.602) and possess a higher perceived capacity to cope with the curriculum (ρ = 0.361). However, it is also the case that none of these characteristics are associated to any degree with the quality of

achievement on the first assessment task. Confidence to complete assessment is actually negatively associated with the achievement result on the first assessment tasks (ρ = 0.-0.181).

The age of the participant appears as the primary predictor of achievement on the first assessment tasks (ρ = 0.484). While age and the level of achievement were positively associated, age was negatively associated with assessment confidence (ρ = -0.204) and the perception of the capacity to cope with the curriculum (ρ = -0.146). These associations indicate that older participants actually achieved better than younger participants, but have a lower confidence in their ability to do so. This finding supports that of Krause, Hartley, James and McInnis (2005). Age is also positively associated with the hours of study the participant intended to complete (ρ = 0.278).

The lack of significant positive associations between the personal characteristics of the participants, particularly the level of assessment confidence and the capacity to cope with the curriculum, suggests that the participants' attitudes upon entry in the bridging program in relation to their academic capacity do not reflect how well they will perform academically in the early weeks of the semester.

The correlation matrix for the week 10 data collection is shown as Table 9. Sample sizes ranged from 68 to 77.

Table 9: Final data collection Spearman's rank order correlation matrix

Measure	1	2	3	4	5	6	7	8	9
1. Social behaviours	-								
2. Assessment confidence	.153	-							
3. Organisation	**.599****	.088	-						
4. Behaviour responsibility	**.610****	.058	**.579****	-					
5. Capacity to cope	**.398****	**.419****	**.439****	**.372****	-				
6. Age	.130	-.114	.051	.061	-.097	-			
7. Hours study	**.305***	-.178	.192	.221	.053	**.381****	-		
8. Hours work	.106	-.102	-.039	.061	-.048	-.069	-.009	-	
9. Overall achievement	**.260***	.140	.220	**.253***	.211	**.407****	**.264***	.036	-

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

It is apparent that academic behaviours and attitudes are much more closely aligned to the quality of academic achievement by this time. The overall academic achievement is now positively associated at a statistically significant level with social behaviours ($\rho = 0.260$) and behaviour responsibility ($\rho = 0.253$). The levels of association with organisation ($\rho = 0.220$, $\rho = 0.059$) and capacity to cope with the curriculum ($\rho = 0.211$, $\rho = 0.074$) are just outside the cut-off for significance at the 95% confidence level. The association between achievement and age was still at a similar level to that of the initial data collection; however, the association of achievement with the weekly hours of study had increased substantially ($\rho = 0.264$). Older students were still reporting higher levels of weekly study at the week 10 data collection ($\rho = 0.381$). It is apparent that older students are still studying and achieving at higher levels ($\rho = 0.407$); however, the negative associations of age with assessment confidence and the capacity to cope with the curriculum which were present at week 1 are no longer evident.

The strength of the associations between the various academic scales has also shown a general increase to quite high levels, with behaviour responsibility now correlated with social behaviours ($\rho = 0.610$) and organisation ($\rho = 0.579$). Likewise, social behaviours and organisation are highly correlated ($\rho = 0.599$).

Conclusions

A major finding of this study is the low level of confidence that the participants demonstrated in relation to their capacity to succeed in assessment, particularly those involving oral presentations and examinations. Even though the participants reported significant improvements in perceived academic self-efficacy over the course of the bridging program in many areas, the confidence to perform in examinations and oral presentations demonstrated no improvement at all. The strong correlation between achievement and age which was

evident at both data collections also indicates that this is a particular problem for younger participants.

It was identified that the participants who left the bridging program possessed lower levels of organisational capacity and self-expectation and commitment to completion. However, it was also demonstrated that the participants' view of their academic capabilities in week 1 were not indicative of their actual achievement during the early weeks of the program. The positive association between the participants' attitudes towards assessment, their capacity to cope with the program content and their academic behaviours only appeared at the week 10 data collection. This lack of awareness on the part of the participants should be made known to current and potential bridging program students as an aid in communicating that their perceptions of their academic capacities in the early transitional period of the program may not be accurate and must be given time to develop.

This study has provided clear evidence to support the stance that the intervention employed during the first six weeks of the semester achieved significant improvements in both the level of academic self-efficacy and study behaviours of the participants of a bridging program. However, two areas are suggested for further study. Firstly, the role of assessment during the early transitional period of tertiary bridging programs is considered to be very problematic. It is considered that traditional forms of assessment, particularly examinations, may be inappropriate during the early stages of these programs and alternative forms of assessment may be warranted. The views expressed by Debenham and May (2005) relating to the academic silence with respect to teaching within tertiary bridging programs, and assessment in particular, are still apparent in this regard. Secondly, younger tertiary bridging students with negative previous experience of educational environments and who are possessed of lower levels of self-expectation, commitment and academic skills appear to be at greater risk of attrition. The

techniques which may be employed to keep these students engaged for a sufficient period to allow their skills and commitment to develop to a point that will support them in their tertiary endeavours requires further research.

Appendix 1: Academic self-efficacy related items

No.	Item Text	Collection 1 $\overline{X}$	Collection 1 *s*	Collection 1 *Nn*	Collection 2 $\overline{X}$	Collection 2 *s*	Collection 2 *N*	*Z*	*p*
1	**I should be able to keep up with the amount of work in the [bridging program]**	**4.00**	**0.623**	**246**	**4.49**	**0.553**	**77**	**-3.904**	**.000**
2	**I should be able to understand the workbooks which are used in the [bridging program]**	**4.23**	**0.585**	**246**	**4.43**	**0.498**	**77**	**-3.667**	**.000**
3	**I should understand the content of workshops offered in [bridging program]**	**4.18**	**0.595**	**246**	**4.43**	**0.572**	**77**	**-3.646**	**.000**
4	**I believe that note-taking in lectures will be easy to do**	**3.75**	**0.761**	**246**	**3.88**	**0.743**	**77**	**-2.725**	**.006**

No.	Item Text	Collection 1 $\overline{X}$	*s*	*Nn*	Collection 2 $\overline{X}$	*s*	*N*	*Z*	*p*
5	**I find it easy to integrate and extend on the ideas of other people**	**3.76**	**0.769**	**246**	**3.91**	**0.653**	**77**	**-3.793**	**.000**
6	**Writing assignments is easy**	**3.10**	**0.794**	**246**	**3.36**	**0.962**	**76**	**-2.834**	**.000**
7	**I do not need much guidance when writing my assignments**	**2.87**	**0.850**	**246**	**3.22**	**1.021**	77	**-4.284**	**.000**
8	Examinations are easy to pass	2.99	0.808	246	2.97	0.986	75	-1.575	.115
9	Oral presentations in workshops do not concern me	2.77	1.215	246	2.69	1.259	77	-1.127	.260

Appendix 2: Study behaviour and attitude items

		Collection 1			Collection 2				
No.	**Item text**	$\overline{X}$	*s*	*Nn*	$\overline{X}$	*s*	*N*	*Z*	*p*
10	**I intend participating in class discussions**	**4.06**	**0.674**	**246**	**4.26**	**0.616**	**77**	**-2.468**	**.014**
43	I plan ahead	3.97	0.859	246	4.12	0.760	77	-.806	.420
44	**I believe that study techniques are individual to each student**	**4.33**	**0.559**	**245**	**4.45**	**0.550**	**78**	**-2.874**	**.004**
45	I enjoy being organised	4.14	0.670	246	4.28	0.579	78	-1.671	.095
46	I know what it means to be organised	4.11	0.684	245	4.15	0.740	78	-.906	.365
47	I am happy to ask for help	4.18	0.664	246	4.18	0.734	78	-.147	.883
48	I intend on reading my course outline closely	4.30	0.657	246	4.29	0.686	78	-.784	.433
49	**I will study regularly and consistently**	**4.26**	**0.611**	**246**	**4.19**	**0.604**	**78**	**-2.274**	**.023**
50	I have organised a study, work, life balance	3.81	0.838	246	3.96	0.797	78	-1.759	.079
52	I will go to class and lectures	4.57	0.520	246	4.58	0.523	78	-.686	.493
53	I understand that the outcomes of this course are my responsibility	4.63	0.492	246	4.62	0.515	78	-1.061	.289

		Collection 1			Collection 2				
No.	**Item text**	$\overline{X}$	*s*	*Nn*	$\overline{X}$	*s*	*N*	*Z*	*p*
54	I will look after my health	4.48	0.562	246	4.47	0.528	78	-.539	.590
55	I will be active in class	4.31	0.609	246	4.49	0.528	78	-1.855	.064
56	I look forward to becoming involved in the...campus activities	3.98	0.772	246	4.03	0.755	78	-.510	.610
57	I know I need to be an independent learner	4.37	0.563	246	4.53	0.552	78	-1.800	.072
60	**I will take up drafting options**	**3.82**	**0.750**	**244**	**4.24**	**0.759**	**78**	**-4.336**	**.000**
61	I have organised a quiet study area	3.90	0.898	241	4.17	0.834	77	-1.715	.086
62	I will communicate with teachers	4.24	0.605	240	4.40	0.494	72	-1.446	.148
63	I look forward to meeting my peers	4.14	0.697	241	4.29	0.666	77	-.870	.384
64	I will be part of a study group	3.76	0.823	241	3.97	0.858	77	-1.420	.156
65	**I will complete my assessment on time**	**4.42**	**0.573**	**241**	**4.6**	**0.544**	**77**	**-2.043**	**.041**

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Educational and cultural challenges of bicultural adult immigrant and refugee students in Australia

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We report the relationship between the cultural and educational challenges of immigrant adult students. Thirty-five recently arrived adults in a bridging course completed a self-administered, online computer interview to rate their exploration and commitment to their heritage and Australian cultures, and express their experiences with their own challenges (size and effect of challenges, people who helped them deal with their challenges). Students' biggest challenges differed in relation to their bicultural identities (their cultural identities for both heritage and Australian cultures): money and school tasks for the more bi-culturally committed; English and personal skills for the less. Students who were more bi-culturally committed appeared to experience some advantages in their experiences with their challenges. How newly arrived immigrants develop their bicultural identities can have implications for how they address their challenges, and find a place for themselves within the new culture and their heritage culture.

Introduction

Adult immigrant and refugee students encounter many challenges as they start their education in Australia. Some newly arrived adults find their challenges overwhelming and drop out of classes. Others handle the same challenges with resilience and success (Centre for Multicultural Youth 2008). The challenges of immigrant newcomers include difficulties associated with entry into a new culture and difficulties directly associated with their educational experiences. In a multicultural environment, cultural challenges often revolve around finding a place and a personal identity in both heritage and Australian cultures (Lawrence, Brooker & Goodnow, in press). Educational challenges for immigrants often revolve around developing the English and learning skills needed in adult education. These difficulties are faced by migrants (Townsend 2008), refugees (Victorian Foundation for Survivors of Torture 2007), and international students (Ang & Liamputtong 2008). Little is known, however, about how these newly arrived adult students actually handle their challenges, and less is known about how their cultural and educational challenges may be related to each other.

Our aims were to document the challenges encountered by immigrant and refugee adults early in their Australian education. We focused on the prevalence and size of challenges these students experienced when studying in a specialised bridging program, and on the students' approaches to handling their challenges. Students' approaches involved their feelings and activities at school, and their perception of the supporters who could help. We also focused on the students' development of '*bi*cultural identities' as part of their acculturation into Australian society. We could then ask how immigrant students' development of a bicultural identity related to their educationally-oriented challenges.

Encountering challenges

A challenge is a specific type of difficulty (e.g. a situation, an elusive skill, a social conflict) that arises in a person's life, sometimes uninvited. The challenge demands that the person engage with the specific difficulty to try to gain mastery over it (Lazarus & Folkman 1984). Several researchers have made distinctions between difficulties that are seen as 'challenges' in this sense of invitation to engagement, and those difficulties that are seen as 'threats' (Lazarus & Folkman 1984; Williams, Cumming & Balanos 2010). The key to the difference lies in the person's approach in either attempting to master the difficulty or in retreating from its threat. According to Williams and colleagues, people who perceive a difficult situation as a challenge and work on it actually fare better than people who see the same difficulty as threatening.

Although challenges are difficulties, they are associated with actual or potential rewards and gains. This is particularly the case when challenges are seen as small rather than as large and overwhelming. Small challenges are easier to overcome, involve less risk, and offer safer opportunities to practise new skills or to access new resources (Azmitia & Cooper 2001; Fergus & Zimmerman 2005; Lazarus & Folkman 1984).

People do not always handle their challenges solo. Teachers and colleagues can fill motivating and supportive roles for students. Cooper (1999), for instance, described how some ethnic minority students used social support to help them succeed. Educationally successful students reported feeling driven to either prove gatekeepers wrong (e.g. teachers or community members who believed they would fail), or to succeed on behalf of their supporters (e.g. teachers and supportive family members). Social networks, whether provocative or supportive, aided them in their successful activities.

Achieving bicultural identity

A *bi*cultural identity (as opposed to a *mono*cultural identity; Lawrence et al., in press) is a person's sense of self in relation to more than one culture, in an environment where multiple cultures co-exist. Immigrants and refugees, for instance, live their daily lives in interaction with their ethnic, heritage culture and in interaction with the mainstream Australian culture.

Finding a place (a 'cultural home'; Lawrence, Benedikt & Valsiner 1992) within both cultures allows newcomers to adapt to their new surroundings, while maintaining their previous cultural values and resources as part of their acculturation process (Laosa 1999; Schwartz, Unger, Zamboanga & Szapocznik 2010). To date, researchers have tended to focus on people's identification with their ethnic culture. Schwartz et al. (2010), however, recently pointed to the importance of also developing an identity with the mainstream national culture.

Achieving a strong identity in one's heritage culture can help people to develop greater inter-cultural awareness, proactive coping with discrimination, and improved psychological well-being (Phinney, Jacoby & Silva 2007; Rivas-Drake & Hughes 2008; Umaña-Taylor, Vagas-Chanes, Garcia & Gonzales-Backen 2008). To describe how people develop that cultural identity, Phinney (1989) drew on Erikson's (1968) concept of ego-identity and Marcia's (1993) processes of exploration and commitment. Phinney developed and revised a Multi-group Ethnic Identity Measure (MEIM-R; Phinney 1989; Phinney & Ong 2007) to assess people's cultural identities in terms of their exploration and commitment activities. These activities can be experienced in different ways. A person may have, for example, no experience of either exploring or committing to a culture, or s/he may explore what the culture involves without making any commitment, or s/he may both explore and commit to that culture.

Phinney (1989) saw these exploring and committing activities as appearing and progressing in a particular order. She argued that ethnic minority adolescents who had achieved their ethnic identity had first explored their ethnicity and then committed to their ethnic culture. Syed (2010), however, found that progression patterns were far more complex, especially in college students.

The study of bicultural identity development is also more complex than asking only about a person's ethnic identity. In a multicultural environment, most people do not have the luxury of excluding one or the other culture from their consciousness. We took the more realistic approach of asking immigrant adults how they were exploring and committing to both their heritage and Australian cultures. Developing some form of identification with the mainstream culture as well as their heritage culture can ease the strains and conflicts of immigrants' transitions (Fuligni, Witgow & Garcia 2005; Ogbu 2004).

Challenges for immigrant and refugee adults in Australian education

Like all adults in Australia, immigrant students must achieve a certain level of education if they are to move on to sustainable and rewarding employment. Unlike other adult students, however, immigrants are not typically continuing their education or 'returning to school'. Many are starting their adult education, or restarting it after disruption. Most refugees and some immigrants arrive with limited English. Some have formal qualifications that are not recognised by Australian authorities, but others have no experience of formal education (CMY 2008).

Some challenges for newly arriving students relate directly to their cultural experiences, for example, dealing with racism and discrimination (Ang & Liamputtong 2008; Mestheneos & Ionnidi 2002). Other challenges relate indirectly to their cultural experiences, for example, poor housing in low socio-economic areas, limited transport and crowded medical facilities (Earnest, Housen, & Gillieat

2007). Immigrant and refugee adults often feel 'shut-out' from either their ethnic or the wider community as they struggle to build social networks and support systems that will help them in their new environments (McMaster 2007; Townsend 2008).

The challenges that newly arrived adults face can have a serious impact on their educational experiences. Students living in poverty often cannot afford fees or materials, and thus miss out on services that could otherwise support their study efforts (e.g. access to computers, libraries, public transport). Those with a poor grasp of English, or with serious gaps in their schooling, may find barriers to develop new and supportive friendships, miss important social nuances in class, and experience difficulty in completing assignments to the standards of their class peers (Sidhu & Taylor 2007; Suarez-Orozco, Gaytan et al. 2010).

Students who find ways of dealing with their challenges productively are better placed to progress through their early educational experiences into college or university. They are also better positioned to find meaningful places for themselves within the new culture. To provide adequate services and support, educators and counsellors need to know the challenges faced by adult immigrant students early in Australian education, and how their cultural and educational challenges may relate to each other.

The present study

We asked students about their explorations and commitments in relation to both their heritage and Australian cultures, about the type and size of any challenges they encountered early in their Australian education, and about their approaches to these challenges (in their feelings and activities at school and their social support). Our approach involved using a self-administered, online computer interview that gave students control and privacy to reflect and report

on their challenging experiences within a supportive, well-informed research environment (Lawrence, Dodds, & Brooker, 2010).

Methodology

Participants

Participants were 35 students (19 women, 16 men) attending a college for recently arrived immigrants in a suburb of Adelaide. The college caters for the specific needs of adult immigrant students who are beginning their education in Australia.

The mean age for the 35 students was 23.5 years (*SD* = 6.9). Only three were older than 30 years. They represented 60% of 58 students invited to participate at class sessions. Non-participants included students absent on the interview day or declining to participate (19), and four who did not complete the online interviews. They came from regions with recent histories of substantial conflict and war: Central and East Africa (14), South Asia (11) and the Middle East (10). Most (32) had lived in Australia for less than five years. Three older students had been in Australia for more than nine years, and their presence in the classes indicated that they had not yet been able to move on in their education or employment. Most (31) had been to high school, two had completed university degrees and 14 had never completed high school studies. Of the four who had only experienced primary school, three had not completed it.

Procedures and materials

Students worked through the online computer interview in class sessions at the college. The interview was programmed to ask initial and follow-up questions, and to give participants a variety of activities (ratings, map construction, typed in open-ended comments). Two trained researchers and one or more teachers were present to assist and debrief students. Assistance included explaining questions and typing answers if students requested help.

Cultural identities. After entering demographic details, students rated how much they agreed with MEIM-R items (0 = 'strongly disagree', to 4 = 'strongly agree'; Phinney and Ong 2007). The MEIM-R contains three items about a person's cultural exploration (e.g. 'I have spent time trying to find out more about my cultural group') and three items about a person's cultural commitment (e.g. 'I feel a strong sense of attachment to my cultural group'). MEIM-R items for Australian and heritage cultures are listed in Table 1.

Challenges. Students next constructed concept maps showing in diagrammatic form the type and size of challenges they experienced, with their emphases (Novak & Cañas 2006). We provided 11 potential challenges and allowed students to generate others. The 11 challenges were developed in pilot studies with immigrant and local students. They were: English language, money, family, health, skills, time management, discrimination, other peoples' expectations, culture, school tasks and school rules. Students located any of these challenges in one of two labelled spaces: an inner central space where they could place their big challenges, and an outside, peripheral space where students could place their small challenges.

Approaches to challenges. Students then typed their open-ended responses to two questions about their approaches to their biggest challenges: 'How do your challenges make you feel about school?' and 'How do your challenges affect what you do at school?' Two researchers independently coded each open-ended response as either 'positive', 'negative' or 'neutral'. Inter-rater agreement was high, with complete agreement on 83% of 35 comments about feelings (Kappa = .68), and 91% of 35 comments about activities (Kappa = .86). We also asked students 'Does anyone help you with your challenges?' and provided checklists of family (e.g. parents) and non-family people (e.g. teachers) for them to tick as their helpers.

Findings

Students' bicultural identities

The students were developing bicultural identities in their explorations of their heritage and Australian cultures. They also were making commitments to one or both cultures, but these commitments involved greater variability. The group had a higher mean rating of cultural identity for their heritage (3.04, $SD = 0.54$) than for the Australian culture (2.74, $SD = 0.60$), $t\,(33) = 2.82$, $p = .01$. The two cultural identities, however, correlated reasonably, $r = .40$, $p = .02$.

Two subgroups with different patterns of cultural identity

Two subgroups emerged from our analyses with different patterns of bicultural identity in their ratings of MEIM-R items. Subgroup differences were particularly related to their commitments to one or both cultures. The subgroups, however, differed only in their ratings of their bicultural identities. They did not differ in age, gender, cultural group, length of time spent in Australia, total education prior to Australia, or college course.

One subgroup of 22 students we called Biculturally Exploring and Committing, and the other group of 12, Biculturally Exploring without Committing. Table 1 shows the mean ratings of the six items that these subgroups gave to each item for each culture, together with the subgroup overall mean ratings.

Table 1: Mean ethnic and Australian cultural identity scores for two subgroups of 22 Exploring and Committing and 12 Exploring without Committing students

	Group mean rating (standard deviation)	
MEIM items	Biculturally Exploring and Committing	Biculturally Exploring without Committing
Commitment items:		
I understand what membership of ... means to me		
• my ethnic culture	3.41 (0.50)	2.58 (0.79)
• the Australian culture	3.05 (0.72)	2.17 (0.94)
I feel a strong sense of attachment to:		
• my ethnic culture	3.32 (0.65)	2.42 (0.90)
• the Australian culture	3.18 (0.40)	2.00 (0.85)
I have a strong sense of belonging to:		
• my ethnic culture	3.23 (0.75)	2.67 (0.78)
• the Australian culture	3.00 (0.87)	1.50 (0.80)
Overall commitment score:		
• my ethnic culture	3.32 (0.51)	2.56 (0.43)
• the Australian culture	3.08 (0.46)	1.89 (0.61)
Exploration items:		
I have often done things that will help me understand:		
• my ethnic culture	3.27 (0.63)	2.75 (0.75)
• the Australian culture	3.18 (0.59)	2.33 (0.78)
I have spent time trying to find out more about:		
• my ethnic culture	3.14 (0.83)	2.92 (0.79)
• the Australian culture	2.82 (1.01)	2.75 (0.62)
I have often talked to other people to learn more about:		
• my ethnic culture	3.09 (0.75)	2.75 (0.87)
• the Australian culture	2.82 (1.01)	2.75 (0.97)
Overall exploration score:		
• my ethnic culture	3.17 (0.62)	2.81 (0.44)
• the Australian culture	2.94 (0.61)	2.61 (0.68)
Overall cultural identity score:		
• my ethnic culture	3.24 (0.53)	2.68 (0.36)
• the Australian culture	3.01 (0.47)	2.25 (0.49)

As a group, Biculturally Exploring and Committing students were exploring and committing to both their heritage and Australian cultures. They gave high ratings (3 = 'agree' or 4 = 'strongly agree') to all exploration and commitment items for each culture. Students in the Biculturally Exploring without Committing group were exploring both cultures, with ratings generally lower than those of the Biculturally Exploring and Committing group. They also gave particularly low ratings to commitment items. As a group, they did not have a sense of belonging to the Australian culture, and did not understand what 'being Australian' meant for them.

Students' experiences of their challenges

The students identified between one and 13 challenges by placing them in the central or peripheral spaces of their concept maps. There was a mean of 7.46 challenges for the sample (*SD* = 3.23), with similar mean numbers for big challenges (3.88, *SD* = 2.73) and small challenges (3.65, *SD* = 2.16). Table 2 shows the number of students who located each of 11 challenges as big (in the central area) and small (in the peripheral area) in their concept maps.

Table 2: Number of students placing 11 challenges as 'big', 'small' or not challenges

Challenges	**Students' location of challenges in concept maps**		
	'Big' challenges (central area)	'Small' challenges (peripheral area)	Challenges not included in map
English	23	11	1
Money	19	11	5
Personal skills	15	15	5
School tasks	12	8	15
Family	11	12	12
Health	10	10	15
Time management	9	14	12
Discrimination	8	12	15
School rules	8	6	21
Culture	7	16	12
Other people's expectations	7	12	16

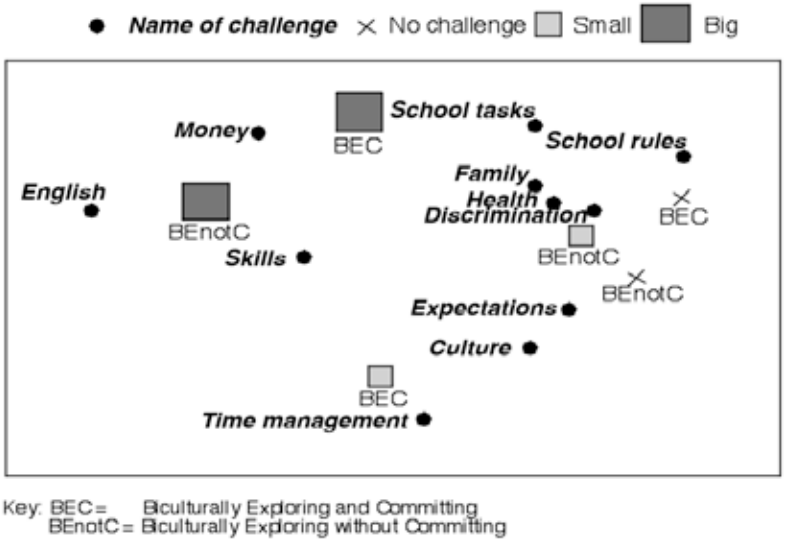
English was the most commonly identified challenge, with 97% of the sample putting it into their concepts maps, and 68% (23) identifying it as a big challenge. School rules was the least commonly identified challenge (for 40%), but it was a big challenge for eight. Culture was a challenge for 66%, but a big challenge for seven of the students.

Subgroups' different patterns of challenges

We used a Correspondence Analysis to show how the two groups described the size of the 11 challenges ('big', 'small' or 'not a challenge'), χ^2 (50, 374) = 76.25, p = .01. This form of analysis

yields a two-dimensional diagram (shown in Figure 1) of the relative association of the two groups with different size challenges.

Figure 1: Location of 11 challenges as 'big', 'small' and 'not' challenges, by Exploring and Committing students (BEC) and Exploring without Committing students (BEnotC)



The Biculturally Exploring and Committing group was more closely associated with big challenges of money and school tasks, and small challenges of time management and to a less extent, culture. School rules, discrimination, health, and family were not challenges for this group.

In contrast, the Biculturally Exploring without Committing group was more closely associated with big challenges of English language and their own skills, and small challenges of discrimination, health and family. Culture and other people's expectations were not challenges for this group.

Students' approaches to their challenges

The 35 students varied in their approaches to their challenges. More made positive comments about how their challenges affected their feelings about school. Twenty students made positive comments (e.g. 'I want to go to school and I am very happy at school, I think I can develop my skills here'). Eight made neutral comments (e.g. 'I'm not feeling bad … this challenge don't affect my study'), and seven made negative comments (e.g. 'They make me feel like I want to drop out'). Similarly, when describing how their challenges affected their activities at school, more (17) made positive comments (e.g. 'I work hard all work and I manage my time') than neutral comments (5) (e.g. 'It doesn't affect too much my school work'). However, 13 made negative comments (e.g. 'It's hard to write English … I have trouble with my homework'; 'They make it hard to get to class sometimes').

Subgroups' different feelings about their challenges

More Biculturally Exploring and Committing than Biculturally Exploring without Committing students made positive comments about their feelings (73% > 33%), and fewer made negative comments (9% < 42%), χ^2 (2, 34) = 6.23, p = .04. There was a similar trend for students' comments about their activities. More Biculturally Exploring and Committing than Biculturally Exploring without Committing students tended to make positive comments about their activities (82% < 18%), and fewer negative comments (46% < 54%), although this trend was not statistically significant.

People who help students with their challenges

When asked if anyone helped them with their challenges, 32 students answered 'Yes', with the three 'No' responses accompanied by explanations of personal management styles (e.g. 'I have to manage time. When I have an appointment I have to do it after school'). The 32 students identified up to 10 people who helped them (M = 4.59, SD = 1.68). Most (97%) identified teachers, followed by friends and

classmates (81%), brothers and sisters (56%), school counsellors and other support workers (53%), parents (41%), extended family (41%), romantic partners (31%) and children (6%).

Subgroups' different helpers

More Biculturally Exploring and Committing than Biculturally Exploring without Committing students identified school counsellors as helpers (71% > 18%), χ^2 (1, 32) = 8.22, p = .00, but marginally fewer Biculturally Exploring and Committing students identified extended family members (29% < 64%), χ^2 (1, 32) = 3.68, p = .06. These differences were related only to the students' bicultural identities, and not to the number, type or size of their challenges.

Discussion

Our aims were to examine the education-related challenges experienced by newly arrived adult students and their approaches to these challenges, and to analyse how these challenges related to their development of bicultural identities. We were interested in the type of challenges these students encountered, and the relative emphases students gave to these challenges. Developing a bicultural approach to life in a new country can help immigrant students educationally (Fuligni, et al. 2005; Phinney 2006). The development of a bicultural identity, however, also presents immigrants and refugees with its own particular challenges in, for example, handling discrimination and other people's expectations (Ogbu 2004; Oppedal, Roysamb & Sam 2006). As far as we can tell, the specific relationship between educational and cultural attainments and challenges has not been analysed systematically.

Our findings show that these recently arrived adult students were dealing with challenges related to developing bicultural identities in different ways. Their acculturation experiences had the dual focus on their cultural roots and their new, mainstream culture that Schwartz et al. (2010) saw as the normal immigrant experience. They were in

the process of finding places for themselves in two cultures, at least to the extent of exploring them. Some students also were already committing to both the Australian and heritage cultures. Others were exploring what both cultures meant to them, but were unwilling or unable to commit themselves as strongly to either one or both.

According to Phinney (1989), commitment represents an advance over exploration in the development of an achieved cultural identity. It would be tempting to argue that the students who were both exploring and committing (BEC) were more advanced in their acculturation experiences, as Phinney argued for adolescents' ethnic identities. Certainly, it is plausible to see exploration as easier to achieve than commitment, although Syed's (2010) data do not support a straightforward progression. It is too early to make strong inferences about the processes of bicultural identity development for these or other adult students.

Our findings point to the students' current cultural experiences, not to the order in which exploration and commitment are achieved in relation to two cultures simultaneously. We cannot for example, know whether students who explored and committed to both cultures were previously only exploring; or whether students who were only exploring would go on to commit to one or both cultures; or whether the one student who said he belonged only to one culture—the Australian culture—will continue to turn away from his heritage culture. We can say, however, that newly arrived adults' bicultural experiences vary, with at least two orientations: those who commit to both Australian and heritage cultures, and those who do not commit to one or both. Our findings add to the study of acculturation and biculturalism by pointing to this variability in adults' bicultural development, and also by showing how different bicultural orientations are related to educational experiences.

Asking students to represent their educationally-related challenges in a concept map placed minimal verbal demands on them and was

attractive and easy to use. The task gave students a private, engaging and non-judgmental research environment in which to reflect upon and express their experiences (Lawrence, Dodds & Brooker 2010). It was appropriate for eliciting sensitive information (Bachman 2003; van de Wijgert, Padian, Shiboski & Turner 2000). It yielded distinctive patterns among the challenges of the two biculturally-oriented groups. These groups also reported different ways of responding to their challenges.

The finding that English was the most consistent and largest challenge realistically reflects the importance of language study as a significant gateway to academic and vocational opportunities. Similarly, the lack of emphasis on school rules reflects the efforts of the teaching staff to encourage their students to take control of their own educational experiences and to reduce their adherence to typical school rules. These were adult students, and the school's emphasis on self-managed learning was a part of the students' orientation to Australian adult education.

As well as representing the realities of these students' experiences, the concept map allowed us to relate broader acculturation concepts to their everyday concerns. Previous research pointed to immigrants' difficulties with cultural conflict, isolation from other group members and strains on time and energy (Ogbu 2004; Oppedal et al. 2006). These acculturation issues were represented in the concept mapping task by individual concepts of culture, discrimination and time management. They were among the least emphasised challenges for the students, typically being identified either as small or no challenges. The immediate difficulties of educational and everyday experiences seemed to loom larger than the broader acculturation issues. It appears that these adults thought they could handle their acculturation-related challenges, or at least did not feel overwhelmed by them.

That the acculturation challenges differed for the two groups points to a need to investigate some of the subtle differences in the association of culture and discrimination as challenges for students with different bicultural orientations. It would be useful to explore, for instance, why immigrants who were more biculturally committed did not see discrimination and why immigrants who were less biculturally committed did not see culture as major difficulties.

The distinctive patterns for the two biculturally-oriented groups give a first glimpse at how educational and cultural difficulties relate. That members of the more biculturally committing group were more concerned about money and school tasks suggests they may have dealt with the issues related to the English and study skills that were the major concerns of the less biculturally committed group. They may have arrived with those skills or with better strategies for acquiring them. Here is a link between personal educational and broader cultural concerns that warrants further investigation.

While most students made positive comments about their feelings and/or about their activities at school, the biculturally committed group expressed more positive feelings. According to Lazarus and Folkman (1984), a positive approach can lead to an easier time overcoming a challenge, because the person sees it as less threatening and more of an opportunity to excel. It would be useful to know if the more biculturally committed were able to handle their subsequent educational experiences as challenges and not as threats. In a follow-up study, we are tracking refugee students through their first year of high school (Brooker 2012). We know of no similar tracking data for adult refugee or immigrant students.

That the two bicultural groups did not differ in the number of teachers or siblings helping them suggests that, regardless of cultural experience, these students had similar access to the major social resources in each part of their lives. This finding agrees with the report of Fuligni et al. (2005) and Phinney's (2006) suggestion that

bicultural students are well supported when they can access resources from both cultural arenas.

The two groups did differ, however, in accessing secondary supports. More of the biculturally committed students relied on school counsellors, and more of the less biculturally committed students relied on their extended family. Although families can be useful resources for ethnic minority students (e.g. Cooper, 1999; Grotevant & Cooper 1998), recently arrived immigrant families often have limited or no understanding of the education system (VFST 2007). Their support can be limited. By not accessing outside help, the less biculturally committed students may be at a disadvantage when dealing with institutions. School support services such as counsellors can provide access to funds, training, information and social networks. Ang and Liamputtong (2008), however, found that Chinese international students did not use university counselling services, because they mistakenly saw them as supports for mental health, rather than for help with accessing task-oriented services.

We add to the study of acculturation and biculturalism by demonstrating that, even in these early stages of immigrants' acculturation, there are (at least) two distinct patterns of bicultural identity development: those who explore and commit to both heritage and Australian culture, and those who explore but do not commit to one or both cultures. These patterns of bicultural development are also useful for educators, because they relate to students' different experiences with personal and educational challenges, and with how students deal with those challenges. Students who were committing to both heritage and Australian cultures seem to have distinct advantages in how they deal with their challenges. The relationship between broader cultural challenges and immediate educational challenges warrants further research and attention by educators. Helping students to develop their bicultural identities may very well

help them to deal with their educational and personal challenges more positively and productively.

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Diabetes literacy: health and adult literacy practitioners in partnership

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This paper describes pedagogy in a series of 'diabetes literacy' programs involving culturally and linguistically diverse (CALD) communities. The programs were jointly delivered in local community sites, including neighbourhood centres and public housing halls, by qualified nutritionists from a public health service and adult literacy teachers from a technical and further education (TAFE) institute. The programs were funded by the Australian Government as an adult literacy innovative project, and they were considered innovative because the concept of 'diabetes literacy' is relatively new, and in the Australian health literacy context, the work of health professionals in a team with adult literacy teachers and other organisational partners is undeveloped and rarely documented. The main focus of the paper is on how these two partners managed to work together effectively within an integrated literacy approach focusing on the situated health needs of selected CALD communities.

Introduction

This paper reports on a project funded by the Department of Education, Employment and Workplace Relations (DEEWR) under its 2007 Adult Literacy National Project. It was an innovative project in the sense that it focused on 'diabetes literacy', a concept not yet widely known, and it involved organisational partnerships between a vocational education and training (VET) institution, a public health organisation, a diabetes education organisation and local community groups (see Black, Innes & Chopra 2008). At local levels similar partnerships may have operated 'under the radar', but rarely have they been documented in Australia. A central feature of the project involved adult literacy teachers co-presenting with qualified nutritionists (also dietitians) to provide diabetes education to local community groups. Underpinning the delivery of the programs was a pedagogy which viewed participants as members of social networks (Balatti & Black 2011), and focused on their situated health needs. This paper makes the case for the further development of similar partnerships and pedagogical approaches in health literacy projects.

The project involved the trialling of six short diabetes literacy programs (two hours per week for seven weeks) which focused on educating culturally and linguistically diverse (CALD) groups about the risks and prevention of type 2 diabetes. These programs can be seen as a local response to what has been termeda national diabetes 'epidemic' (Diabetes Australia NSW 2007), or in the words of some researchers, a diabetes 'juggernaut' (Zimmet & James 2006). The programs were conducted over the course of one year (from October 2007 to September 2008) and each program targeted different CALD groups in their local communities on the outskirts of a major Australian city. The target groups included CALD groups known to experience a higher rate of type 2 diabetes, including people born in China, Armenia, Iran and Afghanistan. Each program was jointly delivered by an adult literacy teacher and a qualified nutritionist, with

the support in some cases, of a local community member who acted as an interpreter. A diabetes support organisation (Diabetes Australia) provided some resources and professional development for adult literacy teachers prior to the programs. The focus of each program was on the prevention not the management of type 2 diabetes, and each program focused oneducating about the types and nature of diabetes, and the role of diet and exercise in helping to prevent type 2 diabetes.

An integrated concept of literacy

The programs were based on an 'integrated' concept of adult literacy (e.g. Courtenay &Mawer 1995; McKenna & Fitzpatrick 2005; Wickert & McGuirk 2005; Black & Yasukawa 2011). That is, the prime concern in the programs was the effective delivery and understanding of important health messages, and literacy practices were highlighted and addressed 'as interrelated elements of the same process' (Courtenay & Mawer 1995: 2). Thus, they were not programs designed to improve literacy skills as such, except in the process of facilitating learning about diabetes prevention. The adult literacy teacher's role wasmainly to minimise English language and literacy barriers to learning,and to help provide the approach to learning that best enabled participants to learn about diabetes. Qualified nutritionists provided the diabetes knowledge and expertise.

Diabetes literacy—a new concept

While health literacy generally is a contested concept (e.g. Peerson & Saunders 2009), we drew on a definition of health literacy by Zarcadoolas, Pleasant and Greer (2005: 196–197) to define diabetes literacy as: 'The skills and competences to comprehend, evaluate and use information to make informed choices about the risks, prevention and management of diabetes'. Specifically, the major concern was type 2 diabetes, and to locate diabetes literacy as an active form of community decision-making for promoting good health. In the

international research literature, there are relatively few examples of specific programs being conducted as a means of preventing type 2 diabetes, though programs have been developed to assist community groups in managing the disease (e.g. Deitrick, Paxton et al. 2010), and diabetes management information is available (as a 'toolkit') for adults with low literacy and numeracy skills (Wolff, Cananagh et al. 2009).

Literature review

This project brings together the adult literacy and health sectors in a 'health literacy' initiative. In Australia, compared with some other western countries (outlined below), there are few health literacy initiatives, and especially where literacy and health professionals have worked together. To date, health literacy in Australia has been a concept developed and promoted largely from within the health sector (e.g. Nutbeam, Wise et al. 1993; Nutbeam 1999; Green, Lo Bianco & Wyn 2007; Keleher & Hagger 2007; Peerson & Saunders 2009) with very limited input from literacy specialists (for an exception, see Freebody & Freiberg 1999).

The situation in Australia is in contrast to health literacy in the United States (e.g. Nielsen-Bohlman, Panzar & Kindig 2004), Canada (e.g. Rootman & Gordon-El-Bihbety 2008, Simich 2009) and in Europe (Kickbusch, Wait & Maag 2005), where the concept and resulting programs are very well developed. In these countries and regions there are also examples of strong links between the adult literacy and health sectors. In the United States, this has been evident since the 1990s (e.g. Sissel & Hohn 1995; Hohn 1998), and a decade ago these links were referred to as 'a maturing partnership' (Rudd 2002). In the UK, the 'Skilled for health' initiatives have demonstrated similarly effective partnerships between health and adult literacy practitioners (The Tavistock Institute 2009).

In Australia, the first national health literacy survey (Australian Bureau of Statistics 2008) based on the Adult Literacy and Life Skills survey (ALLS, see Australian Bureau of Statistics 2007) provided a potential catalyst for the development of health literacy initiatives, though to date there has been little evidence of any action. Defining health literacy as essentially the ability to access and use health information, the survey sought to quantify the extent of health literacy in Australia, with claims, for example, that those with the poorest health literacy levels were generally older, lacking formal education, unemployed or their first language was not English.

Cross-sectoral partnerships

In both the health and adult literacy sectors, there is currently a push for partnerships as part of a trend towards 'linked-up' or 'whole-of-government' approaches to addressing social policy problems and issues. In health promotion the push for such partnerships and alliances has been going on internationally for more than a decade (e.g. Gillies 1998). This is due largely to the health sector's shift beyond clinical and curative measures to the growing recognition of the broader social, economic and environmental determinants of health (e.g. Wilkinson & Marmot 2003; Keleher & Murphy 2004), and the need to cross the boundaries of different policy sectors and thus break down previous 'silo' approaches to health.

The adult literacy sector in Australia by contrast is relatively new to the promotion of partnerships but, in recent years, cross-sectoral partnerships, community capacity building and notions of 'integrated' and 'social practice' understandings of literacy have been promoted strongly in some national research reports (e.g. Wickert & McGuirk 2005; Balatti, Black & Falk 2009). Research by Figgis (2004) and Hartley and Horne (2006), however, indicate the paucity of partnerships involving adult literacy and the health sector.

The role of social capital

Linked strongly to the push for partnerships and community capacity building is the concept of social capital which refers to social networks and relations between people within groups as a resource (see Australian Bureau of Statistics 2004). There is increasing recognition that the socio-economic well-being of individuals, groups and nations is dependant not just on the acquisition of technical skills (human capital), but also the networks, trust and shared values that comprise social capital (OECD 2001).

Social capital is increasingly being seen as playing a role in both health and adult literacy discourses. For example, at a very basic statistical level, the Australian health literacy survey (Australian Bureau of Statistics 2008) indicates that those who participate in groups and organisations, even as non-paid volunteers, achieve higher health literacy levels than those who do not participate. While there are some researchers who see the role of social capital in health as both complex and contested (e.g. Campbell 2001; Szreter & Woolcock 2004), nevertheless it is seen to offer a useful starting point and the space to examine the dynamics involved in the social determinants of health (e.g. Brough, Henderson et al. 2007), and worldwide this is a burgeoning area of research (e.g. Kawachi, Subramanian & Kim 2008).

In the adult literacy field there is research indicating the social capital outcomes from adult literacy courses and how particular pedagogical strategies can help produce these outcomes, such as fostering bonding ties between participants, drawing on their life experiences and, through bridging and linking ties, encouraging connections with outside networks (Balatti, Black & Falk 2006, 2009). Much of this work draws on social theories of learning in which learning is understood to occur best when it is situated in 'communities of practice' (Lave & Wenger 1991; Wenger 1998). Learners in these communities create and negotiate knowledge and meaning in

dialogue with other community members, and thus become active participants in their own learning. This model has been proposed recently for health learning involving adult literacy programs (Schecter & Lynch 2011), and it underpins the effective delivery of the type 2 diabetes prevention programs described in this paper.

Type 2 diabetes and CALD groups

According to recent Australian Government reports, diabetes is one of the leading chronic diseases affecting Australians, with an estimated 787,500 people (3.8% of the population) diagnosed with type 2 diabetes in 2007–8 (Australian Institute of Health and Welfare 2011: 15). Further, the rate of type 2 diabetes in Australia has increased steadily, tripling from 1995 to 2007–8 (Australian Bureau of Statistics 2011). The majority of cases of type 2 diabetes (up to 80%) are considered preventable or can be delayed by healthy diet and increased physical activity (Colagiuri, Thomas & Buckley 2007: 2; Diabetes Australia 2007). Indigenous people in Australia experience the highest rates of diabetes, three times the non-Indigenous population, and diabetes is also associated with socio-economic disadvantage, living in remote areas and being born overseas. Regarding the latter group, the prevalence rate is higher for people born in regions such as North Africa, the Middle East and South-East Asia (Australian Institute of Health and Welfare 2008).

It is mainly people born overseas in non-English speaking countries who comprise the CALD groups that are the focus of this paper, and reports have examined the complexity of factors responsible for their higher prevalence rates (e.g. Australian Institute of Health & Welfare 2003; Australian Centre for Diabetes Strategies 2005; Thow & Waters 2005; Colagiuri, Thomas & Buckley 2007). Included in socio-economic risk factors are levels of spoken and written English, and the Australian Health Literacy Survey (Australian Bureau of Statistics 2008) indicated that people whose first language was not English performedmainly at the lowest two health literacy levels on the five-point scale of proficiency.

Interventions to help prevent type 2 diabetes for CALD communities often focus on changing lifestyle factors such as diet and physical exercise, and successful interventions are seen to be those that are *consultative*, involving the target community; *collaborative*, using a range of partnerships; *practical*, in removing linguistic and socio-cultural barriers; and *culturally appropriate*, taking account of the characteristics of the target groups (Colagiuri, Thomas & Buckley 2007). Establishing partnerships with ethnic communities in order to encourage culturally-competent health promotion is also seen to be significant (National Health and Medical Research Council 2006). All of these elements resonate strongly with the diabetes literacy programs outlined in this paper.

Methoology and research samples

Primarily, this project adopted a qualitative research approach. The research comprised three components: firstly, an action research component involving the researcher, the adult literacy teachers and the health professionals in each program; secondly, semi-structured interviews with the participants at the conclusion of each program; and thirdly, a follow-up telephone evaluation of participants' views undertaken at least one month after the program finished. This paper reports mainly on the first component—the action research. Details of the other research components are available in Black, Innes and Chopra (2008).

The key aim of the study, and the main 'new' element to be researched as part of the action research, was how adult literacy teachers and health professionals could work together effectively as team teachers. For both groups, team teaching was new in the delivery of diabetes literacy programs, though some adult literacy teachers did have experience team teaching with different vocational teachers in a VET context.

Action research focuses on the practical issues of immediate concern to social groups or communities (Burns 1999: 24). It is usually undertaken in naturally occurring settings and uses methods common to qualitative research. The participatory nature of action research and its emphasis on change and reflective professional practice made it particularly suitable for the innovative, community-based programs in this study. The action research in this study mainly comprised joint planning between the adult literacy teachers and health professionals prior to each session, and 'reflections' at the conclusion of most sessions on how the sessions progressed and how they could be improved in future. It followed the established format of most action research studies—the spiralling process of planning, action, observation and reflection (e.g. Kemmis & McTaggart 1988). The reflection sessions comprised the researcher who provided some focus questions, together with the two co-presenters of the program, and these sessions were tape recorded and later transcribed in full.

In light of the aim of the study—to investigate how adult literacy teachers and health professionals could work together effectively as team teachers—the transcript interview data were organised according to several themes. These included: how an 'integrated' concept of literacy was implemented; how the adult literacy and health professionals determined their respective roles and professional boundaries; the importance of planning and communication for successful programs; and the main elements of a collaborative pedagogy which included a social capital approach to pedagogy. These themes comprise the main headings of the findings and discussion section in this paper.

In total, six local community programs were delivered, featuring Asian and Middle Eastern community groups identified in the research literature as experiencing higher rates of type 2 diabetes. The programs were delivered in local community sites considered to be in areas of low socio-economic status, and which featured a high

concentration of public housing. The sites included neighbourhood/community centres, a church hall, a public housing hall and, in one program, a TAFE college. On average, 10 participants completed each program, and predominantly participants in the programs were female (86%). The ages of participants varied, but primarily they were older, averaging 55 years, though in two programs the ages averaged 70 and 72 years respectively. Recruitment to the programs was mainly through word of mouth via existing local community networks, including through local Chinese, Armenian and Iranian organisations.

Program structure

The structure of the programs was initially determined through discussions between the nutritionists and the adult literacy teachers. While there were some slight variations, in the main the six programs (of two-hour sessions for seven weeks) adopted the following structure:

Weeks 1 & 2: Introduction, getting to know participant needs, introduction to what is diabetes—the differences between the types of diabetes and how diabetes affects people.

Weeks 3 & 4: A focus on diet—discussions on food types, food labels, nutrition and the food and diet of the participants in the course. In some programs a trip to a supermarket was undertaken.

Weeks 5 & 6: A focus on exercise—pedometers were supplied to every participant, and in some programs there were group exercise activities (Tai Chi for example, and a short walking tour in the community).

Week 7: A relaxed final session with general discussions, recaps on the essential messages, details provided of

diabetes treatment referral services in the area, and a communal lunch provided by the participants.

Findings and discussion

Implementing an 'integrated' concept of literacy

'Integrated' literacy is a well known concept in vocational education and training, but there are often misunderstandings over what it involves and how it should be implemented (Black & Yasukawa 2011). For several of the presenters in these diabetes literacy programs,it was mainly through trial and error that they gained a better understanding of how it might work effectively in practice. As we have indicated, these programs were not designed to improve literacy skills as such, except in the process of facilitating learning about diabetes prevention, but at times this message became a little confusing. A health professional commented at one stage, 'well, I don't want to take over because the aim is also literacy', which was not entirely correct. In her particular program there was greater potential for confusion because it involved converting an existing adult literacy class to a diabetes prevention classfor the period of the program (seven weeks). While the rationale for doing this was sound—working with an existing mainly Chinese community group attending an off-campus literacy class in a local neighbourhood centre—it was nevertheless found problematic to re-label the class as a 'diabetes prevention' program and to then expect all participants and presenters to understand the primary focus was now health and not literacy. The 'integrated' concept, however, was less of an issue in the other diabetes literacy programs, as the literacy teacher on a program delivering to a Chinese group demonstrated in explaining where she considered literacy should fit in:

> We use a lot of English and they get the key words, [but] from an English teacher point of view, it's not giving grammar and everything, it's just the key words, like carbohydrate, Glycemic

> Index … insulin, all these kind of key words … or like the GI symbols, [so] they know what to look for …

Determining roles

It was to be expected that there would be some difficulties to overcome with two professionals, unknown to each other prior to the program and from different disciplinary backgrounds and sectors of work, team teaching on a seven-week program.

As the programs were essentially about diabetes education, in most programs the nutritionist led the program by introducing the diabetes prevention knowledge, and the literacy teacher provided a secondary, supporting role, trying to ensure that participants understood and were engaged with the issues. However, this was not necessarily the case with all programs. In one of the programs, it was clear that the health and literacy presenters considered they had equal though different roles, and they were sufficiently confident and relaxed enough in their roles to 'just jump up and interchange' as the need arose in the sessions. As the dietitian (D) explained, they worked together in a cooperative, equal fashion:

> Yes, well, I think we worked very well together, because often we would find one of us was standing up talking or doing something on the whiteboard and suddenly the class would be trying to say a word and I wouldn't know how to instruct them through that, so I would deflect to L [the literacy teacher], who would then take over or jump up and do a diagram … and she would do the same when she was revising something with them and a content question would come up—either she would answer it and look to me for confirmation, or she would throw it over to me …

The literacy teacher in the above partnership stated:

> D [dietitian] puts the content, and then I do activities, say, with D's content, so she's like the knowledge, and I kind of structure the class and do the activities like I would normally in an everyday classroom.

Issues involving the relative status of the two team teachers, and whether or not one dominates, appear to be central issues in team teaching situations involving disciplinary experts working with adult literacy and numeracy teachers (Black & Yasukawa 2011). In another of the diabetes programs, the adult literacy teacher knew the participants very well, having taught them literacy skills for part of the year, and this teacher was also quite knowledgeable about diabetes. In these circumstances, she took a more dominant role in the delivery of the program, which made the health professional feel uneasy, especially as she considered some of the information provided to participants was too prescriptive, and from her health perspective, actually incorrect. As she stated, 'it's hard when someone's trying to talk about your area of expertise'.

Professional boundaries

The above situation of a health professional feeling uneasy about how health knowledge was being delivered by a non-health professional should hardly be surprising, and there were several other situations in the programs where both or either presenters were seen to move beyond their areas of professional expertise. In one case, a dietitian felt sufficiently strongly about an issue of incorrect information being delivered that she informed her co-presenting adult literacy teacher by email prior to their next session. Similarly, some adult literacy teachers expressed the view that their co-presenting health professionals sometimes spoke too fast and delivered information inappropriately, for example, covering too many concepts in one go, or being too didactic ('you can't just sit there and talk'). These were relatively minor issues, easily overcome, though they nevertheless demonstrated that presenters were aware they were members of different professional networks, and there was a natural sensitivity on their part to reflect and protect their own areas of expertise. In an ideal situation, it was precisely the combination (i.e. 'integration') of thetwo areas of professional expertise that offered the possibility

ofan enriched learning experience for participants. The following three-way dialogue involving the researcher (R), a dietitian (D) and her co-presenting literacy teacher (L) can be viewed as an example of professionals representing their respective areas of expertise in an integrated way:

> (R) Well, that's the other thing, when they do go and consult a doctor … they know the questions to ask, they already have a grounding [as the result of this course]
>
> (D) That's what I'd like to, I mean, (my) personal role that I have is that they will leave this with an increased awareness of the issues around diabetes, eating, exercise, care of the feet, and where to go for more help, and to be a bit more empowered in asking their doctor
>
> (L) And they know what these words mean, they know concepts, what insulin is and what it does
>
> (D) Take more control over their own health
>
> (L) And they've already got that schema before they go in there … they know the words.

There was also inevitably a carry-over of skills and knowledge from one professional area to another. Literacy teachers gained knowledge about diabetes and how to prevent type 2 diabetes, and health professionals developed pedagogical strategies appropriate for working with CALD participants.

Planning and communicating

A key element to effective team teaching in these programs was the planning and the communication between the co-presenters that went on before the program started and between sessions during the program. In most programs the two presenters communicated via email prior to the sessions, and this enabled a good working relationship. One dietitian commented:

> Our resources complemented each other. I had these pictorial resources I got from Diabetes Australia on risk, and they fitted perfectly with the worksheets. Well, I guess that's because we had communicated about what we wanted.

However, in one of the programs where the co-presenters did not communicate very effectively from the beginning, there were some initial problems, as the literacy teacher explained:

> I was a bit surprised because when she turned up, she said sort of, 'now, do you want to get started now?'... And I was surprised because I presumed that she was going to be leading it and giving the information. So I actually didn't quite know where ... [to begin].

In this program the situation was quickly resolved before the following session and henceforth there was regular communication between both presenters by phone and email, prompting the literacy teacher to later state, 'It felt more comfortable and she said that too ... I feel like we've got bit more of a game-plan'.

A collaborative pedagogy

All the programs were conducted in an informal, relaxed, interactive manner, encouraged by the local community contexts. Every program except one (conducted in a TAFE college) involved participants seated around one central table. Teaching facilities were sometimes sparse with a mobile whiteboard being transported to two centres, but that was a secondary concern. In one program targeting Chinese residents in a neighbourhood centre, other Chinese people were in the same centre playing mahjong, table tennis and doing Chinese brush painting. As an indication of informality and the community feel of these programs, the literacy teacher commented that at morning tea time her students, '... have a chat with the people in there and say what they're been doing, and then we get people wandering past the door and having a nose in here'.

In one program targeting Afghan and Iranian mothers, their young children played close by and interacted with them during the class. Some groups comprised mainly older participants with some Chinese and Armenians in their respective programs being in their 80s, though some of their peers in the class were quite young. In one program, a grandmother, daughter and grand-daughter were all involved in sessions for a short time, and intergenerational and interfamilial factors of some kind were at play in other programs. The formal education levels of participants varied also, with some having university qualifications while others were illiterate in their own first language. One elderly participant was blind. No attempt was made to screen participants prior to the course; all were welcomed. Although the presenters spoke in English, in several of the programs, local community members acted as interpreters, and this dynamic, multi-dimensional, communication process, while appearing to an outsider as chaotic at times, allowed all participants to communicate in ways they felt most comfortable about health issues they all felt strongly about. These local community/network aspects were very significant in facilitating the informal pedagogical approach in the programs, and they are indicative of the social capital elements discussed in the following section.

'Empowerment' and a social capital approach

All the programs involved a similar pedagogical approach, with the adult literacy teachers being employed in the one TAFEcollege, and thus likely to share similar pedagogical perspectives. Interestingly, there was no hint of dissonance from the health professionals with the pedagogical approach taken. The discourses of adult literacy pedagogy and public health in particular share some similar themes, with a strong focus on community and individual empowerment, and even the background influence of educational philosophers such as Freire (e.g. see Laverack 2004: 51).

Recent adult literacy research has demonstrated how particular teaching strategies result in social capital outcomes (Balatti, Black & Falk 2006, 2009), and the presentation of diabetes knowledge in the programs was undertaken in a way that encouraged the social capital concepts of bonding, bridging and linking ties.

Bonding ties are the strong ties that build cohesion and common purpose within the learning group. There were many ways that bonding was encouraged within the programs, and in particular it involved building trust which requires 'encouraging people to get to know one another and creating a non-judgmental climate in which people feel safe to share life experiences and to make errors as they are learning' (Balatti, Black & Falk 2009: 23).

One literacy teacher said she and the dietitian deliberately sat down with the participants in the sessions rather than stand up, 'so we didn't have that type of us and them kind of thing, so we were all on eye contact'. Activities in the sessions were also as non-threatening as possible. For example, rather than ask if any participants had type 2 diabetes, participants were asked if they had or knew of any family members with the disease. Participants also did group activities based on their diet rather than itemise their personal food items over a set period, which might have been confronting or embarrassing to some participants. The community interpreters were also very helpful as mediators in reducing the social distance between presenters and participants.

To nurture a sense of belonging, sessions included a lot of group discussion and working in pairs, and participants were encouraged to share their viewpoints and their life experiences. Group cohesion was assisted by the health professionals accommodating the expressed needs of individual participants, even when they were not directly related to diabetes prevention. For example, one elderly participant wanted to know about osteoporosis, which the dietitian subsequently discussed with the group, and another participant with diagnosed

type 2 diabetes brought his own glucose readings along for the dietitian to advise him on.

The exercise component of one program also encouraged group cohesion. The Tai Chi video which the presenters showed to the group, while useful, was soon abandoned as the older Chinese participants demonstrated to the presenters their own local form of Tai Chi. The session was, in the words of the teacher, 'very physical and together, really connecting …'. This session in turn seemed to encourage the group to focus on other forms of dance in the next session, furthering bonding within and between participants and the presenters, as the literacy teacher indicated:

> … and they would all laugh, and then the other one would get them to show them some kind of dance … and they are showing each other different dance moves and things this week, I've kind of noticed that, social aspects of them … it was very nice, but it was a very role reversal, they were showing us what to do … But it was really lovely, and they were loving it, and I was getting my right and left wrong all the time …

Evidence of increased bonding and trust in the group which resulted from this pedagogical approach was provided in one Chinese group with participants increasingly admitting to having type 2 diabetes. This appears relevant because there is evidence in the research literature that some ethnic groups, including the Chinese, feel stigmatised by acknowledging their diabetes condition (Colagiuri, Thomas & Buckley 2007: 22). And yet, as sessions progressed and participants felt more at ease in their group, they were asking specific questions relating to their own condition, including bringing along their own medical records to discuss with the dietitian. As the dietitian noted, 'I think in the first week or so I was aware that one person actually had type 2 diabetes. By the end (after seven weeks),there were still people coming out of the woodwork'.

Bridging ties, which are links between groups of people who are different, and *linking ties*, those links to institutions, were also encouraged. There were instances, for example, of the presenters trying to encourage participants to join walking groups or a local gym or swimming club or dancing group in order to increase levels of physical activity. Some participants were encouraged to get involved in a community garden project in one local area, and local excursions (where possible) were a feature of each program. In all programs, links were made to local health institutions providing specialised diabetes services.

The pedagogy was thus situated in the everyday lives of the participants in their own communities. While the two presenters did have a pre-conceived idea of the structure of the program sessions (outlined earlier), the aim was not to adopt a deficit approach and impart knowledge to unknowing participants. Very quickly sessions followed the direction of the participants' interests. Sessions on diet in one program for Chinese residents, for example, led to heated discussions about different types of rice, the relevant costs to purchase (rice with a lower glycemic index [GI] tends to be more expensive), and cultural values in conflict with healthiest options. This led to a compromise health message of eating smaller servings of rice, but more vegetables. Cultural values relating to different types of cooking oil were similarly discussed and negotiated, and seemingly straightforward concepts such as what is meant by 'a piece of fruit' were the subject of contestation. The participants could be seen to comprise learning 'communities of practice', with largely sharedethnic and cultural values, and much of their learning in the programs resulted from discussions with each other. Interestingly, the one program where this did not work quite so effectively was the one delivered in the TAFE college. In this program the participants, while comprising a 'student' community of practice, featured greater diversity in their language and cultural backgrounds, and the classroom seating arrangements (at separate tables and in rows) did

not encourage the same level of dialogue and self-direction. In this program there was greater focus on teacher-developed 'worksheets', which gave the program more a flavour of formal learning, in contrast to the informality of programs delivered in the local neighbourhood centres or public housing halls.

Conclusions

Health professionals providing education on preventing type 2 diabetes to various CALD groups in local community contexts is not new (see Colagiuri, Thomas & Buckley 2007). But there are features of this project, including the various organisational partnerships, and adult literacy teachers and health professionals working together within a social capital pedagogy, that make this project innovative and potentially useful as a model for other health literacy initiatives.

In the literature review, Rudd (2002), a well known health literacy specialist, refers to 'a maturing partnership' between the literacy and the health sectors in the United States. By comparison, and adopting the relationship metaphor, this would make partnerships between the two sectors in Australia, such as those featured in this project, akin to 'a first date'. As indicated in the literature review, there are very few documented cases in Australia of health and literacy professionals working in partnership.

This paper indicates to a large extent the potential for adult literacy teachers and health practitioners to work together effectively. They appear to share the aims of individual and community empowerment, and they can work collaboratively using pedagogical approaches that encourage such empowerment. However, this project was essentially a pilot study, a one-off, government-funded, innovative health literacy project, and to move beyond pilot studies to more systematic initiatives requires greater resource commitments. While this project featured organisational partnerships at the micro (the teaching interface) and meso (middle organisational) levels, what Australia

lacks in the area of health literacy are partnerships at the macro level—between peak government, health and literacy/educational organisations (see Balatti, Black & Falk 2009),which would provide some policy direction, stable funding and sustainability to health literacy programs in Australia. These diabetes literacy programs hopefully will encourage a step in that direction.

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Cultural codes as catalysts for collective conscientisation in environmental adult education: Mr. Floatie, tree squatting and Save-our-Surfers

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This study examines how cultural codes in environmental adult education can be used to 'frame' collective identity, develop counter-hegemonic ideologies, and catalyse 'educative-activism' within social movements. Three diverse examples are discussed, spanning environmental movements in urban Victoria, British Columbia, Canada, the redwoods of northern California, and the coral reefs and beaches of Hawai'i, respectively. The first, Mr. Floatie and his fight for sewage treatment, illustrates how art, humour and drama can be employed to mobilise the public, media and government to action. The second, Julia Butterfly Hill and her 738-day squat in a redwood tree, shows how cultural codes embodied in both tree and woman catalysed social action for forest preservation. The third, the grassroots organisation Save Our Surf, demonstrates the effectiveness of education and activism through immediate, multiple

and short-term symbolic appeals for help, leading to long-term success in Hawaiian coastal conservation.

Introduction

In several decades of scholarship and activism on adult learning in new social movements (the women's, peace, civil rights, anti-racism, GLBT rights, anti-globalisation, Indigenous rights, environmental and other 'identity' movements), one of the central concerns has been, and remains today, the role of social movements in facilitating individual and collective learning, and, conversely, the role of adult learning and activist-educators in advancing social movements (Foley 1999, 2001; Hill & Clover 2003; Branagan & Boughton 2003; Hall & Turay 2006; Ollis 2008; Flowers & Chodkiewicz 2009). Social movements are recognised as powerful sites of 'cognitive praxis' (Holford 1995) and 'collective learning' (Kilgore 1999). They are catalysts for personal transformation and wider social change (Welton 1993), and pedagogical sites in which adults engage in purposeful, embodied learning (Ollis 2008).

In contrast to the economic determinism of class struggle in 'old' labour, workers' party and trade union movements, new social movements are seen as 'political' and 'cultural' movements, where the construction of collective, oppositional identities—that is, symbolic actions in civil society—challenge dominant state and corporate ideological hegemony (Beuchler 1995). In the environmental movement, as in other social movement contexts, the process of 'educative-activism' and 'conscientisation' is critically important (Clover 2002). *Conscientisation* is Paulo Freire's (2007) notion of 'reading the world' to understand the underlying political, economic and social structures of oppression and their relation to environmental issues, and to take action to overturn these. Educative-activism for progressive social change works to revive and legitimise

people's local, often invisible environmental knowledge, and to create alternative, indigenous 'epistemic communities' challenging dominant knowledge systems (Hall 2006). Humour, music and art are central to much of the 'cultural learning' which takes place within new social movements, including the environmental movement (Fien & Passingham 2002; Branagan 2005; Clover & Stalker 2005; Clover & Stalker 2008; Ehrich 2010). The arts and other forms of symbolic action not only help to create new knowledge and collective identities—to develop 'counter-hegemonic' ideologies within counter-publics—but also catalyse action for collective change (Fraser 1990; Mayo 1999).

In social movements, 'cultural codes' or 'frames' provide alternative cognitive frameworks for personal transformation and collective thinking, identity and action (Mayo 2005; Carroll 1997). These codes challenge dominant meaning systems and transform 'common sense' understandings of public issues. Departing from Marxist analysis of class struggle as the engine of social change, new social movements are understood as 'instances of cultural and political praxis through which new identities are formed, new ways of life tested, and new forms of community prefigured' (Carroll 1997: 16–17). That is, within our post-industrial societies, new identities and new political spaces are constructed in flexible, shifting 'networks of meaning' drawing together and mobilising disperse social actors, not only to challenge dominant cultural codes and revealing the forms of power sustaining them, but also to propose alternative ideological frames (counter-hegemonic ideologies) and new ways of living.

While every dominant state or corporate entity has a legitimating 'frame', every social movement has a contesting 'counter-frame' (della Porta et al. 2006). A counter-frame or cultural code is understood as an 'interpretive schemata that simplifies and condenses the "world out there" by selectively punctuating and encoding objects, situations, events, experiences and sequences of actions within one's present

or past environment'; in its strategic function, it is 'action-oriented sets of beliefs and meanings that inspire and legitimate the activists and campaigns of a social movement organization' (Snow & Benford, quoted in della Porta et al. 2006: 252). Moreover, frames are 'both individual and social. A frame is an individually held cognitive schema but is important in collective action insofar as it is shared by enough individuals to channel their behaviors in shared and patterned ways' (Johnston 2002: 65–66). As Lakoff (2010: 71) tells us, these frames are 'physically realized in neural circuits in the brain. All of our knowledge makes use of frames, and every word is defined through the frames it neurally activates'. As such, he argues that there is a strong need for the environmental movement to frame its messages more effectively so that they might be more readily taken up by the public.

This paper comprises an interpretive historical analysis (Merriam 1998) of three cases of creative protest in the environmental movement, each illustrating the power of 'frames' or cultural codes to transform and radicalise popular understandings of environmental issues, to develop local knowledge, and to provoke social change. The three cases considered here are the public art, activism and humour of Mr. Floatie in Victoria, Canada from 2004 to the present; tree squatting by Julia Butterfly Hill in northern California from 1997–1999 and her subsequent activism; and the environmental protest of surfer-activist John Kelly and the organisation Save-our-Surfers (SOS) in Hawai'i in the 1960s and 1970s.

Research for the study was based on newspaper accounts, websites, secondary publications, and online, archival materials at the University of Hawai'i in the case of SOS (UHM 2011). For the first case of Mr. Floatie, all available uploaded internet videos were reviewed (eight); including such classics as 'Mr. Floatie pushes for poo power' (about sewage pollution and bio fuel conversion), 'Mr. Floatie serves lunch' and 'Mr. Floatie learns to sail' (in which Mr.

Floatie teaches about waste management and sings his trademark song: 'I'm Mr. Floatie, the ocean-going poo. If you live in Victoria, I came from you'). An exhaustive search was also made of local news media websites and archives on the internet (including *The Tyee*, *Vancouver Sun*, *Georgia Straight*, *Victoria Times Colonist* and several local Seattle papers), as well as Canadian Broadcasting Corporation sites, and numerous blogs and environmental action websites (e.g. Conservation Connection, Victoria Sewage Alliance). The website of Mr. Floatie's parent organisation, People Opposed to Outfall Pollution, also served as a fertile source of data. For the second case of Julia Butterfly Hill, out of hundreds of videos, nine which focused specifically on her 1997–99 tree sit were used as data for the study, along with some 20 newspaper, television and web-based media accounts, blogs and websites. Hill's published books, personal blog, and the website of Circle of Life (an organisation she founded post-tree sit) also provided data for the study. For the third case of SOS, online newspaper archives and the unpublished materials in the Save Our Surf digital archive (roughly 300 posters, newsletters, announcements, flyers, articles, photographs and pamphlets) were the main data sources for the study.

Mr. Floatie

The first case is that of Mr. Floatie (aka James Skwarok), a man dressed as a giant piece of human excrement, who for the past several years has called attention to the dumping of untreated sewage into the ocean waters of Victoria, British Columbia. This proud provincial capital of over 200,000 people has traditionally fashioned itself as a tourist-friendly city of flowers and afternoon tea: a quiet, British-like home to retirees and other Canadians fleeing the country's colder climes. More recently, thanks in part to the efforts of Mr. Floatie, Victoria has also become famous for its poop. It is the last major city in North America to release raw sewage directly into a waterway—the Juan de Fuca Strait (which separates the city and greater Vancouver

Island from Washington State). At present, an average of 40 million gallons of untreated sewage is released into the ocean each day through two underwater outfall pipes, positioned under two points of parkland jutting a kilometre out into the Strait (Gilbert 2010).

Since 2004, the efforts of Mr. Floatie and a related non-governmental organisation, People Opposed to Outfall Pollution (POOP), have helped to galvanise public support in favour of sewage treatment, an issue largely 'side-stepped' by an intransigent Victoria government. Mr. Floatie has appeared at numerous public meetings, he ran for mayor in 2005, and he has helped to organise such events as the First Annual Victoria Toilet Regatta (POOP 2011). Using a combination of humour, disgust and public shaming of politicians, Mr. Floatie and POOP are widely credited with bringing public outrage to bear on the sewage issue. POOP's mission ('The porcelain throne speech') is in part 'to have FUN educating the public about the problems of dumping raw sewage into the Juan de Fuca Straight' (ibid.). Mr. Floatie himself is a 6-foot, brown velour poop, sporting a bow-tie, whimsical sailor cap and falsetto voice. Satirical puns and potty humour cheerfully emanate from Mr. Floatie, making good copy for journalists and community activists alike.

Much in the same way, for instance, as the Raging Grannies (another creative protest group with origins in Victoria, Canada) have used satirical and humorous song to promote 'cultural learning' within social movements (Roy 2000), so has Mr. Floatie given the problem of sewage a recognisable public face, drawing on the catalytic power of humour. This is easily illustrated in a few samples from interviews with Mr. Floatie: the idea of donning a giant poop costume 'just floated to the surface in a conversation with friends'; he was 'bummed out' at what was happening; he wanted to see 'some movement on the issue'; and, after losing his bid for mayor, he 'asked people not to dump him' (Mason 2006). Likewise, various members of the public have noted that Mr. Floatie 'scared the crap out of people', but if

successful in his clean-up efforts, was an 'endangered faeces', and that 'some communities have a town fool; Victoria has a town stool' (Hawthorn 2005).

As these bad puns have been shared both formally (through the press) and informally (in conversation, websites and email), they have acted widely to expand interest in the environmental issue of sewage pollution in Victoria. Mr. Floatie's run for mayor in 2005, for example, generated stories that ran in more than 50 newspapers in North America (Heiman 2006). In another successful endeavour in public environmental education, the first annual Victoria Toilet Regatta, held in July 2005 in Victoria's inner harbour (also the seat of provincial government), drew 400 spectators. They watched nine contestants paddling boats such as 'Montezuma's Revenge', 'Gas Bag' and 'Floattete' (POOP 2011). Notably, Mr. Floatie has been used as a humorous hook into more serious examinations of sewage as well; for example, articles on treatment status and options in Victoria and in Canada at large (MacLeod 2006; MacQueen 2005). Working less visibly, the Victoria Sewage Alliance, a coalition of environmental and labour NGOs long involved in the sewage issue, has supplied supporting social, economic, political and technological knowledge, education and activism to the sewage debate as well.

The eventual 'outcome' of Mr. Floatie's environmental activism, together with that of supporting NGOs, the media and public, was a 2006 Provincial order requiring Victoria to have a detailed plan and fixed schedule for sewage treatment implementation established by June 2007 (MacLeod 2006). At that time, most observers believed the city would have sewage treatment in place by the 2010 Winter Olympics, allowing it to avoid the potential embarrassment of its sewage-sullied image being broadcast to the world. By 2009, local government had approved a $1.2 billion plan to build four sewage treatment plants to handle the millions of gallons of raw sewage that the City of Victoria pumped daily into the Strait of Juan de Fuca (Le

2009). In 2011, however, there was still much public debate over how sewage treatment would be financed, but movement on the issue was no longer in doubt. As Mr. Floatie reflected on the earlier success of his activism, he believed it was well worth the effort: 'if raising a stink made a difference, that's great. I can tell you it's been a real gas' (Mason 2006).

Julia Butterfly Hill

The second case, that of Julia Butterfly Hill, an independent environmental activist 'tree squatter' who in 1997–99 spent 738 days living in a 1000-year old redwood (named Luna) 180 feet off the ground, demonstrates the power not of humour, but of courage, conviction and persistence in symbolic social action. In her principled stand against the logging of old growth forest in the redwoods of northern California, Julia Hill helped to catalyse public support against old growth redwood clear-cutting by the Pacific Lumber Company, to educate others about the value of such forests and the effectiveness of symbolic protest in social movements, and ultimately to preserve a tract of old growth redwood forest, including Luna, the tree.

Child of an itinerant, trailer-travelling preacher working the U.S. East Coast, in 1994, at the age of 22, Julia Hill suffered a near fatal automobile accident, and after a year of slow recovery, travelled to California on a journey of self-discovery. It was there that she encountered the majesty and beauty of the redwoods, their painful destruction by logging companies, and the grassroots environmental movement which had grown up to try to save them. After attending a fundraiser in northern California, she volunteered as a rotating Earth First! tree sitter for a week, and ended up extending her stay for two years (Oldenburg 2004; Hill 2000).

On her 6-by-4 foot wooden perch, Julia Butterfly Hill was visited regularly by groups of supporters singing, dancing and celebrating

under her tree, and twice a week by a crew who hauled up food, stove fuel and cell phone batteries, and hauled away her waste (Martin 1999). The longer she stayed in the tree, the more support for her grew. Lakota Sioux and American Indian Movement activist Leonard Peltier, for example, presented her (*in absentia*) with a 'defender of the woods' award at a local rally in her honour; musicians Joan Baez and Bonnie Raitt climbed up into Luna to talk and sing songs with her. In short time, she also became connected to the outside world by an impressive array of communications technology: she had a radiophone powered by solar panels connected to two motorcycle batteries, an emergency cell phone, a pager, a hand-powered radio, digital camera, video camera and walkie-talkies (Hill 2000). During her stay, she conducted over 1,000 phone interviews from the tree (Callahan n.d.), had a website, made appearances on radio and TV talk shows, and served as a treetop broadcaster for a cable TV show (Hill 2000). Yet for much of the time, she was alone, often assaulted one way or another, and survived only on her wits, her expansive spirit and faith in the protection of at least one 'ancient tree'. Early on, she endured: (a) attacks from giant logging helicopters attempting to blow her out of the tree, (b) the cutting of trees around her, (c) rotating shifts of security guards hired to camp below the tree who blew horns and opened floodlights at night, (d) verbal harassment, (e) attempts to cut off ground supplies, and (f) being choked with smoke from nearby napalm-fired clear-cuts (ibid.). Neither was nature always kind to her: perched hundreds of feet up in the redwood, she suffered fierce winter winds, cold rains and howling snowstorms, as well as the constant threat of falling.

After spending two winters in the tree, and having become a media star and international spokesperson for the environmental movement in the process, on 18 December, 1999, Julia Butterfly Hill at long last secured an agreement with the CEO of Pacific Lumber to permanently protect Luna the Redwood and a 200 ft. buffer zone around it from logging. She then climbed down from her tree. Since

that day, Hill has continued her struggle on behalf of the environment and other causes. In 1999, she established Circle of Life, a non-governmental organisation which takes as its mission 'education, inspiration and connection to live in a way that honors the diversity and interdependence of all life, …to build a movement of social and environmental change' (COL 2006). She continues to be a featured speaker at social protests of many kinds, writes an on-going activist blog about environmental issues (Hill 2011), has written two books, and has been the subject of several film documentaries, numerous songs and an episode of the popular cartoon, The Simpsons, called 'Lisa the Tree Hugger'. Hill has also inspired others to tree squat, including a Fayetteville, Arkansas grandmother who sat 30 feet up in a tree for three weeks (Callahan, n.d.). By 2004, Hill was receiving over 500 speaking offers a year, and preached a message of love of life and the human connection to all living things (Oldenburg 2004). As part of her message, however, she also popularised an astute, critical understanding of the educational, political, economic and legal dimensions of forest destruction, conservation and environmentalism, much of which she gained in serious study and conversation during the time she spent up in Luna, the tree.

Like Mr. Floatie, Julia Butterfly Hill has clearly been a catalyst for peaceful 'educative-activism' and has offered an alternative 'reading of the world' on issues of forest preservation and environmentalism. In particular, she has helped to construct a powerful 'counter-frame' against the dominant understanding of old growth trees as simple economic commodities to be logged, and of diverse forest ecosystems as simple crops to be harvested. She has this to say, for example, about the idea of forest 'management' (Hill 2005):

> One of the things that was really funny for me after spending some time living in an ancient redwood was listening to all the corporate heads and government officials and even the larger organizations talk about the various ways we need to 'manage' our forests. And here I am living in this tree that's over a thousand years old and

> one day I just started laughing to myself: I think the forests have been managing themselves for a very long time (laughs). I think our challenge is how do we learn to manage ourselves within nature's system.

Save Our Surf

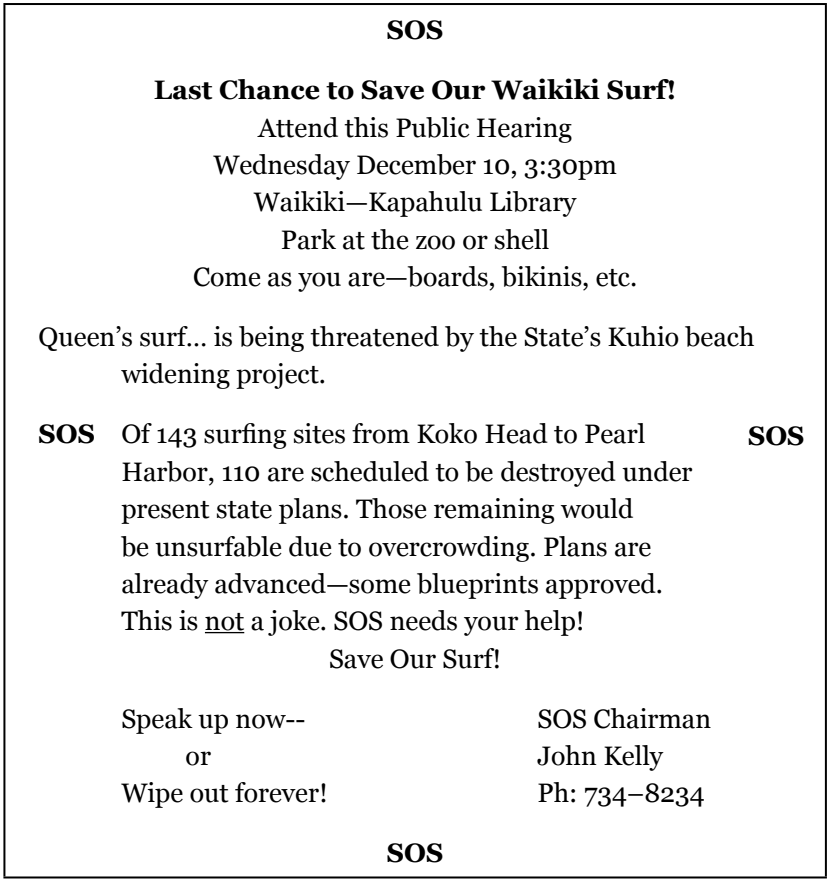
Along with Julia Butterfly Hill and Mr. Floatie, the third case, that of lifelong surfer, activist and Hawaiian resident John Kelly and the non-governmental organisation, Save Our Surf (SOS), demonstrates the wide resonance of protest symbols, as well as their attachment to place. The case of SOS also shows the power of building coalitions from the environmental movement with allied interests. Founded in response to U.S. Army Corps of Engineer plans to develop the beaches of Waikiki, SOS fought in the 1960s and 70s to protect coral reefs and coastal water zones from development projects—tourist resorts, parking lots, freeways, airport and military construction (UHM 2011). In this, SOS tapped into a vein of solidarity with the Hawaiian 'surfing community'—some 30,000–100,000 people strong—and also allied itself with the native Hawaiian land rights and sovereignty movement (Kelly 1996).

Although the world of surfing has today become a $7 billion global industry (SIMA 2009) largely controlled by corporations and professional surfers, in the 1960s and 70s it was still firmly rooted in a counter-culture identity, with strong connections to environmental activism (Flint 1999). In Hawai'i, surfing is said to have originated with native Hawaiians: it was practised by Hawaiian Royalty as '*he'e nalu*' or wave-sliding, and first popularised in the 1910s by athlete and Hawaiian royalty Duke Khahanamoku (SurfArt 2006). This history, and the sharing of common ground (and surf), made the alliance of SOS with native Hawaiians easier. By the 1960s, in much of the world, surfing was part of a white, middle class, male, Hippy movement, embracing soulful brotherhood and communion with nature, and rejecting mainstream norms of work and domesticity. Yet, in Hawai'i,

SOS surfers also comprised a mobile grassroots environmental movement within the larger context of the Hawaiian Sovereignty Movement, lending political force to a variety of native Hawaiian land and ocean tenure disputes, with inspiring results.

The principles SOS used in its efforts were 'EDUCATE, ORGANIZE and CONFRONT! ... the basic strategy rests on three simple concepts: respect the intelligence of people, get the facts to them, and develop an appropriate action program' (Kelly 1996: 90). SOS was in essence a loosely structured grassroots organisation which came to life only as needed: 'SOS remains organizationally amorphous, able to mobilize forces from the community for confrontations with the establishment and to melt back into the community when issues resolve or stalemate' (Kelly 1994: 3). Adopting a kind of local 'guerrilla' activism, SOS had no membership, no by-laws, no central office or budget, and operated mainly by issuing calls to action (an 'SOS'). Among numerous SOS calls to protest destruction of surf, reefs and ocean shores from government and developers, for example, was an appeal to action against the further development of famed Waikiki Beach (Figure 1).

Figure 1: SOS call to action



Source: adapted from UHM (2011) SOS digital collection

In a time before the internet, before social networking and cell phones, SOS leafleting, 'surfer flick' movie nights, song festivals, media campaigns, and above all, informed and vocal participation at public hearings, marches and rallies, were very effective methods to organise environmental protests, with impressive results. As one newspaper column put it (Udall & Stansbury 1974: 1):

> This brash style has worked beautifully up to now. Kelly's young brigadiers gather facts, prepare broadside handbills, edit crisis newspapers and tangle with leading establishment planners and businessmen in public hearings. Their batting average to date has been remarkably high. In a state where developers and land speculators are still riding high, the surfers have won most of the major fights they have entered. Critics of Kelly and SOS question their strident rhetoric, and call him "communistic" for his anti-capitalist rhetoric. But to us, Save Our Surf is a bright story of participatory democracy. Any time high school youngsters can do battle for the environment and hold their own with the establishment elders, all of us should applaud.

In addition to organising protests, SOS also helped to develop a non-profit print shop, and, importantly, a library of government planning documents, reports and photographs used to inform the public about dubious and covert development plans. In 1974, for example, leaked reports from a large resort development on Kauai detailed political payoffs and corruption in the project, and SOS led a media exposure which eventually resulted in the closure of the project and the downfall of the mayor (Kelly 1994). Other SOS successes included stopping the Kuhio Beach widening project (see Figure 1 above) and the dredging of reefs around eastern O'ahu, being instrumental in the creation of Sand Island Park, and struggling against the evictions of tenants, farmers and fishers at various junctures in time (UHM 2011). All in all, SOS is credited with winning 34 major environmental victories in Hawai'i during the 1960s and 70s (Kelly 1996), in large part due to its ability to educate and mobilise the public around environmental issues on short notice, and with persistent calls for help.

Conclusion

As these three cases make clear, creative, cultural codes and symbolic actions can effectively serve as a catalyst for conscientisation and educative-activism in the environmental movement. As Mr. Floatie's

success teaches us, satirical humour is a powerful tool in environmental adult education. Commenting on the Raging Grannies, a group of elder women who write and perform satirical protest songs, Roy (2000) concludes that 'humour is appreciated by allies but feared by opponents' (p. 7); moreover, 'unexpected avenues of expression [like a large costumed poop] disturb complacency' (p. 14). In some ways, Mr. Floatie can also be seen as a Freirian code or generative theme in problem-posing education (Barndt 1998): he is an outrageous yet humorous symbol which provokes us not only to laugh, but also to think more deeply about the issue of sewage. Most obvious is the question of why the government keeps dumping raw sewage into the ocean. Further questions naturally arise: Why do they keep trying to maintain that this dumping is not a problem? Who produces and controls knowledge about the severity of pollution, and sewage treatment options? Who benefits, who loses, what choices are there and what can we do to change things? And so on.

Likewise, the symbolic action of Julia Butterfly Hill not only led to her own personal education and transformation into an environmental activist, but also gave inspiration and knowledge to a wider collective environmental movement. Luna (the tree) became a symbol of hope, resistance and victory for the environmental movement; like Mr. Floatie, Luna was a cultural code, generating awareness, education and action around a critical environmental issue. Julia Butterfly Hill herself also acted as a cultural code; she became a genuine 'American hero', darling to the press and popular imagination. She was raised in poverty in a trailer home, experienced a traumatic car crash and epiphany, overcame great adversity with passion, persistence and strength, and against all odds never gave up her faith. In a truly American cultural feat, she broke the record for the longest tree squat. Because this personal narrative had strong resonance in the American popular imagination, it then allowed people to listen to a second, more critical message about the destruction of old growth forests, the greed of timber companies and the collusion of government.

SOS similarly helps us to understand the power of symbols to create 'counter-publics' and counter-hegemonic ideologies. Positioned by mainstream society as hedonistic, 'long-haired lay-abouts', surfers in SOS created an alternative identity as a community of mobile, informed, quick-striking and effective grassroots activists who were allied with the struggles of native Hawaiians and other marginalised communities. Symbolically, SOS was able to contrast a deep public appreciation of Hawai'i's beautiful, pristine beaches and reefs with corrupt and rapacious development, again 'counter-framing' an ideological debate in the public imagination. In short, the cases of SOS, Mr Floatie and Julia Butterfly Hill embodied cultural codes which acted as strong catalysts for collective conscientisation in environmental adult education; they were powerful expressions of individual and collective thinking, adult learning, identity, and action for social change.

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Mathematics funds of knowledge: *Sotmaute* and *Sermaute* fish in a Torres Strait Islander community

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The purpose of this article is to describe a project with one Torres Strait Islander Community. It provides some insights into parents' funds of knowledge that are mathematical in nature, such as sorting shells and giving fish. The idea of funds of knowledge is based on the premise that people are competent and have knowledge that has been historically and culturally accumulated into a body of knowledge and skills essential for their functioning and well-being. This knowledge is then practised throughout their lives and passed onto the next generation of children. Through adopting a community research approach, funds of knowledge that can be used to validate the community's identities as knowledgeable people, can also be used as foundations for future learning for teachers, parents and children in the early years of school. They can be the bridge that joins a community's funds of knowledge with schools validating that knowledge.

Keywords: *Torres Strait Islands, Torres Strait Islander parents, Indigenous Knowledge Centre, funds of knowledge, sorting, partitioning.*

What can be learned from Torres Strait Islander parents' funds of mathematical knowledge and incorporating into the transition to formal school?

At a time when a number of strategies have been implemented to increaseTorres Strait Islander parents' participation in education with their children (see for example, Department Education, Employment and Work Relations 2011; Torres Strait Islander Regional Education Council 2011), I argue that going beyond the simple dichotomy between parents' funds of knowledge (experience, out-of-school, intuitive, tacit) and academic (in-school, linear, deliberate) is critical. For children in the early years of schooling, instruction must be underpinned with authentic engagement in productive activities, drawing on prior knowledge and complexity and the dialogical emergence of instruction. What this means for educational practice is that by inviting children into a world of motivating activities where the everyday and spontaneous comes into contact with school, the children's and their parents' engagement with both the activity and the social context are foregrounded so that questions and inquiry can occur (Gonzalez et al. 2005). That is, the classroom becomes an information exchange that draws on multiple funds of knowledge that are activated and tied with mathematics curricula (see, for example, Australian Curriculum and Reporting Authority 2009; Department of Education and Training, Queensland 2010; Department of Education, Training and the Arts, Queensland 2008).

At the heart of this project a funds of knowledge approach is adopted because it provides a powerful and rich way to learn about communities in terms of their resources, their mathematical

competence related to *sotmaute (*sorting) and *sermaute* (partitioning) through the giving of fish and the way they utilise these processes to support the education of their children. Through familial and social networks, Torres Strait Islander parents build capacity amongst one another and with their children (Makuwira 2007). Such networks validate the parents' own definitions of maths as they exist in their communities—'funds of knowledges' that are applied in daily life (Moll 1992: 133). The idea of funds of knowledge views that people are competent and have knowledge that has been grown and developed through their life experiences that have given them that knowledge.

If one accepts the premise of this article, that funds of knowledge of mathematics are those that reflect the unique histories and culture of communities and which are historically and culturally accumulated, then the question arises: How are these knowledges and the learning of them connected with and situated in communities and the voices of the people? Here, I draw on the work of Lahn (2006) who describes the practice of giving fish. Giving a *sermaute* (share) of fish is a significant practice for Torres Strait Islander women. While the choice of fishing companions can illustrate a range of relationships, for example, family and friendships, the 'distribution of fish is not as flexible' (p. 301). With the division of caught fish come the expectations to give a share to relatives as well as elderly neighbours. Distributing the fish is generally towards 'ascending members of their own family and that of their husband' (p. 304). This emphasis reciprocates

> the earlier physical and social nurturance received by the individuals in this generation (in particular, parents, aunties, mother's brothers). These individuals are viewed as having nurtured them to adulthood, an idea communicated locally through expressions like *lugaut* (look after) and *gromape* (raised). ... This ethic in fact extends to all older members of the community, who are seen as responsible in a more general sense

> for creating (nurturing) the physical and social community to which the younger generations now belong. (p. 304)

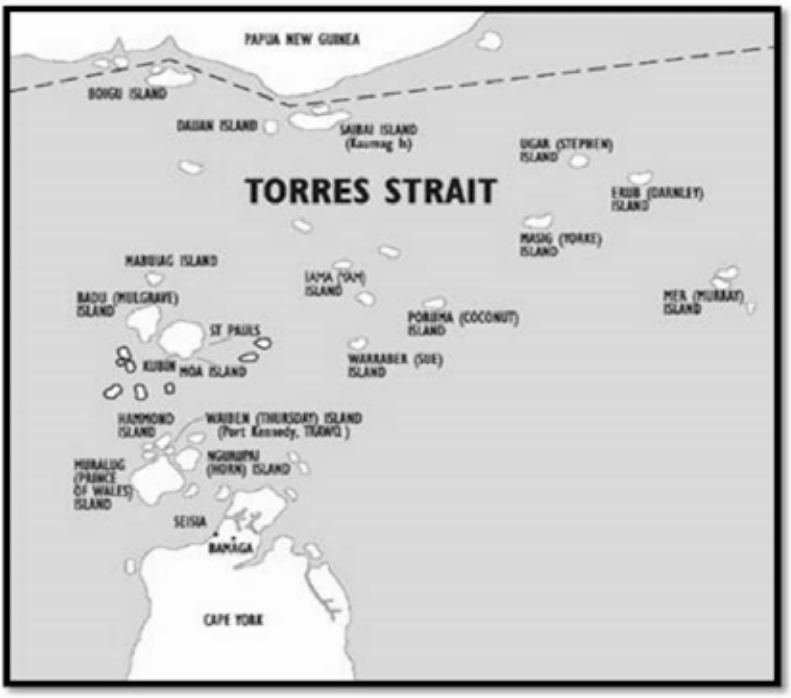
Women are expected to provide their relations with fish of reasonable size and type in relation to their overall catch. Through this process, the idea is to make individual buckets 'less unequal' by comparison with others that are not necessarily equal (p. 301). The preferred way to control fish distribution after returning home is to choose the fish to distribute to specific 'households and individuals free of scrutiny or pressure' (p. 301). But the distribution of fish occurs among a number of houses that function as 'multi-house networks' (p. 303). It is through such networks that funds of knowledge are learned, shared and practised.

Where is the community, and what did I do?

The project adopted a community-based approach because it 'conveys a much more intimate, human and self-defined space' (Smith 1999: 127). It relies upon and validates the community's own definitions. I established a relationship with community members over time as a consequence of another project that was based at the primary school, but chose to embark on a preliminary process in collaboration with the community following cultural protocols, respect for the community and because this project was based within the community and not school. Where is the community?

The Torres Strait Islands consist of eighteen islands and two Northern Peninsula Area communities (Torres Strait Regional Authority 2010). They are geographically situated from the tip of Cape York north to the borders of Papua New Guinea and Indonesia and scattered over an area of 48, 000 square kilometres. There are five traditional island clusters in the Torres Strait: top western, western, central, eastern and inner islands (see Figure 1, Torres Strait Regional Authority Map 2011).

Figure 1: Torres Strait Regional Authority Map



Although I had visited the island on previous occasions, I come from a background of speaking only one language, English, which was one of three languages spoken on the island or one of four spoken in the Torres Straits. Specific languages are spoken in Torres Strait Islander communities including Standard Australian English, Yumplatok (Creole), Kala Lagaw Ya (Mabuyag) and Meriam Mir (Osborne, 2009; Shnukal, 2004). Kala Kawaw Ya (KKY) is understood to be a dialect of Kala Lagaw Ya (Osborne 2009). The traditional languages of the top western and western islands, Kala Lagaw Ya (KKY and Mabuyag) are understood to come from the mainland of Australia, with the eastern island language, Meriam Mir, emerging from Papua New Guinea. Yumplatok, identified as a modern language and stemming from

colonisation, is derived from 'meshing' both traditional languages and English, thus creating a language in its own right (Osborne 2009; Shnukal 2004). This language is identified as unifying, that is, it is the one that everyone in the Torres Straits can speak, whereas the western, traditional language speakers cannot speak and understand the eastern language speakers (Osborne 2009; Shnukal 2004).

Who are the community?

Community members who had a voluntary desire to participate were included. There is little benefit derived from commanding that people should attend. When there is a sincere interest in reciprocal learning in a community, relationships and trust can grow. Twenty adults and eight children took part in the community consultation meeting. All reside in the community where the meeting was held. Four adults took part in the workshop which was held in an Indigenous Knowledge Centre that is centrally located in the community. All participants live in that community. Their identities are protected in this paper using pseudonyms.

How did the meeting and workshopcome to be and what were the methods for doing this?

Recent involvement with communities taught me about the importance of meeting with community. I have learnt,and continue to learn, about what works and what does not. What works is predicated on the assumption that, if community can engage and identify with what is discussed, the more interest and enthusiasm is shown. Individual meetings were held with several people, for example, the school campus leader and the Island Councillor and to seek permission to meet under the 'Omei Tree'—Tree of Wisdom—which was suggested by Denise, a senior community woman. A meeting was also held with the local radio announcer for the Island radio which then resulted in a radio interview that was broadcast to the Island community. With support from Denise, and a parent

from the community, a paper-based flyer was delivered face-to-face to the homes of Island parents to let them know about a proposed community meeting and a workshop gathering. The content of the flyer was brief and aimed to provide succinct information for ease of reading and clarity. As per the flyer schedule, the meeting was held for one hour under the Omei Tree with a number of community members in attendance. According to one community member, the fig tree is believed to be over one hundred years old and has been a significant meeting place for the Island community. During the meeting I explained the project and how participants might be involved. Gaining consent was respectful of the community's place and environment as also was that, as a visitor, I needed to be mindful of my actions and presence and conduct in the community.

What kinds of questions did I ask?

The kinds of questions I asked emerged as a conversation rather than a research interview format. I carefully explained that confidentiality would be maintained and that pseudonyms are always used to protect the community's identities. At the meeting I asked the group where they used mathematics in their daily lives. The responses included: buying food at the supermarket, cooking and counting fish and shells, indicating that it emerges through daily activities. As the discussion progressed, I explained some of the early number ideas such as sorting/classification using shells, sticks, leaves, and Poinciana pods that I had gathered from the community. These items were collected after seeking permission from Julia, a Senior community member. At the subsequent workshop I asked about sharing and where it was used in daily life.

Data collection techniques

For the purposes of this paper, the data collection techniques included: digital photography, field notes and audio-recording of a workshop. Digital photography as a non-written source of data

allowed for the capturing of visual images that were central to the preliminary process and which served as a reminder for me (Stringer 2004). Field notes provided descriptions of places and events as they occurred. They provided ongoing records of important elements of the setting and assisted with reporting and reflecting back over events. Audio-recording served as a detailed reminder, capturing participants' knowledge and understandings verbatim (Stringer 2004). It also provided ongoing records of important elements of the setting. Each technique afforded the value of insight into the important preliminary planning of the project (Stringer 2004).

What happened at the community meeting?

In recent years, building on what communities bring to particular contexts and on their strengths has been shown to be effective in engaging with communities (Gonzalez & Moll 2002). How does this occur? A way to engage community was to draw them in with knowledge that was already familiar to them, and which then served as a basis for further discussion and learning (Gonzalez et al. 2002). However, with this process there was a challenge and dilemma. How did I know about the knowledge that they brought to the meeting without falling into stereotyping their cultural practices? How did I address the dynamic process of the lived experiences of the community? Smith (1999) has argued that the responses to these questions have emerged from community-based research that relies on the community's definitions and discussions.

In the meeting, I introduced myself and explained who I was and where I was from. I also explained some of my background and experiences as a matter of protocol and respect. By introducing myself to the community, I provided information about my cultural location 'so that connection can be made on political, cultural and social grounds and relations established' (Moreton-Robinson 2000: xv). This process then allowed the community to locate me in the context

of ancestry, where I was from and my family relations. As the meeting progressed, I asked a couple of open-ended questions to invite stories about where mathematics might be used in daily life on the island. This led to conversations amongst the group about where they used maths. Their responses helped to conceptualise the maths they used, for example, sorting.

When asked how they might sort shells, Denise volunteered to sort a range of different shells into groups. We then had to identify what criteria were used for the grouping. Sorting activities assist with the promotion of understandings of grouping. Children learn to sort objects into groups from their daily experiences. They learn to identify sameness that defines the characteristics of groupings (Sousa 2008). The idea of creating and naming groups continues throughout life and is a way of creating and organising information and making connections with people's experiences. Before young children can learn to count groups, they begin the process of defining a collection using the objects in their daily lives (Baroody & Benson 2001; Sousa 2008). Hence, they need experiences that have a rich variety of two- and three-dimensional objects. Noticing likenesses and differences among objects, children become aware of the features that different objects have. They also become aware of grouping objects. Such an understanding paves the way for learning about partitioning. Denise established the features of each of the sets of shells. If the criteria for membership to a group are vague, it is more challenging to decide whether the shells belong to a particular group. We talked further amongst ourselves, with Denise allowing us time to identify the features of each group.

From my experience, I could not identify the criteria that defined the groups; however, there was consensus amongst community that criteria had been established—edible and non-edible shell creatures. In this example, the community used their daily lives and activities as an opportunity to talk about sorting using their home

language—Yumplatok and English. When I asked when children learn about edible and non-edible shells, there was consensus that this occurs at a very young age, for example, one to two years, and during times when families walk along the shores of the Island and when fishing or playing in the water. This example reinforces Moll's (2002) statement that learning can be rich and purposeful when it is situated within that which already exists—the culture, community and home-language of the group. Gonzalez (2005) explains this further by stating that maths is embedded in social knowledge and mediated through language and the activities of the community. It is not learned nor is it disembodied from its social meaning and context as happens within formal schooling and becomes a linear process of dialogue. The learning about sorting edible and non-edible shell creatures was distributed among the group. It was a shared, collective construction of mathematical knowledge. I found that this experience of shared knowledge, rich in its own complexity, evinced knowledge that had been historically and culturally accumulated and shared through daily living. The community validated their definitions of knowledge, sorting using shells from their environment. In doing so, this process provided a rich way to represent their knowledge and competence to support their children.

As the meeting came to an end, members were asked if they would like furthermaths workshops to be organised for, and with, the parents and children. Of importance was that the community needed time to network and discuss whether they wanted me to return and work with parents and children on the Island and if they identified that there were benefits for their community. The next section talks about one workshop and what happened.

What happened at the workshop?

Building on what communities bring to particular contexts and on their strengths has been shown to be effective in engaging with

communities (Gonzalez & Moll 2002). This was evident from the community meeting and first workshop conducted that focused on early algebra. A second workshop was held, with parents invited to identify its focus. It was during that workshop that sharing and partitioning emerged as mathematical processes that parents used in their daily lives. Using a semi-structured,informal discussion and using items previously collected, allowed for understandings of how this knowledge might be used to support their children's learning. I was invited to do the workshop in the Indigenous Knowledge Centre on the Island, a place of agency that permits and promotes engagement in a range of activities for the community (Taylor 2004).

Partitioning experiences are important for building rational number understandings (see, for example, Piaget, Inhelder & Szeminska 1960). The ability to divide an object or a group of objects into equal parts is identified as critical to understanding the logical development of part-part and part-whole relationships and notions of equality and inequality (Lamon 1996). This ability may also influence children's understandings of mathematical topics such as measurement and geometry. Partitioning is a process that generates quantity and, in doing so, builds understandings of rational numbers(Lamon 1996; Pothier & Sawada 1983). It is an activity that is intuitive and experienced-based; indeed, this process connects the process of constructing rational numbers with children's informal knowledge about fair sharing (Pothier & Sawada 1983). Unitising, however, is a cognitive process for coming to know and understand the amount of a given item or share before, during and after the sharing process. In the following excerpts the process of partitioning is described by Ailia, one of three women who attended the workshop. Ailiae explains the process of giving fish. This explanation came about as a consequence of a question I asked about where maths is used in the women's daily lives. Ailia draws on language that is associated with partitioning—division. Of significance in the following excerpt is that she explains how 'we'involve 'our kids' in giving fish.

> Ailia: Like you asked me what we do here like, now when we come in with the fish and the share for the community [unclear] we do with our kids and they watch.

In this excerpt two aspects are significant. The first is the use of the term 'share' and the secondis that, after the women have gone fishing, that 'share' is for the community and their children are engaged in the activity. Through the process of watching, the children learned the substance of sharing experiences that can then be used as opportunities for experimenting in other contexts and, in doing so, building their knowledge of fair sharing via family activities and relations. This process is in line with what Lahn (2006) identified in her work of fish giving practices in the Torres Strait Islands. The reciprocal,nurturing relationship occurs across generations with the women nurturing and modelling to the children how 'older members' are cared for in the community.

Here, the specific characteristics of community relationships and activities seem to converge on very similarly organised networks of relations based on 'dense exchange' (Velez-Ibanez & Greenberg 2005: 53). For each family from which the women and children come, the funds of knowledge accumulated and that form the basis of daily life contain much of the previous generation's repertoire of information and skills for living. These funds of knowledge are embedded in either historical or contemporary experiences of families. The funds and experiences are a 'currency of exchange' (p. 54) between generations and families that form the 'cultural glue' (p. 54) that maintains cultural relations. This exchange and the idea of sharing are embedded in the social knowledge of the women. It is mediated through the sharing experiences that the women perform and distribute among the group including the children. In the next excerpt, Ailia describes sharing as a practice which is mediated and distributed amongst the families, activities and contexts.

Ailia: When we divide the fish among the families, like if I've got my three sisters and two brothers that I need to catch fish [unclear], with the fish, it doesn't, we don't all [get] the bigger ones in this family and then the other sister get the small ones, we divide it quite evenly, like all the big fish in the basket, we get one each. And then we go down to the second size, even it up.

Bron: So then everyone can go home and feel like it has been a fair sharing out?

Ailia: Yes.

Bron: And that's the process most of the time?

Ailia: Yeah.

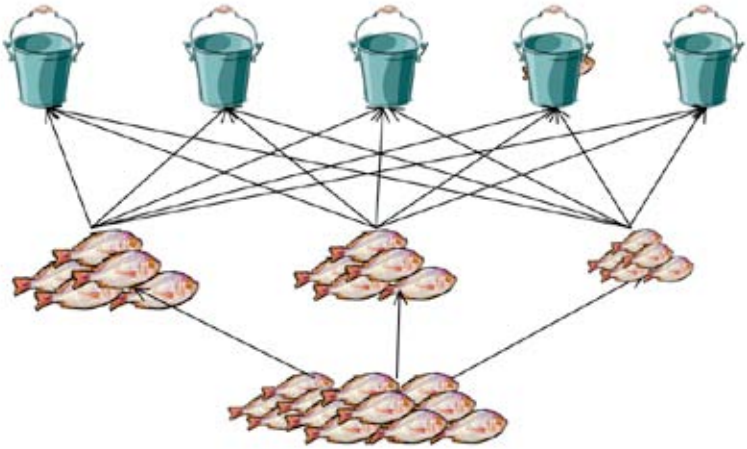
Bron: And the children learn that?

Ailia: Yes.

Bron: They grow up knowing that?

Ailia's explanation provided critical insights into how division was deeply embedded in fish giving practices. It is these same practices that have the potential to be invisible through the trained eyes of formal education (Gonzalez, Andrade, Civil & Moll 2005). The mathsinvolved in such practices, go 'beyond facile constructs of social context and must take into account the deeply felt relationships of co-participants, the social relationships involved in undertaking the practices as well as the deep engagement of connection with a product, and not just a process' (p. 264). Ailia was interested in explaining the fish-giving process but, in doing, so was also interested in uncovering the maths in a systematised way. For example, she explained that she had three sisters and two brothers that she needed to catch fish for and distribute evenly. The fish were first sorted into different sizes. The groups were created based on sameness, that is, fish were sorted by weight through the action of hefting, and measuring length and girth by sight (see Figure 1 below).

Figure 1: A fair share



This process affords young children with opportunities to learn about sorting, sharing and partitioning. How many parents and children are aware that this knowledge as it relates to division resides in their daily practices? In the above example, the fish were distributed and then checked to see how many each bucket received. When partitioning, the number of groups is already known, but how many objects must be placed in each group is not known. In the next excerpt, Ailia explains the sharing process further:

> Ailia: If we only have four buckets, even if we only have three big fish that needs to go into and then we take two smaller ones that will make it like a big
>
> Bron: Oh, okay.
>
> Ailia: And then there's [one] for that, and these three buckets will be this big [one] and this one, two in there.
>
> Bron: You know feel in terms of weight or by sight?
>
> Ailia: Just by [moves arms to indicate hefting action].
>
> Bron: Sight?
>
> Ailia: Yeah.

In Figure 1, the size of the set is unknown and is called fair-sharing or a partition problem. In Ailia's excerpt above, the whole (five fish) is shared among a known number of buckets (four) to determine the number of fish in each bucket and equality. Equality was represented as two smaller fish equalling the size of one larger fish. When asked about how the size of fish were determined, Ailia responded by hefting and gesturing towards her eye to indicate by sight.

In this example partitioning was found to not be a possession that resided in Ailia's head as a fixed attribute or skill only known to her. Rather, partitioning was a practice, and giving fish created a context for the development and teaching of that practice. Gonzalez et al. (2005) argue that understanding maths is not simply about the possession of funds of knowledge in mathematical domains. The key point here is that such domains must be socially mediated into 'productive knowledge in order to be meaningful' (p. 266), as demonstrated in the following excerpt from Ailia:

> Ailia: When we do that, kids will stand there and say, why don't you put [indistinct] the question, so then we explain it to them.
>
> Bron: Yep.
>
> Ailia: So we want it even.

What is evident in the above series of excerpts is that Ailia and the women she referred to who were involved in the fish-giving practice have the skills, connections and understandings with how the process works. It is up to the women to pass on this knowledge and support to their children because they are brought up this way and therefore it is what is expected (Lahn 2006). The reciprocity among family was evident in the excerpt. Each step in the process revealed a network of family who gave or received fish and advised the children or each other, thus maintaining second generation and or third generation relations and practices. Such activities demonstrate how the process established enduring, social relationships and interdependence as

well as the partitioning process, where the focus was on equality and sameness.

The knowledge of giving fish had not been taught systemically to the children. But such knowledge becomes useful within the maths curriculum in schools as a means of stimulating and engaging students' curiosity about their environment and their cultural practices in a context that is relevant to their lives. When children begin school, and where there is an unequal distribution of funds of knowledge and where materials and textbooks may be limited, the use of a pedagogy that draws on the children's cultural knowledge and the resources available to them makes good sense (Browning-Aiken 2005). When children are provided with activities such as the examples above in their daily lives prior to schooling, a strong argument could be made that they should be much more closely linked when children commence formal learning ofpartitioning—division.

Conclusion

In evaluating the meeting and workshop as strategies for engaging with parents and their cultural practices and the maths that is part of such practices, the experience has revealed several themes that directly affect the nature of home-community relations-early years' schooling and have the potential for improving educational achievements on the basis of more knowledge of pedagogical practices. For one, Ailia placed high value on fair sharing—partitioning which was indicated in the daily practices used to share this skill as well as exhibiting respect for family members who were also teachers. Learning was something that occurred in the community and at home in a form of increasing household responsibilities and in the business of people in their family networks. Together, the themes have implications for the nature of the teaching that parents engage in and for the pedagogy within classrooms when

children begin school. Thus, teachers need opportunities where they can engage with parents to learn what funds of knowledge exist among their students because they provide an important part of the teaching and learning process when materials and resources are limited. Conversely, funds of knowledge can be considered as enriching as the curriculum where such resources are available.

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Knowledge management systems and open innovation in second tier UK universities

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The purpose of this paper is to examine the performance of second tier UK universities in relation to the effectiveness of their knowledge management systems and involvement in open innovation. Data were acquired using a mail survey of academic staff in social science and business faculties in second tier institutions. The results indicate that certain key factors influence the effectiveness of knowledge management systems. Universities engaged in open innovation appear to have developed more effective systems. It is concluded that universities seeking to survive in the face of government spending cuts could benefit from optimising the effectiveness of their knowledge management systems and giving greater emphasis to the acquisition of new knowledge by exploiting open innovation.

Keywords: *universities, funding, knowledge management systems, open innovation*

Introduction

One consequence of Western governments facing increasing problems funding public sector service is the university sector has faced either a freeze or reduction in government financing (Lundsgaard & Turner 2004). In the UK, the 2008/09 recession which followed the global banking crisis has caused the Government to reduce significantly the level of student funding made available by the Higher Education Funding Council for England and to permit an increase in the level of student fees from £3,290 to a maximum of £9,000 in 2012.

In an increasingly volatile world, organisational performance can often be enhanced by the exploitation of new knowledge (Goh 2002). Drucker (1985 a, b) posited that survival of organisations in turbulent times will be higher among those which exploit innovation to sustain performance. One possible approach for responding to public sector funding problems is to place greater emphasis on innovation as the basis for developing new service propositions or enhancing organisational productivity (Chaston 2011). The purpose of this paper is to examine the validity of this perspective in relation to the UK university sector by examining knowledge management and innovation practices within these institutions.

University funding

By the 1990s many governments began to freeze or reduce the level of funds being made available to higher education (HE) institutions (McPherson et al. 1989). Many universities responded by slowing their rates of spending and, where permitted, increased the share of costs borne by students by raising tuition fees. In Australia and New Zealand, as government funding decreased, universities attempted to improve productivity to close their funding gap and greatly expanded their efforts to attract more overseas students (Scott 2003).

Australian and New Zealand governments also created a student loan scheme for their domestic students (Dobson 2001). Within Europe, there has remained a more embedded philosophy that young people should continue to be provided with free university education. In the UK in the 1990s, however, the government decided that to sustain the delivery of a high quality learning experience (Johnes & Johnes 1994), it was necessary to introduce student fees (Peters 1999). By the 21st century more nations wishing to create a skilled and educated workforce to sustain economic growth have accepted a 'study now, pay later' funding philosophy (Lundsgaard & Turner 2004).

In the UK Lord Browne recommended a lifting of the cap on student fees (Browne 2010). English universities were permitted to increase student fees up to a maximum of £9,000. A key factor influencing this decision was that, following the 2008 banking crisis and subsequent recession, reduction of the UK public sector deficit required a drastic reduction in university funding via the Higher Education Funding Council for England.

University reform

Even before the UK Government's recent actions over increasing student fees, policy initiatives had been introduced with the aim of enhancing productivity and reducing operational costs with the HE sector. A common thread associated with these policies has been the use of New Public Management philosophies which emulate commercial market systems through state-induced competition (Chaston 2011). To achieve this aim, there has been heavy reliance upon indicator-based performance assessment models (Orr et al. 2007). A number of key performance indicators (KPIs) now exist in the university sector. Examples include profiling student recruitment, course quality assessments, monitoring course completion rates and measuring employment outcomes following graduation. However, in assessing the benefits associated with the provision of more data

to assist in the management of change, Todnem et al. (2008: 21) concluded that, in relation to the HE sector in Europe,

> audit culture and managerialism have created an environment that encourages opportunistic behaviour such as cronyism, rent-seeking and the rise of organisational psychopaths. This development will arguably not only lead to a waste of resources, change for the sake of change, further centralization, formalization and bureaucratization but, also, to a disheartened and exploited workforce, and political and short-term decision-making.

The performance assessment indicator which has possibly received greatest attention in the literature is the Research Assessment Exercise, first introduced in the UK and subsequently in Australia and New Zealand. The key justification for the RAE indicator was that this assessed whether universities were sustaining a knowledge ethos. Heald and Geaughan (1994) suggested the assessment system reflected a government desire to expand outputs without increasing financial inputs. The estimated incremental cost of conducting the RAEs was £27m to £37m being spent on the 1996 UK RAE (Ball & Butler 2004).

Taylor (2001) suggested that research assessment exercises resulted in a strengthening of the 'publish or perish' ethos to the detriment of teaching quality. Craig (2002) noted the RAEs changed career expectations and lowered morale among those academics whose primary job satisfaction is teaching. Ball and Butler suggested that some Vice Chancellors' commitment, especially in the second tier institutions, to upgrading their research activities was motivated by a wish for higher personal prestige.

Cutt et al. (1993) considered that where research is given priority this can have a detrimental impact on teaching quality. This effect can arise because resources are withdrawn from teaching by university management willing to accept a 'satisfactory' rating in the place of excellence in teaching as an appropriate strategic goal. Concern about

a possible decline in teaching standards caused Mathews (2007: 238) in his assessment of RAE outcomes in Australia to propose that:

> perhaps we would be better served, in whatever country we reside, by re-thinking whether our universities should all seek to emulate the prestigious, sandstone universities and be research powerhouses. Should the newer universities have different charters? Should there be a more diverse set of expectations regarding the performance of academics within our university systems?

Knowledge management

In an increasingly complex and volatile world, newly appointed senior managers are unable to fulfil their role in ensuring performance goals are being met unless systems exist within the organisation that permit the creation and transfer of knowledge (Nonaka 1994). The existence of effective knowledge management systems has become a critical factor in determining organisational performance. Chaston (2004), Blumentritt and Johnston (1999) and Smith et al. (2009) concluded that where new knowledge is required, the greater is the need for effective information utilisation inside the organisation. The need for new information is especially important within knowledge-intensive sectors (Merona et al. 2007).

The effectiveness of knowledge management systems is dependent upon the willingness of managers and employees to work together, sharing key knowledge of mutual benefit (Goh 2002). Interaction aimed at providing and obtaining knowledge is usually accompanied by higher organisational performance (Jones & Crompton 2009). Barriers to implementing knowledge management are usually people related (Ruggles 1998).

Most studies undertaken in this area have been qualitative (e.g. Liebowitz & Chen 2003; Wiig 2002), reducing the researcher's ability to empirically determine which factors are critical in creating

effective knowledge management systems (Beesley & Cooper 2008; *Syed-Ikhsan* & *Rowland* 2004). Wong and Aspinall (2004) used both qualitative and quantitative data as the basis for identifying the Critical Success Factors (CSFs) influencing knowledge management programs within organisations. They concluded that successful knowledge management requires proactive leadership from top management committed to exploiting innovation to sustain performance.

Taylor and *Wright* (2004) examined knowledge management practices in the UK's National Health Service. They identified the three key variables influencing process: (i) 'organisational climate' which reflects the organisational culture based upon open leadership and a willingness to learn from mistakes, (ii) 'infrastructure and process' which is determined by the quality of information and a performance orientation, and (iii) strategy implementation which involves the existence of a strategic vision and workforce satisfaction.

In view of the importance of effective knowledge management systems and in light of questions raised in the literature concerning the adequacy of a KPI philosophy with emphasis on research outcomes for assessing performance in the HE sector, an aim of this research study is to examine the current state of knowledge management systems within UK universities. Specific objectives of the study are to utilise the *Taylor* and *Wright* (2004) knowledge management model to assess the following hypotheses:

H1: Prevailing organisational climate influences the effectiveness of knowledge management in universities.

H2: Prevailing infrastructure and processes influence the effectiveness of knowledge management in universities.

H3: Prevailing strategy implementation influences the effectiveness of knowledge management in universities.

H4: Highly effective knowledge management systems exist in universities.

Open innovation

Drucker (1985a , b) posited that a key attribute of successful managers in both private and public sector organisations is their ability to exploit innovation to provide an effective response to significant external environmental change such as an economic downturn. The importance of innovation has been validated by studies of private sector organisations which survive recessions (Gilbert 1990; Ghemwar 1993; Trott 1998). The ongoing validity of this viewpoint has recently been endorsed by a survey of chief executive officers of major businesses conducted by IBM (2008). Innovation is also critical in service sector organisations (Lin & Chen 2007). The activity is often orientated towards the enhancement of internal organisational processes and development of new products (Freel 2006; Tanabe & Watanbe 2005; Hine & Rynan 1999).

The traditional approach to innovation in most organisations is to retain ownership and confidentiality of proprietary knowledge by using a closed innovation approach. Chesbrough (2003), who coined the phrase 'open innovation', concluded that some organisations, especially in the private sector, have now moved towards collaborating with external organisations to achieve competitive advantage. Huang et al. (2010) posited that open innovation enables organisations to achieve improved value-added outcomes.

Not all organisations apply the same approach in involvement in openness (Chesbrough 2007). Christensen et al. (2005) argue that organisations manage open innovation in different ways depending on (i) their position in the innovation system, (ii) the stage of product/service maturity and (iii) the scale of the value proposition. A characteristic of open innovation is that the process does not necessarily take place within the boundaries of the organisation

(Lichtenthaler 2008). Elmquist et al. (2009) proposed open innovation is influenced by the number of partners involved and an internal versus external focus. Although open innovation can provide access to a larger pool of ideas, the costs can be considerable, practical problems over intellectual property ownership can arise and lack of trust may frustrate achievement of optimal project outcomes (Birkinshaw et al. 2011). National and corporate cultures influence the willingness to engage in open innovation (Lundvall 1998). Gerard et al. (2009) concluded the two most critical factors influencing successful collaborative innovation were corporate culture and the scale of investment undertaken to maximise the expertise of an organisation's own workforce.

Successive UK governments have sought to 'bridge the gap' between academia and business (Lee 2005). Perkmann and Walsh (2007) concluded that these actions have increased open innovation between industry and universities in the development of new products and industrial processes. Malik et al. (2011) noted that university-industry relationships are now much more common in many European countries and these activities are perceived as increasingly important in the sustaining of national economic growth.

Mohannak (2007), Moensted (2010) and Ojala and Tyrvained (2009) posited that the creation of knowledge management systems which encompass involvement in collaborative activities is critical for effectively managing changing market environments. Wiklund and Shepherd (2002) concur with this view. The research of Camison and Villar-Lopez (2010) and Palacios et al. (2009) indicated an ability to access new knowledge is a key influencer of market performance. Leidner (2000) proposed the highest priority should be given to the acquisition and exploitation of knowledge when organisations are engaged in innovation. Chen et al. (2006) determined that, where knowledge management systems are reliant upon acquiring knowledge from external sources, the effectiveness of such systems

enhances the capability of service providers to respond rapidly to changing external environments. Bate and Robert (2002) reached a similar opinion in relation to the use of knowledge management in the public sector.

These various observations provide the basis for the following hypothesis, namely:

H5: Universities engaged in open innovation will have established more effective knowledge management systems.

Methodology

A focus group was carried out involving academics from both the older, established institutions and second tier universities. Academics from the former institutions felt there had been few, really fundamental, strategic changes as a consequence of the RAE. In contrast, academics from the second tier colleges reported that the advent of performance indicators had significantly altered strategies, policies and working conditions. Hence, in order to reduce the impact of inter-organisational variance complicating data analysis, it was decided to restrict the research to assessing views of academics from second tier universities.

Response rates tend to be higher among individuals who are familiar with the topic and terminology being used in a research study. Hence the sample frame was limited to academics from social science or business faculties. A sample frame of 500 academics was constructed by selecting individuals from the data provided on institutions' websites. Prior to the mailing of a survey, a small-scale pilot study involving 25 academics was undertaken.

In relation to an assessment of knowledge management practices, the survey design is based upon the methodology validated by Taylor and Wright (2008). Their approach involves asking 27 questions to assess the factors influencing perceptions of knowledge management

processes. Respondents are provided with a five-point scale ranging from 'very strongly disagree' through to 'very strongly agree' in relation to each of the questions. Overall system effectiveness is based upon the overall mean for these 27 questions.

Lazzarotti et al. (2010) have validated a scale on open innovation. It was decided to use their scale in this current study. The scale uses the following factors to calculate an overall mean to provide an indication of the level of open innovation:

- Three items which assess the use of open innovation to extend skills, competences and creativity.
- Two items which assess the aims of sharing risks and costs.
- Five items which assess the organisation's level of orientation towards involvement in innovation.
- Five items which assess managerial and organisational behaviour.

Results

The total of useable surveys received was 138, a response rate of 27.6% percent. Cronbach's alphas were calculated to assess reliability of the 27 measurement variables used to assess aspects of management system effectiveness. In all cases the values were greater than 0.70 which is the lowest limit for acceptance of reliability for each variable (Hair et al. 1998). Hence all variables were used in a multiple regression analysis. The results are summarised in Table 1. All six factors were significant at $p=<0.05$ in relation to the dependent variable of knowledge management effectiveness. The overall mean for all variables, which provides an assessment of overall system effectiveness, was 2.43.

Table 1: Regression of factors in relation to the dependent variable of knowledge management effectiveness

Factor	Beta	T	Significance
Open leadership	0.415	6.912	0.00
Quality of information	0.215	3.121	0.00
Workforce satisfaction	0.201	2.991	0.00
Learning from mistakes	0.196	2.834	0.02
Vision	0.114	1.731	0.03
Performance orientation	0.119	1.572	0.04

Analysis of variance

	Sum of Squares	Mean Square	F	Significance
Regression	101.11	16.89	14.32	0.00

To assess reliability of the 15 multiple measurement variables associated with assessing open innovation, Cronbach's alphas were calculated. All values were greater that 0.70. Hence all variables could be used to calculate the overall mean for involvement in open innovation that was utilised in subsequent statistical analysis. The respective mean scores for extending skills, competences and creativity, sharing risks and costs, level of technological aggressiveness and managerial, and organisational and behaviour were 2.13, 1.82, 2.07 and 2.18 respectively. This yielded an overall mean score for involvement in open innovation of 2.05. A regression analysis of involvement in open innovation and knowledge system effectiveness was statistically significant at $p < 0.05$ (adjusted R^2 = 0.31; $F = 3.65$; $t = 1.98$).

Conclusions

Taylor and Wright (2008) posit that the key factors influencing the effectiveness of the knowledge management process are

organisational climate, structure and process, and strategy implementation. As summarised in Table 1, a statistically significant relationship at $p < 0.05$ was found between effective knowledge management and the variables of open leadership and quality of information. Hence it seems reasonable to suggest that these results support the validity of hypothesis H1; namely, that prevailing organisational climate influences the effectiveness of knowledge management in universities.

Also as shown in Table 1, a statistically significant relationship at $p < 0.05$ was found between effective knowledge management and the variables of workforce satisfaction and learning from mistakes. This suggests it is seems reasonable to conclude that these results support the validity of hypothesis H2; namely, that prevailing infrastructure and processes influence the effectiveness of knowledge management in universities. Finally, as also shown in Table 1, a statistically significant relationship at $p < 0.05$ was found between effective knowledge management and the variables of vision and performance orientation. Thus it seems reasonable to suggest that these results support the validity of hypothesis H3; namely, that prevailing strategy implementation influences the effectiveness of knowledge management in universities.

The reported value for overall knowledge system effectiveness at 2.05 is somewhat below the 3.0 mid-point of the measurement scale utilised. This result would suggest that, on average, management knowledge systems are not well developed in this UK university sector. In view of this outcome, it seems reasonable to suggest that this study was unable to validate hypothesis H4; namely, that highly effective knowledge management systems exist in universities. Most published studies of public sector system effectiveness tend to be qualitative in nature (Chaston 2011). This means that any comparison of results from this current study with previously published outcomes is virtually impossible. Nevertheless, it can be noted that

congruence of opinion exists in relation to a qualitative examination of systems within the HE sector undertaken by Louidor et al. (2008). They concluded that, despite colleges being knowledge intensive organisations, systems for supporting management processes in relation to involvement in teaching and research are usually poorly developed. As a consequence, they believe universities are not exploiting the opportunities offered by knowledge management systems to undertake strategic planning activities such as Value Stream Analysis which could assist decision-making with respect to optimising an institution's future service provision portfolio.

Collaborative learning is a measure of the degree to which firms utilise new knowledge as the basis for evolving innovative solutions capable of sustaining market performance. The regression analysis of involvement in open innovation and knowledge management system effectiveness was statistically significant at $p<0.05$. This outcome indicates the likelihood of universities which are more involved in open innovation will have evolved a more effective knowledge management system to assist in collaboration with external parties to acquire new knowledge. On the basis of this result it seems reasonable to propose this research supports hypothesis H5; namely, that universities engaged in open innovation will have established more effective knowledge management systems. This finding is congruent with an earlier conclusion by Chaston (2011). He proposed that, in the face of difficult market conditions, public sector organisations can be expected to place greater reliance upon systems that support the effective accessing and exploiting of new knowledge. Furthermore, collaboration is of little benefit unless internal systems exist which permit the effective interchange of knowledge between managers and employees inside the organisation (Goh 2002).

Discussion and further research

Zanra and Pearce (1990) considered that there is often a significant time lag between the adoption of a new strategy and a resultant observed change in organisational performance. In view of this situation, they suggested that merely examining the nature of environments confronting organisations at a single point in time may often lead to inconclusive results when seeking to align a strategy with a specific performance outcome. To avoid this problem, they recommend researchers undertake longitudinal studies measuring performance in relation to strategy of a period of several years. Hence this current study could be further enhanced by a longitudinal project to assess UK university performance following an upturn in economic conditions and the introduction of higher student fees in 2012.

Another methodology issue raised by Charhi (2000) is that many public sector organisations are often multi-departmental entities in which variation in managerial processes being utilised will be encountered. She suggests this variation can cause problems in assessing overall organisational performance in relation to factors influencing strategic outcomes. For example, the identified overall strategy used by most departments within an organisation may be very conservative, with only a minority of departments whose behaviour is innovative contributing to any improvement in organisational performance. However, as the minority component within the organisation, although activities of this latter group are the cause of improved performance, their existence in the survey data will be masked by the fact that the majority of departments are exhibiting a more conservative managerial orientation. Hence there is the need for further research to determine the degree to which inter-departmental variation in managerial behaviour can be identified within HE institutions.

The focus of this study was on second tier universities in the UK. This is a country which faces the problem of needing to reduce

a much larger public sector deficit than some other developed national economies. Hence there is the need to research whether the conclusions of this study are equally valid in relation to the performance of publicly funded universities in those countries facing smaller public deficit problems.

The near-term actions required by the UK Government to reduce the nation's massive public sector deficit means that all publicly funded organisations can expect to face either frozen or reduced annual budgets over the next few years. Hence there is a requirement for further research concerning organisations elsewhere in the UK public service sector. The aim would be to determine whether conclusions reached in this study about knowledge systems and open innovation are also applicable to these other organisations.

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Adult language, literacy, numeracy and problem-solving skills in the workplace

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This paper examines the performance of the eight major occupational categories across the four skill areas of the Adult Literacy and Life Skills Survey. The results indicated that some 38–64% of employed Australians were below minimal competence (at Level 1 or Level 2) in one of the four skill areas of prose literacy, document literacy, numeracy or problem-solving skills. A pattern of greatest need was identified amongst two occupational groups, namely, machinery operators/drivers and labourers. There was also a clear occupational hierarchy in the area of problem-solving skills that was considered to reflect a social bias since it was inconsistent with the three other skill areas. The findings also highlight pockets of social disadvantage and inequality with many labourers outperforming managers and professionals. It was concluded that the pattern of performance across occupations and skill levels was statistically and significantly different than chance.

Adult language, literacy, numeracy and problem-solving skills in the workplace

At some time almost everyone would have encountered a lack of competence in adult levels of literacy and numeracy. Without any wider experience, it is likely that they might perceive it as an isolated instance or just an individual issue. This is because they would not normally be in a position to gauge the extent of the deficit at a macro-level.

The general issue of literacy has been addressed at a national level since 1996. Reading was assessed as part of an international study through the *Adult Literacy and Life Skills Survey* that is conducted by the Australian Bureau of Statistics. The most recent *Adult Literacy and Life Skills Survey* assessed prose literacy and document literacy, as well as numeracy and the ability to solve problems using real-life tasks. This official survey reported the raw data in terms of five skill level categories but of necessity did not purport to make analyses beyond the basic socio-demographic groups. For instance, it did not make comparisons across occupational groups to provide a picture of literacy and numeracy in the workplace.

The purpose of this brief report is to analyse the results of the *Adult Literacy and Life Skills Survey* as a guide for future emphasis in adult training and labour market programs. The approach is overly quantitative but the interpretation of the results is descriptive. This study is part of a larger program of research that focuses on the fundamental importance of reading in the workplace (Athanasou 2011).

Background to the Adult Literacy and Life Skills Survey

The *Adult Literacy and Life Skills Survey* (ALLS) focuses on four broad constructs:

- *Prose literacy*: the ability to understand and use information from various kinds of narrative texts, including texts from newspapers, magazines and brochures;
- *Document literacy*: the knowledge and skills required to locate and use information contained in various formats including job applications, payroll forms, transportation schedules, maps, tables and charts;
- *Numeracy*: the knowledge and skills required to effectively manage and respond to the mathematical demands of diverse situations; and
- *Problem solving*: goal-directed thinking and action in situations for which no routine solution is available (*Adult Literacy and Life Skills Survey* 2006: 4)

The five skill levels of the survey range from Level 1 (the lowest) to the combined Levels 4 and 5 (highest levels). Level 3 is cited as the minimum standard adequate for coping with demands in a developed economy. The results are reported comprehensively in the Australian Bureau of Statistics, Catalogue No. 4228.0 (re-issued in January 2008).

The proportion of employed Australians below minimal competence (at Level 1 or Level 2) was 39.5% for prose literacy, 38.6% for document literacy, 44.5% for numeracy and 64% for problem solving (see Table 1). At first glance, the proportions at Level 1–2 might seem high to a layperson, but these results support the experience of deficits in adult basic skills in the workplace. They highlight the magnitude of the problems encountered by professional practitioners in adult basic education.

Table 1: Skill levels of employed people across all industries

Skill area	Level 1	Level 2	Level 3	Level 4/5
Prose literacy	11%	28%	41%	20%
Document literacy	12%	27%	40%	22%
Numeracy	15%	29%	35%	20%
Problem solving	27%	37%	29%	7%

All percentages rounded

Notwithstanding any conceptual, technical or statistical limitations of these international surveys, the findings may still provide an initial basis for intra-national comparisons. Certainly the scope and breadth of the survey is unrivalled in Australia as it is based on a national random sample of households. Readers interested in the theory and methods underlying the international *Adult Literacy and Life Skills Study* are referred to the document *Measuring adult literacy and life skills: New frameworks for assessment* (available for download at: www.statcan.ca).

In this paper, the proportion of persons in an occupation who were categorised as Level 1, Level 2, Level 3 and Levels 4–5 were compared with the overall distribution. The purpose was to highlight those adults in occupations that had greater or lesser proportions than the total workforce across Australia. The following sections explore the specific findings in relation to three key questions.

Which skill level is most characteristic of an occupation?

Table 2 indicates the modal category of competence for each occupational group. This analysis focuses on the proportions of workers at each level within each occupation separately.

Each row in Table 2 is read independently and shows which skill level was the most popular within each occupation. In other words, it tries to characterise each occupation. For instance, in terms of prose

literacy, it is noted that most managers were at level 3; for document literacy most managers were at level 3 and similarly for numeracy and problem solving. The situation was quite different for labourers. Most labourers were at level 2 for prose literacy, document literacy and numeracy, but at level 1 for problem solving.

From Table 2, one would infer there is a pattern of greatest need amongst two occupational groups, namely machinery operators/drivers and labourers. There is also a clear occupational hierarchy in the area of problem-solving skills when it decreases from level 3 for managers and professionals through level 2 for technicians and trades, community and personal service workers, clerical and administrative workers and sales workers, then to level 1 for the remaining occupational groups.

Table 2: Modal level of competence across occupational groups

Occupation	Prose literacy	Document literacy	Numeracy	Problem solving
Managers	Level 3	Level 3	Level 3	Level 3
Professions	Level 3	Level 3	Level 3	Level 3
Technicians and trades	Level 2	Level 3	Level 3	Level 2
Community, personal service workers	Level 3	Level 3	Level 2	Level 2
Clerical, administrative workers	Level 3	Level 3	Level 3	Level 2
Sales workers	Level 3	Level 3	Level 3	Level 2
Machinery operators, drivers	Level 2	Level 2	Level 2	Level 1
Labourers	Level 2	Level 2	Level 2	Level 1
Total employed	Level 3 (41%)	Level 3 (40%)	Level 3 (35%)	Level 2 (37%)

Both prose literacy and document literacy are characterised by two clusters (a) machinery operators/drivers and labourers and (b) all other occupations. Numeracy shows a different clustering but still with two major groups, (a) community, personal service workers, machinery operators/drivers and labourers in one group and (b) all other occupations in the second group. Problem solving reveals three broad groups. The first is (a) machinery operators/drivers and labourers that show low levels; (b) a middle grouping which peaks at level 2 and comprises technicians–trades, community, personal service workers and clerical, administrative workers; and (c) the managers and professionals that peak at level 3.

Which occupation is most characteristic of a skill level?

This question focuses on the characteristics of each of the four levels and how they are typified occupationally. In this case, Table 3 is read vertically. As an example, prose literacy, document literacy and numeracy at level 1 were dominated by labourers; but problem solving at level 1 was dominated by the technicians-trades.

Once again the picture is reasonably consistent. Labourers have the highest proportion of employees at level 1 for three of the four skills; technicians and trades characterise level 2; and the professions occupy the other extremes, dominating levels 3 and 4–5 (see Table 2).

Table 3: Occupations with the highest proportion of employees at each skill level

Scale	Highest Level 1	Highest Level 2	Highest Level 3	Highest Level 4/5
Prose literacy	Labourers 24%	Technicians, trades 20%	Professions 25%	Professions 39%
Document literacy	Labourers 23%	Technicians, trades 19%	Professions 24%	Professions 37%
Numeracy	Labourers 21%	Clerical, administrative 17%	Managers 16%	Professions 40%
Problem solving	Technicians, trades 20%	Professions 19%	Professions 32%	Professions 40%

All percentages rounded; proportions in parentheses refer to the proportion of employees in an occupational group at that level

Is there any difference in the proportion of workers' pattern of skill levels of each occupational group compared with the Australian workforce?

I calculated the expected proportion of workers that should exist when one takes into account the distribution of workers across the eight occupational groups and the four skill levels at the same time. I then compared this with what was observed. This formed a contingency table, from which it is possible to determine the chi-square statistic as a measure of the observed minus the expected differences (a copy of these tabulations is available on request).

For all four skills (prose literacy, document literacy, numeracy and problem solving), there was a statistically significant difference between the existing pattern and what might be expected. This was far greater than might be expected by chance (see Table 4) but, in practical terms, it was not a major difference as it never amounted to more than four per cent in any one instance. All of the largest

differences were in the area of the professions—mainly being over in the actual numbers compared with expected numbers.

Table 4: Chi-square test of observed and expected numbers of workers across the eight occupations and four skill categories (based on the original data)

Skill	Chi-square value	Degrees of freedom	Probability
Prose literacy	1600	21	p<.001
Document literacy	1410	21	p<.001
Numeracy problem	1410	21	p<.001
Problem solving	1490	21	p<.001

Discussion and conclusion

Adult performance below the minimum levels of competence is a common phenomenon. The proportion of employed, adult Australians below minimal competence (at Level 1 or Level 2) varied from 38.6% for document literacy to a high of 64% for problem solving. It is not distributed evenly, but there is a coherent pattern of advantage or disadvantage within and across occupations. Variations over and above chance were noted within and across the four skill levels examined in this paper. The distributions highlighted clusters of occupations across the spectrum of competence.

Throughout this paper, no claim has been made that the *Adult Literacy and Life Skills Survey* was a perfect measure of competence, but it is useful as a starting point and should not be overlooked. It did provide a structured basis for descriptions. At the very least, it offered a common benchmark for intra-national comparisons across the eight occupational groups.

In framing any policy action for adult education and training, some regard might be given to the areas of need within skills. It was always

expected that there would be occupational differences in skill levels and this has eventuated. This analysis confirms that there are pockets of low levels within occupations that policy-makers may seek to address through targeted workplace English programs (see Black & Yasukawa 2010). For example, there is a pattern of greatest need amongst machinery operators/drivers and labourers.

One further phenomenon that is worthy of attention is the substantial overlap in all skill areas between occupations. To my mind, it points to social and occupational inequalities. Put very simply, there are some labourers who are far more competent in all skill areas than other groups such as managers and professionals.

Moreover, there are some skill areas that are worthy of further investigation. The occupational hierarchy in the area of problem-solving skills represents a complex phenomenon that is worthy of further study. It is not clear to what extent this dimension is socially or intellectually biased against those who are unskilled, as this hierarchy is not reflected in the other three skill areas.

Up to recent times the focus of adult labour market programs has been on industry assistance or provision to persons who are unemployed, but there is now evidence that there are also needs within occupations. For instance, 17.6% of professionals are below the minimum level of competence in prose literacy, 18.3% are minimum competence in document literacy, 23% are below minimum competence in numeracy and 43.7% are below minimum competence in problem solving. And this is from the occupational group that was the most highly rated across skill areas. While industry-related programs are contextual, an occupationally focused delivery at the individual level may offer an ecologically valid and possibly more equitable basis for program delivery. Notwithstanding these policy implications, this paper has documented language, literacy and numeracy training needs across the eight major occupational categories.

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The adult learner may really be a neglected species

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When we separate the process of learning that is experienced by adults and children from the methods, systems and settings that are used, a clear case can be made for a very distinct, andragogical model. This concept exists separately from the notion that there is undoubtedly a common pedagogy or 'art of teaching' that is shared by the best educators, regardless of whether their audience comprises children or adults. The key to improving the adult learning experience is to acknowledge that adults do have very different needs, expectations and limitations in what they want and need to know, and how they are prepared to experience it.

Introduction

In his influential book, *The adult learner: a neglected species* (1973), Malcolm Knowles is credited with popularising the term 'andragogy' in relation to the way adults learn and the way they are taught. The

first references to andragogy can probably be attributed to a German educator, Alexander Kapp, 150 years before, who referenced Plato. The word originates from the Greek translation which literally means 'man-leading'. Adults were seen as self-directed and teachers as facilitators of the learning experience. At this time 'andragogy' was seen as distinct from 'pedagogy' which related to how children learn and are taught. By 1986 Knowles' original book had reached its fourth edition and Knowles' thesis had changed, with andragogy now encompassing and not separate from pedagogy. He concluded that there was a continuum from self-direction to teacher-led instruction and that both adults and children could experience many different learning styles according to need and the situation. We began to hear about 'the ageless learner' and life experience as a basis and foundation for all learners.

In the contemporary Australian context, adult learning takes place in a variety of settings such as the workplace, vocational training institutions such as TAFE, universities and private colleges. According to the Australian Bureau of Statistics, in any one year, nine out of ten Australians aged between 15 and 64 are engaged in some form of learning. It can be formal and lead to accredited qualifications within the Australian Qualifications Framework (which conceptually bridges secondary schools, vocational education and higher education), or completely informal and unaccredited. If we test the notion that there is a single pedagogy for both adults and children, the starting point could be the differences in the settings where learning takes place.

Outside the classroom

Educating children largely takes place within the confines of the classroom. While there have been a range of contemporary learning aids to complement this setting, such as interactive whiteboards and computer labs, the basic premise of the school room setting remains largely unchanged. Children are exposed to some developmental

options such as buddying, peer mentoring and e-learning, but these still take place within the classroom setting.

Some adult learning also takes place in a classroom setting, however, it also embraces the workplace as the setting via mentoring, coaching, shadowing and buddying programs (all loosely grouped as development options). Workplace learning via distance education, communities of practice or e-learning also broadens the adult learning context, taking place beyond the confines of the classroom. Placing the learning within or close to the workplace setting means the learning experience can be coupled with the learner's work role, heightening the likelihood that the learning transfers into practice and increasing the motivation and meaning which attach to it.

Adults tend to want to learn 'in the moment', meaning they seek out learning that is relevant for them at that time, whereas children have compulsory attendance for the majority of their learning experiences. This paradigm is being challenged for children as a result of social media and the internet. They must now learn how to find what they need to know, rather than learning what they might need to know, bringing them 'into the moment' in a different way. This process has the ability to begin the journey of the lifelong learner in childhood.

The tools we use

There is no escaping the fact that workplace-based, adult education is dominated by Powerpoint presentations. These often form the basis of the individual lessons and an entire course is often based on the framework of a Powerpoint presentation. This has given rise to the evolution of the presenter/facilitator as distinct from the teacher/educator. There is a sense that almost anyone who is willing to lead a group can deliver a Powerpoint presentation and educate. There is often a short 'train the trainer' session to familiarise presenters with the basic expectations of the session.

The classroom teacher in the school setting comes to their role after a minimum of three to four years' tertiary training which incorporates on-the-job learning in the form of 'prac teaching' and rigorous curriculum development. Not just anyone can be a school teacher. It is this disparity in qualifications and preparation for the role that prevents adult education from being recognised as a true vocation and not just an extension of the human resources function in an organisation, or worse still, an activity in which anyone can simply become involved.

Workplace-based, adult education tends to be evaluated at micro-levels (i.e. after each module, session, one-day course, etc.) via a 'happy sheet' or 'reactionaire'. This can be a brutal process for those involved. This exercise often serves to unrealistically elevate the session to 'pass or fail' status for the hapless presenter and can put enormous pressure on the individual trainer to meet expectations. School teachers do not face this micro-level of scrutiny about their work.

The school environment is a continuous learning environment. Workplace learning often occurs in short bursts according to need. Children become comfortable with the learning process because for them it is continuous and varied. Their job is to learn. The downfall of this is there is little opportunity for them to apply their learning in real life or for it to be attached to a task or skill. Often they are left learning something new just for the sake of it which, of course, has both benefits and limitations. Conversely, adults have the opportunity to apply their learning, but often do not have the right scaffolding or blended approach to learning to support them to do so.

According to the *2010 e-learning benchmarking survey*, conducted by the Department of Employment, Education and Workplace Relations, e-learning remains the fastest growing platform for adult learning. Employees demand the convenience of being able to learn at their desktop as they juggle their daily routine. The Federal

Government survey estimated that 43% of vocational education and training activity now involved some form of e-learning.

The teaching technique

Adults have far less tolerance for bad classroom training and for poorly constructed learning experiences wherever they take place. Adults can more easily judge the value of the learning and its relevance to their lives and their needs to acquire particular skills or knowledge. The classroom teacher in a school setting who is not effective is not subject to the same levels of scrutiny from the child. Teachers are not going to be questioned by the children they are teaching in the same way the adult demands that a learning experience meets their expectations. Adults will let the trainer know what they are thinking during the training, and then afterwards, via reactionaries or reports to their supervisor or the learning and development branch in their organisation.

Attention spans between adults and children are not as wide as one might think. Good teachers work hard to change the dynamics of the classroom regularly so that children remain engaged. They do this via regular activities, variety in their delivery and mixing talk with participation and action. Only the best adult trainers take this approach. They often falsely assume that they have the group's attention just because people seem engaged. Often they mistake engagement for daydreaming. Children also daydream, but they are not so willing to sit quietly and still while a teacher delivers a long lecture.

In adult settings the room often manages itself, via peer pressure to conform and lack of tolerance for those who do not want to participate constructively. In the case of children, they can have an influence on the room dynamics but the primary responsibility still rests with the teacher.

Can trainers be teachers?

It is not uncommon for people to make the transition from school teacher to adult educator/trainer. However, it is rare for the reverse to be true. The barriers include the need to obtain specialist tertiary and practical qualifications. Even in the delivery of formal accredited courses under the Australian Qualifications Framework, adult learning only requires a Certificate IV in Training and Assessment which is easily obtained and contains almost no practical grounding in course delivery and curriculum writing.

Training in workplace settings is commonly constructed and then delivered by people who have little or no formal training themselves in how to teach people to learn. Conversely, many of the developmental processes used in the workplace to promote adult learning, such as mentoring, coaching, buddying and shadowing, are undertaken by people who are experts in the core business of the organisation or who have earned respect as successful managers. The value they add comes from their knowledge not of the learning process but of human behaviour and the processes of work.

Other general training that employees need such as relationship skills, teamwork, analysis, problem solving and project management can also be learned on the job or by undertaking tasks associated with their daily work routine. Small businesses in particular must be creative about how their employees learn as the cost of conventional training strategies is often prohibitive.

Adults in learning organisations

Organisations which have an evolved learning and development function have now commonly embraced the concept of the learning organisation, as described by Peter Senge (1990) in his book, *The fifth discipline*. This concept couples an employee's desire to learn about their job role and themselves as a continuous process. It also

elevates the role of learning and highlights the critical importance of adult learning as a means of building organisational and personal capability.

The organisation places great value on the role of learning and development, linking the planning process with systems and resources. The learning organisation embraces the concepts of personal mastery and a commitment to lifelong learning. It views training in the conventional sense as only a component part of the learning process. Employees are encouraged to be self-directed learners and the organisation provides access to a framework via a range of learning opportunities for individuals, managers and teams to learn and to challenge assumptions, values and norms. It is in this sphere where adult learning is connected to the broader needs and aims of the organisation that real differences can be drawn between this and what a child's learning experience means.

Conclusion

When we separate the process of learning that is experienced by adults and children from the methods, systems and settings that are used, a clear case can be made for a very distinct, andragogical model. This concept exists separately from the notion that there is undoubtedly a common pedagogy or 'art of teaching' that is shared by the best educators, regardless of whether their audience comprises children or adults. One of the fundamental problems with adult learning in the contemporary sense is that the contrasting needs and differences to the learning experiences we expect for our children are not readily acknowledged (summarised in Table 1). As a profession, adult education does not have the same status or resources available to refine and develop it that school teaching enjoys. The key to improving the adult learning experience is to acknowledge that adults do have very different needs, expectations and limitations in what they want and need to know and how they are prepared to experience

it. If we accept this is true, Malcolm Knowles was right—the adult learner really is a neglected species.

Table 1: Some of the critical differences in the adult learning experience

Adults	**Children**
Classroom learning just one of many learning modes. Also e-learning, workplace-based learning, distance learning and development initiatives such as mentoring, coaching, buddying shadowing and communities of practice.	Classroom based learning still the dominant mode.
Motivation for learning: career, qualifications, direct knowledge needed to do a job.	Pure learning for staged advancement.
Adults seek out learning that has meaning for them at the time.	Children have compulsory attendance for the majority of their learning experiences.
Emphasis on self-directed learning. Learning is process-based, collaborative, facilitated and often problem-oriented.	Teacher driven. Learning is often passive and dependent.
Adults bring life-long and life-wide experience to the subject.	Children don't bring broad life experiences to the learning.
Adults often have strong values and need to unlearn and have these values challenged.	Children are not as hampered by a value set.
Few formal qualifications are needed for adult educators (Certificate IV level required by Registered Training Organisations). Some school teachers make the transition to adult education.	Minimum three years' tertiary training required for school teaching. Adult educators rarely make the transition to school teaching.

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About the authors

Sean O'Toole *is the Director of Learning and Development in the NSW Department of Family and Community Services. He is the author/editor of five books and has almost 20 years' experience in a range of adult education environments, including large public sector organisations, universities and TAFE.*

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BOOK REVIEW

Lifelong learning in later life: A handbook on older adult learning

Brian Findsen & Marvin Formosa
Volume 7 of the series International Issues in Adult Education
Rotterdam: Sense Publishers, 2011.

As I wrote my overseas Christmas cards last November, I couldn't resist slipping into each one a photo of my recent PhD graduation, my gaudily-clad figure flanked by two relieved supervisors and an even more relieved husband. It was only after I'd posted them that doubts surfaced. What would they think, these English relatives and friends, seeing a 66-year-old woman graduating? Wouldn't they be asking 'Why bother?' (Or, being English, 'Isn't that a bit—embarrassing?') Several months on, I can see that these doubts were mine, not theirs. And so it was a happy coincidence that this book came my way, because the question *why* underlies the entire book. Why undertake late-life learning? Why offer it?

But these questions are only half of the equation. Equally important are other *why*questions that arise from policies and practices aroundlifelong learning. Why have these, to now, seemingly neglected

the older end of the spectrum in favour of the younger adult end? Why the marked focus ontraining people for the workforce? The authors see economic motives here and acknowledge that the same forces are pushing older adults into a particular form of learning—retraining—thanks to our constantly changing globalised employment scene. But they see far wider potential in later-life learning, with benefits ranging from personal fulfilment to social inclusion; and these benefits are the same ones researchers have discovered in lifelong learning. The book sets out, then, to bring together two fields that, as they put it, have tended to live separate lives. The title says it all: lifelong learning in later life.

As a handbook, the text aims to give a comprehensive background to the topic, and it succeeds. Its scope includes history and policy as well as theory and practice, not only in the Western world but wherever else the authors can find scholarly reports or data. Findsen and Formosa start with the big picture: statistics on the aging of so many countries' populations; international and local policy on active aging; and the increasing identification of older-adult learning as a field in its own right. Then they describe the emergence of the practice of late-life learning, from its post-war appearance in the US to its embodiment in various countries' versions of the University of the Third Age. Here, they take the broadest possible view of the sites where learning can take place, seeing as much value in informal and non-formal settings (community classes or groups) as in formal ones (tertiary institutions). The occasional case study adds on-the-ground interest to what is a necessarily broad sweep through diverse settings. Along the way they call on, and critique, theories that have been applied to the field: psychology and sociology, from functionalism to postmodernism. Although no single approach is offered as an adequate basis for research and practice—they specifically reject the grand narratives of the modernist era—they adopt critical theory's attention to unequal opportunities associated with class, ethnicity and gender, as well as age.

Broad-ranging as it is, this text is a mere 190 pages long. Naturally enough, there's a price to be paid for this compression; some may be

irritatedby the over-simplified statements of theory, or disoriented by the occasional leaps between continents as the authors look to the global dimensions of their topic. Although the reference list is comprehensive, the index is perfunctory, with (for example) no listingfor men's sheds or social capital, though both topics feature in the text. A few more euros might have been spent on copy editing. But these are minor quibbles, and what shines through is the authors' passion for their topic. In fact, they have achieved more than their initial aim; while they have shown that the fields of later-life learning and lifelong learning make happy marriage partners, they have provided the basis for something more. Their ultimate wish is a practical one: that their work will help to set up an agenda for the practice of older adult learning and also open up a place for the inclusion of education in any policy discussions on older adults. It seems likely that this handbook will, as its authors hope, find readers of many kinds: academics, students and university administrators; those who work with older adults in a variety of settings, including residential care; and even, perhaps, bureaucrats.

If I can finish as I started, on a personal note, for me one of the more remarkable aspects of the handbook is the authors' ability to discard negative stereotypes about aging whilst recognising that older adults "inhabit a bodily, psychic, and social realm that is to some extent different from that experienced by younger adults" (p.4). They establish the importance of learning in later life without concluding that a distinctive pedagogy, or geragogy, must be adopted to compensate for the inevitable changes that come with age. While they only occasionally address the older adult learner as a potential reader of their text, these few comments strike me as exactly right in tone. Their work is affirming of the value of learning in older age and they have left me with a far more nuanced view of my own learning, and some pride in it too.

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BOOK REVIEW

Changing the paradigm: Education as the key to a socially inclusive future

Tom Stehlik & Jan Patterson (eds.)
Flaxton, Queensland: Post Pressed, 2011
ISBN: 978-1-922020-00-0; 168 pages

This book has a range of contributors, from specialist fields in education, social science, communication and languages, counselling and psychology. Many have worked, or are working, within the Social Inclusion Unit in South Australia. The contributors bring an array of expertise in working with disadvantaged students across a number of fields of practice, ranging from Aboriginal and Torres Strait Islander young people, to refugees, young people with disabilities, young pregnant women and young mothers, youth under the guardianship of the Minister, young people struggling with economic disadvantage, young people with low levels of literacy and numeracy to young people struggling with drug, alcohol and homelessness issues and rural and remote young people.

The idea for the book originated from the Labour Government's commitment to lifting school retention rates by 2020. It is an evaluation of various research works that were undertaken in a partnership between the South Australian Social Inclusion Unit, the Department of Premier and Cabinet, and the Hawke Research Institute of the University of South Australia.

The book has two main sections with five chapters in each. Section one focuses on challenging, present contexts and policies, while section two discusses the possible future through communities and case studies. The first section begins with Chapters one and two, challenging educational and social inclusion paradigms and mapping a global future for education through the perspectives of young people. Chapter three offers young people's perspectives on schooling and gives an account of current schooling practices in the twenty-first century. Chapter four investigates the implications for policy and practice with the notions of part-time study in a traditional school setting. Chapter five supports a well-educated, productive workforce with social policy and with economic imperatives.

The second section begins at Chapter six and discusses the 'cultural interface' of Aboriginal education. This chapter focuses on family and connectivity within an Aboriginal context. Chapter seven investigates connectivity, support and the importance of relationships in inclusive learning environments. Chapter eight focuses on the re-engaging of young people in learning through the South Australian Social Inclusion Unit's Innovation Community Action Network (ICAN) model. Chapter nine adds a counselling or psychotherapeutic focus to the book. The chapter connects the social aspects of well-being for young people with education and aligns social issues with educational disengagement. Chapter ten briefly reviews the ideas from all the chapters and summarises them into four paradigms of social inclusion—young people, schools, teachers, and agencies and systems.

Chapter One, 'Challenging the paradigm: education and social inclusion', is by Jan Patterson, who led the development of the South Australia's Social Inclusion Initiative and the School Retention Action Plan. The chapter discusses Australian education policy, public interest and responses to economic and social change and includes information about the ICANs and Flexible Learning options (FLO).

Chapter two, 'Road maps or global positioning systems? Young people's lives in the twenty-first century: preparing for a global future through education and training' by Alison Mackinnon, focuses on policy directions and the need for a holistic approach to education and training inclusive of well-being and academic skills. Mackinnon was the Foundation Director of the Hawke Institute of the University of South Australia (1997–2006), is a Fellow of the Academy of the Social Sciences in Australia and has extensive publications on women, education, hope and imaginary of young people on the margins. Chapters one and two are easy to follow; they establish policy directions and enable the reader to understand the current socio-economic climate in relation to young people lives in the twenty-first century.

Chapter three, 'Listen to me, I'm still leaving: young people's perspectives on schooling' by Rob Hattam, reports on the inability of policy-makers to listen and act on student perspectives. The chapter offers the reader the students' perspective of twenty-first century education in schools and discusses research that provides a forum for the voice of the student. The author also reports on the outcomes of a survey that identifies what young people in schools are looking for and the implications for social inclusion. Hattam is the Director of the Centre for Research in Education at the University of South Australia and his research focuses on critical teaching pedagogies that influence social and school reform.

Chapter four, 'Senior secondary study as a part-time phenomenon? Implications for policy and practice' is written by Katherine Hodgetts

and Marie Brennan. The authors have diverse backgrounds in teacher education, student pedagogies and social psychologies. The chapter focuses on senior secondary students, and part-time study as a methodology to increase engagement and retention for young people with complex life issues. The authors articulate a proactive model which reflects load reduction and focuses on student well-being and study life-balance.

Chapter five, 'We know what to do but we don't always do it: aligning policy and practice', is by Jan Patterson. This chapter follows on from Chapter one and relates to social inclusion, engagement and re-engagement through a support strategy such as the School Retention Action Plan. The author discusses how policy and practice need to align effectively to support practitioners as well as support their learning practices so that there are more equitable outcomes for all young people. Chapters three to five identify social and educational reforms that are critical to the engagement and re-engagement of young people. Section one thus enables the reader to develop or deepen their understanding of what school is like for the youth of today and how policy and practice must change if young people are to engage or re-engage with education.

Section two introduces the individual experiences of specific cohorts of young people and is a useful resource for students in education, cultural studies or the social science fields of practice. These chapters offer specific examples as well as combining the notions of engagement from the previous chapters in the book.

Chapter six, 'Evolution of Aboriginal education solutions at the 'cultural interface': educator's capacity to respond to the learning priorities of Aboriginal families' is the work of Helen Dolan and Jillian Miller. The authors have vast experiences in Aboriginal education curriculum and focus their writing on school retention plans in Aboriginal communities. The ideas of connectedness, support, family and flexibility are noted as the key to successful engagement. The

authors in Chapter four had also noted that connectivity was the key to successful engagement within other communities. This chapter clarifies the students' voice within this context and many others within this book. It allows the reader to connect the cultural interface with the hopes, realities and views of all young people of the twenty-first century.

Chapter seven, 'Relationships, participation and support: necessary components for inclusive learning environments and (re)engaging learners' by Tom Stehlik, then constructively builds on the previous chapters. The author, a senior lecturer in the School of Education at the University of South Australia, contributed to the evaluation of the School Retention Action Plan and has managed research projects investigating programs for ICAN. This chapter investigates the social inclusion agenda in SA and the strategies involved in changing attitudes, values and cultures. The author's key findings focus on student well-being, the building of relationships, flexibility in learning and the relevance of learning.

Chapter eight, 'Re-engaging young people in learning: the ICAN experience', is written by Susanne Koen and Phillipa Duigan. The authors work within the ICANs in policy development and publications. This chapter focuses on the ICAN programs and gives the reader a sound understanding of the ICAN and FLO models.

Chapter nine, 'Caring for hope: the importance of hope for socially excluded young people' is by Patrick O'Leary, Peter Bishop, Alison Mackinnon and Simon Robb. The authors of this chapter come from a variety of schools in communication, social studies and have published in education. This chapter appeared to be written for students or researchers with background knowledge in psychotherapies. The idea of hope and the purpose of this chapter seemed unclear until the authors explained that the research was conducted with students who attended alternative schools in South

Australia. In reading further into the research, connections could be made with other chapters in the book.

Chapter ten, 'Conclusion—changing the paradigm—moving forward to more equitable educational outcomes for all young people' is compiled by Tom Stehlik. This chapter concludes the book with an overview of the national scene and achieves the goal of clarifying the paradigm shift that is required in school philosophy, teacher engagement, agencies and systems to engage or re-engage young people in twenty-first century education.

I would recommend this book to students and researchers working in the areas of social inclusion, social justice, education and cultural interface and to those working with young people in an education, community or social justice setting.

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BOOK REVIEW

Phenomenology for therapists: researching the lived world

Linda Finlay
Chichester, UK: Wiley-Blackwell, 2011
ISBN: 9780470666463 (print), 9781119975144 (online), 295 pages, RRP A$49.95
DOI: 10.1002/9781119975144

Linda Finlay, author of *Phenomenology for therapists: Researching the lived world*, is a professional in the field of occupational therapy, psychotherapy and psychology. With prior published work in the areas of occupational therapy and research, the author has written this book to highlight the scope, breadth and depth of phenomenology, as a philosophical underpinning to the research process, as well as to provide a guiding approach and method. Specifically aimed at the therapist and the emerging researcher, this book is formulated as an aid to bridging the gap between the coalface of therapy and the world of research, by linking and utilising the

broad world of possibility and opportunity that phenomenology has to offer.

As distinct from providing a 'how to' approach, the author identifies that the book has been formulated to provide an explorative experience of phenomenology in order to introduce, explicate and offer a range of possibilities. To this end the book provides three separate sections that clearly outline the concepts, theoretical perspectives and philosophical underpinnings of phenomenology, followed by six phenomenological research approaches, and finally attends to the practical elements of the research process.

The first of these sections, which outlines the phenomenological process in terms of the concepts, theory and philosophy that enable a phenomenological approach, introduces foundational and essential knowledge and appreciation of what constitutes phenomenology. The first chapter describes the commonality and the transferability of practice skills to the research process outlining a two-way, beneficial relationship between the two. Chapter two specifically outlines phenomenology by discussing differing facets which enable an exploration that can lead to transformative research, while Chapter three is dedicated specifically to the body, experience and the life world. Chapter four introduces the philosophers and their differing contribution to the phenomenology, introducing language, ideas and concepts, urging the researcher to appreciate and engage with phenomenological philosophy. Chapter five builds upon this by discussing the 'phenomenological attitude', bringing to the fore the scientific process of phenomenological reduction, humanistic values and reflexivity, and concludes by offering the author's personal reflections and utilisation of the philosophical underpinnings of phenomenology.

Part II of the book focuses on phenomenological approaches that have been identified by the author as being frequently used in research projects. Initially, the more traditional approaches of descriptive and

hermeneutic phenomenology are explicated, followed by lifeworld approaches, interpretive phenomenological analysis (IPA), first person accounts, and reflexive, relational approaches. This provides a sound, clear narrative of the key approaches commonly used within phenomenology.

Part III acknowledges the diversity of phenomenology at the philosophical and methodological level and provides guidance for the researcher based on the commonalities in phenomenological processes. Whilst identifying that there is no 'one' and 'only' way of conducting this form of research, this chapter provides practical guidance and advice at all stages of the project, including the initial planning, data gathering, ethics analysis, producing and evaluation.

As a practitioner, and an emerging researcher, for me this book has provided an invaluably clear and practical approach to phenomenology. The practitioner/researcher is introduced to the possibilities of phenomenology by way of providing a well articulated text that delivers information, ideas and contextualisation from the philosophical underpinnings of phenomenology, through to the evaluation of the final project. The readable style of the book, with the inclusion of apt examples and tables, provided clarity on the diversity and range of phenomenological approaches within the research process.

Of particular note is the ability of this book, as articulated in its aim, to 'bridge the gap' between practice and research for the practitioner. As a practitioner who is now embarking on the PhD process, I found Chapter 1 heartening. I identified with the links between practice and research and the benefits to both worlds. I could easily appreciate the phenomenological processes that I had utilised within practice that had not been previously framed or conceptualised in this way. I felt less inept, less of a novice, and more empowered by this conceptualisation and the links with my known, familiar world of

therapeutic contact to the new world, that included the daunting task of conducting research.

I have utilised this text as a gateway to an appreciation of research methodology and also as a useful reference throughout the process. The clarity of information throughout the book has crystallised the complex, sometimes perplexing, array of alternatives and conjecture within phenomenology. While I was initially captured by the 'possibility' of phenomenology, underpinned at times by the critical, I found reading became dense and confusing, with so many schools of thought, debates concerning what constitutes phenomenology, and a myriad of differing frameworks and research processes. This text enables structure and clarity and complements other reading by clearly articulating the philosophical and the practical. It provides a broad appreciation for an initiation to the philosophy, as well as an engagement or reference throughout the process.

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NOTES FOR INTENDING CONTRIBUTORS

1 Papers are to be sent to the Editor, Professor Roger Harris, Adult and Vocational Education, School of Education, University of South Australia, Mawson Lakes Boulevard, Mawson Lakes, South Australia 5095. Phone: 08 8302 6246. Fax: 08 8302 6239. Email: roger.harris@unisa.edu.au

2 Submission of an electronic copy of a contribution is preferred, with one paper copy posted, against which the electronic print-out may be checked for accurate layout.

3 The paper should not exceed 5,500 words in length. The paper (and its title) is to be clearly typed on one side only of A4 paper.

4 Authors are also to submit, *separately* from the paper:
   (a) the title of the article (repeated), name(s) of the author(s) and your institutional affiliation(s);
   (b) an abstract of between 100 and 150 words;
   (c) a five-line biographical note on present position and any information of special relevance such as research interests;
   (d) complete contact details, including postal and email addresses, and telephone and fax numbers; and
   (e) 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.

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

6 Authors are to follow the style used in this issue of the *Journal*. Footnotes should not be used. References should be indicated in text with the author(s), the year of publication and pagination, where necessary, in parentheses; for example, Jones (1998), or (Collins 1999:101). References are then listed in full, including pages, at the end of the paper in consistent form; for example,

for books:	Athanasou, J. (ed.) (2008). *Adult education and training*, Terrigal, NSW: David Barlow Publishing.
for articles:	Hamer, J. (2010). 'Recognition of prior learning—Normative assessment or co-construction of preferred identities?', *Australian Journal of Adult Learning*, 50(1): 98–113.
for chapters:	Newman, M. (2009). 'Educating for a sustainable democracy', in Willis, P, McKenzie, S & Harris, R (eds.) (2009), *Rethinking work and learning: Adult and vocational education for social sustainability*, Dordrecht, Netherlands: Springer: 83–91.

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 learning would be welcomed.

9 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.

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