scope

Contemporary Research Topics

Learning and Teaching: 2011

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Scope (Learning and Teaching) aims to engage discussion on contemporary research in blended learning for emerging scholars. It is concerned with views and critical debates surrounding learning theories and practices and seeks to address current and topical matters in education. Its focus is on building a sense of community amongst researchers from an array of New Zealand institutions with a goal of linking in, and stepping up to a wider international community.

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EXPERIENTIAL LEARNING – WHERE TO FROM HERE?

Terry Marler

Learning from experience has always been an important part of vocational education, and when learners are involved in the planning and implementation of an experience related to their subject area, are given the opportunity to reflect on the experience (either individually or collaboratively) and are encouraged to act competently in future situations based on their learning, we have a powerful process for the development of capability, both personal and work-related.

Tertiary educators seem recently to have rediscovered experiential learning as an integrated curriculum strategy rather than as an adjunct such as workplace visits, work experience, or even virtual worlds, or as a separate methodology such as co-operative education. Partly this arises from more attention being paid to the requirements of employers and professional organisations, but the needs of the learner are also being more attended to, with motivation for the intended professional goal as a great driver even at the earliest stages of study. The "glue" keeping the strategy together may be the reflective practice inherent in well-designed learning experiences, and the action competence arising from this reflection.

The re-evaluation of experiential learning and its siblings, discovery learning, learning by doing, and project-based learning is a welcome and appropriate path for tertiary educators to be taking. Earlier enthusiasm for these models has prompted caution from Kirscher, Sweller and Clark (2004) who point out that poorly supported experiences can be confusing, with too high a cognitive load, resulting in an inefficient and variable learning result. This is especially true of learners inexperienced in the context of the relevant workplace. Interaction between prior experience and the current learning situation is most effective when that gap is of the "Goldilocks" variety – just right – and this will, of course, vary from one individual to another. The answer seems to lie in the skill of the facilitator to enable learners to experience workplaces, or workplace-based activities, with guidance and support appropriate to their skills and knowledge. But the head and the hands are only part of the story; Andresen, Boud and Cohen (2000) remind us that "learning invariably involves the whole person (senses and feelings as well as intellect; affect and conation as well as cognition); and that this is associated with perceptions, awareness, sensibilities and values being invoked, representing the full range of attributes of the functioning human being."(p.227)

In this edition of *Scope: Learning and Teaching* we are introduced to some excellent examples which demonstrate these facilitation skills in a wide range of learning contexts from carpentry to post-graduate occupational therapy. **Maxine Alterio** examines narrative as a method of integrating the insights gained through experience in order to transform understanding of oneself and one's environment. This theme is applied to workplace contexts in other contributions – for example, a transformation in the self-knowledge of student nurses is examined by **Josie Crawley, Liz Ditzel and Sue Walton** using selected children's storybooks in a quite structured way, rather than the self-created narrative described in the first example. Storytelling using film is discussed by **Peter Brook and Jean Ross**, highlighting the tension between the experience of intrusion albeit with good intent, and the need to reflect honestly the changing face of rural New Zealand – with some interesting questions regarding key insights that can be acted upon both by learners and by educational film-makers.

The challenges facing design and support of online learning experiences, and the creation of a learning community inclusive of both face to face and online students, is described by **Rachel Byars** in the context of hotel management. Rachel's careful use of scaffolding builds on prior experience, and her rigorous evaluation methodologies form an excellent basis for reflection and subsequent redesign.

A midwifery preceptor's role is characterised as "being a midwife to the birth of a midwife" in **Erin Mandeno's** contribution, in which she thought-provokingly describes the initial failure of a learning experience to promote reflection. The facilitative skill of the preceptor in the process of reflective positioning, again using personal narrative, serves as an excellent model for all educators. A similarly valuable exemplar of innovative practice is provided by **Francesca Matthews** as she outlines a journey to embed the principles of sustainability into all aspects of learning and teaching. Another challenge for tertiary educators, that of understanding the changing use of traditional library resources by students, is described by **Nancy Evans Weaver and Estelle Barnard**, with possible implications for both academics and librarians.

Linda Wilson, Merrolee Penman, Linda Robertson, Jackie Herkt, Rita Robinson, and Nathan Pettigrew practise what they preach in their discussion of learning from colleagues as new technologies are employed for learners at a distance in a postgraduate programme for occupational therapists. Their experience of the importance of scaffolding, and the dangers of assuming that everyone under thirty is a digital native, make valuable reading for teachers moving towards blended learning – in other words, all teachers.

Ruth Wilson-Salt, Anne Brinkman and Liz Ditzel have provided us with a very thorough overview of professional development methodologies for nurses, including alerting us to the obvious fact that a large amount of nurses' workplace time is when

most educators are asleep! They point out that discriminations against the engagement of nurses in PD can be shift-based as well as the more well-known difficulties for rural nurses. It may well be that the educational opportunities of the nursing workplace can be captured in more accessible formats using Web 2.0 tools.

Finally, we are given an exciting example of learning by the experience of being responsible for gathering some of the evidence for one's own assessment in carpentry skills. **Graham Burgess and Matt Thompson's** story of moving towards an ePortfolio assessment tool includes some delightful discoveries concerning peer support and the high standards that learners will self-impose when required to produce photographic evidence of their own work, and the reflective learning that results from this engagement.

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USING A NARRATIVE ENGAGEMENT FRAMEWORK TO ENCOURAGE TRANSFORMATIVE LEARNING

Maxine Alterio

Abstract

This paper explores the connections between storytelling, reflection, creativity and empathic intelligence. It begins with an overview of these concepts, exploring their relationships to narrative imagination. A narrative engagement model follows that presents ways to integrate experience and develop meaningful understandings of self, others and the world in which we live. Learning outcomes achieved through storytelling at expressive, strategic, reflective and transformative phases then lead to a narrative engagement framework that supports the development of transformative learning. On-going research projects undertaken as part of my commitment to narrative-based learning and teaching practices contributed to these developments.

Introduction

The New Zealand born anthropologist Michael Jackson (2006) writes in his memoir, *The Accidental Anthropologist*, that "narrative forms known to humanity are finite and ubiquitous" (p.288). Yet the ways we adopt and enter into these master narratives to communicate our experiences are singularly our own. Reflectivity plays a crucial role in this process (Roberts, 2001) and influences the depth and breadth of potential learning and subsequently, transformative possibilities. As Jackson suggests, our stories have "unseen connections beneath the surfaces of our familiar world" (p.201). Within the higher education sector, we could view learning as 'landscape' and story as an 'archaeological tool'. Learners consciously, subconsciously and unconsciously draw on past experience to make sense of current situations in much the same way as archaeologists sift through historical artefacts to inform current thinking.

How we undertake and process such demanding work influences the range of outcomes we can achieve. We often need to tell stories in different ways to different people before they 'feel' complete and learning can be consolidated (McDrury & Alterio, 2001). Such retellings provide us with opportunities to examine our emotional responses in depth and to engage in forms of self-review, thus delving deeper into the substrata of our narrative landscapes. Given the complexities of this work, it is prudent to use robust storytelling processes and rigorous narrative-based approaches that provide learners with opportunities to reflect on their experiences,

value and accommodate diverse cultural and emotional realities and develop empathic approaches to self and others (McDrury & Alterio, 2003; Arnold, 2005). A substantial body of literature attests to the effectiveness of storytelling as a reflective and empathic learning tool.

Review Of Literature

Many advocates of the reflective movement promote the idea that we each carry within us reflective learning capabilities (Atkins & Murphy, 1993; Beaty 1997; Boud, Keogh & Walker, 1985; Brockbank & McGill, 1998; Ghaye & Lillyman, 2000; Moon, 1999, 2004; Schön, 1987). Storytelling is one such capability. Regardless of our culture, time in history, or mode of communication, we often share experiences through the telling of stories. When we work with them reflectively and purposefully, significant learning insights can occur. Storytelling has therefore become a powerful learning tool in higher education (Alterio, 2001; Bruner, 1986; Bruner, 2002; Clandinin, 2007; Greenhalgh & Collard, 2003; Lauritzen & Jaeger, 1997; Lordly, 2007; McDrury & Alterio, 2003; Moon & Fowler, 2008; Outram, 2006; Reason & Hawkins, 1988; Witherell & Noddings, 1991).

Creating and sharing digital stories is also proving popular across disciplines, including health and education (Barrett, 2006; Hull & Katz, 2006; Kwiat, 2008; Lambert, 2002; Lowenthal, 2008; Paull, 2002). Constructing narratives using a range of technologies provides rich and diverse opportunities for learners to integrate voice, story, moving and static images and music. Although storytelling is not limited to any one approach, it always involves the integration of interrelated processes, one of which is engagement with narrative.

Narrative Engagement

Barbara Hardy in 1977 made the well-known statement that narrative is "a primary act of mind transferred to art from life" (p.13). Hardy's premise resonated with educators who already knew that learners responded positively to stories. The next challenge was to involve learners more fully in 'learning how to learn through storytelling' and to develop reflective processes that supported this approach. A plethora of resources is now available in journals, texts and open source materials. Ample resources, however, do not guarantee high levels of learner engagement; therefore, it is worth exploring this concept in more depth.

Edgerton introduced the notion of "pedagogies of engagement" in his 2001 Education White Paper, in the belief that such practices encourage cooperation among students and active learning (cited by Smith, Sheppard, Johnson & Johnson, 2005). Arnold (2005) suggests that if we view engagement as an attribute of empathic intelligence, educators who exemplify it demonstrate the ability to:

- attract and hold students' attention through centred, purposeful interactions;
- mirror others to enhance communication; and,
- communicate a vision beyond the here and now (p.22-23).

These abilities also play significant roles in storytelling. The capacity of learners to envision through story is largely dependent on the level and degree to which they emotionally and cognitively connect with particular narratives. Often the most powerful learning arises from learners' own stories. As Butcher notes, "with narrative as our vantage point we have a point of reference, a life and a ground to stand on" (2006, p.198). Such stories provide learners with an authentic voice, a way to validate experience and opportunities to engage with particular themes.

According to filmmaker and historian Joshua Brown, "addressing the unfamiliar is one way to foster critical engagement" suggesting that imagination plays a significant role. When we encourage learners to reflectively process stories in imaginative ways, we foster critical reflection, help build moral development, evoke emotions that invariably aid the learning process, enhance verbal communication, provide background knowledge, capture the complexities of situations and ultimately enrich the perspectives of learners. Critical reflective dialogue, closely linked to the concept of deep learning, is a crucial component of this process.

Deep Learning

A deep approach to learning implies the presence of reflective activity. From Entwistle's (2001) perspective, we "look for meaning", "use experience", "critically examine evidence" and "actively engage with content" (p.598) in ways that enhance personal understanding. Moon defines deep learning as an "intention in the learner to understand the material of learning, seeking the meaning and understanding the ideas in it" (2004, p.59). To engage in critical reflection, Haig (2000) maintains that three prerequisites are critical: "belief in the value of reflection, knowledge of what would be a worthwhile focus for reflection and a rich repertoire of reflection skills" (p.95).

Proponents agree that learners who actively engage with content through reflective processes are more able to recall content effectively over time (Marton & Saljo, 1984), possibly due to efficient and meaningful filing and retrieval systems (Harvey & Knight, 1996). While learners vary in their learning approaches, depending on the context, content and level of interest, those who actively engage with creative methodologies tend to adopt deeply reflective approaches.

Creative endeavour

Definitions of creativity often emphasise flexibility, with educators maintaining that this ability enables learners to cope with an increasingly complex world. Such a view

is reactive as it focuses on problems or challenges, whereas pro-active advocates tend to accentuate innovation, believing this capacity better enables learners to contribute to change and evolution (Runco, 2004). Innovation is one of the engines of cultural change and is evident in the development of significant original ideas (Paulus & Nijstad, 2003). It is also, as Bloom (2001) contends, present in optimal human functioning, and therefore seen as a desirable characteristic to encourage in learners. Recognising the value of creative endeavour is, however, very different from actively fostering its development.

Personality research consistently reveals that intrinsic motivation is a core characteristic of creative people and that external assessment can inhibit innovation (Amabile, 2003). Such findings suggest we need different approaches within formal learning contexts. Yet some educators still believe that creativity and innovation are removed from the serious business of accumulating knowledge. Jackson notes that creativity, while recognised as a "fundamental human characteristic that is central to our welling-being, our productivity and our prosperity" (2006, p.1), is rarely acknowledged in higher education contexts, despite the complex and unpredictable nature of learning and teaching. Educators often find it difficult to translate the generic concepts of creativity into subject–specific contexts, except for those teaching in a small number of disciplines such as performing and graphic arts. Yet the development of creative abilities is one of three areas identified by Sternberg & Lubart (1995) as necessary for learners to be successful. The others are analytical and practical abilities.

While acknowledging that understanding and explaining creativity can prove difficult, academics involved in the Imaginative Curriculum Network reached widespread agreement about the key features associated with creativity, regardless of the "disciplinary, pedagogic or problem working context" (Jackson, 2006, p.3). They include:

- being imaginative;
- being original;
- exploring, experimenting and taking risks;
- processing, analyzing, synthesising data/situations/ideas/contexts; and,
- communication – often through the telling of stories in ways that help people to see the world that has been created.

Creativity is frequently cited as a feature of critically reflective thinkers, as it requires "insight, inspiration, improvisation, moral sensibility" (Saunders, 2004, p.1) which links to speculative thought. If educators wholeheartedly embrace the notion of speculative thought, which Arnold (2005) describes as "the capacity to think beyond the known to imagine what might be" (p.70), and engage students in innovative learning activities, we need to consider the role of empathic intelligence.

Empathic Intelligence

Empathic intelligence values the complexity of human dynamics. Arnold (2005) explores this concept as it applies to learning and teaching. She provides sound reasons for fostering the principles of observation, attuned listening, introspection, reflection, professional reading and mentoring, as apparent in her definition of empathy:

> Empathy is an ability to understand your own thoughts and feelings, and, by analogy, apply your self-understanding to the service of others, mindful that their thinking and feeling may not match your own. Empathy is a sophisticated ability involving attunement, de-centring, conjecture and introspection: an act of thoughtful, heartfelt imagination (p.23).

Empathic intelligence, which Arnold defines as "a sustained system of psychic, cognitive, affective, social and ethical functioning" (2005, p.19) flourishes "upon curiosity about the world, a reflection disposition, a capacity to make analogies between experiences, and gain ready access to memories of significant emotional learning experiences" (p.64), characteristics that also apply to storytelling. Furthermore, Arnold (2005) maintains that empathic intelligence "relies for its functioning on the creation of a dynamic between cognitive and emotional intelligences" and "has an ethical intention" connected to the "application of cognitive and emotional intelligences to a creative and beneficial outcome" (p.25): another hallmark of robust narrative practices and processes.

Narrative Imagination

While the narratives we share and process reflectively in higher education are invariably underpinned by facts and evidence, they also contain elements of narrative imagination. Nussbaum (1997) contends we must foster " the ability to develop narrative imagination, that is to think what it might be like to be in the shoes of a person different from one's self, to be an intelligent reader or listener of that person's story, and to understand the emotions and wishes and desires that someone so placed might have" (p.9). Green (1995) maintains, "the role of imagination is not to resolve, not to point the way, not to improve. It is to awaken, to disclose the ordinarily unseen, unheard, unexpected" (p.3). She also contends that the presence of imagination makes empathy possible and "of all our cognitive capacities, imagination is the one that permits us to give credence to alternative realities" (p.3). These observations suggest that if we can *imagine* other possibilities we are in a stronger position to extend both our learning and the learning of others, and increase the possibility of transformative learning.

The development of transformative learning through storytelling requires learners to form creative and meaningful connections on multiple levels and in diverse ways, to integrate learning experiences, to appreciate life's complexities and ambiguities, and to develop a sense of individual self that functions coherently and purposefully in increasingly challenging contexts. Connecting to aspects of self, others and the world in which we live, lies at the heart of storytelling, as demonstrated in the following Levels of Engagement Model (Alterio & McDrury, 2003).

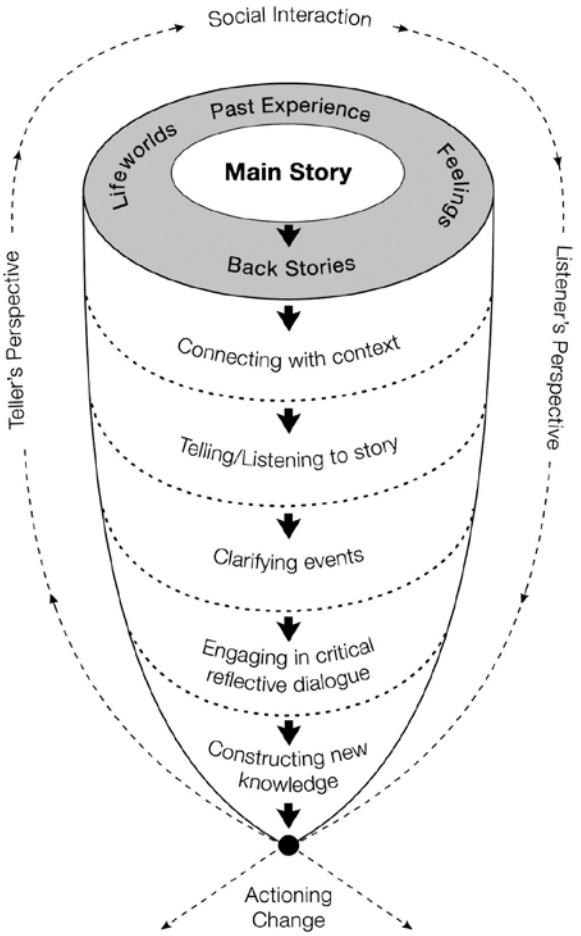

Figure 1: Levels of Engagement through Story

The first level, *connecting with context,* offers learners opportunities to orientate themselves to one another, to the setting, to guidelines and processes and to the purpose of the session. Any reflection at this stage is unlikely. The focus during the second level, *telling the story*, is on tellers' representations, such as what is included and excluded, tone of voice, actions, gestures, points of emphasis, whether the story is told as a drama or a comedy and the degree of affective involvement. Again, reflection at this stage is unlikely or, at best, minimal. The third level, *clarifying events*, enables tellers to backtrack, add additional information and answer questions posed by listeners. As McDrury & Alterio (2001) contend in their 'Reflective Storytelling Pathway Model', tellers may "confirm, elaborate, explain, clarify or refute aspects raised by listeners" (p.64). Reflective activity becomes apparent as tellers and listeners further explore their narrative landscapes.

If tellers are supported to function comfortably at these three levels they are more likely to proceed to the fourth level, *engaging in critical reflective dialogue*, which involves active processing of stories and creative opportunities that "acknowledge and value feelings, make links between present situations and past experiences and critically explore relevant aspects" (Alterio & McDrury, 2003, p.44). The ability to consider and reflect on alternative perspectives indicates a critical reflective orientation, and shifts in thinking become possible. Tellers operating at the fifth level, *constructing new knowledge*, have the ability to enhance and expand their understanding of these alternative perspectives, critically evaluate an assortment of potential resolutions and solutions and to alter their perceptions. Listeners may also gain insights as they work with tellers' stories because some may have experienced similar situations and/or emotional responses.

Flexible narrative-based learning and teaching approaches used in different ways at different levels, for a range of purposes, can result in diverse outcomes. McDrury & Alterio (2001) suggest three key factors influence the type of learning outcome achieved: type of story (spontaneous, predetermined); number of listeners (one, multiple) and setting (informal, formal).

Continued involvement in narrative-based research convinces me that educators can support learners, using a range of reflective narrative processes and practices, to move between expressive, strategic, reflective and transformative storytelling phases.

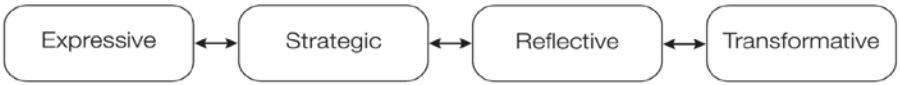

Figure 2: Storytelling Phases

The following examples are by no means exhaustive: they do, however, offer some observations based on my on-going narrative-based research and learning and teaching practices.

Expressive Story Based-Practices

At an expressive phase, stories can:

- convey information;
- articulate views;
- entertain;
- connect with others; and,
- bring about cathartic release.

Examples include, a chemist telling a story to demonstrate a safety point; a political scientist using a story to demonstrate the flaws of a particular law; a lecturer sharing an amusing tale to energise learners on a Friday afternoon or a learner meeting a friend

after class and saying "you'll never guess what happened to me in H101 this morning." Invariably the friend hi-jacks the original story because he or she identifies with the theme and wants to share their equally riveting calamity.

Strategic Story Based-Practices

At a strategic phase, stories can:

- brand a course or programme;
- position learners within particular theoretical perspectives;
- promote certain ways of working; and,
- bring about cultural shifts.

Branding examples are invariably found in institutions' prospectuses, news items and marketing material, such as student and staff success stories, emphasising achievements linked to visible outcomes such as a qualification, an award or a prize. Stories about 'learning how to learn' – the process rather than the outcome – in this phase are rare. Tensions also invariably occur as educators strive to balance their institution's need to be 'output driven' and 'fiscally responsive' and to teach in 'learner-centred' ways.

Reflective Story Based-Practices

At a reflective phase, stories can:

- capture the complexities embedded within experience;
- reveal and explore multiple perspectives;
- reflect on subjective aspects of learning (feelings) in relation to objective aspects (thoughts); and,
- enhance our capacity to imagine and revision.

At this level, we tend to use formal storytelling processes involving reflective conversations that draw out learners' subjective (feelings) as well as objective (thoughts) aspects of learning. We can also fictionalise experiences through performance, writing, drawing and other art forms to challenge and expand the perspectives of learners.

Transformative Story Based-Practices

At a transformative phase, stories can:

- create new knowledge;
- integrate subjective and objective aspects of learning;
- constructively alter our views of self and others;
- critically examine the political and social contexts in which we live and work; and,
- work with our insights to bring about thoughtful change.

Such stories often have significant personal as well as professional consequences. One narrative-based research project undertaken in New Zealand resulted in life-changing

outcomes for several participants (Alterio, 1998). A male left his employment for another position, which he considered more ethical; a nursing lecturer resigned from her teaching position and took up a management role in a health board believing she could more of a political difference; and another nurse took a year's leave to reconsider her career options. Given the possibility of significant life-changes for those who work with story at potentially transformative levels, it is imperative to take due care and provide appropriate support to learners such as peer-support, access to student counsellors and regular meetings between students and educators (McDrury & Alterio, 2003). As educators, we also have a responsibility to further our understandings of transformative learning and perspective transformation.

Transformative Learning And Perspective Transformation

The theory of transformative learning, underpinned by centrality of experience, critical reflection and rational discourse, was developed by Mezirow in 1978. Others attached considerable importance to transformative learning in perspective transformation (Taylor, 1998; Cranton, 1994; King 2005). Viewed as an intuitive, creative and emotional process by Grabov (1997) and Boyd & Myers (1988), perspective transformation reflects Arnold & Ryan's (2003) stance, that transformative learning experiences are "those which occur with sufficient emotional intensity to be meaningful, and with sufficient cognitive patterning to organise thinking and learning in deeply significant ways" (p.5). According to Arnold (2005), a lecturer working with students with these purposes in mind, has the ability to: "attract and hold student's attention through centred purposeful interactions … mirror others to enhance communication … channel teaching skills, learning approaches and charisma for the benefit of students' learning … and can communicate a vision beyond the here and now" (p.23).

A transformed perspective can occur after a series of small but significant moments or events, or as a result of significant life changing events (Alterio, 2006). A revitalised understanding of transformative learning and practice raises the importance of subjective experience (Wood 2003; Piper, 2004). No single mode of transformative learning can accommodate variances in contexts, capabilities and approaches; however, we can acknowledge and work constructively with subjective experiences by encouraging a culture that values learners' stories.

One framework with this aim, a version of which I presented at the 2006 Assessment, Learning and Teaching Conference, Leeds Metropolitan University, Leeds, UK, reflects my on-going interest in storytelling and the ways in which it connects to transformative learning.

Four aspects: storytelling, reflection, creativity and empathic intelligence, play significant roles in supporting the development of transformative learning. These aspects

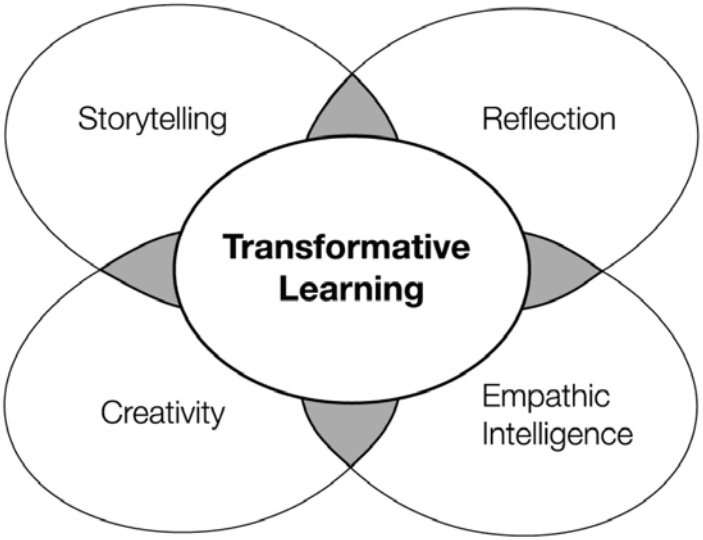

Figure 3: A Narrative Framework to Encourage Transformative Learning

interlink in multiple ways. As Arnold (2005) comments, "It is not just *what* we learn, but how we *feel* about what we learn, which counts in the long term" (p.19). Ramsden agrees, stating that "learning is best conceptualised as a change in the way people understand the world around them, rather than a quantitative accretion of facts and procedures" (1992, p.82). If we want learners to form creative and meaningful connections, appreciate life's complexities and ambiguities, and develop a sense of individual self that functions coherently and purposefully in our increasingly challenging higher education contexts, we must support them to integrate their feelings and thoughts. Arnold believes that "the best educative processes match information-seeking with imaginative and open-ended outcomes" (2005, p. 27), a view that resonates with the notion of 'learning as landscape'.

Evidence Of Transformative Learning

When we work with learners' stories at a potentially transformative level we open up the potential for them (and us) to create new knowledge, critically reflect on the contexts in which they (and we) live and work, and constructively draw on insights that alter their (and our) views. As a consequence, learners and educators may undergo significant changes, which may include developing changed world views, alter values and valences and integrate thoughts and feelings to a greater degree.

Regardless of how or why a changed worldview occurs, there is no going back – we have forged a new way of being, feeling, and thinking. We see self, others and the world differently and we start to express ourselves in new ways.

Conclusion

So, how can we enhance our potential to facilitate transformative learning by engaging in narrative? Firstly, by nurturing our own and our students' capacities to imagine, reflect and empathise. Secondly, by processing stories from multiple perspectives, engaging in truly reflective dialogue and creating opportunities to expand our understandings of self and others. Thirdly, we can digitise our stories. Each approach offers learners a way to 'learn through storytelling.' When anchored in sound educational frameworks, these approaches support learners to achieve transformative outcomes.

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Maxine Alterio is a tertiary educator with an interest in narrative research practices. In 2010 she won a national Sustained Excellence in Tertiary Teaching award. She is co-author of *Learning through Storytelling in Higher Education* (RoutledgeFalmer, UK and USA, 2003). She is also a short story writer and a novelist. Many stories in her collection, *Live News and Other Stories,* (Steele Roberts, NZ, 2005) have won, or been placed in, national and international competitions. Maxine's best-selling first novel, *Ribbons of Grace,* (Penguin Books, NZ, 2007) will be followed in 2012 by a second novel, *Lives We Leave Behind.*

LEARNING THROUGH THE DEVELOPMENT OF YOUR OWN TEACHING PRACTICE – A CASE STUDY

Rachel Byars

Introduction

Faced with the dilemma of teaching both a group of face- to-face students and a student enrolled from a distance provided me with the challenge of developing online learning materials, that would support their learning and ensure interaction of both sets of students. The focus was to develop a blended delivery approach that would ensure interaction between students and facilitator as well as ensuring engagement and interaction of all students. An added challenge was that I was under both time and budgetary constraints. This paper highlights the learning and development of my teaching practice and eLearning skills; how I gained a better understanding of eLearning and the opportunity to be a reflective practitioner.

Background

The development of this project was partly due to recent collaborations with Christchurch Polytechnic Institute of Technology (CPIT) and Otago Polytechnic (OP), where students studying the Bachelor of Applied Management who would like to major in Hotel Management, may do so as a distance student with Otago Polytechnic, Dunedin. In the past the hotel major has been offered as a face-to-face class with on-campus students and therefore, I was faced with challenge of providing online materials for students taking the course from a distance under both budgetary and time constraints. By creating an online option for study, this would allow for more students to take this course who otherwise may not have been able to attend classes in Dunedin. Otago Polytechnic had also recently moved their learning management system from Blackboard to Moodle, so I was also required to have an understanding of this system and also any open or licenced education resources that were available to me.

Underpinning literature

Arbaugh, Desai, Rau, and Sridhar (2010, p. 40) provide the following definition of a blended classroom: "[one that] integrates online learning with traditional face-to-face class activities in an intentional pedagogically valuable manner, and in a manner where between 20 and 70% of course content and activities are delivered online". The focus of learning for any blended delivery course is a shift from just being presented with information in a classroom to the construction of knowledge required in eLearning

courses. Constructivist theorists such as Vygotsky (1978) highlight the importance of social interaction in learning , which is still paramount in eLearning where the merging of both prescriptive and constructivist strategies for learning with technology is paramount (Robyler, Edwards, & Havriluk, 1997).

Graham (2006) argues that classes should be a cross between face to face and purely online modalities for some of the following reasons: (1) improved pedagogy – learning becomes more interactive and applied, while at the same time preserving some elements of the Socratic method; and (2) increased access and flexibility – allowing students to learn some material at their own pace.

An essential requirement of blended delivery is fostering the learning community and ensuring interaction of learners. Salmon's (2000) proposes a highly effective five stage model that provides design and implementation suggestions for facilitators which in turn support, encourage and focus learners to ensure that they meet all the intended outcomes of a course. Salmon (2000) suggested that for eLearners to be successful and happy, they need to be supported through a structured developmental process. The model as shown in figure 1 is a 'scaffolding' model which gradually builds on participant's previous experience. This scaffold offers essential support and development at each stage as they build up expertise in learning online.

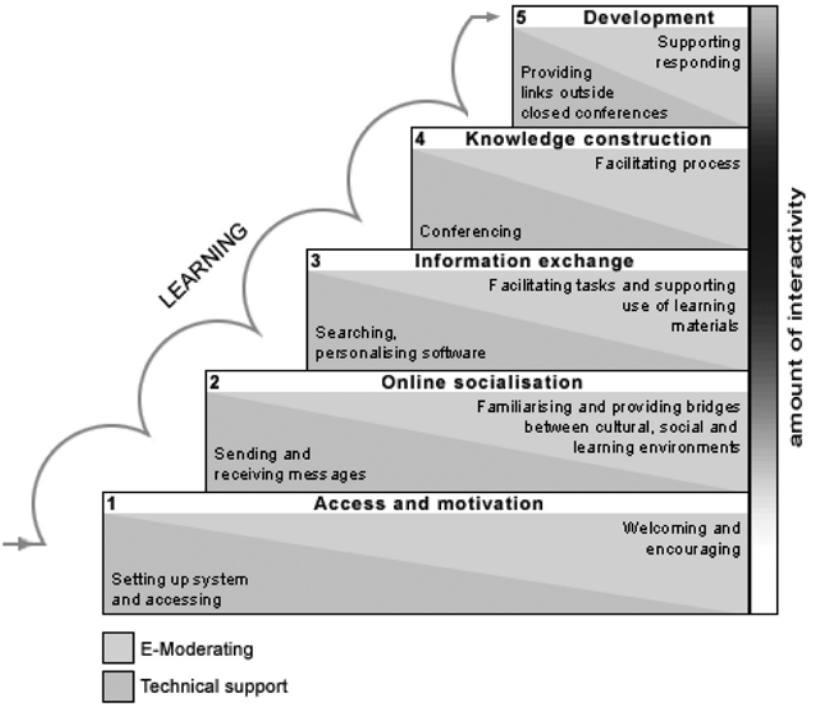

Figure 1: 5 Stage Model (Salmon, 2000)

The model identifies stages that learners progress through, providing a type of "how to" guide which highlights the importance of learning and the educator in the eLearning context, and provides behavioural benchmarks to which online learning communities, and the activities of the moderator can be evaluated against.

The emergence of community in the educational context has been demonstrated to enhance student learning through the implementation of an overarching pedagogical framework (Bielaczyc, 1999). The educational benefits derived from fostering a community of learners have been well documented. Rovai (2002) suggested a positive correlation exists between a sense of community and cognitive learning. Rovai (2002) demonstrates that students indicating a strong sense of community exhibit increased cognitive learning, course satisfaction and feel less isolated and are more likely to persist with their course of study than their less orientated peers.

Herrington, Reeves and Oliver (2006) suggest that tasks should be authentic and have real world relevance. They emphasise that the use of authentic activities within online learning environment have shown to have many benefits for online learning. Instead of providing academic decontextualized exercises that can be used primarily to practice a skill, authentic tasks should be created so that the core of the online learning environment and the completion of the tasks effectively comprise the entire student commitment for the course.

An important aspect of blended delivery is the format of the information provided and the accessibility of software. The Open Educational Resources (OER) movement is a technology-empowered effort to create and share educational content on a global level (Caswell, Henson, Jensen, & Wiley, 2008). The eLearning Guidelines (Milne & Dimock, 2006) are a valuable resource and reference for the development of eLearning material. These guidelines were developed to assist the tertiary sector in its use of eLearning, by providing information on best practice and help with the design of eLearning materials and a basis for evaluating the quality of eLearning teaching and resources (Milne & Dimock, 2006).

Case Study

The course that was re-developed was the second year, Rooms Division Operations Management, part of the Hotel Management major of the Bachelor of Applied Management at Otago Polytechnic. A 15 credit course with 56 directed learning hours and 94 self-directed learning hours. The overall aim of the course provides students with the skills, knowledge and aptitude to develop, implement and monitor management planning in the operations of the front office and housekeeping division. Students are able to explore and evaluate current management practice required by the sector and make the appropriate management responses to changes in the operating environments through the analysis of each of the fundamental management issues used in a quality accommodation service operation.

There two key learning outcomes in the course:

1. To develop competence in application of rooms division operation knowledge, skills and attitudes.
2. To provide understanding and practice in functional management in practical management situations.

In terms of the potential outcomes for the re-development of the course I wanted to provide a more efficient way of delivery to remote students, as well as providing a very comprehensive Moodle resource and support for all students. I also wanted to ensure that students felt that they were part of a learning community and to ensure interaction amongst students as well as with the material provided.

At the same time I saw this as an opportunity for my own personal development and learning which would be achieved through the exploration and use of different eLearning technology, such as the advanced use of Moodle, use of videos, quizzes and other technology.

Budgetary and time requirements at the start of the project were limited and therefore consideration of this was made throughout the re-development and the use of free software or access to existing software through the Otago Polytechnic was used. The crucial part of the re-development was the design of the Moodle site and the use of appropriate eLearning tools.

Designing the course – the methods

The primary focus of the re-development was the Moodle site that would support all students. In particular I wanted to develop resources that would demonstrate the use of a Hotel Property Management System Fidelio, which is used in hotels as a reservation, point of sale, sales and marketing and yield management system. I also wanted to provide interactive resources for the course, which would include but not be limited to activities and tasks to guide students through the hotel reservation process, information relating to the process of yield management to ensure maximum occupancy and revenue within a hotel. The process also allowed me to review some of my eLearning skills as well as an opportunity to learn from the use of new software and open education resources.

My initial plan was to use the following eLearning tools as part of the re-development:

Demonstration of Fidelio (property management system) – use of Camtasia (screen capture software). To capture what you are doing on the computer screen and allow explanation. The author had not used this software before, but saw potential benefits for both on and off campus students, being able to review processes in their own

time and repeatedly. Camtasia would be used to do short demonstrations of the use of Fidelio, for example making a reservation, completing a guest folio, completing a group booking, checking in a customer, posting a charge to a folio.

PowerPoint notes with audio - For any theoretical information, short PowerPoint slides with narration would be used, allowing students to listen as well as reading through slides.

Student activities - Student activities to complete on the reservation process and policies, to allow engagement and interaction of the material. This may include but not limited to short quizzes, discussion board exercises or a pair exercise. Some of these would be embedded within an eXe package. eXe is a freely available Open Source authoring application (http://sourceforge.net/projects/exe/) that assists facilitators and academics in the publishing of web content without the need to become proficient in HTML or XML mark-up.

Resources and readings - Associated readings and resources will be provided on Moodle that will support the unit of learning.

The re-development process

The re-development of this course provided me with a number of challenges and learning opportunities. The practical aspect of the re-development allowed me to trial and design sections of the Moodle site. The process also allowed me as an educator to engage with critical reflection of my own teaching practice. According to Boud, Keogh and Walker(1985) the capacity to reflect relates directly to how effectively individuals can learn from their personal experiences and therefore reflection provides a meaningful way for an individual to gain genuine understanding.

The first 'trial' was using an eXe package. One of the key benefits I found of using an eXe package rather than the traditional book format in Moodle is that you do not have to upload every individual file, graphic, link or YouTube video into Moodle first. It also allows different formatting within the package. Uploading individual files in Moodle can become quite laborious and so this was certainly less time consuming. The eXe package also allows the developer (and student) to access information in a logical learning sequence. Another favourable aspect of eXe was the design of the learning components, along with the different type of activities that can be utilised within this package.

Within the eLearning component there is information for the student to read, YouTube video clips to watch, exercises to complete, discussion forums to participate in and activities to complete. Elluminate sessions will also be held to provide synchronous learning. Elluminate is a virtual classroom that allows a lecturer and student to meet in a virtual classroom and have synchronous discussions.

The use of the eXe package (as shown in Figure 2) allows for the content to be displayed in a structured and organised format that the student can work through.

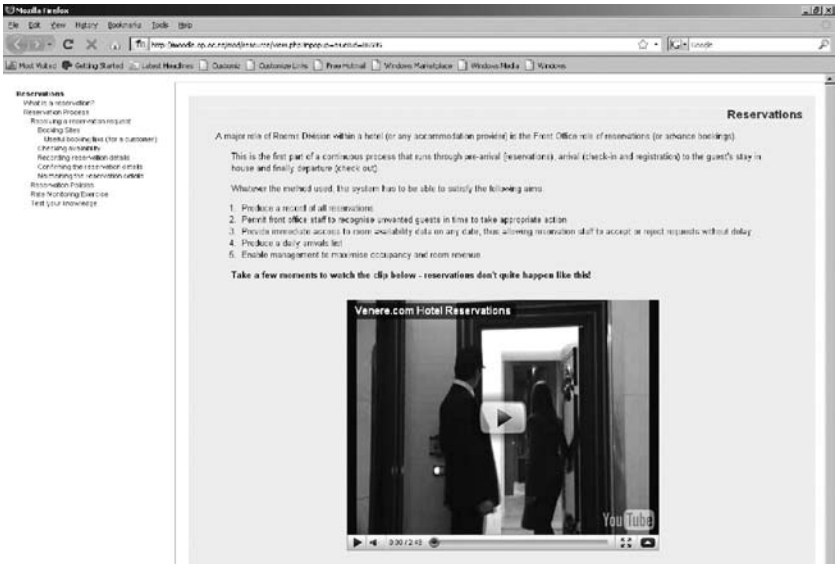

Figure 2: Reservations eXe package

As part of the development of the eXe package material, iSpring and Camtasia software were used. Camtasia Studio, a screen video capture programme published by TechSmith allowed me to capture the reservations programme Fidelio. I was able to demonstrate tasks within Fidelio and provide an explanation of what I was doing which was captured by Camtasia.

Student support and learning community

Secondary to the content of the course, I also wanted to engage students with the material, their peers and the lecturer. I wanted to ensure that the level of engagement and interactivity would provide students with a sense of community and support within the course. Consideration of student support was key to the planning and design of the Moodle site. Students need to have an initial understanding of what is expected from them in a course and also the technology that may be used within the course (Fisher & Baird, 2005). Students need to feel empowered to add to the body of knowledge, whether this is through group or pair activities, discussion forums, use of wikis in Moodle or even chance to use the Elluminate classroom for group chats. I considered different options for student support via the Moodle site, individual communication through Skype and email and group communication via the Elluminate classroom. The development of this aspect of the course was modelled on Salmon's (2000) five stage model with student support and interaction with the learning material provided in a number of ways.

Stage one was about access and motivation to the new technology. Students were encouraged to participate in a general welcome forum by informing the group of a hotel they would really like to stay at and the reason why. I also participated in the exercise, which created a sense of familiarity and 'safety' about participating. The second stage was about socialisation and enabling participants to relate to others in the group. This time there was another forum set up to allow students to make comments about one of the sessions we had where students had to present (via Elluminate) an unusual or unique hotel. Students were asked to make a comment or pose a question on someone else's chosen hotel. These introductory activities provided opportunity for the students to explore the news forum and become familiar with the use of technology and how it worked. These stages really acclimatise the learner to the online environment and try to develop a supportive learning and social environment. By week 7-9 of the course, students were reaching stage three (information exchange)/ stage four (knowledge construction).

At stage three the focus was on information exchange through group communication and discussion. This stage is characterised by the learners interacting with the course materials and activities online and providing each other with further knowledge through the Elluminate sessions and discussion forums. In the fourth stage 'knowledge construction', students should be more adept to working online and managing their time and working with each other. Learners will be working collaboratively, sharing ideas. At later stages they may even start to pose problems and challenge each other. Stage five (development) is where students would gain a self-insight and be able to reflect and make judgements on their experience and the knowledge surfaced and built. This often takes time in their learning and would not necessarily occur until later stages of their degree programme. This final stage really leads participants to take responsibility for and reflect on their own learning.

Table 1 demonstrates how the 5 stage model was used and adapted within the Rooms Division Operations Management course. It highlights each stage of the Salmon's 5 stage model. The table highlights some of the activity tasks that students participated in and the feedback and or dialogue from other participants and lecturer.

Student Feedback

To informally evaluate this course I administered a survey to fifteen students who were asked to participate in giving feedback on the Rooms Division Operations Management course. The survey consisted of seventeen structured questions which were ranked by students about the use of technology within the course, interaction between students and lecturer, the contributions expected of students within the course. All students completed the survey.

	Activities for students	Feedback/Dialogue	Resources
Stage 1 Access and motivation	Students asked to logon to the Moodle and the Rooms Division Operations Management (RDOM) course	Lecturer ensures students can logon and access all areas of Moodle and Rooms Division Operations Management course	
Stage 2 Online socialisation	Students asked to introduce themselves and respond to at other students	Welcome message from lecturer and from other students	Discussion forum within RDOM course
Stage 3 Information exchange	Students asked to post to the discussion forum a hotel they would like to stay (include website) and say why they have chosen the hotel. They then comment on two students.	Responses from lecturer and from other students	Discussion forum within RDOM course Synchronous discussion via Elluminate
Stage 4 Knowledge construction	Students asked to read Global Distribution article and discuss. Rate monitoring exercise to be completed in pairs.	Feedback from students through the online discussion and from the lecturer.	Discussion forum (within the RDOM) Synchronous discussion via Elluminate
Stage 5 Development	Students asked to create a short PowerPoint presentation on technology in Rooms Division and to discuss their ideas online using Elluminate.	Feedback from students and the lecturer during discussions.	Discussion forum (within the RDOM) and via Elluminate

Table 1: Example of learning using Salmon's 5 stage model

The *first question* asked students whether they enjoyed working with the technology on this course.

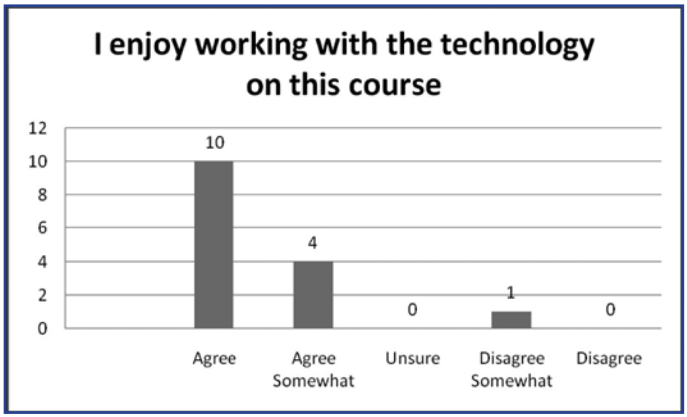

Figure 3: Student feedback, question 1

The *second question* asked students whether the technology was helping them learn. 8 students agreed, 6 students agreed somewhat and 1 student was unsure.

The *third question* asked students whether they felt the lecturer was keeping track of what they were doing on the course. 12 agreed with the statement and 3 agreed somewhat.

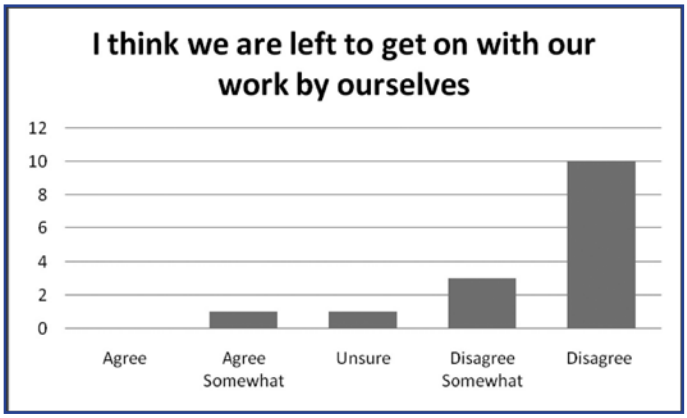

Figure 4: Student feedback, question 4

The next question asked students whether the lecturer intervened too much during the course, 12 students disagreed and 3 students disagreed somewhat. It was pleasing to see that 13 students agreed somewhat that the technology was helping them achieve their personal aims on the course, only 2 students disagreed somewhat to that statement.

The *seventh question* asked students whether they felt that technology increased the control of when and where they worked, interestingly 1 student agree, 13 agreed somewhat and 1 student disagreed somewhat.

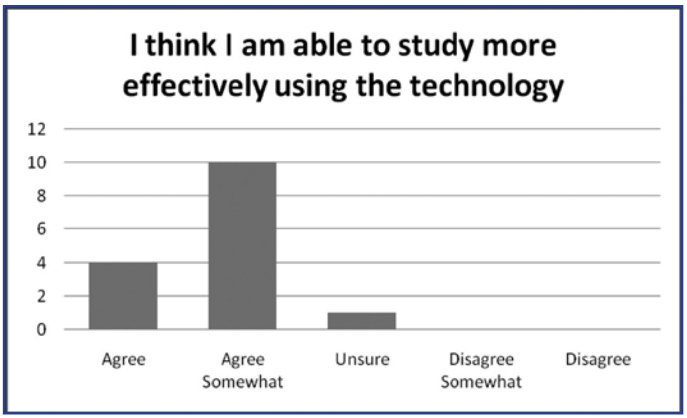

Figure 5: Student feedback, question 8

12 students agreed that they liked the feedback they received from the lecturer, whereas 3 agreed somewhat. There was a positive response to question ten, where 13 students agreed that they can ask questions and get a fast response on the course and 2 students agreed somewhat.

In *question eleven* students were asked whether they found that technology makes it hard to keep up with everything they are doing; 12 disagreed with the statement and 3 disagreed somewhat.

When asked whether they felt isolated working on the course, 1 student agreed somewhat, 4 students disagreed somewhat and 10 students disagreed.

The results in the chart below show how students responded to *question thirteen* which asked whether they found they were working with others more easily using this technology.

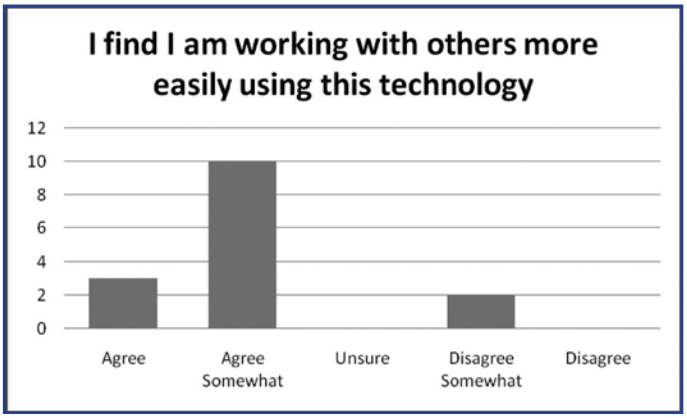

Figure 6: Student feedback, question 13

In question fourteen students were asked to respond to the question "I feel I have learnt from the contributions of other students on the course', 4 agreed, 8 students agreed somewhat, 1 was unsure and 2 disagreed somewhat. *Question fifteen* asked students to respond to the question 'The technology makes it difficulty for me to know what I am expected to do – 2 agreed somewhat, 1 was unsure, 8 disagreed somewhat and 4 disagreed.

A pleasing result was that students were not put off using the technology as question sixteen asked the students whether they would take another course taught using technology like this. 10 students agreed, 4 students agreed somewhat with only 1 student who disagreed somewhat. The final question asked students whether they would feel happier doing the course without technology, 2 students agreed somewhat, 3 students disagreed somewhat and 10 students disagreed with the statement.

Overall, the students have certainly responded well to the technology that they have encountered through this course and have been willing to provide valuable feedback on their experiences. As well as the survey questions, they were also given the opportunity to provide further comments.

Comments have been collated and table 2 shows how many students had commented on similar themes:

Common Theme	Comments	Number of responses
Support	Felt really supported from the lecturer, she gave us really good and quick feedback if we had any queries.	3 responses
	Thought I would have hated doing this without the same face to face support, but surprised myself and loved it	1 response
	Sometimes I wanted to get in touch but was not sure how to	1 response
Feedback	I was surprised how quick the feedback was	5 responses
	It was good to have weekly messages about what would be happening and always had personal emails on our progress as well	1 response
Flexibility	Really enjoyed the flexibility of learning, although we had set times that we had to learn, it was good to be able to go over stuff in my own time as well	2 responses
Technology	I struggle at time with some of the technology, I am not really into all that. Don't think my internet connection is that great.	1 response

Table 2: Themes identified in student feedback comments

Generally the students were very optimistic and positive about using the different technologies through the course. This feedback has been extremely valuable and has allowed the author to reflect on the course as a whole and see where future improvements may be made.

Learning and reflections from the re-development

The re-development process has given me the opportunity to explore new eLearning skills, coupled with the opportunity to reflect on my teaching practice and knowledge. I have ensured that students were given an opportunity to provide informal feedback to support my own reflections on the re-development.

With the changes to the course I have ensured a move away from the electronic receptacle or 'repository' of information to one that ensures learners actively constructs knowledge and one they can engage or interact with. Through the integration of new information and experiences I have tried to provide learners with an improved Moodle site that will enhance their learning experience. Sigala (2002) comments in her overview of the evolution of Internet pedagogy that this is often the first stage in the use of eLearning and that lecturers 'webify' their face to face sessions. The impact of the didactic approach in eLearning is limited and where possible the author used this re-development as a springboard to move away from a 'webified' approach. A more constructivist and authentic approach to eLearning which encourages the use of conventional, structures and linear approaches (Oliver, Harper, Wills, Agostinho & Hedberg, 2007) was also considered. As Oliver et al., (2007) suggest the value of designing for learning lies in learning experiences that learners need to achieve. They went on to suggest that "well designed workflows can cater for the need of individual learners" (p.65). This idea also allows more experienced learners the scope to choose the activities in which they will engage, recognising the need for learners to assume some ownership of their experiences. On reflection of these comments I ensured that the information provided to students would allow for a positive learning experience and one that they would gain value from. Certainly, the initial student feedback highlighted the fact they have been able to study more effectively using the technology and they are more in control of their learning.

One of the key aspects of the learning process I had concerns with was that eLearning encourages learners to build their own knowledge based on their individual experiences and apply this directly to their environment (Mayes and de Freitas, 2004 as cited in Beetham & Sharpe, 2007). This focus moves from teaching to the student's learning. As facilitators of learning it is imperative to have an understanding that the constructivist pedagogy sees learners at the centre of the learning experience rather than the lecturer. Within this theory learning needs to be active rather than a passive process. I initially struggled with how this would work within an online environment,

but found that the Elluminate sessions, the tasks and activities that involve students either individually or in pairs certainly bring alive the authentic nature of eLearning.

A key factor for me was the authenticity of tasks and that the learning material would provide opportunities for students to work in small groups, giving them peer engagement (not just via the lecturer) as well as interaction with the lecturer. Herrington, Reeves and Oliver (2006) suggest that these tasks should be authentic and have real world relevance, therefore this was important when developing the material. The shift in learning from face to face to a more blending delivery offering also required students to have a clear understanding of the technology. This came in the form of sessions before the 'formal classes' started to fully understand the philosophy behind this blended delivery method. By modelling the course on Salmon's (2000) five stages, it ensured participant progression through the online course and a level of progression when interacting with the material and peers.

I would admit that even though the feedback from students was good about the use of technology, that they had learnt from the contributions of other students on the course and that they did not feel isolated in the course, this is one area that still requires work on. Although, students did interact, I believe that more interaction would increase their learning and allow for a better sense of engagement with the material, the other students and lecturer. I also think that if students are new to eLearning that it would take some time for students to really gain a sense of community online and to gain the values of interaction.

There were certainly a number of different tasks and opportunities that were provided to students to reinforce communication and the sense of a learning community, which included watching and taking notes from a YouTube clip, critiquing a reading, a rates monitoring exercise, collaboration of work with other students and practical exercises on Fidelio. Synchronous sessions via Elluminate were used as both a communication support, but mainly for a class session. Huffaker (2003) suggests that reinforcing communication between facilitators and students cultivates a community of practice, where communities are built and sustained.

The re-development process has allowed me to reflect on my personal development and understanding of eLearning and to become a more confident practitioner of eLearning practices. Despite the constraints of time and budget, it has demonstrated that we are able to produce suitable resources and content for blended delivery that can support students through their learning experiences and to be able to interact with their peers through a number of different channels.

Conclusion

In conclusion, the critical elements of this re-development comprised the content of resources learners interact with as well as the tasks or activities learners are required to perform, and the support mechanisms provided to assist learners to engage with the tasks and resources (Oliver, 2001). The design of the course determines the effect of learning and by having a clear understanding of relevant learning theories and models of eLearning, the design of a course may ensure that learners will engage with their learning. Constructivist learners will learn best when they are able to contextualise what they learn for immediate application. ELearners must be given explicit learning outcomes so they are able to set expectations and whether they have achieved the outcomes. Having seen the results, I have wondered why I have not used it more in my teaching, but certainly see the benefits of using it, especially with more flexible and blended delivery methods in the future.

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Article

LEARNING THROUGH THE DEVELOPMENT OF YOUR OWN TEACHING PRACTICE – A CASE STUDY

Byars

HOW TO BUILD REFLECTIVE LEARNING THROUGH CHILDREN'S PICTURE STORYBOOKS

Josephine Crawley, Liz Ditzel and Sue Walton

Abstract

One way that nursing students build their practice is through reflective learning from stories. Children's picture storybooks offer a special source of narratives that enable students to build empathy and examine and reconstruct their personal concepts around human experience. Picture storybooks tend to be short and provide an efficient learning tool. Yet, little has been written about using children's literature as a flexible learning educational tool for nursing students. In this article we use McDrury and Alterio's (2002) five stage model of learning through story telling as a guide for educators wishing to use children's picture storybooks as an educational resource.

Reflective learning from stories

Stories have long been used as the basis of reflective learning in nurse education (Benner 1991; Bowles 1995; Davidhizar and Lonser 2003; Koenig and Zorn 2002; Schwartz and Abbott 2007). The process of reflection involves examining an experience, or a story, analysing, exploring emotion and actions. Learning through reflection happens when students critically examine their own responses to the story and knowledge foundation; thereby informing, developing and advancing their professional practice (Fitzgerald 1994). Opportunities for reflection and learning abound in children's picture storybooks as genres of storytelling are skilfully interwoven. When read aloud, written text is heard aurally and supplemented by illustrations thereby extending the narrative beyond the words.

Stories in books are helpful educational resources as they are perceived as less threatening than recounting personal experience because they are about someone else. Children's picture storybooks have been defined as "… profusely illustrated books in which both words and illustrations contribute to the story's meaning" (Lynch-Brown and Tomlinson 2008, 91). Krautz, a nurse educator uses children's books to "awe and inspire nursing students" writing that "reading them bypasses the natural resistance to change." (2007, 223). Titles of books that we have used in this paper and the key nursing content areas for student learning are provided in table 1.

Author/Illustrator	Book title	Nursing content areas
Cole (2003)	*Mummy Never Told Me*	Folklore Sexuality Conception
Fox and Vivas (1984)	*Wilfrid Gordon McDonald Partridge*	Intergenerational memories Living stories Diversity
Andreae and Parker-Rees (2000)	*Giraffes Can't Dance*	Confidence, assertion Problem solving
Blos and Gammell (1987)	*Old Henry*	Tolerance Diversity Individualism Meaning of home
Rosen and Oxenbury (1989)	*We're going on a bear hunt.*	Problem solving New situations Diagnostic hunts

Table 1: Children's picture storybooks and related nursing content area

When using narrative literature, it helps to have a model to follow to assist us to choose the right book, deconstruct the story so we can examine students' personal experiences related to the concept being taught, and use reflection to build students' awareness and skills so that this knowledge can be applied to practice.

In this paper we show how we use McDury and Alterio's (2002) five stage model of learning through storytelling (shown below in figure 1) and children's picture storybooks to encourage reflection in undergraduate nursing classes. A summary of key considerations for educators who intend using children's picture books to facilitate student learning is provided in table 2 at the end of this discussion.

Stage one: finding the right story

Finding the right story is critical for those wishing to add children's picture storybooks to their reflective learning repertoire (Crawley 2007; Krautz 2007). Educators should choose a book to which they have an emotional response, a story that contains a depth of emotion that is relevant to nursing student experiences. The theme should also relate to the nursing curriculum and reflect the content matter of the teaching session. The book needs to portray interpretations about a social or emotional situation, tell a good story, and be stimulating and magical enough to transport listeners into the story. Stories with an element of fantasy, reflected in the content of the pictures as well as the

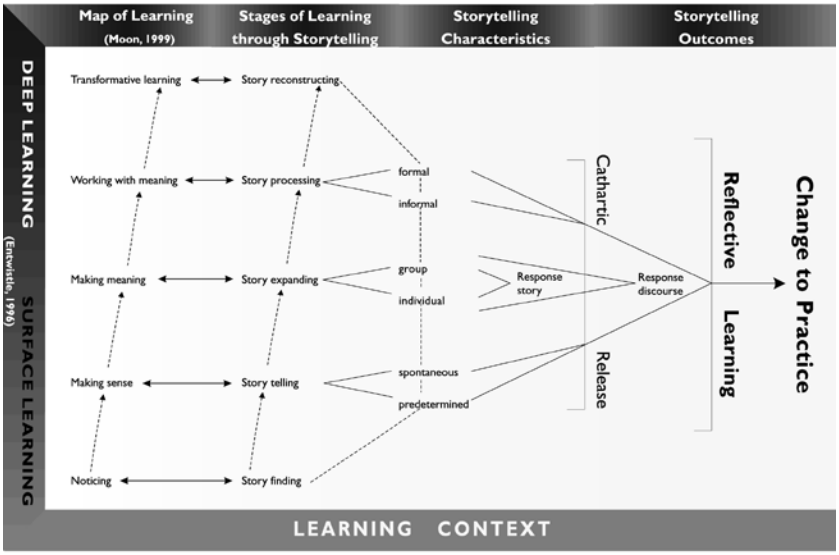

Figure 1 **Model of Reflective Learning through Storytelling**

(McDrury & Alterio, 2002)

text, are likely to tickle the imagination, question reality and give permission to explore being someone with different values or think in a different way (Cass 1984; Lynch-Brown and Tomlinson 2008; Spitz 1999).

When looking for the right story, it is important to remember that books are not created equal. We look for well written, persuasive, compelling illustrated books with emotional depth. In the classic tale *We're going on a Bear Hunt* (Rosen and Oxenbury 1989), the words' rhyme and rhythm play with alternating colour and black and white images. These have symbolic meaning related to perceiving and solving problems where the final picture surprises the reader by suddenly shifting the story to the bear's perspective. The choreography between text and illustration makes the story memorable; without the pictures, it is simply not the same story. We always consider the integral importance of illustrations to the story when choosing the book, as there is no point in reading a picture book aloud to a group of students if the learning environment precludes the students from seeing the pictures!

Books designed to bring students' knowledge to a point pre-determined by the educator (and author) are best avoided because they tell students what to think, rather than encourage them to experiment and explore knowledge. Books which involve students in learning and resonate and build upon their experiences are preferable. Such books featuring the interplay between text and illustration, multiple character perspectives, rhyme and rhythm, narrative techniques of inversion, subversion, and irony can have special effects in accessing childhood memories (Crawley 2009).

Characters are important whether they be personified animals or humans. It is best to choose characters that students respond to on a human level, such as Gerald the giraffe with his expressions of awkwardness, glee and pure bliss in *Giraffes can't Dance* (Andreae and Parker-Rees 2000). Characters need to be alive yet flawed, reacting to each other and their environment with illustrations that work in sympathy with the text, portraying the characters' emotions. Characters that prompt reflective discussion behave, feel, think and react to different experiences as they develop during the course of events in the story illustrating the effects of human beings on one another (Krautz 2007; Lynch-Brown and Tomlinson 2008).

Nursing students can vicariously experience the characters' struggles and the choices they make by participating in a life experience represented in the story in small doses (Krautz 2007). Where educators provide a safe and supportive learning environment, students may become acquainted with a range of human conditions - suffering, joy, grief and death - that could be outside their personal experience (Crawley 2007; Krautz 2007). Thus, the books offer a non-threatening way for students to gain maturity in human responses.

Stage two: story time – telling the story

Once we have chosen our story, we share the story by reading the book out loud. McDrury and Alterio (2002) consider that it is at this stage that students begin to make sense of the story, where the stories revolve around the values, attitudes and behaviours that effect practice. However, when sharing children's picture books, the educator is reliant on the author and illustrator for structure, context and clarity in linking the ideas, attitudes and values portrayed in the book. Jack Zipes (1995) likens the role of the storyteller to that of the little boy in *The Emperor has New Clothes*, where the boy is the only individual amongst hundreds who steps up to the naked king and tells him the truth. The child's words are provocative and subversive; they liberate bystanders to think and speak what they've been repressing. This is the role of the storyteller educator.

Reading rollicking or touching children's books aloud is not for the faint hearted. A reader with a flair for the dramatic must engage students by being involved with the story (Spitz 1999, 2). Fortunately "most picture books are designed to be read aloud … and their print, style and vocabulary is thus designed" Cass (1984, 14). The educator (storyteller) can alter their tone of voice, emphasis, facial expressions and gestures to entertain the audience and communicate the book's messages.

There is nothing wrong with an entertaining tale *per se* for reflective learning, yet the educator needs to think about ways to expand student involvement with the story. As the tale is told, the educator should make explicit the multiple layers of conveyed messages within the book (both adult and child) and encourage students to be part of the storytelling by developing alternative interpretations. Spitz (1999, 7) talks about "…

looking closely at pictures, words, and their internal negotiations as well as their more far-flung associations." When probing for possible meanings of the text and pictures, we can shape interjections, statements and rhetorical questions around the text and illustrations as it is being read. For example, when reading *Wilfrid Gordon McDonald Partridge* (Fox and Vivas 1984) we might comment; *"Poor old thing" – interesting choice of words,* and *I wonder why the illustrator chose to draw Miss Nancy on her own, with her back to us?* Or when reading *Old Henry* (Blos and Gammell 1987), we might say:

> *They look a bit taken aback – what do you think? There's quite a contrast between his house and the rest of the neighbourhood. What has the author told us about what's important to Henry!*

This approach invites students to shift their focus from passive recipients of information to being actively involved in the story. We can draw listeners into the story by asking - *what do you think happens next?* - then pausing for student thinking time before turning the page.

Stage three: expanding the story to build meaning in practice

Story expanding takes place when nursing students (listeners) reflect on their practice and explore possible meanings (McDrury and Alterio 2002). In this stage we invite discussion of the book beyond the words and illustrations provided so that we can collectively make meaning of the events in the story and explore alternative interpretations. To do this we use questions and statements that prompt expansion of the perspectives of the fictional characters; the way events unfold, how one character influences another's actions. We actively seek the perspective of the listener, both as an individual, and as a representative health team member. By already involving students in the telling of the story (as in the above stage), the educator has encouraged active participation in the evolution of events and character perspectives as written by the author.

Questions that expand the meaning of the story go a step further, encouraging exploration of the children's story from the perspectives of the different characters to open up understanding around how one event affects another; the complex (often contradictory) variety of human values, and start making links to nursing theory and practice. Questions we use include:

> *How did [key characters] feel? How did others react? What may have been motivating them? What does this suggest about attitudes and values of different characters? What would you have done in this situation? I wonder what made (character) take that action? Have you had many friendships with older adults? Finding some common ground – seems a familiar step in building a relationship! This looks suspiciously like "strengthening community action" to me.*

To build meaning in nursing practice, the educator should aim for students to interact emotionally with the story as it is told. We have found that when the educator models their own emotional reactions when telling the story, students express their own emotional responses, wonder, amusement, sadness and surprise and talk about their emotional involvement with the characters and stories. We direct discussion by asking questions such as: W*hat feelings are involved; how do these feelings link to significant events – is anything likely to change?*

The beauty of children's picture storybooks is that while some emotions are embedded in illustrations, others are hinted at through character motivation and actions. In *Old Henry* (Blos and Gammell 1987), Henry, a gentleman with different values to those of his new neighbours, refuses the welcoming gesture of a gift of pies from his community. We explore concepts of tolerance, diversity, individualism and the meaning of home by asking questions such as:

> *How do you think these ladies felt when Henry said, "thankyou no" to the pies?" What do you think was going on for Henry? What are the options when people have different values than you? What does home mean to Henry? What does home mean to you?*

After telling, the story can be extended by gathering the students' thoughts about some of the book's concepts. The book *Wilfrid Gordon McDonald Partridge* (Fox and Vivas 1984) lends itself to an exploration of the concept of memory to direct reflective discussion by using questions such as: *What is memory? How important is it to have memories? How do patient's memories and stories influence the care you give them*? Context is important since the 'meaning' of a fact or position depends upon the perspective from which it is viewed and the terms of reference (McDrury and Alterio 2002; Rolfe, Freshwater and Jasper 2001). We can explore nursing practice contexts experienced by students by asking: *Why did I read you this book*? Similarly, we can explore the author's context through asking questions about the book, such as: *What do you think the author is trying to say to whom – what about the illustrator*? Context from the individual listener's perspective is progressed in stages four and five.

Stage four: story processing

This stage involves: exploring multiple levels of perspectives, comparison of the context in which the story was presented with alternative contexts and how the story could be retold; and other stories and theoretical evidence that link to the story (McDrury and Alterio 2002; Rolfe *et al.* 2001; Schön 1983). We ask questions that prompt students to dig deeper into their intuitive response to the story: questions that critically examine the underpinning beliefs, assumptions and values; and recognise and challenge of their own preconceptions. For example, after reading *Wilfrid Gordon McDonald Partridge* (Fox and Vivas 1984), a story about a child's quest to restore an elderly woman's memories, we lead discussion about:

The worth of putting energy into something that will progressively deteriorate; the appropriateness of children or nurses having friendships with elderly clients, or what loss of memory might mean for a client's extended family (not featured in the book).

When processing and reflecting on the story, we explicitly ask the students to examine how the moral lessons are conveyed, how prejudices are subtly implanted and how moral codes they have previously developed as children are now being applied to new nursing situations.

Stage five: reconstructing – building new practice

Story reconstructing aims to assist students transform learning into changes, or affirm practice (McDrury and Alterio 2002). Dialogue focuses on how learning from the story has illuminated understanding, or will change personal practice; allowing students to share insights, and internalise their learning (McDrury and Alterio 2002). Having used the children's picture storybook to trigger discussion, we can now put the book down; it has served its purpose.

To encourage students to make the most of the reconstruction stage, educators can prepare fertile ground for reflection by building exercises around the telling of the story (McDrury and Alterio 2002). If it is relevant to the teaching objectives before reading the book, the educator can prepare the students by examining the concepts within the nursing context. Before reading *Giraffes can't Dance* (Andreae and Parker-Rees 2000), we ask students to self assess their personal assertion skills. After the story telling and resultant discourse, we encourage students revisit their notes, adding to them what things about nursing feel scary, how they can gain in confidence, and how they can support each other. We reinforce resultant new learning with appropriate theory – in this case about confidence, assertion and looking after each other.

As educators we have observed how discourse around some stories can 'unlock' the students' unconscious learning and open opportunities for alternative understandings around knowledge. Through the simplicity of the language, the predictable structure of the content and the entertainment of the illustrations, we have seen students connect with the content of the books and often feel safe enough to share portions of their own narratives in large or small groups, building on the base provided, highlighting the constructed nature of their personal narratives. We found that after reading *Mummy Never Told Me* (Cole 2003), students shared their knowledge on 'embarrassing' topics such as:

How "inny" and "outy" tummy buttons were formed, what is involved in male circumcision, did female circumcision really exist, did a safety pin in your night gown work as contraception, that the elderly aren't interested in sex, food to eat that determines child gender, and didn't a child asking about bodies mean they had been abused.

These open discussions make nursing students aware that they have things to "unlearn", as well as to learn and that their personal knowledge base has been shaped by the values and beliefs they have been exposed to. Students realise that where the context is right, sexuality is a topic they can comfortably talk about. We have found that students say they are more likely to ask clients more questions around sexuality (rather than assume or not ask!), and respect diverse client answers.

A summary of the key considerations for each stage of the story telling model is provided in table 2. We hope that is provides a useful guide for educators wishing to use children's picture storybooks.

Story Stage	Key considerations for educators
Story finding	Relevant for curriculum and student experiences Presents multiple perspectives Has characters/story students (and educator) can emphasise with
Story telling	Be comfortable and confident reading the book Ensure students can see illustrations as well as hear text Make explicit narrative techniques in book as you read it Make overt different perspectives within the book
Story expanding	Invite discussion around the book, and the differing perspectives presented Ask about students' emotional response Link concepts from story to student experiences
Story processing	Explore the underpinning beliefs, values and assumptions presented in the book. What would be an alternative story? What was fact, what subjective interpretation – what does nursing knowledge add/say regarding this concept? What underpinning beliefs, values and assumptions does each nursing student come with?
Story reconstruction	Discuss how will incorporate new/reinforced 'knowledge' into practice. Provide opportunities for written and verbal reflection Be available for student de-briefing Provide opportunities for practice and constructive feedback.

Table 2: Summary of key considerations for educators

Conclusion

We recommend McDrury and Alterio's (2002) model of learning through storytelling as a guide for educators wanting to use storybooks to enhance reflective learning. The stages of the model give a structure to a process that nurse educators might otherwise feel is intuitive, and as such, possibly not available to them.

We have found that children's picture storybooks provide students with an alternative experience of events, attitudes and emotions that are pertinent to nursing practice. Children's picture storybooks offer a range of perspectives through artful interaction of illustration, text and the characterisation of the players in the story. When we choose appropriate children's picture storybooks, reflective learning opportunities can be built for students through intentional discourse. Our experience shows a well-employed book is a memorable resource that resonates with students' experiences and allows exploration of individual's constructed knowledge in a non-threatening manner.

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CREATING A FILM FOR EDUCATIONAL PURPOSES TO CAPTURE THE RURAL EXPERIENCE.

Peter Brook and Jean Ross

Background

Educational content relating to the study of rural culture, society, rural people/whanau (related to as families) is generally not at the forefront of Bachelor of Nursing (BN) educational programmes in New Zealand (NZ). Lack of rural content is surprising as geographically, NZ is very diverse with glaciers, fjords, mountains, plains, subtropical forest, a volcanic plateau and miles of coastline. The total population of NZ is about 4.5 million people, of which, approximately 30% live on the South Island, with the remainder of the population residing on the North Island. The population density of NZ is relatively sparse with 15 people per square kilometer. Of the total NZ land mass, rural areas account for 97% of land having about 15% of the total population (Jones, 2007). Rural is defined as a town with a population 1000 people or fewer (Statistics NZ, 2006). The terrain of NZ is conducive to numerous sporting activities (winter and summer sports). Thus, tourism has become a dominant economic industry for international visitors, whereas the traditional economic values lay in the rural environment focused on agriculture. Agriculture today is not as dominant as it once was and our values have shifted. Despite this shift the rural economy and the people who reside in rural areas of New Zealand require to be understood by those who provide services to rural people. This paper highlights the gap in preparing student nurses to care for rural people, and provides one innovate learning tool, that goes some way in addressing this gap.

Preparing student nurses for rural practice

Preparing student nurses to practice competently as registered nurses in rural settings is the commitment of the BN programme at the School of Nursing, Otago Polytechnic, Dunedin, New Zealand. This programme is unique in that it is the first programme in NZ to offer dedicated/committed rural content and clinical experiences while considering the distinct, diverse and challenging nature of NZ nursing practice.

Politically, the changing focus of the provision of health care in the community was a strategic direction of the NZ Labour government in the early 2000's. The Primary Health Care Strategy (Ministry of Health, 2001) an initiative of this government, was designed to promote and maintain health of the populations through District Health

Boards, Primary Care Organisations and rural communities in the form of Community Trusts to promote accessible, affordable, approachable, available and appropriate health care to the people of NZ. In turn, appropriate access and acknowledging social networks which provide formal and informal rural care become the focus of rural nursing practice. Understanding rural people's sociological, economic and local culture will ultimately decrease inequalities for access to health care.

Rural life is fundamental to the fabric of New Zealand society. Understanding the people, their day to day values, beliefs, and activities, is crucial for effective nurse-client partnership. Producing a rural documentary was seen as an effective means to capture the authenticity of rural life. One rural community situated in the rural Otago region (where student nurse clinical placements occur) was developed as a local resource to engage with student nurses' awareness, and understanding of the rural context and its people. Student nurses within the Bachelor of Nursing Degree at Otago Polytechnic apply this knowledge in clinical practice thus enhancing their partnership.

Why a film?

The Educational Development Centre (EDC) at Otago Polytechnic was approached by the second author with a view to helping with the establishment of the media and funding applications for this project. Several funding sources were explored but all had drawbacks due to timeliness and the requirements to shift the focus of the project. In the end it was decided to fund the film production internally even though this resulted in a necessarily reduced scope.

All through this initial process the researchers were challenged to justify the use of a film as the means of confronting students with the essence of rurality. Other options included (a) taking students to a rural town for a period (b) assigning field work that would include a rural study (c) asking speakers from rural New Zealand to address the students. While all these options were considered, and are still available, we went ahead with the film because it best embodied our package of requirements.

This rural film had three aims. First, the film introduces Otago, New Zealand, the local region associated with the educational institution and clinical placement areas. Included is the main urban centre, Dunedin. The documentary provides local knowledge while orientating the student to the physical location, of Dunedin and Otago and the wider environment, rural Otago. Having been orientated to the location, and the distance from Dunedin to rural Otago settlements, students are introduced to its people, the second aim.

The second aim introduces Otago and its total population of 205,000 people; the population density is 6.2 people per km. The population is made up of mainly a Maori

and New Zealand European culture. The Otago region has only 4.8 percent of New Zealand's population and is, therefore, a more isolated setting. The third aim of the film is to capture the thoughts about rural lifestyle from Otago residents (including children, old-timers and newcomers). Their comments highlight social and economic issues associated with life in a more remote setting and provide insights about access to health services.

Designing the production of the documentary

The Otago Central town of Tarras was chosen as the setting for the film as it was known well to one of the researchers, was relatively close to Dunedin and represented a typical town of the rural Otago hinterland.

A professional film maker was contracted to do the actual filming and editing. A professional script writer was also contracted in association with us to lay down the film storyline. Local rural people including new arrivals, working people, rural families including local children and transient workers of Tarras, were filmed and interviewed over a two day period. These participants were invited to share their values and beliefs, way of life and experiences of living and working in a rural community as well as their access to all local and regional services.

The film is thirty seven minutes long and consists of interviews, background shots, narration and music. The knowledge of the viewer deepens as the film continues and as the camera cuts away from a close-up of a local person being interviewed to the related pictorial representation of the subject being talked about, be it a school, road, shop or farm. The local people told their own stories and very rarely the interviewer was obvious in the exchange.

Formal permission to engage with local people in the film was sought wherever appropriate and most were enthusiastic about the idea of telling "Tarras's story". Some did not want to be identified in any way and some were willing to talk but not be filmed, or the other way round. A typical scene consisted of an individual, couple or group talking about some aspect of their life in Tarras. At times professional aspects of living in the community, like the observations of the horticulturalists and the teachers, were discussed. Other times groups talked about community support and recent projects like the church kneelers that represent local families or the catering at the dog trials to raise funds for the pre-school. Sometimes people talked about the isolation, about the constant fund-raising and helpful neighbours.

We tried to weave all of these scenes into a unified picture of Tarras, from an outsiders' point of view in part, but also authentic in the fact that the stories told by adults and the remarks by children were all from locals in their own words. The film's unity came from the juxtaposition of the images with the narration and dialogue and the arrangement of the sequence of scenes, music and interviews.

The film was edited into its final form between January and March 2011 and in April the researchers returned to the Tarras community to show the film following an invitation by the Tarras Branch of the Rural Women of NZ. The film to us was a teaching resource but part of the project's evaluation consisted of gaining the community acceptance of the reflections the film showed back to them. After the showing there was a discussion about the content. Overall the reception to the film was favourable and full of amused recognition. However, there were some constructive comments about the content which were discussed with the first author after the second author vacated the meeting. We decided the best way of getting insider reflection was if the first author (an insider of the Tarras community) left the meeting and the first author continued with ongoing discussions. The first author as able to gain the following community reflections:

- Technical errors like spelling people's names.
- The role of sport in the community. Some said that the film did not bring this out and said the local golf club and rugby bound communities like theirs together.
- The weather. The film was made in summer and several people told us that this was just part of the Tarras cycle through the year. In winter this is one of the coldest parts of New Zealand and the preparation for winter and the adaptation to it is a major preoccupation of the community.
- The role of the very woolly sheep Shrek. A merino found after years of evading the annual shearing ritual was discovered in the back country near Tarras and was made into a national celebrity and an iconic Tarras symbol. But although Shrek had led to "putting Tarras on the map" and an increase of tourism, some people thought it trivialised the true fine wool industry that was the backbone of Tarras's economy.
- The history of Tarras. Some members thought there were more stories to tell about how the current town and surrounding area got to where it was and would have preferred, not just a snapshot of contemporary Tarras, but rather a recounting of the forces and experiences that lead to the present day. The process of wanting to tell a story about an environment to give it meaning is described in McDrury and Alterio.(2002)

Reflections of the project - The use of film.

We would like to put this video in an on-line repository but are still working through permission issues and student difficulties in locating such resources (Jeffrey et al, 2011). Film as a teaching resource is a difficult medium. On the one hand we have sumptuous images and authentic narration. On the other we have the expectations that students bring into watching a film for instructional purposes. (Adams, 1986; Cutting et al, 2010)) Students' television experiences condition them to treat film watching as ephemeral, low energy experiences with little thought required and only

entertainment as the engagement factor. A film like ours without critical analysis and intellectual engagement is reduced to just another piece of ephemera. Also, to even start to capture the imaginations of our audience the production values, and hence the costs, have to be of a standard of at least a television advertisement. Anything less reduces credibility.

Intrusiveness and holding up a reflective mirror.

At times we felt we were trespassing on a family and all their compelling relationships. The town, like all towns, cannot be a perfect hamlet of harmony and what can an outsider discover in a short time about local issues? We trod warily here. Two examples will suffice. Some people welcome the rise of tourism and the busy shops that cater for them. Others ruefully reflect on that the fact that these shops used to cater for the local daily needs but now they have to go to outlying centres for their groceries. The other example concerns access to emergency medical facilities. Some families have access to a helicopter for a quick dash into a large hospital in Dunedin. Others have to use roads and several hours to get to the same hospital. Does our film highlight the dichotomous nature of medical access?

Conclusion

The film took longer to make and was more exacting than we first thought. The process of making the film has deepened our understanding of rurality, a process predicted by Shrewbridge and Berge (2004). Reflections on the film tend to be about what we would do next time and the authenticity or otherwise of capturing the rural experience in the manner we did. The way people reported on their life and their choice to live in the country is especially interesting. The scholarship around the 'sense of place' is particularly relevant. Early evaluations as a teaching tool look promising. Further proposals for explorations into the same topic include a temporal slice of seasonal activities with the locals having more control over the direction. EDC and the School of Nursing at Otago Polytechnic are grateful for the hospitality and generosity of the people of Tarras who helped with our film.

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MODIFYING THE DIRECTION OF CHANGE - THE ROLE OF THE PRECEPTOR IN UNDERGRADUATE MIDWIFERY EDUCATION

Erin Mandeno

Introduction

Midwives work 'with women' and provide care that is both supportive and shared throughout the childbearing experience. On the path to become a skilled helper at the time of birth, midwifery students are required to develop reflective skills and midwifery knowledge; ideally which have been grounded in their personal experience of practice. As described by Morton-Cooper and Palmer (1993) the role of the midwifery preceptor is a necessary precursor to the birth of a midwife. The preceptor relationship can be considered a strategy that has the ability to influence midwifery students' attitudes and beliefs about the profession (Morton-Cooper & Palmer, 2000). As a framework, it has potential to influence midwifery practice, to enhance student opportunities of clinical learning and to promote a more collaborative approach for student learning and supervision.

The intent of the preceptor relationship is to inspire and support growth and development of the midwifery student while providing role modelling and socialization into the profession (Morton-Cooper & Palmer, 2000). This paper attempts to address some of the concepts idealised by these authors by exploring the idea of transmission of midwifery knowledge within a preceptor relationship that I shared with a second year direct entry student. Using two exemplars from practice and with reflection to social theory and adult learning principles, I will discuss how the student's learning was initially hindered by her own barriers and how learning was then promoted through the use of reflective positioning and narrative pedagogy. The concepts of power, transcendence of knowledge and ongoing learning needs assessment will sequentially be discussed through reflection throughout the body of the paper.

Exemplar One

The following exemplar of practice identifies the value of preceptorship within midwifery practice and is in an interpretation of an interaction shared with an undergraduate midwifery student. For the purpose of discussion, the interaction has been reflected on in two parts – one discussed immediately following and the second part will discussed in a latter section of this paper. While loosely based upon a real event, names, conversations and specific details have been altered to protect anonymity.

Before Katie arrived at the hospital, Sarah and I had already discussed her role. As this was our second birth together, and I anticipated Katie to have a straight forward labour and birth, I felt happy for Sarah to exert more independence in the midwifery care and management of Katie's labour. We discussed that she would be responsible for basic cares and coming up with a plan for ongoing management. Sarah voiced that she was comfortable with this and appreciated the opportunity.

When Katie arrived, she was still in early labour. In consultation with myself, Sarah completed necessary assessments (listened to Foetal Heart Rate (FHR), baseline and obtained a history of Rupture of Membranes (ROM) and onset of contractions) and suggested Katie and her partner walk to help labour progression. They were happy with this and as it was a beautiful evening – decided to walk around the hospital gardens. Sarah and I discussed ongoing cares and expectations – and I felt that we were in agreement with the midwifery care that we would provide with Katie. Sarah voiced that she was keen to do as much 'hand's on learning' as possible and as I had already discussed this with Katie and had her consent, I was quite happy to facilitate this throughout Katie's labour and birth.

Katie returned within half an hour and as she walked down the hall I could tell that her labour had established. Contractions were coming quite quickly and she was no longer smiling. She had a strong contraction before managing to get back to her birth room and I could see that she was beginning to rock and sway and her labour song was changing. Sarah was beside me, standing a bit aback from Katie, but I assumed that she saw what I saw and was preparing also for a quick labour. As Katie entered the room, I asked Sarah what her plans were with terms of cares and she suggested she would listen to the heart rate and then do an internal examination. In my head, I questioned the need for this – as I could clearly see what was happening and did not feel the need for the intervention – and also questioned the likelihood of getting Katie on the bed to perform the procedure, but said nothing to Sarah as I felt this was her opportunity to learn and make decisions. I stepped back and watched Katie move and sway, moan and sing... dilation obvious without the need for touch.

Sarah struggled listening to the FHR as Katie could not keep still. In between two contractions she tried but as soon as a contraction came, Sarah would step back and watch Katie move. No touch, no support, no guidance, no words to Katie – I remember wondering – can she see what I see? She decided to use the Cardiotocograph (CTG) as intermittent auscultation as she felt that the Doppler was not working effectively and in between another few contractions, she felt confident that the baby was happy and well. Katie was well too, but not happy – contractions now on top of one another and she was working very hard to cope with the intensity I was surprised that Sarah offered no words of encouragement while physically touching Katie while listening to her baby. I could tell she was nearing transition – climbing on and off a lazy boy chair – as if trying to escape the intensity of each contraction while at the same time supporting her body to facilitate decent. Perhaps Sarah could not see this, or was too focused on listening to baby to see what has happening before her eyes.

"I can't do this Erin", Katie said – my invitation now to provide the assistance that up to this point she hadn't required. I looked for Sarah, who had disappeared to the midwifery office to write in Katie's notes and had not yet returned. I rubbed Katie's back and applied counter pressure and her noises decreased in pitch and became more internal as if I was grounding her back to the task at hand. I spoke softly to her and her partner guiding them through this tunnel towards the light of birth. Sarah had returned and stood at the door – watching and waiting for her opportunity to step in – which I encouraged, as it was her 'birth experience' – rather than my own. "Do you think I should do the vaginal examination (VE) now?" she said to me – loud enough for Katie to hear. Katie's noises instantly became higher pitched and distracted from her task and I suggested that it probably wasn't necessary and that her role was one of support at this stage. She stood beside Katie, looking defeated, and coached her through her contractions – no touch, no embrace or softness, I perceived her to be displaced and disorientated. Katie reflected this also – they became mirror images of one another, neither comfortable with each other's energy at this crucial moment of need.

Within minutes, Sarah said she had to go do something – and left the room. Again, Katie said to me "I can't do this anymore Erin" and I supported her to the pool. We hadn't planned for a waterbirth but I felt that she needed the closed cave of a quiet bathroom to get her through these last moments of labour. With Katie in the bath, lights turned off and her partner providing support, I left the room to find Sarah – who still had not returned. She was sitting in the office talking with another midwifery student and I suggested she come and prepare for the birth. She looked guilty and surprised and all of a sudden no longer disorientated or displaced. She quickly went to task at preparing the birth trolley without instruction and waited patiently at the door of the bathroom – half committed to entering and silent. Again, no words of encouragement or instruction to Katie and I wondered if she actually understood what her role was, despite her articulated confidence before Katie had arrived.

Katie birthed her baby into the water with the three of us supporting, but not touching her. She had had a traumatic first birth, and although she and I had not planned that she would catch this baby, it was a beautiful outcome to heal some of the ongoing grief she felt about her first birth. As Katie lifted her baby from the water and to her breast – she said "I did it, I did it! I am your mum my baby!" I felt pride for Katie and amazement for her strength and power and achievement.

I was also very excited that the student had witnessed such an amazing birth – with midwifery guidance as the only intervention (apart from minimal intermittent auscultation). I felt like a teacher of the art of midwifery and was excited to debrief with Sarah. Once Katie and her partner and baby began talking between the three of them, I stepped out of the bathroom to give them some space. Sarah followed me and I asked her about her experience of what she had just been a part of. She shrugged her shoulders and said "I might not count it as one of my attended births because I didn't really do anything or get to practise skills. I've seen a waterbirth before anyway..."

Social Theory

Social theory is the history of social thought and when applied to the individual it can explain how an individual places themselves within the wider context of socialization (Coleman, 1990). In turn, 'socialization' refers to the practices by which individuals are made into new members of existing societies or professions and the term "education" refers to the subset of practices that have as their intended outcome shaping of the individual through the transmission of knowledge and skills, the development of competencies and beliefs inherent to the profession (Pateman, 2002). Therefore, social theory can be used to explain not only how an individual orientates them self within society, but also, how they orientate themselves towards the learning of the competencies and beliefs embedded within the context of that society.

For example, Duveen (1993) theorises the social construction of identity. Duveen's Self-Other-Object Triangle explains how social representation is created through various possible identities in which people position themselves in relation to the symbolic field of culture (Duveen, 1993). These identities, when negotiated and assumed by the individual, allow them to construct the structure of their social world and to define their personal orientation with it (Andreouli, 2010). Thus, social representations provide both the meaning related of an object and their personal orientation towards the object (Andreouli, 2010). From an alternative, but similar perspective, Positioning Theory, developed by Harre is a psycho-sociological theory that illustrates how people metaphorically position themselves and others within experiences (Harre & Moghaddam, 2003). The theory has foundations within social constructionism and assumes that all human behaviour is goal directed and based upon previous experiences. Barnes (2004) argues that during conversational interactions, people use narratives to illustrate meaning and value constructed through previous experiences. In this context, people adopt a role (or position) and present themselves as actors in a drama with the meaning and value of an experience is highlighted in the position they adopt and the dialogue they chose to recite (Barnes, 2004).

When applied to learning theory, the works of Duveen and Harre can illustrate how an individual will position themselves within a learning opportunity and in turn, how this will define the value and meaning experienced from the opportunity (Barnes, 2004). When applying these theories to the midwifery student in the shared exemplar, it can be determined that the student identified her learning as being the priority of the experience which she limited to clinical skill acquisition. As skill acquisition was not achieved, the student was unable to define learning value from the experience. Using the framework of the Self-Other-Object Triangle (Duveen, 1993), it can be suggested that the student perceived her role at the birth was to learn clinical skills, rather than to learn how to (and hence learn from) supporting a woman during labour. This idea illustrates a key aspect of Positioning Theory – the ever changing

system of rights, duties and obligations associated with the position that is adopted. In the exemplar, the student obviously felt that is was her right to learn at the woman's birth and probably, that it was my duty to provide her with the opportunity to learn and yet she dismissed her duty to provide care to the woman. This position clearly illustrates the student's opinion that knowledge is a commodity provided rather than a construction of her own effort. The student surrendered all autonomy for her own learning and bestowed that sense of power to circumstance and to chance. As circumstance did not provide her with her desired outcome, the experience and its inherent learning potential were not actualised (or at the time acknowledged) and she felt 'unsuccessful' or 'let down' by the experience.

We position ourselves according to the perspective that we take of others and the context in which we work. Liquirish and Seibold (2008) suggest that with reference to the development of competence, student midwives frequently identify that 'hands on learning' is of greatest value. However, in order to be able to be competent with any procedure the midwifery student must also be able to display the appropriate communication, interpersonal and intrapersonal skills. Additionally, Bluff and Holloway (2008) suggest that students will learn the role of the midwife within a culture of constant change and they will emulate the philosophy of care provided by the midwife they are working with at any one moment in time. It is probable that the student in the exemplar prioritised hands on learning within a distanced provision of care based upon expectations and practices of a midwife she had worked with previously. This presents an ethical and professional dilemma where the education of midwifery students is facilitated through members of the profession who may not practise woman-centered care.

Motivating Development

Learner readiness can be defined as the time when a learner demonstrates as interest in learning which is often motivated when they realise the existence of a gap between what they already know and what they desire, or, are required to know. Learner readiness is dependent upon the emotional and experiential readiness of the learner. Emotional readiness is symbolic to the learner's internal motivation towards knowledge, belief and skill, whereas, experiential readiness is the learner's ability to learn and is influenced by their social context. For example, experiential readiness will be influenced by a learner's life experiences, their ability to conceptualise and the value placed towards learning and the lesson learned. These factors are ever changing; therefore, learning is also considered a fluid process an idea illustrated through the Kolb Learning Style Inventory (Kolb, 1984). As suggested by Kolb (1984) learning occurs through the sequential experiences of four dimensions consisting of: a concrete experience, subsequent reflection of the experience, the formation of abstract concepts as a product of reflection and eventually the testing of new concepts, behaviours or

ideas. Kolb's theory suggests that effective learners will gradually move towards a more reflective and actively experimental style of learning as their emotional readiness towards learning matures (Lum, 2006).

Although learning will typically commence with a concrete experience, Kolb (1984) suggests that due to its nature of fluidity, learning can theoretically commence with any one of the four elements. Within the provided exemplar, the woman's birth had the potential to be a pivotal learning experience for the student; however, she was unable to commence the process of learning as she was unable to identify a concrete experience that she gained through the birth. This will be reflective of her emotional unreadiness to learn anything other than clinical skill – a product of positioning described previously. My initial instinct had been to challenge her on this; however, in order to become motivated to change, an individual must first accept information and contextualise it within something of significance and personal value. Providing the student with my insight into what she 'could or should have learned' probably would not have instigated any change in her positioning or altered her emotional readiness to learn.

Human change is a profound psychological and dynamic process that involves the unlearning of preconceived ideas and the restructuring of thoughts, perceptions and attitudes which will result in the relearning of new insight (Kritsonis, 2004). If I had discussed with the student where, in my opinion, she had gone wrong –for example, not supporting the woman through labour, the student may have denied the validity of this critique resulting in the undesired outcome of further concreting her negative perception of the learning experience. As the preceptor, in order to meet her ongoing learning needs, it was my role to use the experience to assist her to reposition herself as the learner and to enable her to find a personal connection to the birth. In this process of supporting, guiding, enabling and empowering the student through her learning, she was also able to experience role modelling respective of the very essence of holistic midwifery care. In this context, the preceptor relationship can be considered a strategy that has the ability to influence midwifery students' attitudes and beliefs about the profession and a means to guide professional socialisation.

Exemplar Two

This exemplar follows on from the previous one discussed in this paper and is a representative account of a conversation that I had with the student immediately following the birth.

"I might not count it as one of my attended births because I didn't really do anything or get to practise skills. I've seen a waterbirths before anyway..." I was surprised and almost heartbroken to hear her say this. I asked her what she had felt during the labour and what she had noticed

Katie doing that I had felt so clearly indicated no need for intervention, or 'skill' as the Sarah interpreted it. Sarah suggested that she didn't know what to do when Katie was making so much noise and moving about and that she felt awkward trying to help her through her pain and didn't like 'getting into her space'. What about helping her though it – I asked – what is our role as the woman's midwife? The student shrugged her shoulders and said that no one ever teaches them what to do apart from offering massage and that she didn't know what her role had been at this birth. This comment explained a lot of the disempowerment that she was obviously feeling throughout the labour and I was amazed that I had been so focused on watching Katie progress and share this insight with Sarah, that at the same time, I had been so blind to seeing Sarah stumble and fall.

I asked her to describe a moment in her life that she had felt an overwhelming sense of fear and that she continues to think about negatively. After a moment, Sarah described being a secondary school student and being on a caving adventure with her class. While she had looked forward to the adventure – she described feeling sick to her stomach once she actually got into the cave, knowing that the only way out was to progress further through the cave. She described having thoughts about sudden torrential floods sweeping through the cave and an overwhelming sense of fear. Although she managed to get through the cave successfully, she said that she continues to have nightmares about the experience.

I asked Sarah to imagine herself back in the cave and to allow herself to feel the sense fear. And then asked her to describe what it would take to decrease the fear – while still imagining herself in the cave. She thought about it for a moment and then said if the cave had been better lit and that the person in front of her had stayed closer, then she probably would have felt safer at the time. When I asked Sarah to imagine herself within the cave that was then fully lit and the person in front of her was within touching distance she agreed that her sense of fear within the memory was decreased.

I then asked Sarah to imagine Katie during labour and suggested that as her labour was progressing rapidly, she probably felt much like Sarah had when in her cave – in which the only way out through the fear and pain was to progress forward through it. I tried to describe that our role as the midwife is to help women through their experience – and what they need is often to know that there is a light at the end of the tunnel, reassurance that they are progressing well and are safe and to know that there is someone within touching distance – if they need. "Imagine if you had been in your cave with a decent light and a hand to hold – you would have felt less fear and probably would have been empowered by the experience," to which Sarah agreed – "as a midwife, you are the light and you are the hand to hold which keeps your client going and makes her feel safe and empowered". Sarah looked at me wide eyed and silent, however, in that instant of a moment – I could tell that she could now see what I had thought was so obvious and in turn, I had provided her with the lifeline, that I had previously been ashamedly blind to...

Reflective Positioning

If positioning can limit growth, it can also be seen as a powerful tool in the transformation of student learning and development. Reflective positioning can be applied as an analytical tool to fill in learning gaps by providing a contemporary framework for a student to 'paint by number' the complexity of midwifery practice and enable the development of knowledge and skill embedded within practice (Hunter, 2008). As illustrated through the previous exemplar, narratives can provide excellent opportunity for the understanding of midwifery practices that may go unnoticed by the student. Shieh (2005) suggests that Narrative Pedagogy, or personal storytelling, has the ability to generate opportunity for a student to co-create or recreate content and subsequently make connections through personal or real-life experiences. This connection subsequently provides the student with the learning environment and opportunity to rationalise an experience within the context that it occurred and assist them to move beyond the empirical world and into the inner aspects of practice that a textbook alone cannot teach (Hunter, 2008).

My role as this student's preceptor was not to simply identify what her priorities of learning ought to be by my definition, but to assist her to reposition herself and her learning alongside the woman and the woman's birth experience. This was achieved through narrative pedagogy in which the student was asked to describe a personal situation that held both emotion and value and it was through this narrative that she was able to connect with the woman's birth experience in a way that she had previously overlooked. Once able to connect with the woman's birth experience, the student was then able to create an abstract concept about her role at the woman's birth, reflect upon the birth with new light and develop a greater understanding of her role as a learner and as a midwife. Reflective positioning was therefore used as a teaching/learning strategy that was able to assist the student to increase her learner readiness, both emotionally and experientially, and also to empower her to reposition her perception of rights and duties throughout labour. The formation of an abstract concept, her experience of the cave, symbolised her commencement of Kolb's Spiral of Learning (1984) and her initiation into reflective midwifery practice.

Conclusion

Clinical areas can provide a vital professional teaching/learning environment and it is the role of the midwifery preceptor to ensure that the learning environment is maximised to the full potential. Through the exploration of social theory integrated into the principles of adult learning and various teaching strategies, this paper has addressed the role of the preceptor in the socialisation of a student midwife. While the purpose of the preceptor relationship may be inspire and support growth of midwifery students, this can only be achieved when students are motivated and open to all learning opportunities. Through the use of narrative pedagogy the student in this paper

was able to transform her perception from her right to learn at a birth to her duty to provide care the birth and an expectation that learning would occur as a result if she allowed it to.

The exemplars used within this paper illustrate transposition of power from powerless to power assumed and in addition highlight an essential transference of knowledge regarding the role of the midwife within professional socialisation. As illustrated throughout this paper, the role of the preceptor needed to evolve from professional educator to personal motivator in order to find a compatible balance between the ongoing learning needs of the student and the ongoing learning requirements of the profession. Coleman (1990) states "just as forests and fields of the physical environment are being replaced with streets and skyscrapers, the primordial institution around which societies have developed are being replaced by purposively constructed social organisation" (xvii). In whatever context 'societies' exist; whether personal or professional, it is necessary to question that given these changes – are we still going where we want to go and if we are not, are we able to modify the direction?

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EDUCATING SUSTAINABLE PRACTITIONERS - PERSPECTIVE OF A VETERINARY NURSING EDUCATOR

Francesca Matthews

Abstract

The word sustainability is now a part of everyday language, but what does it mean? How as educators do we go about educating and creating life long sustainable practitioners within their chosen discipline and of life outside work, especially when most educators feel as daunted by this as any of their students? Initially, it is first important to understand what sustainability is, how everything is cyclical and how big an impact we are really having. Then look at how individual people and small groups, including our students, can collectively make a big difference and influence. How do we make good choices? What are the other factors that need to be considered? It's not just the environment but social, cultural and economic impacts that need to be considered. As educators it is extremely important that we walk the talk and actively demonstrate that everyone can make a difference by ensuring that sustainability is a core competency and life-long learning capability.

Introduction

> *"We need to teach our children and students the fundamental facts of life – that one species' waste is another species' food; that matter cycles continually through the web of life; that the energy driving the ecological cycles flows from the sun; that diversity assures resilience; and that life, from its beginning more than three billion years ago, did not take over the planet by combat but by networking." (Capra, 2011)*

The definition of sustainability is: the capacity to endure (Wikipedia, 2011) or in other words meeting the demands of the present generation without compromising the ability of future generations to meet their own needs (University of Canterbury, 2011). According to the Global Footprint Network (2011) humans currently require the equivalent of 1.5 planets to provide the resources we use and absorb our waste, so we are using our resources at a much faster than the earth can regenerate them. If all countries were using resources as fast as developed countries, the global requirements would be closer to 4 planets. A significant change is required to how we currently use all resources, otherwise these will come to an end and there will be nothing left.

Sustainability is not climate change, but a concept which encompasses climate change.

One of the positive off shoots of increased sustainability is hopefully a reduction in the impacts of climate change. Whether or not you believe in climate change is irrelevant when it comes to the subject of sustainability.

It is difficult to find quality peer reviewed journal articles on sustainability. Much of this could be due to the features of the study of sustainability, they are difficult to evaluate according to the standards of disciplinary science (Ziegler & Ott, 2011), especially of the natural sciences. This is made even more difficult due to the fact that in many situations there are no right or wrong answers. In some situations there are answers that are right with the knowledge that is currently available. However, the emergence of new-found knowledge and products may result in this answer changing over time.

Principles of Sustainability

The principles of sustainability are: (Hughes, 2009)

- only take what nature replaces – take oil for example, only take it at the speed that it can be replaced by nature.
- manufacture only items nature can process and is thus cyclic
- avoid breaking nature – maintain the natural environments, like native forests
- equitable distribution - ensure resources are shared and people are treated fairly.

No-one can argue with the facts we are using resources faster than they can be replenished. If we don't act now, the consequences are dire for future generations – our children, grandchildren and the generations that follow.

When educating students to become sustainable practitioners, sustainability should be integrated into the curriculum, rather than a stand alone topic in the curriculum. It is a fundamental change in philosophy – we must be educating all our students to become not only sustainable practitioners in their field of study but also in life in general (Sterling, 2004; Mann, 2009). To truly understand sustainability, education must first involve the teaching of the fundamentals of sustainability (Orr, 1991). We need to ensure that our students understand that sustainability extends into all areas of our and their lives. It is more than recycling and building greener buildings. It is also about ensuring we ourselves are able to live and enjoy our lives too. We therefore look at sustainability falling into three categories.(Hauraki District Council, 2009)

1. Environmental well being
2. Social and Cultural well being
3. Economic well being

Understanding the fundamental concept that when we are truly sustainable, these three categories are integrated is paramount. When benchmarking using a strong sustainability model, we should consider the environment as the outer circle and social and economic factors within this. (Sustainable Measures, 1989). For example,

when making any purchasing decision we should not just ask which product has the best price advantage (economic well-being), but questions such as:

1. Do we need that product in the first place?

And if we definitely do then, we must ask which product:

2. will last the longest?
3. will give the most optimal performance?
4. comes from the company with the smallest global footprint?
5. will be most recyclable at the end of its life?
6. is produced locally?

The above all relate to environmental well being. Now we need to consider social and cultural well-being:

7. How are the people that produced the product treated in their workplace including pay and conditions.

For example: coal mining is taking a highly concentrated form of fuel that is rich in carbon, which has taken millions of years to form and selling it on to be burned to produce power such as coal-fired power stations. Coal mining is profitable for a local area and can produce a cheap power source. The Solid Energy website states: *"Coal provides over a third of the world's energy. It is a major component in the manufacture of everyday goods, from steel to cement, golf clubs to mountain bikes, water and chemical filters to kidney dialysis machines and even cosmetics, shampoos and toothpaste"*. However, the costs on the environment are high as coal is mined at a rate faster than it can be replenished; burning coal releases large amounts of carbon into the atmosphere; coal mining can result in the destruction of natural environments, depending on how it is mined. Ideally we need to be working in a manner that provides economic stability without damaging (or better still enhancing) the environment, our social and cultural well-being.

What does Education for Sustainability involve?

Education for sustainability involves encouraging a fundamental change in the attitudes of all of our students in terms of the way they think about their whole lives and requires collaborative learning and sharing (Sterling, 2004). It is through these future employees that we have the ability instil knowledge and capability to be adaptable and really make a different with positive changes. Nowadays young children are being exposed to sustainability right from a preschool age but most of the students reaching the tertiary sector currently are still not that savvy when it comes to sustainability.

The Greenkiwi website describes education for sustainability as requiring the development of:

1. **Knowledge and understanding** of the key concepts of sustainability, focusing on the underlying causes of unsustainable practices and understanding the requirement to redesign systems currently in place in society.

2. **Attitudes and values** that include a concern for the future – both personally and the environment we live in.
3. **Key competencies** to promote active learning, thinking and communicating that lead to a change in attitudes and the way things are done.

How do we walk the talk?

The first step in educating sustainable practitioners is to *walk the talk*. This requires buy in from all staff involved in the education of the students. My employer, Otago Polytechnic has already made a pledge to being sustainable (Otago Polytechnic website). That in itself is a huge stepping stone to getting buy in from staff. When one of our KPI's becomes sustainability the options are buy in or change jobs. Everything we do we ask the question "Is it sustainable" –environmentally, economically and socially/culturally (Hauraki District Council, 2009). I was volunteered for the role of sustainability champion in our School of Veterinary Nursing (SVN) and I accepted despite having no particular skills in this area, other than the knowledge that we definitely need to do much better or there will be nothing left. Responses from staff, when this became a key performance indicator (KPI) varied wildly from the positive to some very defeatist comments. Some comments you may hear include: "It's too big, I can't do anything to make a difference", "I'm too busy", "I'm not trained in this topic therefore I can't teach it" and "it's not in the course therefore we don't have to" – attitudes which can be challenging to deal with. However one thing was clear - all the staff agreed in their own way that the world cannot go on like it is, which, was a good starting point. We are now two years down the track and the change in the attitude of staff has been phenomenal. Now, without exception, staff members in the SVN are now embracing the challenge.

As educators and as a provider of education we must practice what we preach and do it in a way that makes it attainable to everyone and accepted as a mainstream practice. The image of a stereotypical greenie does not help normalise acts of sustainability. It needs to be seen being practised by people that are perceived as mainstream.

Within the SVN, we talked as a group about what a sustainable practitioner is in terms of our profession – this helped us examine how we would deliver our message to our students who have come to us to learn to be veterinary nurses. We came up with the following statement: "A sustainable practitioner in the field of animal care/veterinary nursing and rural animal technology is an animal advocate who provides excellence in animal and client care. They will promote to their clients and actively participate in sustainable practices that maximise job and life satisfaction and improve the quality of their practice, whilst minimise the long term negative impact on themselves, society and the environment". This was our first step in embracing the challenge.

The next step was to look at what we already had accomplished and come up with a list of additional improvements to our sustainable practices, both at work and at home. If we are practising what we preach and learning ways to improve our practices in both environments, it naturally becomes something that we share with our students. The University of Canterbury (New Zealand) website offers some good simple tips to live more sustainably at home (Ecomyflat, 2010)

In SVN, our programmes are largely distance based, so where we started was by reviewing how much paper we generated; how could we reduce our printing; how we could continue to engage students in quality education and outcomes without having so many contact courses; what products we were sourcing, what reusable alternatives were there, and where do they come from; what and how we were teaching. We also looked at ways of significantly reducing the enormous marking load by using innovative and creative assessment and learning strategies, all of which have improved the lives of our staff and the students, whilst maintaining the quality of our graduates. We have made significant inroads into this, which has had a considerable positive impact on our school reducing costs, reducing workload, allowing us to refocus on continuing to improve and develop our programmes and improving the quality of the education we offer our students. These strategies have been commended by our standard setting body. This is still an ongoing project for SVN and one of the significant areas in which we are trying to develop our skills is assessing the products we purchase and ensuring they are sourced from companies with good green practices. This can be challenging to dig deep and find out more than just reading the companies' sustainability policies. Some examples of questions include:

1. What are they actually doing?
2. What is their goal with regards to sustainability?
3. What changes are implemented currently?
4. Which ones are in the long term goal?
5. What plan do they have with regards to becoming carbon neutral?
6. How do they treat their staff?

We also continue to share with each other ways to reduce our own personal eco-footprint as well as that of the school. Slow and steady incremental changes are the key to a long term change for the better.

Calculating our Eco-footprint

It is possible to look at your own ecological foot print, as well as that of your workplace or industry using one of the many online calculators. (Ecological Footprint Calculators, Ecological Footprint Quiz, World Wildlife Fund). There are literally hundreds of these on the internet and each one will give quite different results, depending on the number of questions asked and the assumptions made, but the general trend will

be the same. This makes you more aware of the impact you are having. Awareness is one of the first steps towards improvement, followed by good working knowledge of the fundamentals of sustainability. The next step is to make and implement a plan to reduce your eco-footprint. Once you have calculated your ecological footprint, each of these websites comes with tips on how to improve this. Many of the changes are simple and easy to implement, such as changing light bulbs to energy efficient ones, boiling only the water you need, recycling everything you can, composting and only washing full loads of washing. By doing this we are making a positive impact on the environment and *walking the talk*.

Put it in the rubbish

I have always been a proud Kiwi that has felt good at making sure the rubbish makes it to the bin and I've always been really good at carefully separating rubbish and re-cycling even when kerbside recycling was not available. However, this does nothing to actually reduce the waste volume being produced. The key concept that must be understood is that nothing disappears. Just because someone comes and collects the rubbish, it is not gone, it has just become someone else's problem. For all the rubbish that goes to landfill, it will be a major problem for the future generations; All rubbish that goes for incineration this produces toxic chemicals and increases carbon in the atmosphere, not to mention reducing the world's available resources.

The world is cyclical. That is how it maintains balance, but the non-recyclable rubbish created by human kind is creating a dead end. In some cases where we think we are doing a great job by recycling, we are actually only saving the product from becoming dead end rubbish for one life cycle, as it is recycled into a product that is of lower quality and this has no ability to be recycled (Story of Stuff website).

Once the fundamental issue of rubbish/waste is understood, it is possible to live in the western world and produce significantly less rubbish (Levitt, 2010). Product stewardship (Veleva, 2008) is a concept where as part of the cycle of a product each and everyone who touches it takes some responsibility for it. This is a key concept to help reduce end use rubbish.

Some things that appear sustainable may not be

Advertising and common popular opinion are not always facts. Independent research is required. Think about the plastic versus paper debate – an example that is familiar to most people. Although we all know that plastic bags take hundreds or maybe thousands of years to break down in the environment and biodegradable plastic bags take less but still a considerable time period to break down, it is not always immediately the best choice to have a paper bag over a plastic bag, because the costs of producing a paper bag on the environment are actually higher (Dummies.com, 2010; Biotech, 2011 Dunn, 2008).

Of course the best choice is having quality reusable shopping bags, made from environmentally friendly materials and not using either plastic or paper bags at all.

Another good example is computer based education over paper based education. The push is nowadays to a paper free, electronic based education. This is also happening in the workplace, but this in itself is not always a green approach (Carlie, 2010). Computers use a lot of electricity – and not all electricity is produced using green energy production methods (Think Ecological, 2009). As a computer user you should be investigating your power provider and ensuring the company has strategic initiatives and priorities to ensure the power they are generating includes green renewable options and making sure they are also conserving the environment at the same time. Computer manufacturing requires lots of plastic and metal, including some rare metals, which are mined causing their own sustainability issues and are only available on the earth in very small quantities. They also then create a large amount of waste when they are past their use by date. While there is no doubt computers are not going to go away and they are the future of the world around us, we need to make good choices about our purchases and also make the effort to ensure waste products are fully recycled.

Let's consider renewable power sources. Hydro power is renewable, but to set up hydro power requires the changing of natural waterways, redirecting water through turbines and down canals. What happens to the lower waterways where water is no longer running or running at lower levels and the ecosystems there? The use of water for power consumption needs to be accomplished in balance with the environment. Wind power also has its own set of issues, but here it is more about changing the view of the landscape. Farming continues under wind turbines that are placed on viable farming land and the stock seem to be habituated to it, so the land is still in use however whether the farming is the best use of the land may be a question that needs to be asked. Could native bush be regenerated under wind turbines? Would native birds return to live under the turbines?

There are many other examples however the point we need to drive home as educators is that is essential to research both sides of every debate when making changes to become more sustainable. This will ensure the changes actually implemented are truly more sustainable, not just in response to advertising hype.

Ethical consumerism

As part of being an educator for sustainability it is important to start practicing ethical consumerism, both at work and at home. This requires a whole mindset change for many people. It is time to avoid making decisions based on the cheapest price. We need to instil in our students to first to ask themselves; do I really need this product to do my job or to live comfortably? They need to learn to separate 'want' from 'need'. If in deciding the product is required then as part of the journey to making a purchase,

build capability to allow them to start by establishing how ethical and sustainable the product is –– is this a quality product that is sourced and made locally? Where is that product (components of the product) sourced from? What is their sustainability policy and how is it implemented? For a product that has a use by date, how is its disposal managed? Think about the new television for example - does the company leave the disposal up to you or do they provide ways of taking back their products for correct reuse and recycling?

I have recently asked several internationally prominent companies that produce products for the veterinary industry about their sustainability policies. They all had one, without exception, however the frontline staff I asked about this were not well versed in their companies' initiatives or knew very little about how it was being implemented to make a difference - nor did they understand their role personally or professionally.

Here is our chance to create pressure as educators and through our creating of sustainable practitioners. Everyone needs to be *walking the talk*. Holding back on purchases from these companies until they walk the talk; considering taking business elsewhere; or if it is not urgent continue to pressure them to improve their practices. Continued contacts and emails to these companies have resulted in me starting to get some headway into what is actually being implemented. I think this has also opened the eyes of their frontline staff to what needs to be going on and what actions they should be taking - a new advocate for sustainability is being created who can also start to apply pressure.

SVN are not yet changing suppliers if they do not stump up with the right answers at this early stage. This is partly because the industry is small and the options are often limited, and partly due to health and safety unknowns about some of the alternative products, relating to diseases that products are effective against. We are continuing to apply pressure to our main suppliers and in the future if they are not demonstrably making a difference, we will revisit our purchasing decisions.

Encouraging change

It is human nature to be resistant to change, particularly if our own little world is comfortable and we are happy. It is hard then to examine the wider impact we are having. Laziness is also a problem – change is hard so why bother, especially when the perceived impact is not personal. According to the 1degree website "if every Australian replaced just one incandescent light bulb with one 20-watt compact fluorescent light bulb (CFL) it would be the equivalent of taking ONE MILLION cars off the road for a whole year" This is a great website for ideas of other practical changes.

Start small – make small changes, make them simple ones that are easy to implement. Show how everyone can do it without changing the way the live much. Engage people

in what you are doing. Things that actually have personal health benefits are great. Refer to the drinking bottled water debate as one example (Story of Stuff website). Take them along for the ride. Infectious enthusiasm is catchy.

Keep sustainability in everyone's mind

In the Otago Polytechnic SVN, one of my own initiatives has been to provide a weekly tip to improve sustainability – this started as a small and attainable idea for staff and students about what they can do to improve their own sustainability for small incremental future gains and hopefully a tip they will share with a wider circle of friends. However it has developed further as engagement has increased and some bigger concepts are being introduced and interspersed with practical 'what to do' tips. These tips were originally emailed out, or added to forums on our learning management system, Moodle. However in recent months, we have added them to our School of Veterinary Nursing Sustainability blog as this allows for easier and wider dissemination of the information.

These tips are generating lots of positive feedback from staff and students including one of the great things about working for or studying with Otago Polytechnic is our commitment to sustainability. Staff and students are also now starting to provide feedback and generate their own ideas and suggestions of more sustainable practices.

Using blended delivery to graduate a sustainable practitioner

Over the past two years we have battled with how to effectively embed and deliver sustainability in the standard curriculum. The practicalities are that you cannot just teach or ask about sustainability in the context of the course/programme being studied. Sustainability is a journey that requires the implicit understanding of key fundamentals just like any other subject. These need to be addressed first, and then they can be integrated easily into any course material.

Because there are so many grey areas and differing opinions in how to implement sustainability into the workplace or everyday life, this lends itself ideally to a personal learning story. This can be presented in the form of a blog, where weekly questions are asked by the course facilitators requiring class discussions or some research followed by a reflective blog post on the week's learning. Class discussions – synchronous, asynchronous, face to face or over a web conference are an important part of developing knowledge and passion in this area. Ideas and solutions that are presented should be directed back to the fundamentals throughout the programme, thereby by giving validity and a method of engaging all in evaluating the proposed solution.

The SVN will be rolling out an electronic learning resource we have developed, based on our learning over the last two years, in how to integrate the sustainability fundamentals into all our programmes. The proposed plan is that this resource will

be able to be integrated into any Otago Polytechnic programme, and to any level of pre-existing knowledge through the use of the learning guide, readily available online resources and the class group. The content of this resource of which has been carefully selected, facilitates reflection, group discussions and blog postings will enable all of our students to graduate as sustainable practitioners in their field and provide the building blocks to carry the message of sustainability with a passion to continue their learning and development in their discipline and in life.

Conclusion

Sustainability can no longer be ignored. It must become a key competency of every student we educate in every discipline. It is our responsibility as educators to be the source of graduates that understand the fundamentals and importance of sustainability – environmentally, economically, socially and culturally, who are prepared to implement this into all areas of their lives and become themselves an advocate for sustainable practices. There is no requirement to have had an education in sustainability yourselves to be able to start embedding within your programme. Use the resources widely available on the internet and contact experts in the field and start the journey towards a sustainable future. Contact us in SVN; we are more than happy to help you on your journey.

The stakes are high. It is no longer an option to choose whether to adopt sustainability or to become an educator of sustainable practitioners. The futures of the planet and our children, grandchildren and future generations are at the mercy of what we do now.

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Francesca Matthews graduated from Massey University in 1997 with a BSc and BVSc. Since graduating she practiced as a veterinarian in small animal practice in New Zealand and England before entering the world of education on return from overseas. Since 2003, she has been employed by the Otago Polytechnic School of Veterinary Nursing. Her current role is as a senior lecturer and programme manager for two of the distance programmes – National Certificate in Veterinary Nursing and Certificate in Rural Animal Technology. In the last 2 years she has also been the champion for sustainability within the School of Veterinary Nursing. Her interest in sustainability stems from seeing the enormous waste that the world produces and believing there must be a better way to do things. It is driven by her 3 young children who she would like to inherit a more sustainable world. She intends to embark on study towards the Graduate Diploma in Sustainable Practice in 2012.

STUDENT USE OF ACADEMIC RESOURCES IN ASSIGNMENTS

Dr. Nancy Evans Weaver & Estelle Barnard

Abstract:

Successful tertiary education rests on the skills of many professionals working in collaboration. We are a psychology lecturer and a librarian on a teaching team in an introductory psychology course at an ODL (online/distance learning) institution. While collaborating in the course, we realized that students must develop the foundation skill of acquiring and using professional sources (e.g., the psychology literature). We wondered what types of resources students actually use in their assignments. We developed a research programme to answer this question. Our method of investigation is citation analysis: We collected the references page from assignments and analysed the type and frequency of sources cited. Our work relates to both practical questions (e.g., Does our library supply the type/quantity of materials students actually use? Are there implications for access and acquisition?) and pedagogical questions (e.g., Do students use appropriate types and quantities of scholarly resources? Do they use the supplied/recommended resources?). To begin study we compiled a list of course resources and measured how frequently each type of resource was used by students. We also examined whether resource use is related to student characteristics (e.g., level of previous study). Initial analyses of the first of a semester's assignments suggest higher levels of resource use than were expected. Most students used instructor-supplied journal articles, and some used supplied background information and the textbook. Very few library-supplied readings were used. There may be differences between students who submit in print and those who submit online.

Introduction

What sources from the literature do students use in writing their assignments? Part of what faculty hope to teach our students is effective and scholarly use of the professional literature in our field. Reading and interpreting sources, then using and acknowledging them correctly, is a foundation skill that students must acquire in early courses if they are to successfully move forward in their discipline. Are students finding and citing scholarly resources in numbers and types that their faculty consider appropriate?

Academic librarians also have an interest in the numbers and types of scholarly resources students use. Especially as budgets tighten, librarians find they must be able

to justify acquiring and maintaining library holdings. With emphasis on information literacy in recent years, librarians today spend time and large chunks of budget on student guidance to library sources. They may develop tutorials to teach students basic search tools, create study guides for specific courses, and maintain bibliographic lists for particular disciplines. These library tools may be face-to-face, in print, and/or online.

At the Open Polytechnic, librarians and faculty work closely together to achieve this mutual need: instructing students on how to find and use appropriate sources for completing assignments and helping students grow in information literacy in their field of study. Our librarians are assigned to work with faculty in specific disciplines. One of the authors is the Psychology Librarian at the Open Polytechnic and the other author is the Principal Lecturer in Psychology. We work together to decide what types of library resources are most needed, how students will be taught to find and use resources, and how the library will be incorporated into teaching and learning.

In 2009, E came to N and asked a question: Are students using the library resources developed and maintained for our psychology courses? From that question, a research programme has developed.

There are many ways to measure "use". We decided to focus on how library resources are used by students in completing assignments. We chose to examine assignments from one of our large introductory psychology courses, because this course enrols large numbers and so would provide a big data set and also because we have an interest in students who are just beginning their study.

From there, we made other choices about our research programme. For example, we realized that while we looked at use of library resources we could also examine how students use other types of resources in completing their assignments, for example, do they use the journal articles provided in the course and/or their textbook? We also reasoned that characteristics of the students themselves might influence their use of sources, and so we collected information such as whether this is the first time they have enrolled with us and their highest level of past educational achievement. Finally, we noted whether the assignment was submitted in print or online and what mark it received.

We then set out to find or create a method of research. The method chosen was citation analysis. In citation analysis, the researcher collects sources acknowledged within a document as a way of measuring their importance. Most scholarly documents have two types of acknowledgements that can be examined: in-text citations (brief acknowledgments of sources placed within an assignment at the point where a source is used) and more complete source information placed at the end of the assignment,

either bibliographies (a list of all sources consulted) or references (a list of all sources cited) (see Burton 2010 for these definitions). Within the scholarly document, these parts both acknowledge the earlier work of other researchers and provide the reader with information on how to find the original work (Burton 2010).

Citation analysis has taken a wide variety of forms. We found that either or both in-text and end-of-report acknowledgements of sources may be examined. The method has been used, for example, to study preferences for print versus online materials (e.g., Knight-Davis and Sung 2008; DeGroote 2008), to compare student use of sources in their writing assignments and faculty use of sources in their own professional writing (see Watson, 2010 for an overview), and to examine the effectiveness of library instruction (e.g., Clark and Chinburg 2010).

We hoped this method would help us learn what resources our students are using. With our data, we might begin addressing practical questions that would help library decision making. All our students study by distance and predominantly online. Past research has shown that, for example, distance education students typically use online library information, especially Subject Guides (e.g., a list of library resources especially applicable to psychology), as an alternative to face-to-face library instruction (Grays, Del Bosque and Costello 2008). In this course the Subject Guide is specifically tailored for this assignment, is accessible from our online course page, and is highlighted by posts from the librarian on this page. Would it be used by students?

We also hoped to begin to address pedagogical questions. Do introductory psychology students use what their teachers consider to be appropriate types and quantities of scholarly resources? Does this include journal articles, books, material supplied and recommended by their instructors? Answers to those questions also have practical application, in that they may guide use toward ways to better teach students about scholarly writing. We also examined whether source use is related to student characteristics such as level of previous study and number of concurrent courses. Finally, we wondered whether source use predicts success in the assignment: Is there a relationship between number and/or type of sources cited and the mark the assignment received?

Based on past research, the results of a pilot study we conducted the previous year, and our teaching experience with factors that affect student marks, we formulated hypotheses about several variables. First, based on the pilot study, it was hypothesized that students who submitted their assignments electronically would differ in their use of academic resources from students who submitted in print. In addition, based on our teaching experience and the pilot study, we hypothesized that several variable would be related to the mark received on the assignment. In particular, our second hypothesis was that the number of sources used would relate to the mark received:

We expected assignments using more sources would receive higher marks. Our third hypothesis was that use of the instructor-recommended journal articles would also relate to mark: We expected that assignments using more of these articles would receive higher marks.

Method

Participants

Our participants were students enrolled in course 73195 General & Applied Psychology at the Open Polytechnic of New Zealand in Trimester 1 2010 (February – June 2010).

This is a Level 5 course (beginning tertiary/university level) and forms one of a pair of introductory psychology courses at the Open Polytechnic. Students use a combination of print and online resources, and the teaching is entirely by distance. Part of what students are specifically taught in this course is APA citing and referencing, and they apply that developing skill to complete two in-course assignments.

Each assignment requires the student to conduct a psychological experiment. On this first assignment, they read background literature about the topic (the effect of expectancy on memory), recruit a small number of participants, and then test the participants' memories of a photo that contains both expected and unexpected items for that particular scene (a tutor's office where, for example, a desk would be expected but a party hat would not). They then analyse the memory scores, discuss their meaning, and write a report in the style of a professional journal article in psychology to present their experiments and its results. They are taught to use in-text citations within their report and to include an APA-formatted references page at the end.

We tabulated several student variables about our participants. Using the Open Polytechnic's records, we recorded their highest level of study before enrolling in 73195, whether this was their first time enrolled with us, and how many (if any) other courses they were taking along with 73195 in Trimester 1 2010.

The total number of students from whom we collected data was 124.

Materials

Our materials were a set of data sheets gathered from Assignment 1 from these 124 students. From each assignment, the references page was copied and formed that student's data sheet.

Procedure

After approval by the Open Polytechnic's Ethics Committee, our research assistant copied the references page from each assignment and coded all data sheets to remove student identity. She also recorded whether the report was submitted in print or online. Analyses then proceeded using only these codes. The researchers did not know student identity until the last stages of data analysis.

Procedures were also put into place to minimize some perceived weaknesses of citation analysis. First, we used references and not bibliographies. Students had been strongly advised that references must include only and all cited sources, i.e., only and all the sources they actually called on in their reports, and they were told they would be marked on this. (Use of citations and references counts for 5% of the mark on this assignment.) We believed they should, therefore, do their best to include only and all those sources they actually used. (Bibliographies, with no requirement to cite all sources listed, may be less helpful as an accurate estimate of sources actually used, in our opinion).

Second, as a check on accuracy, we pulled a stratified random sample of the assignments and examined the entire report, not just the references page, to compare in-text citations and references. The sample consisted of 10% of the total collected data sheets (n = 12), stratified by mark received on the report (since there might be a relation between mark and sources used). One of the researchers then read the entire report, noting whether (1) all cited sources were included on the references page, and (2) only cited sources were included on the references page.

These data were then analyzed in two ways: by citations and by references. By *citations*, there were 33 cited sources over the 12 reports. Of these 33, 32 were included (as they should be) on the References page, for an accuracy of 96.97%. By *references*, there were 36 sources listed on the References pages of the 12 reports. Of these, 32 were cited within the report (as they should be), for an accuracy of 88.89%. Overall then, the pages can be considered a fairly accurate representation of cited sources: Almost all (96.97%) cited sources do appear on this page, and most (88.89%) of the sources appearing here have indeed been cited within the report.

In our opinion then, while using the references page as the data source is not perfect, it does seem to capture most of the sources students cite. Of course, students may also have consulted other sources that influenced their assignment but that they did not cite – we have no way of measuring this since bibliographies are not included in APA format for laboratory reports (Burton, 2010). However, this is the first assignment written by most of these students and our experience has been that students do cite and reference any source they possibly can.

With those statistical preliminaries completed, we then moved on to the content analysis of the 124 data sheets.

Results

Our major analyses focused on a set of source variables. These variables were of three main types: (1) total number of sources used, (2) instructor-supplied sources used, and (3) library-supplied sources used. Finally, we tabulated whether the assignment was submitted in print or online and what mark it received.

We began our analysis with a set of descriptive statistics for these source variables, including three measures of central tendency (mean, median, mode) as well as a measure of variability (range). Table 1 shows the results for most important source variables.

Variable Name	Mean or percentage used	Range	Median (Score # 62)	Mode and its frequency; other frequencies
Overall number of sources used	3.62	0 to 11	4	4 (n= 36)
Textbook	59%	0 or 1 (No or Yes)	1	1 (n=73) 0 (n=51)
Instructor-provided journal article (B & T)	83%	0 or 1 (N/Y)	1	1 (n=103) 0 (n=21)
Instructor-provided journal article (L & Z)	53%	0 or 1 (N/Y)	1	1 (n=66) 0 (n=58)
Instructor-provided journal article (P et al.)	57%	0 or 1 (N/Y)	1	1 (n=71) 0 (n=53)
Instructor-provided background information	45%	0 or 1 (N/Y)	0	1 (n=56) 0 (n=68)
From Library: Subject Guide	6%	0 to 2	0	0 (n=117) 1 (n=6) 2 (n=1)
From Library: RR & AR	2%	0 to 4	0	0 (n=121) 1 (n=2) 4 (n=1)
Other sources: Found by Student?	21%	0 to 7	0	0 (n=98) 1 (n=16) 2 (n=6) Other counts (n = 4)

Table 1 Source type and use summed over all participants (n = 124)

Note. RR & AR = Recommended Resources and Additional Resources from our library. See explanation later in Results.

Of most interest are the following results.

The overall mean number of sources used was 3.62 sources. The mode (most frequently occurring score) shows students most commonly used 4 (n=36) sources. One student used 11 sources.

Looking at types of sources cited, the most frequently used source in this assignment was one of the instructor-provided journal articles (coded as B & T to indicate its authors), with 83% of students including this source in their references. The other two instructor-provided journal articles were also fairly well used, at 57% (P et al.) and 53% (L & Z). Not shown in Table 1 but also examined was how often students used none of these articles, one of them, two of them, or all three of them. We found that 12 students (just under 10%) used none, 29 students (23%) used one, 38 students (31%) used two, and 45 students (36%) used all three of the instructor-recommended articles.

The textbook, which contains a chapter that is very relevant to this assignment, was cited by 59% of the students. A multipage summary of the theoretical background and past research for this assignment, written by one of the instructors, was cited by 45% of students.

Library resources of all types were very infrequently used by our students. Sources from the Subject Guide, which is an online resource showing 73 library-held materials that are relevant for this assignment in this course (as chosen by the instructor and the psychology librarian), is used by only 6% of students. Similarly, "recommended resources" (RR) and "additional resources" (AR) are also used by very few students. These are 17 sources held by our library as general psychology resources (e.g., other psychology textbooks), not geared particularly to this course nor this assignment. We found that about 2% of students use one or more of these library sources.

Finally, we classed as "Other" any source listed on a references page that did not come from the textbook, the instructor-provided sources, or the library-provided sources. We found that 21% of references pages contained this type of source. We think of these sources as student-origin, although they may have come to the student from a librarian at the student's local library or from some other person. Of students who used this type of source, most of them used only 1.

We also tabulated which students submitted online and which by print, and we examined the mark obtained on this first assignment. Ninety-nine students (80%) submitted this assignment online, while 25 (20%) submitted in print. The overall mean mark was 64.47 out of 100 marks, the mode was 75, and the median was 67. The highest mark obtained was 91 and the lowest was 18.

We then began running statistical tests, in particular tests to evaluate our three hypotheses. We found differences in the use of instructor-recommended journal articles between print and online submissions. We also found relationships between the two hypothesized variables, number of sources used and the use of instructor-recommended journal articles, and mark received.

First, there may be a relationship between use of the journal articles recommended by the instructors and whether the assignment was submitted in print or online. We have grouped the instructor-recommended articles (no articles used, one article used, two articles used, or all three articles used) and found a weak relationship (Chi square = 7.44, df = 3, p = .059) with type of submission. Online submitters tended to use more of the instructor-recommended journal articles than did print submitters.

We have also found some variables that relate to mark. There is a weakly significant relationship between the number of sources used and the mark achieved (Chi square = 12.59, df = 6, p = .05). In general, assignments with more sources got higher marks. For example, of the assignments using 4 or more sources (the median and mode, see Table 1), 53 out of 69 (77%) received a mark in the A or B range. But of assignments using 0 or 1 reference, only 3 out of 10 (30%) got an A or a B.

There was also a strongly significant relation between mark and use of the instructor-recommended articles (Chi square = 24.78, df = 9, p < .01). Grouping use into four categories (no articles used, one article used, two articles used, or all three articles used), assignments using more of the articles achieved better grades. Of the assignments that contained all three sources, for example, 39 out of 45 (87%) were marked as A or B, but only 4 out of 12 (33%) of the assignments that used no sources were marked that highly.

Finally, we collected statistics about the students themselves that may be relevant. First, we categorized students as to level of secondary qualifications (e.g., NCEA levels). Second, we recorded whether students were enrolling at the Open Polytechnic for the first time with this course. Third, we noted how many other courses they were taking this trimester. These student variables will be used in future analyses.

To summarize our results so far, we have collected means, medians, modes, and range information on the use of a variety of academic resources by students submitting the first assignment in an introductory psychology course offered through online/distance education. Students used 3 or 4 sources on their references page, on average. The most frequently used sources were instructor-provided and recommended journal articles, the course textbook and instructor-provided background information. Library resources were infrequently used, even those resources specifically relevant to this course and this assignment. Statistical testing of our three hypotheses support all three predicted results.

Discussion

Can teaching faculty and their library colleagues determine what academic resources students are using in their assignments? The method we chose to begin to answer this question is citation analysis. We expected that students in an introductory psychology course taught through online and distance education would use some types of scholarly sources more than others and that it would be worthwhile to examine their pattern of source use. The data could influence library acquisitions and library instruction, as well as allowing teachers to determine if students are indeed moving toward scholarly use of sources and information literacy in psychology.

We collected the references page from 124 first assignments in course 73195 General & Applied Psychology at the Open Polytechnic of New Zealand. We calculated descriptive statistics to determine the pattern of use of a variety of sources. We found that most students used 3 or 4 sources in this assignment. A set of journal articles provided and recommended by course instructors were the most heavily used resources, followed by the textbook and background information written by one of the instructors. Library resources, even those specifically chosen to be most relevant for this course and this assignment, were infrequently used. Statistical testing has begun. So far, there is support for our expectation that online submissions may differ in their source use from print submissions. Several variables may affect the overall mark received on the assignment, including the use of the recommended journal articles and the overall number of sources used.

Our study relates to a body of research using citation analysis. As summarized by Heller-Ross (2002), citation analysis is widely used in library research, and even small studies have been helpful in setting library budgets and policies. Academics can also benefit from using this method to examine how their students seek and use scholarly sources. For example, past research (Leiding 2005; Kraus 2002) suggests that journal articles are a favourite type of resource in student writing. Kraus also suggested that advice from teaching faculty may have a pronounced effect on what types of sources students look for and cite. In agreement with this literature, we also found journal articles, in particular those articles recommended and provided by the course's teachers, were among the most heavily used sources.

As to other results, we were pleasantly surprised at the overall number of sources cited (on average, near 4 per student), given that this assignment does not specify that students must use outside sources at all. On the other hand, we thought more students would cite their textbook, given that we do allow secondary sources and that this assignment is specifically linked to a chapter in that textbook.

Our most surprising result is the very low use of library resources. Our psychology librarian has a forum on the course page and strongly advocates for the use of these sources. All library staff seem to us to be helpful, supportive, and knowledgeable in their communication with students. Yet few students used library resources in this assignment. It may be that we are not doing a good enough job of encouraging students to use these resources, or there may be factors in the way students access or interpret them that should be considered.

From the initial statistical testing, we found as expected that there does seem to be some relation between the number of sources used – and especially the use of the recommended journal articles – and the mark received on the assignment. It is also interesting that there may be some difference between assignments submitted electronically and those printed and posted in.

There are limitations in this research, of course. The two most important involve the participants and the materials. First, we have examined source use only for one set of students in one course in one trimester in one discipline at one distance-based institution. Our students may not be like your students! Second, our data came from the references pages of assignments. Although we took measures to test that it did indeed accurately reflect sources used, we still are relying on the competency of students to report sources and on their honesty in listing them.

We have plans for continuing this research. We have many more statistical tests to run on our data. For example, we want to further explore possible differences between assignments submitted online and those submitted in print. We also want to test any relationships to student variables, such as level of previous education and whether the student is newly enrolled. Do more experienced students use more sources, for example?

Then we want to go beyond this first assignment. The references pages from the second assignment in this course are available. We want to analyze them to see if students change their pattern of source use. Finally, we want to look at student use of sources in higher level courses. In particular, this course is the prerequisite for a Level 6 course 73212 Thought, Memory & Language. We hope in future to examine how those 73195 students use sources in 73212, now at a higher level of study.

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LEARNING FROM OUR COLLEAGUES

Linda H Wilson, Merrolee Penman, Linda Robertson, Jackie Herkt, Rita Robinson, Nathan Pettigrew

Abstract

Postgraduate occupational therapy (OT) education in Aotearoa New Zealand caters for a specific group of practitioners, most of whom are novices both in post graduate education and digital literacy. Over twelve years Otago Polytechnic staff members have utilized many strategies to increase accessibility of postgraduate education to a small geographically diverse profession. As our expertise has grown and the technology developed we have listened to and learned from our colleagues. We describe the context for learning, the characteristics of our students in terms of digital information literacy skills, the use of technological supports and the challenges and opportunities created in the program through five vignettes. We have learned from colleague learners about what does and doesn't work. What works in technology based distance education is remarkably similar to what works in other forms of education, therefore if skills and confidence in using the tools can be developed; processes cease to be a barrier to content.

Introduction To The Learning Context

The School of Occupational Therapy at Otago Polytechnic is a provider of distance learning for occupational therapists, predominantly domiciled in New Zealand. Occupational therapists participating in this education are primarily female, often with poorly developed digital information literacy skills (Martin 2006) (although many are supported by teenage children), studying part time, and working full-time with minimal employer support. The students juggle multiple roles being students, parents (some solo), supporting aging parents or partners in study or business, and having other community responsibilities. Postgraduate study is an opportunity to expand their thinking, affirm and value their professional identity and have time for themselves in a busy life, and yet engaging in postgraduate study brings the anxieties of balancing the demands of their personal life, with the commitment required to successfully complete postgraduate study (Schnell, Penman et al. 2007).

Staff of the program are similarly members of this profession, which has come to postgraduate education mainly since the mid nineties (Wilson 2004). As we increase and diversify the courses offered we have also had to juggle our own formal study while

developing knowledge and skills in the educational technologies we use to make distance learning for these students accessible. Geographically we are a small country with a dispersed population; with distance education one route to profession specific post graduate education, especially that promotes a connection between people working with similar clients or techniques in different settings or towns. Our profession is, like other health professions increasingly using technology in diverse ways in education, with under and post graduate students, in supporting practice and practicing across distance (Nguyen, Zierler et al, 2011).

We became increasingly more web based in teaching delivery and support for students because of the flexibility. However, each advancement, for example from course readers to CDs, from a hardcopy file of learning activities to a proprietary Learning Management System to adding in Web 2.0 tools, we have both been challenged, and challenged our students. In the process, we have learned both from our students and each other, what seems to work.

This chapter uses five vignettes, each told by one of us, to share some of what we have learnt. In the same way that we teach different subjects, and use technology in different ways we have told of our experiences in our own way, so the voice changes with the vignette. Rita tells of her initial forays into discussion boards – the initial training ground for most of our students and their preparation for Web 2.0 activities, the two Lindas each write of their experiences with groups of students networking cooperatively, one internationally and local. Jackie describes some learning from blogs and Google documents and Nathan reports on research undertaken to examine how a number of factors including self-efficacy impact on the use of these tools for continuing professional education. Prior to presenting the vignettes, we describe our courses to contextualize our experiences.

Course Specifics

Enrolled students range from those who have recently completed professional occupational therapy qualifications, to those who have not studied for over 30 years. Students complete a postgraduate certificate (3 courses, one of which is compulsory), a postgraduate diploma (6 courses, two of which are compulsory) or continue on into a masters. Students can complete the courses in any offer, having between 3-5 courses available each semester (14 weeks duration). Enrolments in each course range from 8 to 25 students with the majority choosing initially to enroll in courses that relate to their specific practice area, continuing, once hooked, into the more generic and research related courses. Distance learning, especially technology based, is a new experience for most of the students and therefore anxieties about both their ability to manage the technology and the level of self discipline they perceive is required is evident.

The general structure of each course is set readings related to and usually followed by, one or more learning tasks. Learning tasks may include allocated readings, a request for a posting on a discussion board, a quiz to test knowledge or understanding, or a practice related assignment to complete and report on. All courses initially used the Blackboard™ Learning Management System (LMS) replaced now with Moodle, along with fortnightly tutorials, initially teleconferenced, then delivered by Elluminate and now Adobe Connect. The format of the online courses is common, with additional resources, links or references beyond the set core readings (provided on CDs), along with generic information about academic standards, library access and assessment expectations.

The ethos of this program is that the learners are responsible adults who are expected to be self motivated learners (Merriam, Caffarella et al. 2007). Over time, we have noticed that some courses develop a sense of community with interaction, resource sharing, peer review and critique. In other courses, students remain fairly isolated and separated, interacting mainly with the lecturer, which may occur as engagement on the online LMS does not carry any grades or mandatory requirements. It is quite common for learners with limited experience with online learning and limited time to complete readings, engage in the teleconferences, but not in the online discussions. Learning to articulate an argument is hard for many students face to face, yet it seems participation in online discussions is the first place that many develop a sense of self confidence in their own opinion and the skills for greater involvement in Web 2.0 activities. In the first vignette Rita explores her reactions to learning about this as she moved from being a student to a staff member and describes techniques to encourage students' participation.

Rita's Vignette: - Coping With Silence

It is challenging to facilitate an online learning class when no one posts or discusses. As a new associate lecturer I tried reminding and even attempted to use pity (by claiming my job rested on their participation) but nothing worked. Daily I would log on and could see, through the tracking tools that students had logged on but not posted. My problem was; how did I get learners to engage in online discussions?

I empathise with novice online learners; I can relate to them, as I was one, myself, only a short while ago. Enrolling in a distance learning course with extremely limited computer technology knowledge was for me both terrifying and frustrating (Palloff and Pratt 2007). As a novice online learner, it took me more time, effort, and energy to motivate myself to participate in that learning than if I was engaging in face to face learning. My engagement as a student reflected my lack of confidence in three areas; computer knowledge, fear of posting a discussion that others would read and judge, and my writing skills. As I overcame each barrier my participation in online discussion increased.

Now I am a lecturer, those experiences directly influence how I introduce students to the course and the LMS. I use carefully structured activities designed (Jenkins 2006) to ensure students can overcome these barriers, to master the LMS, and to develop confidence with online discussion forums.

The first barrier is computer skills (Bowles 2004). Building on learners' existing technology skills to increase their use of computer based technology is important. Little things like opening attachments or understanding how to use tools embedded within the LMS can create difficulties. Terminology can add extra challenges, especially for novice users. One way to support learners is to explain exactly what is required, especially in the first weeks. For example, when asking students to access a link I specifically state, 'You access a link by clicking on the words that are underlined in blue'. Providing explicit instructions and descriptions of how to carry out the computer side of the task minimizes some of the frustrations people experience.

Most learners have basic emailing skills therefore emailing is a great place to start. I initially encourage private emails because it helps learners gain confidence in communicating in text. Although there are LMS activities which encourage students to introduce themselves and make a connection to the class, I feel that direct emails between myself and each learner greatly facilitate this. The private emails are very straight forward, saying hello, reminding people that new work has been posted or thanking people for their efforts in responding to learning tasks online. They also reflect back aspects of the person's life that they have shared, such as a sick child or a busy work week. For me, the fear of being misunderstood or exposing my lack of understanding was intensified with online discussion, due to the more permanent nature of text compared to verbal contributions. This fear decreases through participation and relationship building (Garrison and Anderson 2003) that is facilitated through emailing.

From communicating with one person in text via email the next step for students is posting a response to an online discussion that one's peers read. The learning tasks I set in the first three weeks build on a learner's prior skill of emailing by encouraging an email type response to be posted. Learning tasks are worded to encourage learners to post a short response in relation to readings they found interesting, puzzling or reaffirming. Using a learning task which highlights reflections under these categories assists learners to pull out information relevant to them and their context. Additionally, activities which encourage reflection and connecting with each learner's interests and personal goals make the online experience more relevant and therefore more likely that the learner will participate. However, even with fairly neutral learning tasks some learners can still feel overwhelmed by the thought of submitting a response which peers will read. I therefore offer learners the option to email me directly with their thoughts and questions if that feels more comfortable for them. I provide private feedback, and then ask their permission to submit their post with my response on the LMS.

Feedback is a powerful tool in building a learner's confidence with posting online. Every posting gets a response, which I aim to ensure happens within 24 hours. Prompt responses are appreciated. The feedback I post always thanks a person for posting, expands on their idea and then offers an extension of that idea for the learner to consider. Although a little time consuming, this format of providing feedback is designed to assist the learner to continue their inquiry, deepen their learning (Ramsden 1992), and develop more critical thinking. Once I have a group of learners who post consistently, I wait to see if a class peer responds first, to try and increase class participation rather than just conversations to me (Garrison and Anderson 2003). Once learners are confident with online discussion I reduce the speed with which I respond.

The last area which I am mindful in is structuring learning tasks around the skill of writing. Writing skills are an area of challenge for our learners, as the writing used in daily professional practice is different to that of academic writing. Learners are moved from postings that follow an email format, to a personal reflection, an opinion supported by a specific quote from a named article, to comparing quotes or ideas from more than one article. This gradual shift in expectation which some may call staircasing or scaffolding (Vygotsky 1978; Abdal-Haqq 1998) supports the learner to develop their thinking and writing. By providing explicit examples and feedback learners are supported to move their writing from descriptive to academic.

This section has described a number of strategies used which positively affect learners' participation in online discussions. These include

- connecting with each person individually, initially outside of the LMS, by building on emailing skills
- fostering learner's confidence by providing explicit instructions on how to use the technology that creates a online presence
- grading learning tasks which assist the learner to make relevant connections
- providing timely feedback
- providing a safe learning forum in which participants can have feedback from me before they post into the community, and
- moving the learner from email-like postings to ones with more academic structure and content

Although many of these strategies are initially time consuming, supporting learners to engage with the online forums opens up opportunities for them both to use the technology and engage at a deeper academic level. Teaching staff are actively adopting these strategies, as being present online is a necessary part of joining an online community. Although the steps described are for distance based elearning, for students who are new to the emerging technology the need for staff to be as attentive, and present is

needed just as in face to face learning, where a formation of a community is the desired outcome. In the next vignette Linda discusses other factors that influence participation in online learning communities revealed through international cooperation.

Linda R's Vignette: E-Learning Dialogue Between Countries

This vignette describes shared e-learning offered to New Zealand and Canadian students in 2006 and 2007. The project aimed to maximize the use of expertise on opposite sides of the world and provide students an international learning experience (Palloff and Pratt 2007). This was offered within two independent courses in clinical reasoning in OT across a six week time frame. Students were assigned to discussion groups on the LMS hosted in New Zealand. A series of cases with probing questions were posted weekly to structure and facilitate discussion. The purpose was to extend student thinking through interactions made possible because of the technology across institutions and countries as proposed by Garrison and Anderson (2003). Academics with differing expertise oversaw the discussion and posed reflective questions throughout. We reviewed the activity each time to ensure the activity was worth the effort involved. Table 1 shows the level of students and the numbers in the courses.

	New Zealand students	Canadian students
2006	54 entry level (Bachelor)	40 Masters entry level
2007	15 Post graduates	45 entry level
2008	12 Post graduates	40 Masters entry level

Table 1: Numbers of students by program and country

Each year the review provided more information about how to run this learning activity. There were challenges in how to: connect students in different hemispheres who were not involved in identical courses, ensure that the learning was at the right level for both groups of students, entice students to take part in what was essentially an 'extra' and maintain that interest over the 6 weeks, and how to provide a range of opportunities so that all students could readily participate, for example, without becoming repetitive in their comments on a discussion board.

For the students, one of the most valuable outcomes was the opportunity for reflection and self-paced discussion (Salmon 2004), such that less outspoken students provided very articulate and thoughtful comments in their online contributions. For some students, asynchronous learning was preferred:

> *It's a great way to sit and think and then respond to the idea and the concept. .... I need more time to process, this gave me a chance to participate in a manner that I felt comfortable with. I felt that the discussions were much more thought out than the discussions in class. (Alex)*

> *I think that it is particularly good medium for learning about clinical reasoning which seems to be something that you need to think and mull over. (Eden)*

There were comments on the benefits of international e-learning:

> *the opportunity to discuss OT practice with others who study under a different curriculum, come from a different culture … have a different professional history and health system. (Jamie)*

> *it was an innovative and exciting way to learn. What drew me to it was the opportunity to talk to NZ OT students in NZ and hear about their thoughts. (Jordan)*

Student feedback suggested they were more motivated to take part when challenged with case studies which have provocative topics (Garrison and Anderson 2003). We developed cases that had complex problem solving components e.g. issues that were moral, and ethical ones that challenged ideals of theory. One case examined the struggle between the theoretical ideals of client-centered practice and the pragmatic challenges of taking actions to ensure client safety. We discovered that differences in the level of theory–practice integration between two groups of students led to greater insight and learning, as proposed by Salmon (2004). The more clinically experienced New Zealanders, for example, tended to temper the more idealistic solutions of the more theoretically grounded Canadian students. These different perspectives did need careful monitoring by the lecturers. Exploring international differences and similarities was a challenge. Canada and NZ have similarities in that 'western' culture dominates however we needed to create tasks that allowed exploration of the differences e.g. "what impact does the hospital funding system have?"

We gave serious consideration to the warm up phase allowing students to feel more comfortable in expressing their opinions and ideas. This phase is described by Clegg and Heap (2006) as "presenting self, relating to each other, making sense of self in relation to others" (¶ 6). Murray (2000) suggests that greater social knowledge of the students increases the amount of sharing. For students who have no face-to-face opportunities 'warm-ups' are particularly important. The students were mixed in this regard - NZ students were totally distance based; Canadian students met regularly in classrooms and had minimal experience of distance education other than for field work support and of course the NZ & Canadian students never met. It was noticeable that the Canadian students were chattier in their responses, often referring to one another by nickname or mentioning individual's idiosyncratic features. Examples of warm ups can be seen on http://lrobertson.wordpress.com/2007/08/26/online-icebreakers/.

We thought students would participate more if the groups were smaller (e.g. 8-12 students). From the first trial we discovered it was not useful to close off discussion groups or to limit students entering all the groups. On the other hand a central discussion forum enabled everyone to see and benefit from the discussions of a few but did not encourage everyone to participate. Only those who were confident put their views in a public forum, and some learners assumed that someone else would respond and others commented that there was not much else to say after the first few had contributed. A blog was trialed as an alternative forum but there was enormous resistance to having to deal with yet another Web 2.0 tool.

When the Canadian instructor offered up to 10% of course marks to encourage on line contributions a great flurry of contributions resulted from the Canadian students. This incentive had a huge impact on student contribution. Students were drawn towards what 'counts' in an assessment. Not only did we find this effect of incentives on student motivation (Garrison & Anderson, 2003) but the working together as a group from one country with a group in another seemed to help the motivation. Glogowski (2007) comments that, less structure provides more opportunities for students to get 'hooked and committed' (¶15). He is talking about school children but we find the principle of finding a hook, albeit with structure, also holds true in tertiary teaching. Perhaps it is possible to generate projects that students find worthwhile pursing around a particular area of practice. Students could assign themselves to a particular topic and report back on a blog or in one of the discussion forums or in a wiki as suggested in the next vignette, where the wiki enables students to experience participating in research.

Linda W's Vignette - Wikis And What People Like

The introductory research methods course Qualitative Research in Practice is assessed through a research proposal in which students select and develop their own topic. The educational challenge is to provide diverse and distant novice researchers an experience of being involved in an actual research process. I created a Wiki that enabled the group to be involved collaboratively in actual research which might inform their summative assessment but not detract energy or time from its development. A Wiki is software that allows users to develop, edit, and link web pages easily. It can also be used to create collaborative websites or develop online learning communities (Klobas and Beesley 2006).

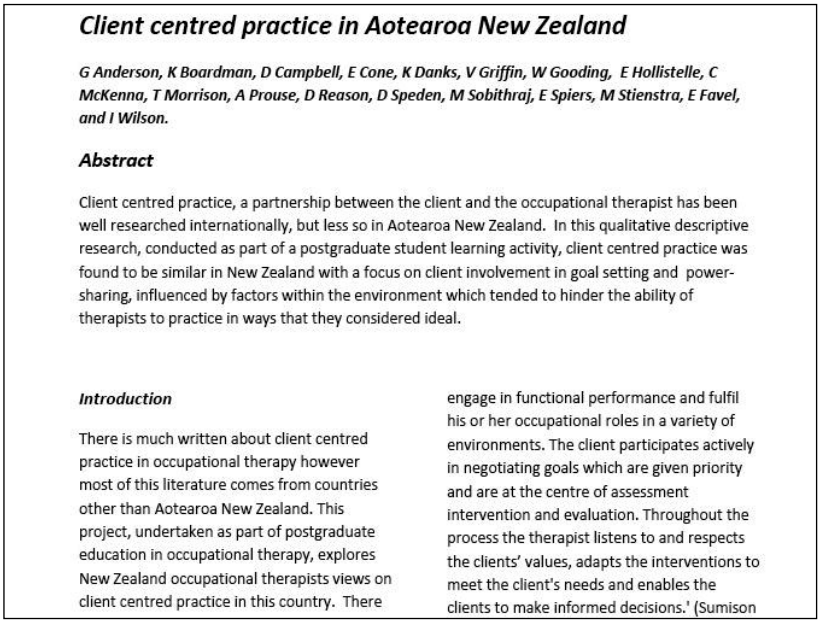
One of the learning activities for this course was a research project where I structured the question, and the process. Through the Wiki students were allocated particular aspects of client centred practice to explore, a topic that crossed all practice areas and included some of the socio-political and cultural dimensions of practice in New Zealand. I used Wikispaces, a free but protected wiki; the work was visible to anyone who

found it but only those enrolled could contribute to achieve the aim of it being a learning activity. I had one advisory consultation with the staff IT advisor, and with follow up colleague support had the initial framework of the wiki set up in under 3 hours.

Eleven pages were set up on the site. The *home page and space overview* clearly identified this was a protected workspace for students on this particular course. Links to the institution and to the program overview were provided. The research context was therefore described and a statement made that the project should not be undertaken by any other person without appropriate ethical approval. Access to the lecturer was provided for visitors to the site should they have concerns about the project. The *project overview* gave students information about the research and what they were to do. The *literature review* included typical section headings such as definitions, history, key features, and aspects of client-centred practice. Students were allocated sections to post synopses to. I defined the *research process*, methodology and the methods we used. Students used the literature to justify these decisions and prepared the information sheet and consent form for participants. When these reached an appropriate standard, they were hard copy posted to each student for them to use with their own participant. Students generated the *interview questions* and identified the demographic data to be collected. One student identified the equipment, environmental considerations and other procedures needed to carry out an interview in a consistent manner. Each student undertook and transcribed one interview and posted the *transcripts*, removing identifying details. Students were then allocated aspects for *data analysis* and specific sections for *discussion and summary*. *References* were posted so that each participant had access to the informing literature. At the time students were working on their own final assessments, I pulled together their contributions and prepared the equivalent of a short journal article as a *final report.* At the time that students posted their assignments I posted to them this report both for their participants and themselves. Figure 1 is a facsimile of the first part of page one of the seven page report. Although the project has been completed and repeated in the last two years the pages are still regularly accessed internationally. I have had no emails expressing concern, pleasure or anything else.

One of the benefits of a Wiki is that one can keep track of who has contributed when. Of the eight students on the course, seven did undertake an interview according to the developed guidelines, transcribe and post it on the wiki. The one student who didn't told us of some of her current issues and remained engaged in other parts of the process. Six students contributed to the analysis, five to the literature review, four to the reference lists and two each to the discussion, the process, and the questions.

My reflection on this is that most students participated in the areas in which they had least experience, or greatest need - that is conducting a research interview, transcribing it and working through the process of data analysis. In comparison to other online class activities in the LMS, the level of engagement in this process was high. Students



Client centred practice in Aotearoa New Zealand

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Abstract

Client centred practice, a partnership between the client and the occupational therapist has been well researched internationally, but less so in Aotearoa New Zealand. In this qualitative descriptive research, conducted as part of a postgraduate student learning activity, client centred practice was found to be similar in New Zealand with a focus on client involvement in goal setting and power-sharing, influenced by factors within the environment which tended to hinder the ability of therapists to practice in ways that they considered ideal.

Introduction

There is much written about client centred practice in occupational therapy however most of this literature comes from countries other than Aotearoa New Zealand. This project, undertaken as part of postgraduate education in occupational therapy, explores New Zealand occupational therapists views on client centred practice in this country. There

engage in functional performance and fulfil his or her occupational roles in a variety of environments. The client participates actively in negotiating goals which are given priority and are at the centre of assessment intervention and evaluation. Throughout the process the therapist listens to and respects the clients' values, adapts the interventions to meet the client's needs and enables the clients to make informed decisions.' (Sumison

Figure 1. Page 1 of completed article

in their evaluation indicated that they appreciated the opportunity to be involved in actually doing research (Kielhofner 2005) without feeling that it compromised their own research pursuits. Given that the summative assessment requires students to undertake a literature review, identify a justifiable research question and process and be involved in collecting references, by the end of this particular course, through the Wiki experience, students had actually been involved in all elements of a research process (Brown and Adler 2008), through to write up and recommendations, albeit not on the same project.

The use of a Wiki set up by the educator is sufficiently simple for students to actively participate in. The quality of some elements of the literature review was relatively high, especially from those for whom the course was not their first enrollment. The depth of data analysis and discussion was adequate from those who participated. However, I acknowledge that by then people were writing their own proposals for the summative assessment. Three have continued on to be involved in research projects of their own, two directly related to their own proposals. Additionally the two honors students commenced the course expecting to proceed to research in the same academic year. That five of the eight have been involved in research directly within a year of the class affirms for me that students had positive experiences of research.

Students can be trusted to select, from the learning activities offered, those that best meet their own perceived needs. People may not engage in a task that does not seem

of value to them, but will if it is needed by the group. (Palloff and Pratt 2007) There is more to be done to work out how to make a future project possibly live (i.e. going through to full publication), without creating an unwanted level of anxiety for students and negating the positive benefits of being actually involved in a research experience. Detecting and responding to student participation and anxiety, occurs in introductory taught research whether conducted using distance or emerging technology or engaging students face to face. Another area to address is making the site more easily found by members of the profession. This could be done by encouraging those members of staff who actively blog to create an entry about the wiki, which would potentially then bring more visitors to the site. However, a balance between learning in a 'safe' environment, and feeling pressured to produce a journal article needs to be found.

In the next vignette Jackie describes how the use of Web 2.0 tools has enabled students involved in research projects of their own to keep on track, receiving prompt feedback and getting writing early.

Jackie's Vignette - Sharing Made Easy

Embedded within the postgraduate program is the fourth year of the Bachelor of Occupational Therapy (Hons), which students complete as distance students. Students are enthusiastic, full of ideas, yet nervous, as they launch into their first piece of research. They develop their research question, select an appropriate methodology, gain ethical approval, collect and analyze the data, and write the dissertation of 15-20,000 words. Supervising this at a distance is challenge. These students need guidance and support, but they also need to own their own piece of work, and to be able to try things out for themselves. This leads to a tension between being fully autonomous and guided by another. Currently we are using two Web 2.0 tools to assist us in keeping their projects on track; the blog and Google Documents (Google Docs).

A blog (or weblog) is a website where items are posted on a regular basis with the most recent posts at the top. Usually a blog is about a single person, topic or theme. I have blogged for some time and based on my experience, I believe that blogging can develop writing skills. It helps in the identification of issues, forming of an argument, enables reflection on events and actions, and develops editing skills; all invaluable activities for an honors student writing their first major work. We choose to keep the student blogs public because this helps the students realize that the final work will be viewed and discussed by others, which in turn encourages them to cope with public scrutiny, consider issues of confidentiality and professionalism, in relation to the research they are undertaking and how they speak about it.

One student I am currently supervising loves technology, is keen, enthusiastic and enjoying researching, but finds it hard to express ideas in print. Her blog allows her

to chronicle her findings, and bridges the gap between her thinking and her need to produce a written dissertation. It allows her to explore her thinking and play with ideas while keeping track of these ideas and thoughts. The blog helps her monitor the highs and lows, and the resources she is using. In addition, the student sees the blog as an attractive way to journal, which aids the development of her reflective skills. From a supervisor's perspective, I see evidence of her understandings and her ability to identify issues. I can see her progress, challenge or support her thinking yet prompt her when needed. The blog helps me prepare for the few face to face supervision sessions we do have. I post other information or links she might find useful. As a relatively inexperienced researcher and research supervisor I have also used the blog within my own supervision, to get support and guidance about the type of direction and feedback I am giving the student. Finally, the blog may become a useful resource for future students.

Staff members have also used Google Documents to aid supervision. This has provided a way of giving students prompt feedback on the writing of the actual dissertation, allowing the student and supervisors to access the most up to date version of the work from anywhere. Therefore, supervisors do not review work that has already been changed, as happens when a student emails in a piece of work. It also means that even if there is only time to place feedback on a small part of the work, it is available immediately, rather than waiting until the whole review is complete. Sometimes however feedback can be too prompt! As a supervisor I came to realize that by visiting her work frequently to comment, I inadvertently conveyed a sense of urgency. The student began to feel that she wasn't working fast enough. I needed to reflect on when to comment and when to wait, when to prompt and when to let the student see the difficulty for themselves. I also needed to consider whether checking on the work at any time was encouraging or difficult for the student, and whether the supervisor commenting at unscheduled times facilitates or inhibits the student's regularity of work.

As a result, we have learned to negotiate with students how we will use Google Docs clarifying our expectations of each other. Issues for discussion include the role of the supervisor as editor or a commentator, when timeliness is intrusive or helpful, and desired frequency of input. With one student we have agreed that she would leave a note at the top of the chapter when the work is ready to be commented on, and what type of feedback is sought. We also agreed that the pace of work is linked to her timeline for completion and not to how often I comment. Obvious now, but at the time we had not foreseen the implications of the ease of access we both had to the work. It has highlighted the need, as well as other topics normally reviewed during supervision, to 'check in' about Web 2.0 technologies.

Using Google Docs has been accompanied by the frustrations of any emerging technology, as it lacks some features that would make on line collaborations, editing and

review easier for academic writing. Google Docs is continuing to be developed and it is likely that frustrations will decrease. For example, it is expected that students use a proprietary referencing software program, which at present does not interface with Google Docs. Thus decisions need to be made about when to take the chapters off line to complete formatting including headers/footers, indexing and referencing.

To date the use of blogs and Google Docs has been mainly appreciated by students. It may be that these tools will not suit every student. As seen in Rita's vignette many students require encouragement and structure to start using the technology. In our experience not all students, even if generation Y, are digital natives (Prensky 2001) and many require scaffolding and support. Ultimately students will only continue to use these technologies because they perceive them as useful; and there are clear indications from practice that one of the key reasons to incorporate such technologies in healthcare education is because we need to embrace these technologies as practitioners (Kamel Boulos and Wheelart 2007).

The usefulness of Web 2.0 tools for ongoing professional development for health practitioners has been identified by Kamel Boulos and Wheelart (2007) and Penman (2007), but its use is not yet well developed in this profession. In the next vignette we explore the research undertaken on the barriers to the use of online learning as part of honour's research. .

Nathan - Web 2.0 For Ongoing Learning

Professional development (PD) has become increasingly important to professionals, including occupational therapists (OTs). While methods of PD have traditionally been focused on passive didactic learning, studies have shown interactive learning has a greater effect on practice (Davis, Thomson O'Brien et al. 1999; O'Brien, Freemantle et al. 2001). Online communities created through tools like blogs, wikis and social networking sites have potential to facilitate interactive PD for OTs in sharing ideas (Kamel Boulos and Wheelart 2007), and experiences and manage their own learning. Web 2.0 technologies are ideal for this, as they require participants to be more than just passive users: sharing information makes the most of learning. Where Web 1.0 comprised static sites that users could visit, Web 2.0 allows the generation of internet software that allows interaction between users. Discussion forums (Rita's Vignette), Wikis (Linda's vignette) and Blogs (Jackie's vignette) are all examples of Web 2.0 tools that can be used in PD as well as distance education.

The honors study described in this vignette was linked to another research project involving workshops teaching OTs to use Web 2.0 tools in achieving their PD goals. My supervisor Merrolee Penman was exploring the learning processes therapists used within the group, and I evaluated PD from the therapists' perspective and the potential

use of Web 2.0 tools for PD. As a new graduate I was interested in learning to use PD to improve my practice and achieve competency goals I had set.

I worked with four therapists participating in the workshops. They completed a written questionnaire that assessed the participants' familiarity with Web 2.0 tools and their attitudes to PD, and joined a focus group after the workshops. I also undertook an analysis of the online presence of the participants and then conducted two follow-up interviews with participants. Access to the blog maintained during the research (but no longer my primary blog) is available at http://shigakiwi.wordpress.com.

Professional development was defined by the research participants. Participants stated that they valued PD that was self-initiated, challenging, relevant, affirming, practical, evidence based, and informal. In addition, they did not value PD that was expensive or infrequent. In terms of their current PD activities, all participants took part in supervision and literature based activities, while most were involved with audits and conferences. Three out of four were involved in teaching activities and two out of four in research. Other activities were blogging, reflection, volunteer work and informal conversations with colleagues. There were discrepancies between the PD activities therapists value and those they participate in because of lack of time and money, and expectations of employers and the registration.

Therapists saw that Web 2.0 tools have several benefits and barriers associated with their use, and the potential to assist therapists in achieving their PD goals. The benefits of using Web 2.0 tools were: cutting edge technology, provides for international perspectives, allows therapists to access client perspectives, and allows easy access to information. Barriers to using Web 2.0 tools were identified as: difficulty using the technology, difficult access at home or work, lack of time, difficulty knowing what they could safely write about online, and lack of confidence. This lack of confidence was in three areas: in their own ability, in the support of their employer/colleagues in using the tools, and in the identity of others online. Some participants were also not confident in their ability to contribute meaningfully to online discussions.

Interviewees noted that using Web 2.0 tools had a beneficial effect on their practice, through increased access to resources and enhanced reflection on their practice. Both felt that Web 2.0 tools would add to, but not replace, other professional development tools currently used. They perceived an increase in their knowledge from their use of Web 2.0 tools. One participant stated that she felt that the more she used it, the greater the benefits. Both participants believed that participation levels can vary depending on interest i.e. a person may be a primary participant in one area, and be a passive participant in another.

The questionnaire explored self-efficacy. A comparison of participants' self-efficacy scores with their belief in their ability to contribute in an online environment post-learning showed those with higher self-efficacy scores were also more confident both in their postings and explaining the benefits of the tools to others at work. This indicates that belief in their ability to use the tools results in increased willingness to try using the tools, which carries over into the ability to contribute online and explain the benefits to others. This suggests that increasing therapists' confidence in using Web 2.0 tools may increase confidence in the content of their posts and the likelihood of sharing the tools with others. The reverse could also be the case: sharing the tools with others increases confidence in posting, which increases self-efficacy and confidence in using the tools.

Another barrier was participants' view on the location in which PD activities are carried out. Some participants found it difficult to use Web 2.0 tools at work because they felt that PD activities should be done away from the office, or out of work. One reason for this barrier may be participants' views on the Internet, which some see as a social experience that therefore belongs to personal rather than work time. Another reason may be that in many workplaces PD is an off-site activity, with conferences, workshops, and even in-house PD activities held in rooms separate from the office. These findings suggest that the environments in which PD takes place shapes participant's PD expectations, an aspect not evident in literature associated with factors affecting participation in PD activities.

From this study emerge a number of recommendations for continuing professional development and quality professional practice. These include teaching therapists to manage and initiate their own learning, recruiting OT seniors, academics and managers to promote the use of Web 2.0 tools and increase their acceptance in the workplace, and developing groups of people using Web 2.0 tools who help each other make the most of the tools by creating strong links to each other. Further research is justified into ways to overcome some of the barriers to Web 2.0 use identified in this study, the use of accountability and goal setting to increase therapists' levels of participation online, and generalizing the level of online participation across topics of interest. These are not new areas of professional learning in this profession, but the emerging technology whilst seemingly able to provide opportunities for wider networking, brings with it similar issues of trust and access and unfulfilled potential (Veletsianos 2010). The issues identified by Nathan's participants are reflective of Rita's experiences in getting people started using Web 2.0 tools - our experiential learning is therefore supported by his work with colleagues not enrolled in our program. From a rich range of experiences we have drawn out some to share, though the vignettes some of the learning we have done.

Learning From Our Colleagues

Our postgraduate program, and our professional practice, requires us to work collaboratively with our colleagues in practice. Over the past 14 years we have been developing our own and our colleagues' skills in using online and progressively emerging technologies such as Web 2.0 in the provision of postgraduate occupational therapy education. From these diverse experiences we have a number of specific learnings gained through experimentation, reflection and research. We have learned from our colleagues oncampus, who have suggested, supported, and shown us how to tackle specific educational strategies online. We have learned from our colleagues in practice who participated in the research that explored what we had observed in our educational practice. But most of all we have learned from our colleagues in practice who are our distance students. Mainly females, many older, most of who are digital immigrants, with few digital natives, some operating with less than optimal internet access speeds and band widths, some from home and some from work.

What we have learned from them is the relationship between content and process, the pedagogical principles that underpin adult education equally apply to distance and emerging technologies based education. Despite the technology or specific products we have learned that scaffolding is necessary in both the content and process of online learning. Failure in one affects the other. We need to incorporate activities that enable students to become familiar and confident with the technology, familiar with each other as well as aware of the expectations of the course. Rita has described that through careful and deliberate scaffolding students can develop confidence to engage in the deep professional reflections expected at postgraduate level. Nathan and Merrolee have demonstrated, albeit through a small study, that there is a relationship between self-efficacy and confidence in the use of Web 2.0 tools that has potential beyond the courses we teach. Linda R and Linda W reminded us that facilitating learning for those with busy lives means that we can depend on students to select out content and learning activities that seem useful for them and relevant to their immediate needs, which may or may not align with what the lecturer intended. Students value both community work and individual work according to their own needs, situations and confidence. From Jackie we also learned that a supervisor's expectations may differ from the students' and that we still need to negotiate our roles and how we use technology to facilitate the supervision process. The initial experiences of emerging distance educational technology can feel uncomfortable and even disruptive to an individual, but from such disruptions comes innovation that enhances sound educational delivery.

Overall we have learned that, as with face to face education, diversity in the student groups remains: there are quiet students, nervous students, confident students, students who engage, and students who seem to be mainly on the periphery of the student community,

all of whom can submit exemplary work. Emerging technology has neither addressed nor resolved this diversity, nor should we expect it to, without skilled educational practice (Garrison and Anderson 2003).

Our experience is that when students develop confidence in accessing the learning technology, learning becomes accessible (Penman and Lai 2003). Even at the beginning of their program, with appropriate selection of activities to support students with little Web 2.0 or online expertise (beyond emailing and surfing the web) students can contribute actively to discussion boards, wikis and blogs and demonstrate depth in their critical thinking. We have learned how to use the emerging technology and its various tools well ourselves by supporting each other as we developed pedagogically sound techniques: we crafted this chapter using Google Docs for creation, edit and collegial review. The tools are not yet fully utilized, and we have more to learn to have them fully integrated into our educational practices. We have learned that although we are each different, as types of learners, teachers and writers, there are common elements to what we need to integrate into our online teaching. We are like members of other health disciplines actively engaged in using distance technologies without completing higher education in online learning (Nguyen, Zierler et al, 2011). As we have learned about their potential, we have consistently observed what our students did and listened to what they told us. In doing so, we have learned from our colleagues. We have come to believe that using Web 2.0 tools as foundation tools in our approach to learning assists our colleagues in practice to become both confident health care practitioners and net citizens.

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PROFESSIONAL DEVELOPMENT OF NEW ZEALAND NURSES: LEARNING OPTIONS AND OPPORTUNITIES

Ruth Wilson-Salt, Anne Brinkman & Liz Ditzel

Abstract

Professional development is mandatory for all regulated nurses in New Zealand who require a practising certificate; enrolled nurses, registered nurses and nurse practitioners. A minimum of sixty hours professional development every three years is necessary to meet the requirements of the Health Practitioner Competency Assurance Act 2003, as interpreted by the Nursing Council of New Zealand.

In July 2007 the New Zealand Nurses Organisation carried out a postal survey of a stratified random sample of their nursing membership. The questionnaire contained questions about the educational activities nurses use and the issues and barriers to complete their mandatory professional development hours. Results showed that work-based learning options, attending in-service education, short courses, seminars and conferences followed by making presentations to colleagues were the most frequently used professional development activities.

The most significant issue and barrier to completing professional development for nurses relate to two major factors: time management (competing time commitments, getting time off work, time and distance to travel to courses), and cost (in fees for some courses and for travel). Recommendations from recent international research to enhance opportunities for future professional development, such as increasing access to computer-based educational programmes, using night shift educators and preceptors, and e-mentoring conclude the paper.

Introduction

Recently it was emphasised that '[f]uture nurse practitioners will increasingly require the skills and knowledge to base care on best evidence, to use critical thinking and demonstrate advanced leadership and decision-making skills to develop and enhance services in a more complex and diverse healthcare environment" (Casey & Clark, 2009: 35). This challenge requires nurses to continually upgrade nursing knowledge and skills through individual study in combination with professional development programmes provided by many employers. To meet this educational imperative, the international literature shows that the majority of nurses use work-based activities such

as in-service education and training sessions. This research also shows that nurses encounter a range of issues (e.g., managing multiple time commitments) and barriers (e.g., cost) when completing their continuing education requirements. Given an apparent lack of academic literature on New Zealand nurses' professional development, the purpose of this paper is to analyse and discuss the findings of the recent *New Zealand Nurses Organisation: Education Survey Report* (Brinkman, Wilson-Salt & Walker, 2008). Recommendations from recent international literature about strategies to enhance nurses' professional development opportunities conclude the paper.

Background

Professional development programmes (also known as continuing education) based on the work of Patricia Benner (1984) were established in New Zealand in the 1980s. Since then, a variety of professional development programmes, which recognise the nurse's multi-faceted role encompassing clinical practice, education and research have been used to deliver continuing education in nursing. This changed in 2004 when the Health Practitioners Competency Assurance Act (2003) provided the impetus to establish a national framework and the guidelines for the current programme, the Professional Development and Recognition Programmes. The Health Practitioners Competency Assurance Act (HPCA) requires all health professionals to provide evidence that their practice meets criteria determined by the individual regulatory body, which, for nursing is the Nursing Council of New Zealand (NCNZ). The NCNZ has a competency based practicing certificate requirement for all regulated nurses including; nurse assistants, enrolled nurses, registered nurses and nurse practitioners (NCNZ, 2007, 2008). This means that it is necessary for every nurse under the jurisdiction of the HPCA to complete a minimum of sixty hours professional development every three years in order to meet the mandatory competency based requirements (Carryer, Russell & Budge, 2007; NZNC, 2007, 2008).

Nurses are personally responsible for ensuring that this minimum professional development requirement is met and the competency based practicing requirement is enforced by a yearly random audit process. Professional development is explained by the NCNZ as follows:

> "Each nurse is responsible for seeking opportunities to learn and maintain his/her competence in the interests of patient care. A nurse needs to complete professional development in the context of their area of practice. These activities may be within the work environment or within an educational context. His/her professional development may be taken as whole days or hours and include a variety of different learning activities such as degree papers, short courses, seminars, conferences, or in-service education". (NCNZ, 2010).

Literature Review

A review of the literature using the CINAHL database revealed that while some international research has identified a number of issues and barriers for nurses engaging in continuing education, little had been published in the academic literature about the educational activities New Zealand nurses use to complete their mandatory professional development.

In the international literature, Lee, Tiwari, Hui & Choi 's (2005) study of 260 nurses working in a major public hospital cluster in Hong Kong found that the most preferred options for professional development were work-based. Educational activities included seminar workshops (87% reported using these), in-service training (70%), certificate courses (68%), conferences (58%), and degree courses (42%). Formal academic options were the least preferred option for these nurses. In Edwards, Hui & Xin's (2001) study of 200 nurses working across 14 hospitals in Tianjin city, China: attending workshops, lectures, or training sessions; watching films or videos and reading nursing journals were the preferred professional development activities. Similarly, in Gould, Drey & Berridge's (1996) survey of 451 British nurses, it was observed that nurses preferred work-based learning to formal classroom options. In Beatty's (2001) sample of 199 registered nurses from seven Pennsylvanian (USA) rural counties, it was noted that respondents with a hospital-training diploma were less likely to participate in professional development than their university-trained colleagues. For these nurses, barriers to participation included work schedules and travelling distances of between 30 to 60 miles to participate. Turning to the wider health professional literature, in a survey of 213 occupational therapists from three USA states, Lysaght, Altschuld, Grant et al. (2001) found that workplace options were favoured over academic options. Nearly all (98%) of these respondents used workshops, seminar and conferences as work-based options, and 38% used academic coursework to meet professional development needs.

A range of issues or barriers to nurses completing professional development has been reported in the literature. For Hong Kong nurses, Lee et al. (2005) found high course fees (indicated by 92% of respondents) to be the major barrier to participation, followed by limited time (87%), difficulty in requesting duty time (80%), unavailability of a course (77%), and family care burdens (73%). For the Chinese nurses in Edwards et al.'s (2001) study, reasons for not attending continuing education (CE) requirements included; not enough time (indicated by 36.5% of respondents), too expensive (27%), being denied permission to attend (19.5%), and events being held too far away from home (22%). Furthermore, the following quote indicates that inequality of opportunity to access education was an additional issue for Chinese nurses: "[n]urses working in rural and suburban hospitals reported less access to CE opportunities than nurses in urban hospitals" and that "[s]taff nurses and clinical teachers … attended CE less often than head nurses" (Edwards et al., 2001: 34).

For British nurses, Aoki and Davies' (2002) study of 103 qualified nurses working in nursing homes determined that the greatest barriers to continuing education were; cost (indicated by 59% of respondents), lack of information (36%), inadequate time for study (29%), and competing family commitments (28%). They also found that enrolled nurses, night staff and part-time staff experienced fewer opportunities to attend educational opportunities than full time, day shift and registered colleagues. In Bahn's (2007) qualitative study of 25 registered nurses, lack of time release and organisational financial support were identified as the most critical impediments to ongoing professional development. Lack of time and difficulties in prioritising time use were emphasised in by other British nurses as articulated in the following quote:

> "[t]he demands of undertaking [professional development] conflicted with home and domestic commitments and were perceived as a barrier to achieving desirable work-life balance … .They complained of expectation from managers that they would invest personal time in [professional development] intended to primarily improve service delivery" (Gould et al., 1996: 607).

This literature review indicated that nurses use work-based educational activities most often for professional development. Options included: attending workshops, lectures, in-service training sessions, workshops, certificate courses, or conferences; watching films or videos, and reading nursing journals. A wide range of issues or barriers to completing professional development was evident. To sum up, these are categorised into five categories:

1. *Cost*; high course fees, and lack of organisational financial support,
2. *Time*; difficulty in requesting duty and study time and in prioritising time use, heavy work schedules, lack of time release,
3. *Access to opportunities*; unavailability of a course, being denied permission to attend, lack of information about activities, and inequality of access to opportunity to education (e.g., senior and registered nurses having greater entitlement than staff and enrolled nurses),
4. *Conflicting or competing commitments* including family or dependent care burdens, and 5) D*istance*; events being held too far away from home and the expense involved in travelling long distances.

The NZNO: Education survey report

The self-reported questionnaire was sent out in July 2007 to a stratified random sample of 1,650 enrolled and registered members of the New Zealand Nurses Organisation (NZNO). Membership of the NZNO at the time of the survey was approximately 33, 000. In total, 720 usable questionnaires were returned giving a 43.6% response. The survey was first administered as a pilot study of a convenience sample of nurses. The Health and Disabilities Ethics Committees and Central Regional

Ethics Committee administered by the New Zealand Ministry of Health granted ethical approval. Consent for the data to be used was implicit in returning the questionnaire and questionnaires could not be withdrawn once returned and responses were anonymous. Standard demographic information such as respondents' age and gender was requested. To guarantee anonymity respondents completed the survey by placing a circle around the response that best corresponded with their answer(s). The questions also contained a blank space for respondents to write in or make a comment should they wish to provide extra information.

The scope of this paper is limited to addressing questions 18 and 19, which are worded as follows: Which of the following educational opportunities have you taken up in the past three years to meet the educational development requirement(s) of the NZNC? Does completing 60 hours professional development present any issues for you, for example in time and/or costs? (Brinkman, et al., 2008: appendix 2, 49-50). Professional development activities were divided into two categories: *work-based learning options* and *formal learning options* offered by tertiary institutions, i.e., polytechnics and universities. Work-based options are usually quite specific to the work area, and may include occupational health and safety requirements. Tertiary options have followed

Work-based learning options	Per cent
In-service education	93.2
Short courses	75.4
Seminars	75.0
Conferences	61.3
Presentation to colleagues	56.4
Journal reading within a formal framework	27.1
Nursing and non-nursing tertiary learning options	
Nursing postgraduate certificate papers	19.6
Nursing graduate certificate papers	8.9
Nursing postgraduate diploma	7.6
Non–nursing; under and post-graduate papers, certificates and diplomas	6.5
Writing journal articles	6.3
Nursing Masters	5.7
Nursing PhD/research	0.7

Table 1: Educational activities used to meet professional development requirements

two trends: updating of initial qualifications for registration to new qualifications; a consequence of nursing education having moved from hospital-based training to the tertiary education sector, and post-graduate education.

Table 1 lists the educational activities used to meet the professional development hours required by the NCNZ. Respondents could choose more than one option and the per cent of respondents choosing each option is provided in Table 1.

This table shows that work-based learning activities: attending in-service education, short courses, seminars and conferences; followed by making presentations to colleagues and journal reading in a formal framework were the most frequently used professional development options. These choices were more likely to be specific to the individual's work context and job requirements and to have a more practical assessment framework. The majority of enrolled nurses and registered nurses favoured work-based activities (90% and 89%, respectively).

The next set of activities typically involves independent study in a more formal academic setting. Undertaking nursing post-graduate certificate papers were the most frequently used activities, followed by various nursing academic options (i.e., certificate and diploma papers). Registered nurses with a degree qualification (17.5% of the sample) were the most likely to have used nursing tertiary options for their professional development, while 10% of registered nurses with a diploma or hospital certificate indicated they used nursing tertiary education options. Nine percent of enrolled nurses and nurse assistants used nursing tertiary options and four percent non-nursing tertiary options (the highest proportion of any group using non-nursing tertiary options).

An open-ended question about how respondents would prefer to develop specialty skills and clinical knowledge for their area of practice was asked to determine if the options currently being chosen for professional development were different from what they would ideally liked to have chosen. Responses indicated a preference for organisation-based education, namely the less formal, work-based options. In-service education was the most preferred activity followed by seminars, conferences, short courses, presentation to colleagues, journal reading in a formal framework, and nursing post-graduate certificate papers.

Respondents were presented with a list of twelve potential issues or barriers (see Table 2) to completing the mandatory 60 hours professional development. For each statement respondents were asked to affirm it was "an issue" or indicate it was "not a problem" for them. These response categories are labelled as Yes, and No, respectively, on table 2.

	Yes (%)	No (%)
Other time commitments	54	56
Costs in fees	49	51
Ability to take time off work	40	60
Time and distance to travel	37	63
Able to attend in work time	35	65
Time not paid for	35	65
Concern about ability to do assignment work	33	67
Hours of work a factor	28	72
Information technology skills	22	78
Lack of support/encouragement from employer	19	81
Access to computer based resources	18	82
Own motivation to complete	16	84

Table 2: Issues and barriers to completing professional development

Table two shows that overall for nurses in this survey; there were few major impediments to completing the mandatory professional development hours. The major issue related to time commitments (54% indicated that this was an issue), a finding reflecting that nurses lead busy lives, often juggling family with work commitments. Professional development is however, completed in their own time. The next most important issue for the combined nurse sample related to the cost in fees (49%), followed by the ability to take time off work (40%), and time and distance to travel (37%).

Further examination of the data found that for enrolled nurses, the cost in fees (51%) was the greatest barrier to professional development followed by the ability to take time off work (47%), and being able to attend in-service opportunities in work time (47%). For the registered nurse group, having other time commitments (55%) was the most important issue. This was followed by cost in fees (49%) and ability to take time off work (40%). For rural nurses, the most important issue was time and distance to travel for professional development (62%). This was followed by other time commitments (55%) and costs in fees (52%). Responses to the open ended questions elaborated on responses to the already identified issues: experiencing a lack of staffing to cover for educational activities, being too busy to attend, facing organizational cost constraints, juggling childcare and family responsibilities, caring for other dependants, maintaining a work-life balance and bearing the personal cost of fees or travel.

Discussion

The NZNO education survey results concur with the international literature in that the majority of nurses use work-based learning activities - in-service education, short courses, seminars and conferences - most often to meet their mandatory professional development hours. Data also showed that nurses with a degree qualification were more likely to use nursing tertiary learning options to meet their professional development needs compared with all other nurse groups. This might be because nurses who have successfully completed an under-graduate degree are more likely to be interested in and have confidence to continue with post-graduate study.

The most significant issue and barrier to completing professional development relate to time management (competing time commitments, getting time off work, time and distance to travel to courses), and cost (course or conference fees, and associated travel expenses). In regard to the issue of cost, it was recently pointed out that nurses need to be more aware of and apply for grants and scholarships, such as those provided by the Nursing Education and Research Foundation (NERF) who have available "a current annual budget of over $100,000" to assist successful applicants with personal financial study and research costs (Brinkman, 2010: 22).

To address time management factors, it is suggested that as a first step, some ideas on how the profession may proactively enhance the range of, and accessibility to existing work-based educational opportunities should be considered. In this regard, recent international research on professional development for two large groups of nurses, *night shift nurses* (Mayes & Schott-Baer, 2010) and *rural nurses* (McCoy, 2009) provide us with some ideas worth considering. For instance, in their review of the literature on night-time learning opportunities for North American registered nurses working exclusively on night shift, Mayes and Schott-Baer (2010) made obvious the fact that many of the hospital educational opportunities – physician nurse rounds, scheduled patient treatments, staff meetings, planned educational programmes, teaching sessions - are offered during traditional 9am to 5pm working hours, which these nurses are not available to attend. They also note that night shift nurses place a high value on continuing education as part of their professional development (Levett-Jones, 2005) but formal night-time teaching activities rarely occur (Campbell, Nilsson, & Pilhammar Anderson, 2008). These observations raise the important issue of how the professional development needs of nurses who work permanently at night; or exclusively on afternoons or even at weekends are met? In addressing this question, Mayes and Schott-Baer (2010) make several recommendations, which could potentially advance professional development opportunities for all nurses.

Firstly, they note that administrators and staff educations planning continuing education and staff development activities (such as resuscitation skills training updates),

should realize that staff working at night also want and need these programmes. So why not routinely schedule regular training and education programmes at night? Why not bring the in-service education to the nurse at a time that is convenient for the nurse and at the bedside, nursing station or tearoom where it may be a more conducive environment for learning than a classroom?

Secondly, nursing leaders are urged to remove barriers to learning opportunities by increasing access to computer-based educational activities and health care databases. Computer based technologies offer immediate access to resources, information and resources and the literature demonstrates that this learning method is preferred today's younger digital "Net savvy" nurses (Skiba & Barton, 2006). Computer educational programmes could be purchased or created to meet specific needs. The advantage of using computer based technologies are that nurses can access web based materials, computer forums and educational videos at times that are convenient to them, thereby increasing their access to continuing education and staff development programmes.

Thirdly, increasing face-to-face communication to meet the specific needs of this group of nurses, for example by developing night shift nursing councils, or using night shift educators and preceptors is signalled as an important issue (McCarthy, 2004). Being open to new ideas such as midnight rounds, interdepartmental or staff meetings at 1am, and early evening seminars or "mini conferences e. g. from 7 to 11pm with guest speakers" might also be helpful in enhancing learning opportunities (Mayes and Schott-Baer, 2010: 19).

McCoy's (2009) literature review of the professional development challenges for North American rural nurses raises two further questions: what can be done to assist rural nurses who live in isolated communities, and how can technology best be used to improve the educational opportunities for rural (and other groups) of nurses? Several measures are identified in her review. To assist networking and knowledge sharing opportunities, rural nurses should develop strong skills in information retrieval so that they can find and use information for practice and patient education. Courses in how to read, interpret, and use research findings in clinical practice could be provided in the nursing curriculum and well as in daily nursing practice and onsite teaching sessions.

Nurses, particularly in rural settings need access to and training in how to use electronic resources to gain information on evidence-based practice. Computers with broadband Internet access, personal digital assistants with reference manuals, and other emerging technological tools must be readily accessible. Digital technology, also known as 'e-learning', is the preferred learning method for the younger generation and is vital for nurses based in isolated rural communities. E-learning makes it easy for a nurse who has ready access to a computer to retrieve and exchange information. If

these digital technologies were provided by all workplaces, workplace learning would be greatly enhanced because nurses could reduce the use of personal time and expense when completing professional development (McCoy, 2009).

Urban or larger agencies could form financial partnerships with rural agencies to provide support and opportunities for nurses to network and form mentoring relationships. Mentoring has been established as providing one of the most valuable tools in professional development and it would be beneficial for rural nurses to have an urban mentor and vice versa (Gibb, Anderson & Forsythe, 2004). Using mentors from areas with more resources could create strong mentoring programmes, greatly benefitting all people involved in them. In this regard, research has shown that 'E-mentoring': mentoring relationships that are conducted electronically (i.e., by computer and phone), offers a viable method of connecting all nurses to a shared learning environment and could overcome the barriers of distance, isolation, busy schedules and after 5pm working hours (Miller, Devaney, Kelly, & Keuhn, 2008).

Conclusion

These findings affirm that New Zealand nurses favour work-based options for professional development. Issues related to time and cost presented the greatest barriers to completing continuing education. Recent international research points out that we should make more effort to increase the availability of educational activities to the significant number of nurses who do not normally work during the day time hours (9am to 5pm) during which in-service training programmes are normally offered.

For hospital based nurses we should consider ideas such as employing night shift educators and preceptors; holding midnight rounds, interdepartmental or staff meetings at 8pm or 1am, or scheduling early evening seminars to enhance the opportunities to attend educational activities for those working permanently on nights or afternoons.

For rural nurses, opportunities to network and form mentoring relationships could be facilitated by improved communication and greater financial partnership between rural and urban healthcare agencies.

Accordingly, it is suggested we prioritise actions to; look at ways of reducing or subsidising financial and time costs involved in professional development activities; increase access to computer-based educational activities and health care databases; train nurses to effectively use electronic resources to collect information; educate nurses on how to best use research findings to advance clinical practice, and invest in high speed broadband Internet to maximise the benefits of e-learning and e-mentoring for the nursing profession.

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THE USE OF ePORTFOLIOS FOR STUDENT ASSESSMENTS ON THE CARPENTRY PROGRAMME AT OTAGO POLYTECHNIC

Graham Burgess and Matthew Thompson

Background

New Zealand Polytechnics in general continue to have problems meeting the moderation requirements of their Industry Training Organisations (ITOs). The Carpentry programme at Otago Polytechnic in Dunedin was no exception. Whilst we believed that the required work for the programme was taking place, we struggled to find ways of providing the evidence that our ITO required or would accept.

In 2010 we undertook an internal review in Carpentry to find a way forward. Part of the review was in collaboration with our ITO, with the aim of establishing some common ground from which to work and to develop ways of meeting our moderation requirements that were acceptable to all.

The solution that we subsequently developed dealt with our moderation issues and also contributed to new and much improved teaching and learning methods, which we believe have improved student educational experience and results.

Otago Polytechnic's Carpentry Program

Otago Polytechnic's School of Architecture, Building and Engineering is very much in agreement with the central premise put forward by Andresen, Boud and Cohen (2000) that "Learning opportunities arise from the circumstances of normal work; work is the curriculum foundation."

The Carpentry program is part of Otago Polytechnic's School of Architecture, Building and Engineering. Each group of carpentry students collaboratively builds a 3 or 4 bedroom house as part of their experiential learning. These houses are finished to a habitable and readily transportable standard, and are subsequently sold at auction, on site at the Polytechnic by a local real estate firm, and at the conclusion of the auction a substantial amount of money from the sale is donated to a designated charity. This very real-life project provides excellent experiential learning, and an outcome of which all the participants can be proud. It has proven very difficult however to translate this spectacular achievement in experiential learning into written student assessments, or to produce evidence for moderation purposes.

It became clear during our internal review that we did not have a system for visualising or recording the results of students' practical work, but were relying on written assessments of their knowledge of theory. Much practical work remained invisible because written documents cannot represent it. The written theory assessments were merely filed away and forgotten once the assessment process was over, perhaps surfacing briefly for moderation purposes before being permanently archived.

Written assessments can make students fearful rather than building their confidence. These assessments may deplete the learning capacity of the students rather than building on their capacity and tend to only measure what is achieved and not what capacities need to be achieved. An electronic portfolio (ePortfolio) is used to present photos and text in order to encourage reflective group learning and provide evidence of assessment for moderation purposes.

It has the capacity to foster long term learning and self assessment as it encourages students to reflect on the learning that has already taken place. Students have the ability to amend, or add to their portfolio as the learning develops and grows throughout their careers. This long term learning and self assessment has been explained as sustainable assessment.

The Proposal

Following our internal review, a proposal was developed to include a photographic record of the students' work in our assessments, accompanied by some explanatory text, which in combination could be used as evidence.

This proposal was submitted to our ITO, and after discussions with the moderators, agreement was achieved based on the following guidelines:

- The ***experiential learning*** part of our programme (which was designed to reinforce our theory learning), would in future form part of the assessment process; the rationale being that if a student could successfully complete a practical task, they must possess the required theory.
- The photographs of experiential learning will not be required to include each student with their work, although photos will show students from the group working on their projects.
- Lecturing staff would verify that each student did undertake this work.

The Process

Following the agreement with our ITO we proceeded to review our existing assessments, to identify which aspects of our program would be 'theory only' assessments, and which aspects could be assessed in the experiential learning part of the programme.

In collaboration with the ITO moderation team, we examined the Unit Standards for the programme and identified all the assessment information required by each Unit Standard.

The next step was to identify any gaps in our existing assessment material, and to amend these. This allowed us to identify assessments that related to the house construction projects which were not currently being presented as evidence for moderation purposes. Once this task was complete and the material evidence was identified, we needed to find a way to present it visually to the ITO moderation team, in order to clearly demonstrate that we had met all of their requirements.

Presenting the Information: ePortfolio

Various ePortfolio programmes were suggested and examined, but a number of these seemed too involved for our needs at the time. We settled on a simple Power Point presentation, and developed a series of master slides which students could duplicate, inserting their photos and text as required. As a means of tracking this information we have structured the material under the Unit Standards headings to which the information relates, e.g. 'Unit Standard 24382 Demonstrate knowledge of wall framing'.
There are three different types of master slide available, to allow for the varying types of information required, as shown in the examples below.

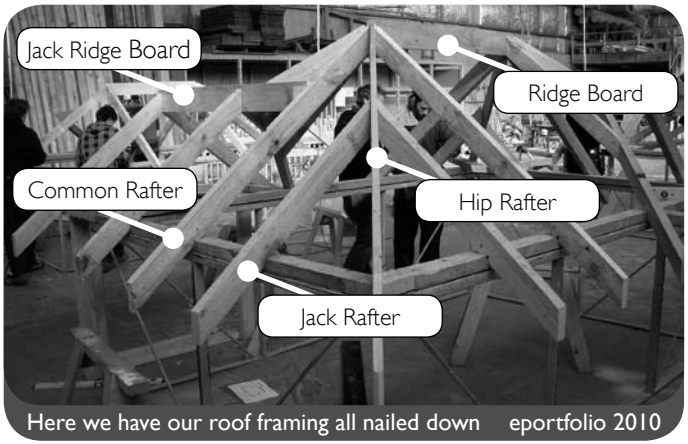

Figure 1 Students are required to identify components using technical trade terms, to demonstrate their understanding and the correct location of those members.

Figure 2 This photo forms part of the assessment for wall framing, where students are required to demonstrate and locate framing connectors.

eportfolio 2010

Hazards and Controls	
Fibre cement dust	Wear dust mask
	Wear safety glasses or safety goggles
UV rays	Wear sunscreen
	Wear safety sunglasses
Noise	Wear ear muffs
Sharp saw blade	Take care when cutting that saw doesn't kick back
	Keep hands well clear of saw blade

Figure 3 Each Unit Standard in this industry requires students to be able to identify hazards relating to the subject they are currently working on, and to be able to explain how they would control such hazards.

Advantages of the ePortfolio

Although the introduction of the ePortfolio was initially driven by the evidence requirements of our ITO moderators, it has a number of very clear advantages for student teaching and learning.

- With the introduction of the ePortfolio, students compile a clear and coherent set of photographs that reflect what has been learnt; but they also gain an opportunity to ***reflect on*** the learning that has taken place, which reinforces this learning. Boud (1995, pp 14-15) points out that "Effective learning also involves learners being able to influence their own learning rather than waiting for others to do so, that is being proactive", and this was found to be the case as learners made decisions about the suitability of the work for photographing.
- Photographs of practical tasks and materials provide a broader range of information than written text. It takes a large number of words for students to describe an activity, and much of what is important can be left out. This information is visible in the photographs, and students become proficient at interpreting relevant details from their images.
- Today's students have been educated in the electronic age and almost all students have an ability to use these electronic resources, through (for example) their experience of computer games, Facebook, or blogs. Assessments require students to achieve similar sorts of outcomes to their electronic environment: produce winners, and move on.
- A cell phone camera is all that is required to gather the photographs, and most students have one of these as an extension of their hand.
- The fact that students are working in a language/technology that they understand and are confident with, is reflected in the way in which students approach their work. Students are keen to compile their assessment material

(photographic evidence with written explanation), and students with weak literacy skills are not disadvantaged by their lack of literacy ability, but are equally enthusiastic and competent in completing their portfolios (this is not to say that literacy is unimportant).

- Students will retain all their ePortfolio assessments after graduation, and may use them as part of a CV for future employment opportunities. They also may wish to refer to this material as a resource during their subsequent careers.
- Although the material has been assembled for assessment purposes, it can (with the approval of the students concerned) become a current, and very relevant, readymade teaching resource, which is already sequenced to the subject being taught. The ePortfolio becomes a resource for the future; an electronic textbook.
- The ePortfolio is particularly suited to programmes containing a practical element, although it could equally be applied to most subjects, in particular those where students are encouraged to gather existing samples of evidence for their assignments.

Where To From Here?

We are currently organising a focus group of students and staff, which includes the group who are already using the ePortfolio, and a group of students and staff from a different trade area who are not involved, and who do not have access to it.

The purpose of the focus group is to engage members in further ePortfolio development, with discussion on some specific points;

- to gain feedback on the current programme from those using it, and examine ways in which the ePortfolio could be improved to better suit their needs
- to check whether the ePortfolio reflects what is currently occurring with the student assessments, and
- to explore the possibilities with the group not currently using ePortfolio, trial it with them and gauge their response. One of the lecturers from this group is already keen to become involved, as he, like us, can see benefits for his students in ePortfolio use.

Our medium term goal is to get the ePortfolio more widely accepted across other Otago Polytechnic Schools, and subsequently to introduce it to other Polytechnics across New Zealand, for their consideration. Within Otago Polytechnic several departments are becoming interested, including Engineering and Horticulture, Veterinary Nursing and Civil Engineering.

The next stage of this development for Carpentry is to review our current programme, look again at our theory assessments, and where possible transfer more assessment evidence to the ePortfolio.

Outcomes To Date

- We have found that students have accepted this system very easily and are now clearly able to interpret the photographs and write the text as required.
- We have also noticed that students are keen to take photos that contain the correct information and **will not photograph** work that is not up to standard.
- We have found that **students are willing to assist their peers**, helping each other to understand what is required, and to compile the materials and text.
- Some of the more capable students have suggested minor changes to the system, which we have incorporated.

Conclusion

To date the ePortfolio is working well, and after the focus review we expect that up to 30 percent of current theory assessments can be transferred to the ePortfolio. This will not create any extra work for students, our moderation requirements will still be achieved, and our students will leave with an even more valuable resource, available for them in the future as a reflected learning resource, or as part of their CV.

References

Andresen, L., Boud, D. & Cohen, R. *Experience-Based Learning: Contemporary Issues*. Accessed October 2011 at http://complexworld.pbworks.com/f/Experience-based%20learning.pdf

Boud, D. (1995) *Enhancing Learning through Self-Assessment*, Abingdon, U.K. Routledge Falmer.

Graham Burgess has been both a Lecturer and programme manager of carpentry for 36 years at Otago Polytechnic, and has always looked for new and improved ways to instruct students while trying to reduce the workload of staff .He sees this development as one way that work load can be reduced and most importantly an assessment system that students enjoy.

Matthew Thompson has been a Carpentry lecture for 8 years with 6 years at Otago Polytechnic. He has always been keen to explore alternative ways of teaching and assessing students.