

SCOPE

Contemporary Research Topics

Flexible Learning I: 2007

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Scope (Flexible Learning) aims to engage discussion on contemporary research in flexible learning for emerging scholars. It is concerned with views and critical debates surrounding flexible 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.

Formats include: editorials, articles, essays, logs and travel reports, book and educational software reviews, and reflective pieces. Other suggested formats will also be considered; and special topics comprising submissions by various contributors may be tendered to the editors.

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Information for contributors: Submissions should reflect some aspect of flexible learning and contribute to critical debate and new understandings. High standards of writing, proofreading and adherence to consistency through the Chicago referencing style are expected. For more information, please refer to the Chicago Manual of Style; and

consult this issue for examples. A short biography of no more than 50 words; as well as title; details concerning institutional position and affiliation (where relevant); and contact information (postal, email and telephone number) should be provided on a cover sheet, with all such information withheld from the body of the submission. Low resolution images with full captions should be inserted into texts to indicate where they would be preferred; while tif, jpeg or eps image files in CMYK mode with a resolution equivalent of at least 300dpi should be provided on a clearly marked disc once a submission has been accepted for publication.

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FLEXIBLE LEARNING: A FOCUS ON THE PEOPLE

Merrolee Penman and Diane Janes

This is the first issue of *Scope* (Flexible Learning) to focus on contemporary research in flexible learning. The defining of flexible learning is complex with many variations on the theme. *Flexible Learning*, according to the populist Wikipedia (n.d.) is “a set of educational philosophies and systems, concerned with providing learners with increased choice, convenience, and personalisation to suit the learner. In particular, flexible learning provides learners with choices about where, when, and how learning occurs.” Eminent leaders in the field such as Collins and Margaryan (2007, 272) concur and go on to define learning as flexible when “options are offered to learners, not only about the time and place and pace of learning, but also relating to types and origins of study materials, to forms and quantities of learning activities and assignments, to ways of interacting with others within the course, and to forms of assessment” while Kahn (2007, 1) adds technology and suggests that flexible learning “can be defined as an innovative approach for delivering well-designed, learner centered, and interactive learning environments to anyone, anyplace, anytime, by utilizing the attributes and resources of the Internet, digital technologies and other modes of learning in concert with instructional design principles”. Even within this institution, flexible learning will be defined differently depending on who you talk to. It is perhaps not surprising then that the first collection of articles to be published on this topic reflects the different interpretations of the term ‘flexible learning’. Issues raised in the articles range from the use of low-tech flexible learning tools (children’s books used with adult learners), through to hi-tech discussions of learning management systems to support student learning.

Common across definitions of flexible learning is the focus on the learner, therefore it is not surprising to see the same theme emerging across all of the articles in this edition. Josephine Crawley’s article is an example of a lecturer who ‘thought outside the box’, finding a learning resource designed for one age group, and adapting its use for a much older group. Acknowledging the diverse learning needs of her students, Josephine describes how she successfully navigated her way through a range of issues to use children’s picture books as flexible learning tools. These resources form the basis for her to be a story-teller, ‘performing the story’ thus linking her students into her story and maximising their learning.

Terry Marler's article identifies the need to know your learner, or as he states – the lesson seems to be 'know the client's needs and make sure you attend to them'. Building on from Josephine's points Terry reminds the reader that relationships are vital in the learning process, and in fact in the race to adopt new tools, there is a risk that the learner can be left behind. Good quality learning materials do not necessarily equate with good learning outcomes. The relationship between learner and teacher is just as important, or more important, than the tool selected for learning.

The focus on the building of relationship with the learner is again picked up by Rose Stanton, specifically in her role as a Learning Advisor for Otago Polytechnic. Rose in her summary describes the importance of relationship building not only with students so that she can ascertain what their specific needs are, but also with the staff of the institution who expect students to have certain literacy or numeracy skills that they may not have. Understanding the needs of both student and the teaching staff is vital as is shown by Rose as she reflects on her experiences of working with English Language learners.

Bronwyn Hegarty and Allison Stewart continue to build on the theme of people as they share their findings from comparing undergraduate and postgraduate online learning in the School of Nursing at Otago Polytechnic. These authors remind the reader of the challenges faced by students as they undertake study that has an online component. As has been reflected in previous studies, students can value the learning that occurs through online interaction, and the example of how the postgraduate students moved through Gilly Salmon's (2000) stages of access and motivation to online socialisation, information exchange and ultimately to the place of taking responsibility for their own learning is a good example of how students learn from each other. Undergraduate students in the example from 2005 could also recognise the value of elearning. But the authors again remind us that learning is not about the technology, although that can have a huge impact, but is about the learner. While there is value in increased accessibility, this is not the answer for all learners. As the authors point out in their conclusion elearning is not something different from face-to-face, rather it is just yet another strategy that can be used to maximise the leaning of the student. Individual difference and individual experience is a reality.

In the first read of Leigh Blackall's article, the reader may consider that the focus on people is lost as he discusses the development of open courseware and open educational resources, before moving onto issues of copyright, reusability and interoperability. However, Leigh in presenting these issues introduces the reader to a context somewhat different to the experiences of most academics today. The individual lecturer setting out to explore the possibilities afforded by socially networked media will be challenged to reconsider their

beliefs, values and therefore actions as they progress through Leigh's article. In doing so, they are brought face-to-face with the student, being encouraged to consider a participatory culture that is about the people being 'empowered to connect and communicate with many others'. Leigh concludes his article by discussing the journey of staff at Otago Polytechnic who have, with his guidance, considered ways of using socially networked media both for their own professional development, and as a mechanism of learning for students. As they have mastered the technology, they have, as the reader will find, been brought face-to-face with the student and their need to be engaged in order to learn. Examples of how the framework being used by the Educational Development Centre, and the approach by the Senior Management of Otago Polytechnic to address issues of reusability, interoperability and copyright (or copyleft) reminds the reader that while the broader issues may appear initially to be insurmountable, it is the willingness of the people that enables the finding of solutions.

This edition of Scope has provided a forum for a range of authors to present their findings. Although some of the articles are evaluative, others descriptive, others essentially a 'storied experience', all provide a focus on flexible learning and more specifically on people. In concluding the editors are reminded of the Maori saying which encapsulates the focus of this issue:

He aha te mea nui?
He tangata.
He tangata.
He tangata.
What is the most important thing?
It is people, it is people, it is people.

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REDISCOVERING INTERPERSONAL RELATIONSHIPS IN FLEXIBLE LEARNING: INSIGHTS FROM INDIA, AUSTRALIA AND NEW ZEALAND

Terry Marler

For around twenty years I have been responsible for the evolution of a paper-based 'correspondence' programme towards a more learner-centred blended model. This development has mirrored my own professional evolution and that of distance education generally. There has been considerable debate over 'what got lost' in the enthusiasm to move to distance delivery, and how the most valuable parts of that loss might be regained using new technologies. I propose to report and comment on some examples of highly successful learning programmes which have placed interpersonal connection at the centre of their learner support methodologies. My observations of these success stories came about as a result of being awarded a Flexible Learning Leaders in New Zealand (FLLinNZ) professional development award for 2005-2006.

The one-to-one traditional learning relationship (teacher-pupil, guru-disciple, master-apprentice) is a wonderful historical model, but unfortunately unlikely to be supported by funding which is based on enrolment numbers, such as the current EFT system in New Zealand. Good classroom teachers have always incorporated elements of this model into their daily work, and good teachers do their best to bring these elements along as they move into flexible modes, including distance teaching. However, the perceived economic benefits of mass distance training resulted in some ill-advised programme planning characterised by insufficient lecturer time being made available for adequate learner support. My own experience of being responsible for about sixty students showed me that with inadequate time allocated for the workload something had to give, and it was inevitably the personal connection. Factors such as the quality of the learning materials, the range of media used, the provision of practical work at intensive block courses, and the type and frequency of assessments are all important aspects of quality course design, but the 'glue' that keeps a student persevering during the difficult times is a personal relationship with a teacher.

Current thinking in all flexible learning debate seems to indicate a pendulum backswing. It is widely agreed that a move away from pure 'delivery of instruction' towards facilitating the construction of more meaningful knowledge demands higher levels of interaction

between teachers and students with relevant workplaces, and between learners themselves. However, it is not practical or even desirable that the senior academic be responsible for all this communication; workplace mentors, peer tutors, teaching assistants, or more generic learning facilitators can all make a valuable contribution to this discourse. A major review of Australian Government policy on flexible learning based on an extensive survey of all stakeholders concluded that “learning facilitators are needed who are interested in the progress of learners in achieving their study aims and developing as learners” (Le Cornu and Dodd 2003, 10). Similarly, a New Zealand study showed that distance learners have “a very strong desire for human contact” (Henderson 2003, 6) and that “the aspect of providing personal communication pathways did a great deal to assist students at the Pre-enrolment and Orientation phases and contributed to their overall level of confidence” (Renwick and Owen 2006, 73). The Technikon Southern Africa Institute has set in place a decentralised learner support network of senior peer teaching assistants with a brief well beyond that of helping with course content (De Beer and Mostert 2000). Their role includes personal counselling and fostering self-esteem concerning learning, and they are often seen as the student’s advocate and friend.

My readings and discussions with practitioners prompted me to go looking for other good examples of the human face of flexible learning. In November 2005 I attended the biennial forum of the Open and Distance Learning Association of Australia (ODLAA) in Adelaide, presenting a paper about the enhancement of synergies between learning communities and workplace communities. At that conference I had a brief but pivotal discussion with Sir John Daniel, Chief Executive of the Commonwealth of Learning (CoL), who recommended that I visit CoL’s project to promote lifelong learning for farmers in Tamil Nadu in the south of India. Within a few days I was corresponding with the project manager, and three months later I arrived in Chennai to begin a ten-day visit.

I was met at Chennai Airport late one hot March night by the regular driver for CoL staff, who took me to my hotel and arranged to pick me up the next day when I would meet with Dr. Balasubramanian, CoL’s South-East Asia manager. Dr. Balasubramanian gave me an indelible impression of idealism blended with sustainable realism. I found him to be an inspiration, and even though I have more years under my belt and should by now be clear about my goals in life, my brief introduction to the philosophy and practicalities of the CoL has left me wanting to know more and perhaps to be more involved in whatever way is possible.

The following days were spent meeting with distance education faculty members of the Tamil Nadu University of Veterinary and Animal Sciences, including Dr Balakrishnan and

Dr Sherrif, who showed me some of their multi-media resources developed for farmer extension learning and also for continuing education for veterinarians. A well-equipped video recording studio with broadcast-quality cameras and editing suite, as well as a complete offset printing unit, were very impressive; more recent skills such as Macromedia Flash and Director authoring were also being used. While I was there I gave a presentation on New Zealand para-veterinary and animal-related programmes.

The next day, a nine hour train trip took me almost to the rural southern tip of India where I was met by a representative of the communications company n-Logue, which delivers wireless broadband connectivity to support the 'lifelong learning for farmers' project. I was taken on a three-day tour of rural villages to see the regional network hubs, the mobile phone towers used for the wireless transmission, and the internet kiosks used by the farmer-learners. I was impressed by the technology; these rural villagers had a much better broadband connection than many New Zealanders, but I was more impressed by the enthusiasm and obvious delight with which the farmers explained the difference that had been made to their lives. Many of these people had no access even to telephones a few years ago; but now they were able to use two-way video and audio links to present their animal husbandry or plant disease problems to an expert in real time, incorporating the use of digital photography. Other benefits included e-commerce, email, educational programmes for schoolchildren and social internet usage. A modest charge for the use of the kiosk helps pay for a facilitator who can also help with training; in Sir John Daniel's words, "Our aim in all this is to produce a dynamic that is not only self-sustaining but self-replicating. The process must be so obviously beneficial that people copy it spontaneously." (Daniel 2005, n.p.). The implications of this learning will continue to grow for some time to come. My overwhelming impression was of 'bottom-up' direction for the learning; and the lesson is to really make sure we know what the client's needs are. This was reinforced two months later on a visit to Australian tertiary organizations where I saw staff and facilities caught up in corporate machinations that had nothing to do with the learners, and conversely success, where the link with 'the client', whether student or industry, was well attended to.

I was accompanied in this trip by Otago Polytechnic's regional campus manager Jean Tilleyshort. We began in North-Eastern Tasmania with a visit to a small Registered Training Organisation called North East Education and Training, which guides year 12 and 13 students through some of Tasmania's State Government online courses. This has revolutionised the lives of these young people and their families, as previously there was an exodus of youth to Launceston for senior secondary education. At least for the vocational courses they can now stay in their own home town, complementing their on-line learning (for example, aquaculture) with practical experience in a relevant workplace. The online

study is supported by two experienced teachers who can help the young learners with study skills, time management, technology, and information literacy. This model of learning facilitators without content-specific knowledge was of particular interest to Jean, who saw its relevance to Otago Polytechnic's Community Learning Centres. We saw this model again in Tasmania's Online Access Centres, provided by and often housed by regional libraries. In conjunction with the Tasmanian Education Department, a matrix of online courses at both secondary and tertiary level can be accessed from almost anywhere in the state.

TAFE Tasmania has a strong reputation for flexible learning innovation, and Kirsty Sharp and Graeme Kirkwood were welcoming hosts and valuable mentors. The 'whole-of-organisation' commitment to flexible learning has been largely due to their ability to sell change to established and sometimes reluctant staff members. The focus on access taken several years ago has now been replaced with a focus on quality of interaction between those involved in the learning, in other words, learner engagement.

In Melbourne I met with Ken Gooding, another Flexible Leader, who had been involved in the production of several of the highly acclaimed flexible learning toolboxes. He spoke with enthusiasm about the use of open courseware and games, especially those which require collaboration. I then went on to Central Gippsland TAFE to meet Brad Beach, Vanessa Marsh, Malcolm Jolly and Glenda McPherson; a cluster of Flexible Learning leaders in an organisation not unlike the size of Otago Polytechnic but much further advanced along the path of organisational change. Here I saw innovative use of mobile technology (digital pictures from phones for assessment of practical skills in panelbeating), medical terminology with pronunciation online, short awards for compliance purposes online (Sale of Liquor Act), the use of role plays for collaborative learning in interior design courses, using podcasts for reflective journaling, and many other imaginative ways of engaging learners. Another focus of Gippsland TAFE's CEO, Peter Whitley, is that of direct training agreements with industries and enterprises; this is well advanced and their 2006 target is 50% of revenue in all departments from this source.

Again the lesson seems to be to 'know the client's needs and make sure you attend to them'. Gippsland TAFE, like Tasmania, has gone beyond simply providing flexible access and delivery; there is a commitment to engaging the learner and really working on the relationships involved. I find it interesting that these are the tenets of good teaching since Socrates. So what relevance do all these impressions have for Otago Polytechnic's new focus on flexible teaching and learning? We have always known the importance of relationship, and we have I believe, done a good job of meeting the client's needs. The cassette audiotapes on veterinary anatomy and physiology that I made in my sitting room

years ago were a source of much positive feedback from students, especially the mature ones who valued the informal, chatty approach to a quite theoretical subject. Newer technologies can meet the needs of diverse learning styles better still; podcasts, video, animations, online chat and discussion boards, and social software can increase connectivity in ways that we are just beginning to understand.

But our students still value the more direct kinds of relationship. The eLearner Support survey of the Aotearoa Students' Association highlighted the students' strong recommendation for two types of 'real person' support (Renwick and Owen 2005). Firstly, that of a specific, dedicated staff member as a first port of call for all enquiries, preferably a senior administrator familiar with all aspects of the learner's experience and able to redirect academic enquiries to an appropriate lecturer. If an academic staff member is given this task, the survey identified time, expertise and technology as common constraints that must be adequately addressed. A particular type of support with which students commonly expressed dissatisfaction was that of the technical helpdesk, often only available during office hours; therefore of little value to the working student or the parent of young children. The authors creatively suggest the possibility of such facilities being shared between providers or outsourced.

The second type of support relationship that featured in the survey was between students. Educational institutions always provide a cafeteria, or meeting rooms; but very few resources are directed towards facilitating social interactions between online students. The use of in-house social networking tools is worth investigating; but more traditional opportunities for informal face to face interactions need to be considered as part of intensives or block courses. A shared lunch, a picnic with games, or a group workplace visit might foster subsequent collaborative learning that results in one less 'drop-out'.

Finally, we need to consider the consequences of not attending to the learner's needs for interpersonal relationship. The above project report strongly suggests that a consideration of student satisfaction be included in the new performance element to tertiary funding. If this is adopted, it will, along with an increased focus on attrition and retention rates, greatly increase incentives for providers to be learner-centred. An important and unique study of cohorts of Australian learners choosing off-campus options while also being enrolled in on-campus programmes showed a significant difference between satisfactions with the two modes of learning (Hagel and Shaw 2003). The face-to-face option was preferred mainly because of the greater opportunities for interaction with teachers and peers. My observations lead me to suggest that we can give our students the best of both worlds, as long as we elevate the need for human connection to the same level as the need for quality learning materials.

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Mummy Laid an Egg!



by
Babette Cole

TALES FULL OF TREASURE: CHILDREN'S PICTURE BOOKS AS FLEXIBLE LEARNING TOOLS FOR TERTIARY STUDENTS

Josephine M. Crawley

The phrase 'flexible delivery' is sometimes mistakenly used only as a collective term for computer-based learning. This limited use of the term does flexible delivery a disservice. I have heard skilled lecturers dismiss the concept outright, perceiving it to imply a straight-jacket one-size-fits-all pedagogy rather than a responsive strategy, even their own, meeting individual student learning needs. Flexible delivery is about creatively adapting a range of methods and media to recognise diverse learning patterns amongst a broad and eclectic group of students, in ways that maximise student participation and learning. Furthermore, flexible delivery is about recognising that learning takes part outside formal course settings, resulting in flexible learning (Van den Brande 1993). Therefore, whilst computer and internet technology have value in flexible delivery, it is important lecturers seek tools that both work for students and support our teaching objectives. In the rush toward digital data some forms of media have been sadly overlooked.

One of the most flexible tools I employ with tertiary students uses no whiz bang technology; indeed it is erroneously thought to be unsophisticated, the undervalued tool of children's picture books. Children's picture books are flexible learning resources that stretch across learning styles and diverse experiences of tertiary students, resulting in individual learning, appreciation of difference, and recognition of previous learning outside the formal learning setting. This paper describes one way I use children's picture books within an undergraduate nursing programme.

Stories are part of all students' cultural heritage. Some oral forms of storytelling are fluid dynamic interpretations of events, while others are based around published literature. Storytelling is an age old tradition with social, emotional and academic benefits for both the story teller and the listener, well recognised in primary education (Eades 2006). Within the tertiary setting, I believe skilful use of the right story can help build students' thinking skills and emotional literacy, as well as encourage reflection. Within my experience, the majority of tertiary students have been exposed to picture books as children and welcome their introduction into the tertiary setting. When I bring out a book I see students physically relax

and get comfortable, they prepare to be entertained with expressions of positive enjoyment, a receptive state for learning. The books themselves are perceived as friendly and familiar media, even though many of the stories I share are not known by the students.

Good stories involve fundamental human issues, providing mixed feelings and different viewpoints (Eades 2006). Nursing studies require student learning and reflection around a number of concepts inherent within human experience including birth, growth, development, death, grief, health and family, and explores influencing feelings, beliefs and values. Each student has their own story bank of experiences that build their personal interpretations of these concepts, becoming the foundation upon which a student will base their beliefs about human issues and values. A student will tend to interpret new information in ways that make sense within their unique constructed story banks, with reflection providing opportunities for deeper learning, critical challenge of assumptions, and the development of new perspectives (McDrury and Alterio 2002). If lecturers wish students to build new ways of thinking, students need to be encouraged to examine their own foundations in order to allow previously constructed learning to influence new learning. Students have often forgotten that they ever constructed learning about such things as sexuality, with concepts embedded in their subconscious as unassailable truths. Nursing philosophy requires students to recognise and understand their constructed paths in order to unconditionally accept the differently constructed paths of their many and varied clients (McDrury and Alterio 2002). The right children's picture books will challenge students and tickle their subconscious, showing the relativity of truths by casting light on the constructed nature of many universal themes.

Children's picture books look deceptively simple; in fact they can be a highly-crafted form of literature. Many contain multiple layers using narrative techniques to highlight the relativity of truth, subversively challenging dominant power structures, liberally parodying past fables and disrupting the sense of what is real; in direct contrast to many adult books' techniques of gritty realism and sensationalism (McMillian 2003; Thacker 2003). Illustrated books are not all of equal literary value, so choice of story does matter. The material needs to both be suitable and appropriate for the students and learning objectives. The story should have colourful and evocative language, often with repetitions of key events or phrases and a detectable structure (Winer 2005). It has been suggested that by crafting children's books within a recognisable structure the story can stimulate recollection of personal experiences (Mahy 2000). The illustrations are not an afterthought to the story; rather they enhance the levels of meanings within the text adding nuance, meaning and expression to the words. Some illustrations are anarchic, portraying contradictory storylines and challenging the dominant discourse (Thacker 2003). Sometimes the text will suggest one level of truth for

children, while the illustrations provide extra truths for the adult eye (Mahy 2000). I have found this is often the case when the author is also the illustrator.

When reading the picture books aloud I want to see students shift their focus from passive recipients of information to being involved in the story. By using carefully chosen young children's books the content is pitched to inform at a basic level and is full of both verbal and pictorial invitations to discuss the extra truth. This is a great leveller. Many students, particularly students from Asia, have come to me with questions and revelations they say they have not felt able to discuss before. With this in mind I look for a book that has simplicity in the rhythm, humorously packaging content into digestible sized chunks, and dispelling myths and assumptions about concepts without seeming patronising to students' whose own 'knowledge' has been built from a cocktail of experience, cultural and religious values, and personal upbringing.

To maximise the story's flexibility the lecturer has to enjoy 'performing' the story. Performing the story, particularly when I know it by heart and keeping eye contact with students, gives an illusion of free-flowing creation rather than of a deeply worked and calculated resource (Mahy 2000). Individual lecturer style influences the written word; although the words are fixed on a page I add emphasis, drama, editing and adding critical questions, think time or cryptic comment as I read. Although the story and illustrations are ready formed I adapt my delivery to the needs of the students. When well performed and linked to student's realities the story simultaneously weaves its magic at different levels, in different directions, resulting in different learning for students.

I will demonstrate here one way I use picture books with first year nursing students to explore the concept of sexuality. My goal is to build a culturally safe foundation upon which to introduce the topic of sexuality; particularly important with students' diverse cultural background, which strongly influences sexuality values and messages. My objectives are firstly to broaden student perceptions of sexuality from the sexual act to a holistic concept that needs to be included in assessment across the age span. Secondly, to enhance students' feeling at ease to reflect on personal sexuality learning and stories; and finally to use humour to defuse a subject many students feel awkward discussing.

I have a favourite author for teaching sexuality, British author Babette Cole, who has several books that easily lend themselves as flexible delivery media, maximising student participation, valuing diverse learning styles and building on past experiences (Van den Brande 1993). '*In Mummy Laid An Egg*' Cole presents a playfully subversive version of where babies come from (Cole 1995). Cole inverts traditional hierarchies about who holds

knowledge by reversing roles; it the children who explode the euphemisms and fables around conception and childbirth providing the grown ups with the truth. Cole's interplay of text and illustration invite the reader to take part within the narrative, leading the listener to tap into their own experiences and knowledge, then challenge the reality of this 'truth' by surprising the listener with illustrations of joyful but unlikely couplings, and babies born conveniently in nappies saying 'Mumma'.

Another of Cole's books is an alternate favourite for the sexuality session. *Mummy Never Told Me* (Cole 2003) is a delightful account of questions that children may ask about sexuality, but result in creative responses or are left unanswered by parents. Sexuality truths are hard to pin down; is there a right answer to the question of why do some women prefer to fall in love with other women? By leaving the question hanging students are encouraged to fill in responses from their personal story banks. The text, echoing society, leaves many questions unanswered. The illustrations however provide a mix between possible 'true' answers and fantastical possibilities, highlighting the irony of what children see and know with what they think they know, what grownups tell them, and what grownups feel children should be protected from. The questions are simply worded but the illustrations contain levels of knowledge that experienced adults will perceive differently than a child. The final text, "But I'm not worried, she'll tell me when the time comes" (Cole 2003 n.p.) has multiple meanings of its own – 'when the time comes' is a traditional brush of line; will the time ever come – did it for the student's? It is also an expression of faith on behalf of a child; life's little secrets actually have answers – will adults share their own uncertainty about multi levelled-truths? While the words 'I'm not worried' play with adults' serious take on the subject of sexuality, attempting analysis and answers, whereas children may observe and enjoy phenomena without finding it necessary to dissect it for moral codes or the truth. "Mummy never told me that boys are different from girls... or that it's hard to tell the grown up ones apart!"(Cole 2003, n.p.).

In both of these picture books Cole explores a universal theme (sexuality) set within a context of children as enquiring, intelligent beings where adults construct fables to 'protect them' from the truth. As with many value-ridden concepts, students are not always aware of their own history of learning around sexuality. New information has been grafted onto foundations established in early childhood, which become subconsciously true for each student. Thus, there is an enormous range of concrete yet often contradictory truths within any classroom of nursing students, indeed often within any one student. One element of flexible learning is recognising and acknowledging previous learning and experience that students have gleaned outside of the classroom (Van den Brande 1993). Reading and discussing either of the above books can evoke the forgotten experiences of childhood

such as the sights, smells, thoughts and feelings that built individual truths. It encourages students to recognise and challenge their own assumptions, and gently open themselves to the possibility of different interpretations. That is quite an achievement, helped in no small way by the perception of the books as non-threatening, having been designed for small children. This is particularly helpful when the class contains a number of international students, for some of whom the notion of a picture book about sexuality designed for children is a foreign concept in itself.

The choice and performing of the narrative is only one part of the teaching process. As I wish students to experience reflective learning I prepare opportunities for students to test the theory against their own experiences. Before I read the story the lecture content has set the scene, acknowledging diversity and the many components that influence sexuality. Theory provides a factual perspective on sexuality concepts, which I pepper throughout with clinical examples and anecdotes that echo the carnivalesque nature of the story I have chosen, and encourage students to interact with their own examples. A skilful story teller links students into the story, extending their involvement and exploring different characters perspectives. I ask students to have a piece of paper in front of them, emphasise that it is not for sharing unless they choose to, and suggest that those students who wish to may like to write responses to my questions. Dependant on the book and the students, the first question ties student's into their personal experience, 'what have you ever heard about where babies come from – who told you what?' or 'can you remember asking anyone tricky questions around sexuality – did you get satisfactory answers?' or sometimes 'what would you tell a child aged five about sexuality?'. Throughout the book I add questions and observations pertaining to the illustrations, pointing out the subversive tendencies, interacting with the creative truths as presented in the book, and encouraging students to enjoy the dynamic portrayal of reality. At the end of the reading I will sometimes suggest students revisit the first question I asked. Many add to their notes, suggesting a deeper level of reminiscence or learning. By involving the students throughout the reading, treating me as an interactive performer, student's participation and learning is maximised.

Students have personal preferred learning styles. Children's picture books respond flexibly to this lecturing challenge. For visual learners the illustrations attract the student to explore the often contradictory relationship between the text and the pictures. Aural learners respond to the repeated word patterns, the rhythm and rhyme, often mouthing them along side me and becoming emotionally connected with the story. Reader-writers tend to look at the words on the page and scribble notes as I leave questions hanging, while kinaesthetic learners often move their finger across an imaginary page following each word as I read it. In their own ways the students all become involved with the story. A key question I

sometimes ask after I have read the story is: 'Why do you think I read that one?'. From the diverse answers, evidence of individualised learning often comes forward.

The reading of children's picture books lends itself to many tertiary settings, although I personally find the small face-to-face group offers the most learning and certainly the most reflective learning that is shared with others. In larger lectures with 50-100 students it can be helpful to visually project the words and illustrations onto a larger screen simultaneous with the reading; however it is generally not feasible to make these available as digital copy for students because of copyright restrictions. This becomes more of an issue when simultaneously lecturing to a face-to-face group and a geographically-remote group via video conference. With larger lecture groups, although I try to retain an interactive element, I leave questions hanging more to stimulate reflective thought. I adapt my teaching methods to more written reflection encouraging discussion to take place in smaller, more personal, tutorials that follow the lecture. When I perform the story and turn the pages of children's picture books students open themselves for learning. Discussion based around the books becomes a foundation from which students are able to reflect, deconstruct past versions of reality, and construct more open contexts from which to examine multiple realities. That one book can stimulate individual learning with each member of a diverse group, exploring commonalities as well as emphasising personal experience, is the epitome of flexibility. An inherent part of the learning is that students, and myself, enjoy this mode of learning. As one storyteller has written: "storytellers have a deep trust of themselves in their storytelling role, offering no excuses, no inhibitions, no distortions. They tell their stories well so that the wisdom of the story reaches their audience." (McDuff 2001, 105). By valuing stories and trusting our own abilities as both storytellers and educators, children's picture books can truly become tales full of treasure.

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SHIFTING PARADIGMS: ONE TO ONE CONSULTATIONS WITH ENGLISH LANGUAGE LEARNERS IN A TERTIARY LEARNING CENTRE

Rose Stanton

"The limits of my language mean the limits of my world" (Ludwig Wittgenstein)

Introduction

Teaching and learning English by its very nature requires considerable flexibility on the part of both teacher and learner. In Sheffield (UK) in the early 1980s, for me teaching English was a voluntary, community-based affair where Pakistani women learnt the basics of shopping vocabulary at one end of the community hall while a crèche for their children operated at the other end. In Greece, high school children went to Greek school in the mornings or afternoons alternate weeks and on the opposite times attended private English Language schools. Senior students were timetabled on Thursday and Friday evenings and then again early Saturday morning. In Vietnam, many people learnt French as a second language because of the French colonial presence until 1954. Then after the Americans were defeated in 1975 Russian was popular as a foreign language for a time, whereas now English is compulsory throughout their high school curriculum. Some older language teachers have taught all three languages and many others have had to retrain from Russian to English.

Similarly when students come to New Zealand to further their education they bring their own complex set of values and attitudes with them. Culture shock, or at least unease, is often the result of travelling to another country. In order to survive and adapt to this, as Kohls (2001) suggests tolerance for ambiguity and flexibility are two very important skills. These skills are highlighted for students; ambiguity is constantly present in language learning and adapting to new methods of teaching, and learning requires considerable flexibility for both teacher and student. Not only does each inter-cultural meeting have its own particular flavour but each student's experience of learning English as a second, or additional language, is particular to their previous learning context, which in turn contributes to their current learning needs.

In this personal reflection I will discuss how the role of a Learning Advisor necessitates scoping students' learning needs and providing appropriate tools and information necessary for learning. The information gleaned from an initial interview with a Non English Speaking Background (NESB) student can be of great value in building up a learner profile, and how my understanding of the students' past learning and their cultural context contributes to my decision about what techniques to use to aid their learning. After ascertaining which course they are currently enrolled in, two pieces of information are vitally important: the English learning pathway and previous study they have completed either in New Zealand or in their home country. Additional information related to their personal and cultural background, as well as immigration status, is also valuable. This information helps me to understand the students' likely competence in English. Lastly, I will expand on the range of English language input students may need, focusing on how oral skills may be developed within the paradigm of one to one learning consultations.

Shifting Paradigms

Working as a Learning Advisor at the Otago Polytechnic Learning Centre has required a major shift in my teaching paradigm from a classroom-based perspective to one based on individual needs. While working as the general English coordinator at the Otago Language Centre in the 1990s I had sampled some learner training activities from Learning to Learn English (Ellis and Sinclair 1989) with my upper intermediate classes, and had lectured Teaching English to Speakers of Other Languages (TESOL) trainees on learning theory related to learning languages. Later, as an English Language advisor for a provincial Department of Education in Vietnam, a Vietnamese colleague introduced me to Howard Gardner's theory of Multiple Intelligence (Armstrong 2000) and discussed Vietnam's nationwide programme for teaching gifted learners. These experiences helped me develop a range of strategies and techniques for teaching English, and provided me with an understanding of specific learning skills related to language development.

However, all those years of teaching, course planning, resource development, curriculum delivery, group management, individual tutorials, needs analysis, assessment, and teaching about learning had not prepared me for the one-to-one learning consultations which are part of my job as Learning Advisor in the Otago Polytechnic Learning Centre. When I first started that role it seemed peculiar to see a name on my calendar appointed to a certain time slot and to have very little information about the student I was scheduled to see, other than the course in which they were enrolled. They could be enrolled in any department, from certificate to degree or post-graduate level. The help they required ranged from oral skills presentations for certificate courses to literature reviews for graduate and post-graduate papers.

With so little information, and such a range of levels, I still have to ascertain their needs, evaluate the situation and proceed with a degree of constructive input within the allocated fifty minute time slot. Ultimately, I attempt to make an impact in that first session to create a satisfactory working relationship so the student will return for more specific help. In other words, I have to have ready access to my personal pedagogical tool kit and be able to respond to the situation and content the person brings with them, rather than deliver a pre-planned lesson with a prepared objective.

This challenge is compounded by the academic and linguistic needs of the many speakers of other languages who come through my door, both English Language Learners (ELL) and NESB students. Another shift, from years of teaching pre-sessional English in English to Speakers of Other Languages (ESOL) classes, and being a gatekeeper and monitor through the International English Language Testing System (IELTS) and Certificate in Spoken and Written English (CSWE) assessments, to meeting the learners on the other side. In my first year at the Learning Centre my perception of the level of English proficiency many had achieved prior to admission to their current courses, and the resulting difficulties many of them were having, led me to attempt to more clearly identify aspects of their learning pathways.

Subsequently, while thinking about related issues, I was struck by the process of the initial consultation with a student. Firstly, how instant my response to that student has to be and, secondly, how quickly I have to adapt to the academic and linguistic skills that the student comes in with. The result is highly individualised support for the learner. To work within a paradigm, which unlike the previous one relied less on planned intervention and more on spontaneous responses, I have to listen to the students needs, create a student learner profile in my head, and formulate the direction of the consultation using the raw material that comes in the door with the student. Naturally these elements all occur in classroom teaching but the significant difference here is that they happen simultaneously. Subsequent sessions can then be prepared for in more traditional ways. The need to be adaptable, creative and flexible in my approach with students is vital.

English Language Entry Mechanisms and Standards

As previously mentioned living and studying in another country requires a considerable amount of tolerance to ambiguity and flexibility. In a recent report on Cross-cultural and Educational Adaptation of Asian Students, Berno and Ward (2004) listed eight recommendations for institutions to help international students adapt to academic and cultural life in New Zealand. One of these recommendations relates specifically to increasing their English proficiency requirements and another to continued training and support to

improve language skills. I would suggest that this also applies to many permanent residents who are learners of English as an additional language.

Most tertiary institutions prefer students to have an IELTS test result although other equivalent measures, including TOEFL (Test of English as a Foreign Language) and CSWE, are also acceptable. The IELTS test allocates individual scores for the four major skills of Listening, Speaking, Reading and Writing with band scores ranging from 0-9, and provides an overall test score which is an average of the band scores.

The IELTS Information for Candidates (2005, n.p.) describes an overall score of 6 as a “competent user who can use and understand fairly complex language, particularly in familiar situations”. On the other hand, a score of 7 is described as “a good user who generally handles complex language well and understands detailed reasoning”. A student operating in the ‘modest user’ range in band 5 will have “partial command of the language, coping with overall meaning in most situations, though is likely to make many mistakes” and is therefore likely to have great difficulties with the language and the content of most courses. The higher the mark, obviously, the better the student is positioned to manage course requirements.

Some of the problems with the IELTS exam lie in the interpretation of the results and their use as a measure of achievement rather than as an indication of general proficiency and readiness to begin a course of study in English. There is also a belief that if the students have met the entry requirements then their English should be good enough to cope with high levels of native speaker input, through either listening or reading materials, and be able to produce fluent and accurate written and spoken English. This is clearly not possible for a learner who achieved an overall IELTS score of 5.5.

It is important to note that some ELL who have been educated in English medium schools, and are therefore considered bilingual, may also have problems with English and the academic conventions of our institutions. Some Pasifika students, for example, are very fluent speakers of English but may be operating with a limited vocabulary. In conversational English, the average native English speaker uses only about 5,000 words (McCarthy and O’Dell 2001). However, Nation (2001) reports that educated native speakers know and use a minimum of around 20,000 word families. Fluent students may consequently be severely challenged when reading academic texts with more sophisticated vocabulary and specialist terminology. Institutions and students can make incorrect assumptions about the implications of studying in a functionally monolingual English environment.

Our records show that some of the students have only reached the minimum standard for entry and working with these students reveals that many of them could have benefited from a higher level of English before starting the course, with more English as part of their course component. In some instances the entry levels were low or 'open', yet used unit standards that required 100% accuracy, for example, in reading comprehension. Clearly that type of assessment system is unsuitable for international or permanent resident students who have a limited vocabulary, and low or even intermediate levels of grammatical knowledge and accuracy.

International Student or Permanent Resident

Whether a student is 'international' or 'permanent resident' creates an important distinction from the perspective of our immigration and educational institutions. Whilst most of these students have very similar needs with regards to living in a foreign country and learning the language, culture, and academic conventions, there are also important differences. International students are usually on short-term student visas and have to pay full fees for their education. Permanent residents and domestic ELL, on the other hand, may have been in New Zealand for many years or may have only recently arrived but with an intention to settle in New Zealand. Their entitlement as residents or refugees allows them access to education in the same way as New Zealand citizens. This does not mean that they do not have ELL needs. These differences, however, had an interesting consequence leading to growth in the business of teaching English to international fee paying students, while the previously established programmes teaching English to immigrants and refugees became a lower priority. These differences continue to determine available support networks and may influence the student's choice of subjects and their motivation to learn English.

In language teaching there are various motivational theories regarding the position of the learner in relation to the target language and culture. One distinction is between 'integrative' and 'instrumental' motivation. Gardner and Lambert (1972) cited in Ur (1991, 276), explain it as "the desire to identify with and integrate into the target-language culture, contrasted with the wish to learn the language for the purposes of study or career promotion." Therefore our permanent residents (and citizens) almost certainly will have a higher desire to integrate. At our institution most of the students in the health sciences are permanent residents and those in travel and tourism mainly internationals. The health sciences and travel and tourism trainings could both be viewed as globally transferable, but the health sciences have a higher degree of professional risk associated with inadequate levels of English and, therefore continued English learning would be desirable.

Another distinction made by Gardner and Lambert (1972) is that between 'intrinsic' motivation (the urge to engage in the learning activity for its own sake) and 'extrinsic' motivation (motivation that is derived from external incentives). It is well known among ESOL teachers and support staff that international students are often under a lot of pressure from the expectations of families at home and financial concerns. Their personal support networks may also operate at a distance and the shock of cultural disorientation may be much greater than for many permanent residents. As a result of the pressure they may place less importance on achieving a good level of English than on passing the assessments; but of course language and meaning are inextricably linked.

Despite good intentions and the promotion of our institution as an internationalised one, I have observed that the specific learning needs of all ELL students can be neglected. These students often do not have adequate content knowledge, language and discourse knowledge and knowledge of academic literacy within the New Zealand context. This situation is reflected nationwide according to Franken (2005, 43) who states that although "there is a guiding document for teachers of linguistically and culturally diverse students in the school sector... Such a document is lacking for the New Zealand tertiary sector". Otago Polytechnic is a signatory to the Code of Practice for the Pastoral Care of International Students (Ministry of Education 2003). International students have access to pastoral support from the International Office; however this does not extend to extensive formal English language support. Permanent residents get little additional support, with the exception of Pasifika students who have a dedicated network. Often the term 'Internationals' is used when staff members consult us about any of the English Language students. It should be noted however that many international students speak English as their first language.

Previous Study and Qualifications

In addition to the students' English learning pathway, previous study contributes to a students' potential for success. However, previous academic success is not always a measure of the student's ability to achieve in a new learning environment. As Hughes (2004, n.p.), the director of the University of Nottingham's Centre for English Language Education, states:

"Generally language level and academic calibre are seen as inextricably linked, and in a monolingual context that isn't a bad assumption. But it tends to make academics overly optimistic about the ability to cope of a 'high-calibre' but linguistically weak, applicant. [I would argue that if you are serious about increasing international numbers, English ability becomes one of the defining characteristics of a high- calibre applicant, rather than something incidental.] And it's not only communication: students from different academic cultures can have very different perceptions of core academic concepts such as plagiarism, criticism of authorities, and argument structure.

In short, almost the entire academic toolbox.”

The comments that were recorded during Learning Centre consultations with our students are indicative of the issues raised in the previous quote. Whilst some of the students seen at the Learning Centre have a previous academic qualification from their own country, many receive comments from lecturers such as: ‘English level questionable, grammar problems’, ‘some academic conventions needed’ and ‘wants advanced listening and speaking’. In addition, some students are concerned about future IELTS requirements for professional registration.

Oral Skills Consultations

Irrespective of previous study and proficiency in written English, many students ask for help in developing their skills in spoken English. It is important to remember that although much of what comprises academic work uses written skills as the means of production and assessment, oral skills are also significant. The polytechnic teaching methodology employs interactive group work, oral presentations and fieldwork placements as part of the assessment of individuals and groups.

Helping students with aspects of speaking and listening is a dynamic process and requires a good knowledge of the micro skills of spoken discourse. The students I work with request help with oral skills for a wide range of reasons. Some have needed to improve their pronunciation and delivery for assessed role plays and others, even with high IELTS scores, seek to improve skills to be able to work with confidence in the industry or profession for which they are training. We have requests for support in order to improve interpersonal skills for field work placements. In addition to the productive side of oral skills, some students experience considerable shock when listening to lectures for the first time and have reported only understanding half of what they hear.

Some of the support requirements are always going to be related to the student’s specific language and culture. This can be quite a challenge due to “great grammatical, lexical and phonetic disparity” (Swan and Smith 1987, 212), for example, between Japanese and English. Japanese has a rather limited range of vowel sounds and few consonant clusters therefore Japanese learners “find the more complex sounds of English very hard to pronounce, and they may have even greater difficulty in perceiving accurately what is said” (Swan and Smith 1987, 213). If such a student comes prepared with an exact understanding of the requirements of the assessment, plus reliable information about the content, we can practice both fluency and accuracy for the specific task in a question and response format. This may mean recording the role plays and doing intensive pronunciation practise. In addition, new

vocabulary and local place names can be explained and the existing range of grammatical structures can be expanded.

On the other hand, an advanced speaker who wishes to improve their listening and conversational skills will require a free-ranging and more fluent level of input, with less focus on pronunciation. The resource material can be some form of current events and news on topics relevant to the student's academic interests, and the conversations don't require recording. The student may expect corrections and explanations of grammatical structures and will be able to integrate new vocabulary into the conversation. When the occasional pronunciation correction is required this usually involves prosodic features such as word stress patterns or intonation.

Students have also requested help with functional language when on fieldwork placements. In this situation, role play work can help the students to challenge some of their cultural norms and associated behaviour which may be seen as deferential or lacking in initiative in their professional training here. Otherwise fluent students, with outgoing personalities, have benefited from role play with me playing the role of an obstructive service provider or unhelpful client. These sessions have allowed them to practise ways of being more assertive in specific situations.

Students working in their final years in health sciences may have reached a very sophisticated level of engagement with the language and culture. Very often these students are permanent residents and may be well placed with regards to English language requirements. However, the factors that govern our choice of language in a social interaction and the effects of our choice on others, pragmatics, may not be well understood (Crystal 1987). I ask these students to note situations from their placement when they have felt unable to use English (and associated cultural conventions) in an appropriate way. One situation was when a student wished to attract the attention of her colleagues as a group in order to thank them for hosting her. She did not know the phrases and actions for attracting attention and did not know what simple formulaic expressions to use to encompass what she meant. These are some of the most simple language tasks for native speakers but can be very challenging for others.

Conclusion

Learning a new job is always difficult; reframing pedagogy is very challenging. Since 2005 a major part of my current job has required me to meet the needs of individual students via one-on-one consultations. Because of my TESOL background I found that the large majority of the students I saw were ELL. At first I was almost overwhelmed by my perception of

the extent of their problems. However, after considerable reflection and the application of some strategies from the reflective approach in teaching (Wallace 1991), I decided to turn those feelings into writing which allowed me to think about the individual profiles more carefully. That enabled me to see that English language difficulties were not always easy to diagnose, nor were they always the main issue for many students. There are often complicated institutional decisions that have been made which contribute to the situation for the student and these can include mistaken assumptions about students' English language proficiency and their academic competence.

Working with this material has allowed me to reflect more deeply on what is involved in an individual consultation as a learning advisor. It is a delicate operation at first, balanced between getting to know the student and being helpful. The situation requires quick thinking and flexibility (a range of teaching experience and knowledge to draw on) and appropriate ability to assess the students needs and direct the session. A Learning Advisor must build up an extensive knowledge of the institution and the various programme requirements and must be able to respond to the students' needs.

The English Language students come from a wide range of backgrounds. Most of them are experiencing the challenges of adapting to a new culture as well as a new academic environment. They are all embarking on a course of study which requires learning through the medium of the English language. Some of them are already successful language learners while others have just managed to achieve the entrance criteria. The language learning process is a very complex one and if these students are to be successful, as Hughes (2004, n.p.) suggests, "you need to move the English question from the margin to the centre of your planning".

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WE NEED
DIGITAL NETWORK LITERACY
TO BE ON AN OPEN NETWORK
TO BE FREE AND OPEN SOURCE



OPEN EDUCATIONAL RESOURCES AND PRACTICES

Leigh Blackall

This article is derived from a wiki document development held at:

http://www.wikieducator.org/User:Leighblackall/Open_educational_resources_and_practices

Slide images and audio to support this article are available at:

<http://flickr.com/photos/leighblackall/sets/72157600223371021/>

In this article the author looks at what constitutes an open educational resource and considers the issues and benefits to an educational institution, an institution which is moving to participate in open educational resource development and adopt more open educational practices. Also included is a description of the initial steps being made by the Educational Development Centre at Otago Polytechnic – a tertiary education and vocational training institution in New Zealand.

Introduction

In a recent First Monday paper titled *The genesis and emergence of Education 3.0 in higher education and its potential for Africa*, Keats and Schmidt (2007) described an educational system that benefits from international and cross cultural relationships and the adoption of open educational resources (OER) and practices to improve operational effectiveness and the quality of teaching and learning services. At the same time Evans (2007) looked at current and future uses of socially networked software in educational settings, specifically pointing out the need for open educational resources, diverse professional networks and embedded new practices, to realise the potential for a new form of socially constructed learning. Such papers and reports describe a steadily increasing trend in the education sector that is by and large a response to the significant successes of social-justice driven innovations such as: the Wikimedia Foundation projects, Ourmedia, the Internet Archive initiatives, the vastly popular market driven self-publishing platforms such as blogs, audio, video and photo sharing services, otherwise known as social media or Web2.0, and the notable increase in Open Courseware and Open Educational Resource initiatives coming out of Educational Institutions¹. However, while the Internet inherently lends itself to openness, and to a large degree has brought about the need for more open practices in sectors that rely on information and communications technologies, copyright laws, incomplete or incompatible

¹ <http://wikimediafoundation.org/wiki/Home>
<http://ourmedia.org> <http://archive.org>

intellectual property (IP) policies, cultural sensitivities, commercial operations, and general ignorance are issues that need to be overcome by educational institutions and the platforms supporting them if they are to realise the mutual benefits of open educational practices and resources. This article will focus on specific issues relevant to Otago Polytechnic, a New Zealand vocational training and education institution, and its initial attempts to develop open educational resources and practices that utilise socially networked media and communication techniques, with an eye towards an Education 3.0 and Open Educational future.

Open Courseware and Open Educational Resources

In 2002 the Massachusetts Institute of Technology (MIT) began a project called MIT OpenCourseWare, with the aim being to gradually publish all educational resources and curricula with copyrights that invite educators around the world to draw upon the materials for their own curricula, and encourages all learners to use the materials for self-study: "We hope the idea of openly sharing course materials will propagate throughout many institutions and create a global web of knowledge that will enhance the quality of learning and, therefore, the quality of life worldwide." (Vest 2002, n.p.)

And so began the wider use of the term Open Courseware. MIT's aim did eventuate with many other educational organisations announcing Open Courseware projects. In July 2005 Wiley developed the OpenCourseware Finder, a search engine focused specifically on finding open courseware from a number of educational institutions². Later that year the Open Courseware Consortium, also based in Massachusetts, was established and currently has over 100 educational organisations from around the world publishing open courseware³.

Open Educational Resources (OER), according to the Wikipedia article, is a term first adopted at UNESCO's 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries (UNESCO 2002). The Wikipedia entry (May 18, 2007) defines OER as educational materials and resources offered freely and openly for anyone to use with copy rights to re-mix, make improvements and to redistribute the resources.

The hugely successful Wikipedia, currently ranking in the world's top 10 websites (Alexa 2007) and easily the world's largest OER had by the time of MIT and UNESCO's announcements been operating for over 12 months and had grown in that time from an initial 8,000 articles in January 2001 to 88291 articles in the English version by October 2002. Today it has 251 language editions with the English version alone containing 1,778,031

² <http://opencontent.org/blog/archives/175>

³ <http://www.ocwconsortium.org/>

articles!

In 2003, the Wikimedia Foundation was announced as an umbrella organisation that would encompass Wikipedia and the other open and collaborative authoring initiatives: Wikiquote, Wikibooks (including Wikijunior), Wikisource, Wikimedia Commons, Wikispecies, Wikinews, Wikiversity, and Meta-Wiki. If these other projects grow at anything like the rate at which Wikipedia is growing, the Wikimedia Foundation will easily house the world's largest collection of OER.

Copyright

With the proliferation of a range of OER from courseware through to reference materials and other media, the most important aspect of all these resources is their openness; first of all their openness in terms of visibility, access and initial use. However, the use of the word 'open' can be problematic, as the word itself does not necessitate consideration of the freedoms to remix, make improvements on, or to redistribute the resources. Even though the intentions stated by many of the leading projects appear clear, all of it is ultimately controlled by the copyright license that is assigned to a resource, and often that choice can result in a resource not nearly being as open as one might first have thought. As in the case of MIT's Open Courseware, the copyright license used on those resources is a Creative Commons license (n.d.), with Share Alike (SA) and Non Commercial restrictions. These restrictions, in particular the Non Commercial restriction, have been criticised for the limits they place on others' ability to remix, make improvements on and to redistribute the resources (Eloquence 2005). How does a user who is affected by these restrictions reconcile this with the grander statements made by the various project leaders? How can other institutions that are partly commercial and partly restricted in their own uses of resources utilise or participate in OER projects that come with such restrictions?

In an attempt to clarify copyright confusion around OER, and to assist open educational projects make better choices in copyright licenses, the Free Cultural Works Definition (Möller and Mako 2007, n.p.) may be useful:

“This document (within a wiki) defines 'Free Cultural Works' as works or expressions which can be freely studied, applied, copied and/or modified, by anyone, for any purpose. It also describes certain permissible restrictions that respect or protect these essential freedoms. The definition distinguishes between free works, and free licenses which can be used to legally protect the status of a free work. The definition itself is not a license; it is a tool to determine whether a work or license should be considered “free.”

However, licenses such as SA and GNU Free Documentation License (FDL) are included in this definition and they both contain restrictions that do not allow someone to freely modify and redistribute a modified work without agreeing to utilise the same or compatible license on the derivative. It is possible to use multiple licenses on a work that is made up of *combined documents*, but impractical or impossible in the case of modifications and derivatives. The Definition of Free Cultural Works tends to be contradictory and possibly misleading in its acceptance of SA and FDL restrictions. For example, terminology such as, “...free licenses which can be used to legally protect the status of a free work...” is misleading because mechanisms within the SA or FDL (commonly referred to as copyleft⁴) do not protect the freedoms of the original work as much as they ensure and promote the reusability of a derivative work, and so the terminology might be more accurate if it was, “...licenses that restrict reuse so as to ensure the same or compatible licenses are assigned to derivative works”. Here the notion of ‘freedom’ is more squarely aimed at the derivative work that is yet to be licensed, and not on the original work that is already free by virtue of its Attribution license without the SA.

Considering the purpose of an OER, it should be enough to say that the license used is one in which attribution to original authors is all that is required in its reuse. This is a practice that should be familiar and comfortable to educational institutions, and it is a license that maintains maximum reusability and flexibility in an original resource. It makes little sense to apply any further restrictions such as Non Commercial, SA or even FDL to an OER that is intended to be available for remix, modification and redistribution in as wide an educational context as possible.

Furthermore, for the purposes of this article and to generate interest and discussion, a superficial analysis of statistics in the use of Creative Commons licenses (shown here in Figures 1 and 2), particularly comparing the growth in use of the Attribution license compared to the SA license shows an increase in the number of Attribution only resources comparable to SA. This might suggest strong motivating factors in the use of free licensing such as Attribution that should be looked at more closely. Perhaps the belief in a cultural commons is growing regardless of detailed copyleft legal mechanisms, and/or perhaps attribution is a stronger currency in the exchange of intellectual property than the various legal mechanisms designed to govern it. It is a research project in its own right, but for this article it is enough to suggest that copyleft legal mechanisms may not be the strongest element in the growth to free cultural works, particularly OER.

4 Copyleft is a play on the word copyright and is the practice of using copyright law to remove restrictions on distributing copies and modified versions of a work for others and requiring that the same freedoms be preserved in.

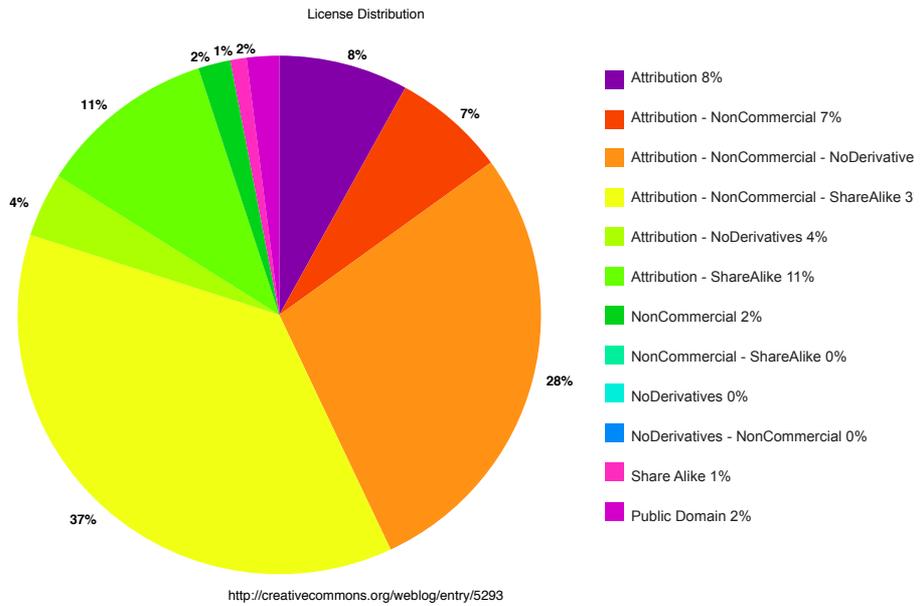


Figure 1. Distribution of licenses in 2005 after Yahoo Indexed Creative Commons licensed works

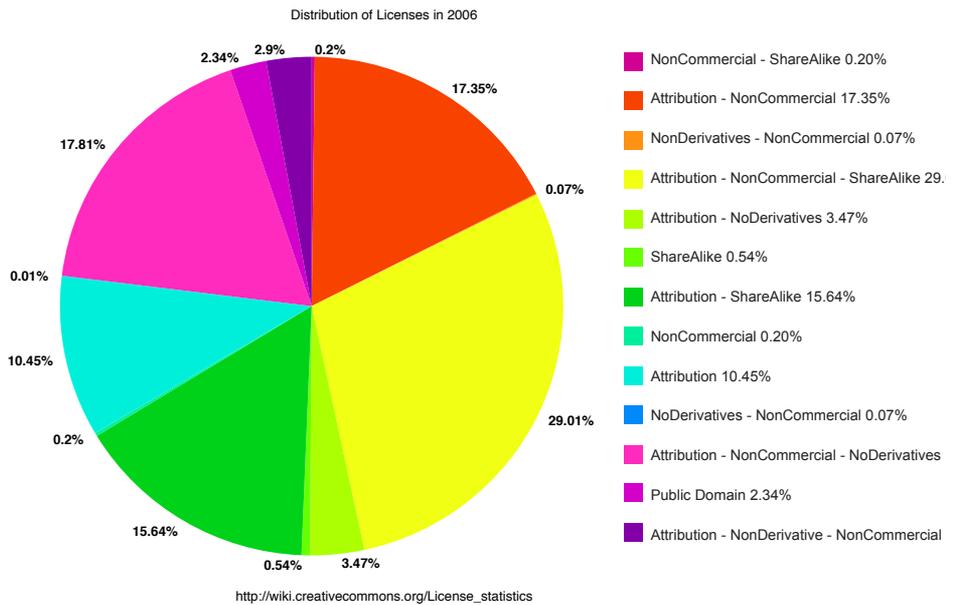


Figure 2. Distribution of licenses in 2006

Re-usability and Interoperability

From 2001 to 2004 there probably was no eLearning unit on earth that had not discussed reusable learning object (LO) theory. Some people became very caught up in the ill-defined and poorly understood 'holy grail' for eLearning, and invested large amounts of time and money developing content that conformed to a range of reusable object standards in their LearningObject Projects (Wikipedia May 17, 2007). The energy and commitment behind LO development has waned considerably in recent years, to a point at which it is a rarely talked about and generally a rarely considered area in today's eLearning Units. The rise in educational use of popular content repositories like Wikipedia and Youtube, and the vastly improved understanding of blogs, wikis and the Internet generally, has led many to question the relevance and integrity of the concept of LO (Wiley 2001; Polsani 2003; Downes 2005; Seimens 2004; Farmer 2004; Jarcho 2005). Still, it is worth noting the functional requirements of a LO if only to see why its relevance is questionable:

- *Accessibility*: the LO should be tagged with metadata so that it can be stored and referenced in a database.
- *Reusability*: once created, a LO should function in different instructional contexts.
- *Interoperability*: the LO should be independent of both the delivery media and knowledge management systems.

These requirements are remarkably similar to the requirements of an OER. Or at the very least, an OER could be said to meet all these functional requirements and more. For an OER:

- *Accessibility* is ensured by the prospect of open publishing. A resource that is published openly to the Internet can be considered accessible with its metadata evolving and updating according to its use. On the other hand, a resource that is delivered over the Internet, only accessible to those with a user name and password, and with metadata that is entered once and for various resourcing reasons, not maintained since, eventually becomes inaccessible.
- *Reusability* of an OER is firstly ensured by a copyright license that uses limited if any restrictions, and secondly by its format. An educational resource with all copyrights reserved, and whose publisher long since fell out of business, and whose author contact details long ago moved on, is rendered a difficult to non re-usable resource. A resource with a Creative Commons Attribution license, on the other hand, will always remain a re-usable resource.
- *Interoperability* is one functional requirement that also affects re-usability, but is one in which neither the LO nor the OER developments have been satisfied. Learning object development tends to focus on standards that ensure a suite of resources will work in more than one learning management system, but may ignore issues for future interoperability

when it comes to open standard formats of individual resources within the suite, and almost never considers an environment outside a learning management system. Open educational resource development on the other hand tends to focus on the use of free and open standard formats and forsakes operability with popular software. An example that covers both these examples might be the situation where LO development, while being reasonably interoperable with multiple learning management systems may use audio files that can only be played on Macintosh's iPod or iTunes. While OER development on the other hand may have ensured that their resource is open, for example, they choose to use OGG Vorbis audio formats. This is done because they are the recognised free and open standard formats for audio. However, OGG Vorbis cannot easily be played on popular audio players like iPod or common digital audio players. While the OER is in a format that can be played through legal software additions to the device, the Macintosh format choice of the LO developers renders their resource operable only on Macintosh players, perhaps under the mistaken belief that it is or will be 'industry standard'. In other words, they rely on Macintosh's abilities to corner and hold the digital audio market and force their format to become standard. For educational requirements, it makes better long term sense to use free and open standard formats that can be made operable and remain reasonably free of market forces for sound long term reusability, not to mention archival purposes.

Socially Networked Media

The popularity and emergent usefulness to learning socially networked media, Web2.0 or social web should not come as any surprise. Contemporary learning theories and pedagogical practices have been influenced by social constructivism, and the relevance that social media has to that thinking should be becoming increasingly obvious as more and more educators gain practical experience and critical awareness of learning through social media. Illich (n.d.) wrote of educational webs and envisioned a society empowered through the use of audio cassette tapes and the postal service. Illich could barely have imagined what the case is today and would be happy to see his ideas proven true. Illich would probably have remained justifiably critical; however, as today's social media is only accessible in wealthy societies and little has been achieved to narrow the widening gap in the now-termed 'digital divide'. But the successes of social media in wealthy societies should be looked at for cues to success in Illich's vision for educational webs in distance learning. While the formats and delivery mechanisms may be different, the concept remains essentially the same – it gives many people the ability to tell their own stories and ask their own questions to many other people, and socially constructed learning opportunities emerge.

For many, the almost daily practice of writing and answering emails, conversing through chat rooms and forums, publishing videos and audio, and collaboratively editing documents and media means information is simultaneously being stored and archived publicly for others to access, learn from and connect with. Informational and personal connections are being made through this social media and all of it creates an impressive opportunity for learning. But as yet, educational institutions struggle to define themselves within this information and communication landscape and appear content with a wait-and-see stance. Meanwhile new educational institutions may be developing. The Wikimedia Foundation added Wikiversity (n.d.) to complement its suite of reference resources and while it rapidly develops its technology, content and connections, with an average edit interval of 20 minutes according to Recent Changes May 2007, the user group discusses its relationship to educational institutions and credentialism (Wikiversity List 2007). The Commonwealth of Learning has established a similar project called Wikieducator that is proactively drawing in professionals and consultants to help with its positioning and it is growing at a similar rate to Wikiversity.

It could be that Illich's vision is already happening albeit through the use of sophisticated and still exclusive technology. With people empowered in the ability to connect and communicate with many others, perhaps new pathways to formally recognised learning will emerge from this social media and directly challenge those who will wait and see.

Participatory Culture

The exciting area to be involved with in educational development is Web2.0. Some people think that like LO, Web2.0 is another passing fad that will have little relevance in years to come. But unlike LO, Web2.0 is what it is because of the sheer numbers of people participating, and if its demise does come to pass it will not be because of its difficulty to understand or implement, it will be because technology and user abilities develop further. Already this move has been suggested with the term Web3D where participation in 3D virtual worlds is growing considerably, but that is an issue for another article.

Keats and Schmidt (2007, n.p.) explain Web2.0 reasonably succinctly:

“Over the past three-four years, a set of technologies and social phenomena have arisen on the Internet that are collectively referred to as Web 2.0 (Web two point oh) indicating that the World Wide Web has seen a set of important changes since its inception (version 1.0) which have turned it from an access technology into a participation technology.”

Participation is the key. As quoted on the Rise of the Participation Culture website (2006, n.p.):
“This shift in internet use from passive to active is at the heart of their digital behavior and can be summed up in one word: participation. The mainstreaming of this participation culture is perfectly characterized by the Pew Internet and American Life Project as “Web is the New Normal.”

But what is Web2.0? Technically speaking it is the use of blogs, wikis, video, photo and audio sharing sites, forums, chats and even email to develop what more interestingly becomes socially networked media. Hotrum (2005, n.p.) writes:

“‘All in all it was just a brick in the wall. All in all it was all just bricks in the wall.’ (Pink Floyd, November 30, 1979). The Internet is independent of device (hardware or platform), distance, and time, and is well-suited for open, flexible, and distributed learning. Yet traditional online, distributed learning methods are anything but flexible, open, or dynamic. What went wrong? Parkin (2004a, b) believes that we failed to appreciate that the Internet is a vehicle for connecting people with each other. We implemented LMS methods that imposed bureaucratic control, diminished learner empowerment, and delivered static information. ‘In a world hurtling toward distributed internetworking, e-learning was still based on a library-like central-repository concept.’ Parkin suggests it is time to explore the true promise of e-learning, and to rework our ideas about how learning should be designed, delivered, and received. It is time to stop letting the LMS vendors tell us how to design learning. ‘It is time to stop the tail from wagging the dog.’”

Others are seeing the link between participatory culture and some of the core objectives for education. Fountain (2005) has prepared resources that describe wiki pedagogy, and Rawsthorne (2006) has looked for ways to apply learner generated curriculum and content. With participatory culture arguably being the norm for a generation of people accustomed to socially networked media and online communication, so called learner generated content will naturally develop. This places educational institutions in a potentially hazardous predicament. What are the implications for an institution or a course within an institution when a large number of its students start blogging all that happens to them there? How can an institution and teachers respond if and when they are exposed to both encouraging and discouraging information about their services and practices? With open participation, of course. We need teachers skilled and experienced with Web2.0 technologies and communication methods so that they can participate at this level and offer balance to information that at present only comes from a student perspective. We need to engage in open educational resource development and participate in open socially networked media and communication platforms. The alternative would be to engage in very measured and

controlled ways, such as through a marketing department, or to not engage at all.

Open Educational Practices

And so, the long and short of it is this: educational organisations should develop capacity among staff and students to access, create or modify and redistribute OER, and to participate in socially networked media. Developing skills and practices along these lines will improve the efficiency and quality of the teaching and learning. For example, here is a very typical situation experienced in many educational institutions:

Two years ago a teacher created a slide presentation using Microsoft PowerPoint using a standard and over-used Microsoft template, and went a little overboard with animation features and sound effects.

- The images used on the slides have been sampled from Google image search results and do not adequately reference the image source, nor is there any record of copyright permission to use these images.
- The slide presentation file is unnecessarily large and is proving difficult to use in any online learning context.
- The presentation is a few years old and has not been updated. It was created by a teacher who no longer works at the organisation, and is used by new teachers who are still adjusting to the teaching of the topic.

Here is a solution:

- The institution's educational development unit starts to run workshops in open source software and open standard formats. Teachers learn how to use Open Office, experience compatibility issues with old PowerPoint slides and begin to appreciate the need to develop presentations that are less reliant on one particular software. Presentation edit files are saved in open standard formats and published to a portable document format (pdf).
- Workshops in copyright are also run and teachers learn where to source images and other open educational resources. The presentation file now has images that permit copying and appropriate attribution for the images is made in the presentation file.
- A range of strategies are shared for reducing presentation file sizes and developing effective use of presentation slides in online learning contexts. Some teachers notice that the pdf process reduces the file and learn how to attach that file to email or in a blog. Others discover Internet publishing sites like Slideshare and Wordpress that offer services that take an original file, process it for efficient online viewing, publish it and manage it within social networking features⁵.

5 <http://slideshare.net>
<http://wordpress.com>

- Other teachers and experts from around the world discover the published presentation and offer a range of feedback. Some users on Slideshare save the presentation to their favourites along with a number of other presentations that are relevant and useful. Others offer comments that point to spelling errors and more up to date information to use. Others request permission to reuse it and suggest the use of a Creative Commons license. In short, by publishing the presentation the teacher is absorbed into the social mediascape and experiences iterations with other content and other professionals that ultimately benefit their professional development.

This example represents the experiences of some teachers at Otago Polytechnic. Those who made an initial approach to the Educational Development Centre (EDC) were exposed to a number of issues and ideas relating to OER and practices. Tentatively, a few developed the confidence to use and contribute content into the social mediascape, and some are beginning to present their own work as OER. Subsequently, the networking opportunities afforded through this participation are proposing a more sustainable practice of professional development that more directly meets their specific needs, as they begin to communicate with other professionals in their field who can offer context, advice and ideas that are more directly relevant to their subject area.

The role of the Otago Polytechnic senior management cannot be understated in these initial successes. They permitted staff to explore and publish works; they permitted staff to work outside the learning management system that was being prescribed; they defended this exploration against internal critics and reactionaries; they actively researched notions of Web2.0 and socially networked media in education; and quickly recognised the potential benefits and wider issues. They have developed an IP that adopts the use of a Creative Commons Attribution license as a default position but with options to restrict a resource if it is needed. This simple feature within the policy retains the ability to protect IP or restrict copying and reuse where necessary, but enables individuals to participate in the development of OER and adopt more open educational practices.

Otago Polytechnic's Initial Steps and Resulting Issues

Otago Polytechnic is a small public education and training institution in the South Island of New Zealand that graduates an average of 1987 students per year. In 2006 it established an EDC to assist the institute in developing flexible learning programmes and staff training activities. Research into online learning has been allowed to refer wider than learning management system-centric practices, with social media becoming a growing focus in the EDC. As a result the work of a small number of early adaptors from a range of departments is observable through William Lucas' work in the School of Languages, that of Merrolee

Penman and James Sunderland in *The School of Occupational Therapy*, of Tony Heptinstall with *Cookery*, David McQuillan with *Massage Therapy*, Rachel Gillies from *Art*, Wendy Ritson-Jones from the *Library*, and the staff enrolled in the course called *Design for Flexible Learning Practice*⁶. This sample of work shows the effort of a number of staff who are making gradual steps in socially networked media and gaining practical experience and critical awareness that will be valuable in the months ahead. These individuals communicate via an email list with others who have not set up a web log but have interest in it nonetheless. They post general questions and answers, matters of interest and occasionally organise informal face to face meetings to support each other's progress.

Currently the EDC is leading collaborative developments of OER on wikis. A large and active number of participants are recognising the critical aspect of a wiki. The EDC decided on already established platforms that were inviting open participation from people interested in developing educational resources. At the time there were two major projects attracting a large number of participants, Wikiversity and Wikieducator. Wikiversity is a project under the Wikimedia Foundation and as the name implies, is a space for content that focuses on education (not just higher education). Wikieducator is a very similar initiative but headed by the Commonwealth of Learning using the same wiki platform as Wikiversity, Mediawiki. Both these initiatives are developing into major OER projects with the most notable difference about these compared to earlier Open Courseware projects like MIT's being that they use a wiki platform, which extends the principle of access to participation as well.

Otago Polytechnic's EDC has been participating in both these initiatives to gauge the quality of activity behind each and to establish what level of interest there is among Otago Polytechnic staff. Initial work on both initiatives has been largely encouraging with staff quickly recognising the benefits of open and collaborative authoring. Benefits found in working on a wiki include:

- Open access making resources easily reusable on other platforms.
- Easy to edit, making development much more participatory rather than reliant on developers.
- Standard interface meeting usability criteria and helping to ensure a baseline quality standard.

6 <http://williamclassblog2006.blogspot.com/>
<http://oteducation.wordpress.com/>
<http://participationinoccupation1.blogspot.com/>
<http://otagocookery.blogspot.com>
<http://massage-online.blogspot.com/index.html>
<http://photography-and-new-media-art.blogspot.com/>
<http://wotsitabout.blogspot.com/2007/05/collaborative-research.html>
<http://flexiblelearningpractice.blogspot.com>

- Version control and edit history are recorded and always available.
- Communication channels exist behind every level of content.
- Helps to change the organisation into a participatory culture in OER development.

Benefits of Wikiversity and Wikieducator are:

- A growing community ready to assist with development, proofreading, editing and translation.
- Networking with an international community of practice in each topic area.
- Publicity for educational institutions participating in such progressive initiatives.
- A neutral platform that is not seen to be owned by competitors and is conducive to open collaboration.
- Platforms to use in the process of developing resources (free proofreading, translation and other contributions).
- Capability building of staff more in line with contemporary developments of Internet (Web2.0).

Concerns are:

- The control of development is very dependent on the level of participation.
- Many subject areas have been started but are not yet at a finished level (a sign of its early stages and tentative testing by others like us). One can, however, see this as an opportunity for educational institutions to establish a strong presence.
- Lack of awareness in the general New Zealand education sector of wiki development processes and ethics can affect the level of staff commitment.
- Hands-off or wait-and-see approaches from leadership can be discouraging to risk-averse teachers.
- The local copyright policies, and poor copyright management of local educational resources (third party breaches), and compatibility issues with the copyright license used on the Wikiversity and Wikieducator platforms can be detrimental to the level of participation.

The final concern relating to copyright may result in Otago Polytechnic having to set up its own wiki, which is both disappointing and limiting in terms of collaborative development and networking opportunities. The key issue lies in the choice of copyright on both platforms which is difficult to manage and in some instances impossible to honour. This may ultimately exclude some level of development contributions from our polytechnic, and arguably from most educational institutions.

Wikiversity uses the Free Documentation License and Wikieducator uses a Creative Commons Attribution SA license. As explained earlier in this article, both these licenses

restrict modifications and redistribution of derivative works to only being permissible if the resulting work is licensed with the same restriction. This legal mechanism is designed to ensure the continued growth of re-usable content, but does it? As argued earlier, perhaps there are other things that encourage the growth of open content, namely attribution and that any legal mechanism, while being difficult and largely impossible to enforce, is enough to prevent re-use and participation.

Such is the case between Otago Polytechnic and the Wikiversity and Wikieducator platforms. While Otago Polytechnic is positioning itself to publish and contribute to the development of open educational resources, the license on those two platforms may prevent our participation. Thus, Otago Polytechnic cannot be certain what the range of its activities may be in the future, as would be the case with most educational institutions at present.

Situations that present difficulties when using copyleft resources are:

- A training service contract with a local company requiring the creation of educational resources that must have all copyrights reserved due to the inclusion of content that is of a commercial concern to the client company.
- The need to remix other educational resources that are restricted, such as photos with release contracts that do not include open distribution rights or the creation of derivatives and so necessitate restrictions incompatible to copyleft.
- The recontextualisation of an educational resource into a local needs that results in a resource that is believed to have (rightly or wrongly) monetary value to a department or client, who therefore wishes to reserve copyrights for a period of time to make use of the first-to-market principle.

There are other scenarios that present difficulties for an educational institution that begins to develop resources and practices based on mechanisms of copyleft. The requirement to redistribute derivatives from a copyleft artifact under the same copyleft restriction may be impossible to honour in these situations. In some instances it may be possible to keep copyright and copyleft resources separate and release a remix under dual licenses, but where a direct derivative has been made, and the distinction between the two have blurred, this management of dual licenses is impossible. Complications in copyright like these are simply impractical to manage. This is why the institution will inevitably base its collaborative efforts, resource sharing and sampling, and general open educational development on content that is licensed in such a way so as to only require attribution, in other words the Creative Commons Attribution. This license maintains the reusability of a resource in any given situation without restriction other than attribution. It benefits the

institution by encouraging wider reuse and subsequent attribution which may turn out to be of greater value than the availability of copyleft educational resources; especially if research indicates that OER proliferate regardless of copyleft mechanisms and even more because of the value of attribution.

Steps Forward for Otago Polytechnic

It is likely that Otago Polytechnic OER developments will have to take place on its own wiki that will use a Creative Commons Attribution license by default, and will allow for other licenses to be applied if needed. Once content is developed to a sufficient level, it will be copied into the Wikieducator and Wikiversity platforms for further development by people in those projects. It is not likely that Otago Polytechnic will be able to use any subsequent modifications that are made on those platforms due to them being made under a SA restriction, but we will at least be able to see the developments and consider future directions of our own resource developments, and we may also benefit from the social networking opportunities offered by those more global platforms.

A structure for wiki content that we are considering is described in Figure 3. Activity pages will be the focus of the resource development and our local wiki will enable embedding and mash up⁷ of multimedia as much as MediaWiki Extensions (n.d.) and our own commissioned developments (Blackall n.d.) can achieve. We will continue to develop staff capabilities and confidence in the use of and participation in socially networked media and work towards a high and identifiable quality of open educational resources that are made available through socially networked media channels. We will do this through the staff development activities of the EDC such as *The Designing for Flexible Learning Practice* course and through Networked Learning workshops and informal support through facilitation of email discussion lists and face to face meetings.

These steps will be augmented through the Programme Development activities that are facilitated through the EDC but conducted by staff in teaching departments that are developing their own programmes. These developments are aimed at improving the flexible learning opportunities in a course and which often, although not always, involve the use of online teaching and learning technologies. Through these activities we aim to develop better awareness amongst staff concerning copyright and to lead discussion about the development of OER, as well as to build a stronger presence of Otago Polytechnic on socially networked media platforms through the encouragement and support of staff participating in social media arenas.

⁷ A mashup is a web application that combines data from more than one source into a single integrated tool; a typical example is the use of cartographic data from Google Maps to add location information to real-estate data from Craigslist, thereby creating a new and distinct web service that was not originally envisaged by either source (Wikipedia October 23, 2007).

Proposed structure for Educational Content within a Wiki

Mildly active. New courses, adjustments to existing courses. Contextualised.

Fairly stable content, based on existing education department documents

Highly active content, regular edits, always changing, based on teacher/student needs

Course Document

Lists units and learning outcomes used in the course, drawing from "unit standard" pages. Includes course description, units used and the resources and activities used in those units.

Unit Standard

Official learning outcomes, unit standards or syllabus documents. Usually contains 3 elements with 3 performance criteria under them and are reasonably generic assessment references

Unit Resources

Lists of links to resources deemed relevant to elements within a single unit standard page. Resources appropriate for all possible contextual needs are listed.

Activity Sheets

Containing a sequence of tasks to guide a learner through a range of resources to meet a particular unit standard. New activity sheets are created according to particular contextual needs.

At the outset of developing online materials for a new course, we identify the unit standards and learning objectives in a course document page, and then create new pages for each of these units. Then we go about gathering (or creating) resources relevant to the units and list them as URLs with descriptors on the Unit Resources page. After we have sufficient resources listed, we create the first of possibly many activity sheets that draw from the Resources, and design learning activities to guide people through the unit requirements and the resources that support them.

Figure 3. Proposed structure for Educational Content within a Wiki
Original diagram by Leigh Blackall 2007

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THE REALITY OF ONLINE LEARNING IN NURSING PROGRAMMES – TWO CASE STUDIES

Bronwyn Hegarty and Alison Stewart

Introduction

In 2005, the authors presented a short 'show and tell' session at the Australasian Nurse Educators Conference which had a tongue-in-cheek title: *Is there a place for online teaching methods in nursing? Or is it a virtual non-reality?* Whilst it is obvious that there is increasing use of online teaching methods in nursing as evidenced by literature (Billings and Kowalski 2005; Sykes 2003; Blakeley and Curran-Smith 1998; Gunn 2002; O'Neill 1998; Plank 1998), the purpose of the presentation and subsequently this article was to share some of the lessons learned in the past ten years. What is the reality for students and lecturers using online learning and teaching? Does this method of delivery enhance learning and what are the limitations of this medium? Can a virtual learning environment be created successfully? The two case study examples in this article describe undergraduate and postgraduate courses previously taught in the School of Nursing at Otago Polytechnic.

They provide an historical snapshot starting with initial development of an undergraduate course in 1996 moving to an example of a postgraduate course taught in 2005. The undergraduate case study illustrates some of the challenges associated with online teaching and learning at a time when there was limited infrastructure in the organisation for this mode. Whereas the other case study is about how online discussion and activities can fit a particular model of learning.

Trends from the Literature

There has been a significant change in education in the past ten years and use of eLearning tools and methods has steadily increased. E-learning is defined by ELAG (e-Learning Advisory Group), as education delivered via Internets or Intranets, which are synchronous or asynchronous, and enables anytime, any place learning (Ministry of Education e-Learning Advisory Group 2002). More generally, eLearning includes any learning which makes use of computer technologies and digital tools, particularly those associated with the Internet (online) or CD-ROM (Ministry of Education 2004), or in any way uses information and communication technologies (ICTs) (DfES 2003). Garrison and Anderson (2003), refer to eLearning as formal learning online which uses a variety of multimedia and networking strategies. These authors have predicted that eLearning will drive pedagogy in the future

towards a knowledge-based model; one which contributes to a knowledge economy through innovative use of information communication technologies.

In 2002, in New Zealand, the Ministry of Education recognised the potential for education through an eLearning Advisory Group publication called *Highways and Pathways* where the following statement was written: "E-learning is set to play an increasingly-important role in expanding learning opportunities and helping New Zealand's transformation into a Knowledge Society" (Ministry of Education e-Learning Advisory Group 2002, 3). Two years later in 2004, the Ministry of Education published *Taking the Next Step: The Interim Tertiary eLearning Framework* where eLearning was described as vital for transforming education in the tertiary sector towards a more learner-centred model (Ministry of Education 2004). Additionally in 2005, the Digital Strategy was developed with the driver being to provide and make accessible, digital materials for all aspects and areas of society: "Information + Communication = Knowledge Society" (Ministry of Education 2005, 6). There is very definitely a trend in New Zealand society towards eLearning, and this is reflected in the strategic direction of not only of the Ministry of Education, Tertiary Education Commission but also in many tertiary organisations. For example, Otago Polytechnic has very clear objectives for flexible learning in the organisational profile (Otago Polytechnic 2006).

Traditionally the nursing profession has responded to societal pressures by making changes in the educational and technological sectors, and distance learning using computer technology was one example of such ongoing changes (Gunn 2002). The introduction of flexible, online courses in the Bachelor of Nursing (and Bachelor of Midwifery) at Otago Polytechnic was part of a trend already occurring in nursing education in New Zealand, Australia, North America and the United Kingdom (Billings and Kowalski 2005; Sykes 2003; Blakeley and Curran-Smith 1998; Gunn 2002; O'Neill 1998; Plank 1998). Not only were registered nurses seeking flexible continuing education to fit in with work schedules and geographical locations (Sykes 2003), they were also becoming aware that clinicians with advanced computer literacy had an advantage in the workplace and more potential for advancement in their careers because computing skills tended to pave the way towards improving competency-based practice and leadership (Conrick 1998, Nagelkerk, Ritola and Vandort 1998, Bachman and Panzarine 1998). In a study of online nursing education in Australia, Sykes (2003, 207) found that "online multimedia courses can enhance learning for clinical practice", and recommended that appropriate and adequate attention was given to prepare and support students to use the Internet for learning. In addition, Sykes (2003) also conducted an extensive review of the literature regarding Internet use in nursing education, and concluded that whilst it was becoming increasingly important to meet the continuing education needs of registered nurses (e.g. formal postgraduate qualifications

and certification courses), the use of online education was less frequently described for undergraduate courses.

Internet use in education can enhance nurses' computer skills making it possible to create an online community of learners engaged in effective online interaction between each other and with their teachers (Billings and Kowalski 2005; Sykes 2003; Wagner 1994). The following case studies illustrate these and other outcomes as well as changes in nursing education at Otago Polytechnic during the past ten years.

Case Study One – *Bioscience on the Internet for Registered Nurses and Midwives*

In 1996, an undergraduate bioscience course, traditionally classroom based, was redesigned for distance learning using multimedia (Internet, CD-ROM, video). The main reason for the conversion was because registered nurses (and midwives) practising throughout New Zealand needed flexible study arrangements if they were to obtain a degree (Bachelor of Nursing or Bachelor of Midwifery), whilst continuing to work in practice. Many potential students lived some distance from tertiary education providers and others had difficulty arranging job release to attend regular classes; therefore the opportunity to study using the Internet was timely. Also at that time, the Nursing Council of New Zealand was promoting the introduction of nurse prescribing and competency-based practising certificates, events which would necessitate further education for practitioners. In addition, the success of an online, distance course in Occupational Therapy at Otago Polytechnic provided an idea of what could be achieved.

Planning and development of *Bioscience on the Internet* took two years. It was resourced with a part-time lecturer, and supported by personnel from the Educational Technology Team (Hegarty 2000). The design involved interactive content based on a prescribed course textbook with online quizzes and discussion related to bioscience concepts and clinical situations. Participants in the course were encouraged to learn and think online through the use of questioning techniques, exercises, and examples of clinical applications; these were presented on an interconnecting series of web pages organised into topics. For example, is a screen shot of a web page on the topic Tissues. A question was posed, and the user could think about their answer before clicking on the A to find out if their answer was correct or not.

Exercises encouraged students to explore, test their understanding and undertake practical activities. For example, labelling a diagram as illustrated in Figure 2. This was a simple and one dimensional activity but served its purpose in the early stages of the course, by encouraging students to engage with the topic. Resources at the time did not allow the development

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BULLET-IN BOARD

Fibrocartilage

Properties: intermediate between hyaline cartilage and dense regular CT. Compressible and resists tension. Consists of rows of chondrocytes alternating with rows of thick collagen fibres. Has scant ground substance (mainly chondroitin sulphate and dermatan sulphate).

Location: intervertebral discs, pubis symphysis and cartilages of the knee.

Function: cushions joints against compression forces and allows resistance to pulling forces while holding joints together.

Q 30 - Why do cartilagenous structures take longer to heal than skin for example?

A -

Clinical application: cartilage tends to calcify during aging and may ossify if chondrocytes are damaged.

↑

Clinical applications were provided at regular intervals for each topic.

Figure 1. Screenshot of a webpage on the topic of Tissues

Exercise T13: Print off diagram and have a go at labelling the diagram of a long bone.

articular cartilage, medullary cavity, proximal epiphysis, distal epiphysis, diaphysis, periosteum, yellow marrow, compact bone, epiphyseal line, spongy bone.

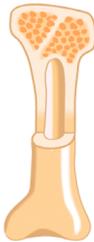


Figure 2. Screenshot of webpage requiring diagram labelling

of more sophisticated online learning objects and animations. In the development phase, a significant amount of time was taken in liaison with several different groups of people. This included:

- members of the Educational Technology Team who designed and built the web resources;
- publishers in order to obtain copyright permission for use of diagrams from the prescribed textbooks and copies of videos for use by distance students;
- copyright specialists to find out what was permissible use of material on the web;
- graphic artists who drew diagrams for use in the course and helped with advertising material for the course;
- colleagues who developed selected topics e.g. microbiology;
- colleagues who evaluated content (expert review);
- nursing school committees responsible for assessment and admissions;
- the Registered Nurse Coordinator who course counselled potential students and,
- the Registered Nurse Coordinator in order to maximise enrolments in a course specifically designed for Registered Nurses and Registered Midwives.

The concept of delivering a course online for registered nurses who needed to continue their professional education was new to colleagues in the School of Nursing. Some colleagues in the school were supportive and provided feedback on the design and content of the online course, others were sceptical that bioscience could be taught online, and most were not particularly interested; the idea was just too different. Online teaching and learning was not familiar to the majority of staff who taught using face-to-face classroom methods of teaching or had experienced traditional distance learning by correspondence. Additionally, the nursing school was primarily an on-campus provider; therefore, the infrastructure for online, distance education had not been established. As a result, the project to set up an online course was a huge undertaking and in isolation took many months of work, in both project coordination and content development. Additionally the developer/lecturer needed to alter the teaching approach so that support for Registered Nurses and Registered Midwives learning to use new technologies was replaced with the traditional approach of 'giving lectures'.

The design of the online course was based on both directed and constructivist educational methods. The content of the course was prescribed and based on the course textbook, and there were activities which promoted mastery learning such as online quizzes. Several activities were offered to encourage participants to build on their existing knowledge and experience and to explore the material and topics, that is construct their own learning. For example, the lecturer posted examples of clinical scenarios to illustrate bioscience principles

and concepts. The class used the online Discussion Board to problem-solve these scenarios and to discuss the rationale for the bioscience aspects. Additionally, participants were also encouraged to provide clinical examples for discussion, and several very interesting cases were posted for discussion.

The merging of both prescriptive and constructivist strategies for learning with technology has been documented by Robyler, Edwards and Havriluk (1997) in a discussion about learning theories and integration models. In directed or prescriptive models, learners work to objectives and undertake activities including tests which have “expected responses, whereas constructivist learning promotes problem-solving activities, the use of scenarios, open-ended questions and assessment using portfolios” (Robyler, Edwards and Havriluk 1997, 61). Constructivist strategies were an important part of the online bioscience course and were promoted both on the discussion forum, and through the use of a learning portfolio on which the students were assessed. Hence the design of the course was aligned with two principles of best practice – interactivity and engagement (Muirhead and Juwah 2003; Sims 2003).

In 1999, a pilot group of students from around New Zealand commenced their study of bioscience using online methods, and until 2002, there were increasing enrolments. In 2001, the course was also offered to undergraduate midwifery students and was redeveloped using the institutional learning management system (Blackboard). The course has continued to be offered online in this way although the content has been organised in a different format e.g. PowerPoint lectures and updated quizzes.

Each year the course ran between 1999 and 2002, changes to the course format were made in response to participant feedback, and also in an attempt to provide a more sustainable model. The initial development required a web developer to create the interactive content, and this required ongoing resourcing which in the long term was not cost-effective. Additionally, textbook resources had increasingly improved to include interactive resources such as a CD-ROM and online resources. As a result, the course evolved from being a complex web-based online package of interactive lecture notes with activities including quizzes, online discussion, chat room and a mailing list (listserv), into a minimalist online content-based presence on Blackboard. The course was eventually based on a prescribed textbook with accompanying CD-ROM. The textbook content was enhanced by online tutorials, freely available website materials and a portfolio assessment as well as online communication tools in Blackboard. For example, participants attended online chat room sessions regularly and responded to online discussions prolifically. They particularly enjoyed contributing to clinical case discussions on the Discussion Board and doing the

online quizzes. However, although they were always pleased with their understanding of bioscience concepts, and the computing skills they gained, participants found the course time intensive with challenges in the form of using a computer and producing a portfolio. For most participants, the use of a computer for learning provoked a lot of anxiety at the beginning of the course. Therefore the course was designed so that the first three weeks of the course were spent learning how to use Internet facilities such as search engines, email, online discussion, mailing lists and chat rooms.

To demonstrate what and how they had learned bioscience concepts, students were given an outline about the type of learning evidence the portfolio should include – assignments, quiz results, tutorial outcomes and results, notes about their learning, concept maps, print outs of content they had found on the Internet, reflections about their learning and online discussions. The inclusion of a portfolio as a learning strategy was designed to promote engagement with the content and reflection on the interactivity they experienced both with the content and with each other on the Discussion Forum. Students found the portfolio method encouraged them to explore bioscience topics and they preferred it to 'cramming' for an exam.

Formal evaluations of the courses revealed the following information (n=70):

- *Computer skills* – all stated that their online computing skills improved; therefore, practice had aided learning. A few in the 2001 class (n= 18) felt that a study day on Internet Skills at the beginning of the paper would be more useful than the self-directed module, and in 2002, students had a face-to-face orientation day which was well received (n= 22).
- *Quizzes* – course participants had varying opinions about the usefulness of online quizzes. Whilst some of the 1999 students (n=12) did not find the module quizzes very helpful, later classes really enjoyed the online quizzes; they found they guided what they 'needed to know'.
- *Bulletin Board, chat room, self-assessment checklists, and exercises* – students in the 1999 group did not rate these activities as particularly helpful for learning. Comments from 2002 students (n= 22) demonstrated how some of them felt about using an online discussion forum.
 - "I'm too nervous to post anything, would rather just read at this stage."
 - "Don't have time to contribute regularly and anyway we meet face-to-face to study."
 - "The others seem to know so much. It's intimidating."
- *CD-ROM* – most students in the 2000-2002 classes (n=58) enjoyed using the CD-ROM which came with the textbook from 2000.
- *Online tutorials and web sites* – students thought the web materials helped their learning.

Additionally, in 2001, participants (n= 18) posted some interesting clinical examples and web resources on the Bulletin Board, and although approximately half did not contribute, those who did wrote very descriptively. The feedback from this group of students was that they did not find the discussions useful for learning course content though they were interested in using it and reading information posted by others. Some found using the discussion forum a chore and didn't understand what was required. This feedback about the online discussion medium demonstrates that students varied in their levels of participation, and preferences.

It is useful to consider these evaluation findings with regard to Gilly Salmon's Model for online discussion (Salmon 2000). Most students in years 1999-2001 got past Access and Motivation (level 1) and Online Socialisation (level 2) and used the Discussion Forum for Information Exchange (level 3). Additionally, in the 2002 class, four out of a total of 18 students used the forum for Knowledge Construction (level 4) with some movement towards Development (level 5), i.e. they supported and responded to their peers. There is more detail about this model for online communication in the ensuing section. In this undergraduate degree course, Discussion Forums 'scared' some learners because they were unaccustomed to the technology, but aided the learning of others, in particular, motivated, conscientious and experienced learners used the forum more interactively.

Other courses in the undergraduate nursing degree have used online teaching and learning to enhance on-campus courses since the development of *Bioscience on the Internet*. However, the biggest growth area for eLearning has been in postgraduate nursing courses. In 2001, the School of Nursing was approved to offer a clinical Master of Nursing. Nurses could enrol in courses to complete the award or could exit with a Postgraduate Certificate / Diploma in Professional Nursing Practice. Since 2003, a number of courses have used audio-conferences, video-conferences and online learning using Blackboard as a learning platform. This has made information accessible to nurses working in rural and urban areas who are unable to obtain replacement staffing or study leave to attend weekly classes or three day study blocks. Each course uses Blackboard in similar and differing ways. At a minimum all make information available such as course outlines, readings, website links and tutorial materials. The ways in which the courses differ is illustrated by the following case study of the *Clinical Inquiry: Evidence for Practice* course.

Case study two – *Clinical Inquiry: Evidence for Practice*

Nurses in any area of practice are constantly involved in decision making with patients and other health professionals about the best way to provide care. *The Clinical Inquiry: Evidence for Practice* course provides nurses with the opportunity to develop the skills required to

use evidence as part of clinical decision-making. Aspects of the course include:

- developing clinical questions derived from situations in practice;
- developing and undertaking a search strategy to obtain evidence relevant to a clinical question; and,
- synthesising critically appraised evidence to answer a clinical question and incorporating this into clinical decision making.

Prior to 2004, participants attended three 3-day study blocks to participate in structured activities in workshops and seminars. End of course comments provided suggestions for course delivery to suit a range of learning styles and situations in the future. Some participants found the level of concentration required during three days of workshops hard to sustain and wondered if it would be easier to learn the material in 'short bursts'. This fits with a cognitive theory of learning whereby locating activities into 'bite sized chunks' can enhance learning with information transferred from short to long term memory (Collis and Moonen 2001). Other participants felt that they needed more time to ponder and synthesise ideas than was currently available in the three hour workshop sessions offered during the study blocks.

From a constructivist perspective of learning, having more time to prepare and discuss ideas provides more opportunity to construct new understandings and thus the potential for critical thought may be increased (Salmon 2000). Other participants had struggled to secure sufficient study or annual leave in order to attend class and this was exacerbated for nurses working in remote areas who also had to allow for travelling time. At the end of 2003 the teaching team concluded that a move to blended delivery with online activities could address these points and was congruent with the focus of the course which requires accessing evidence via the internet. Consequently in 2004, the delivery mode of *Clinical Inquiry: Evidence for Practice* changed to incorporate eLearning with six online tutorials (20 contact hours) replacing the second 3-day face-to-face study block. The evaluation includes comment from 43 participants and is reported in Lewis and Price (2007). Key online learning activities were tutorials which:

- focused on different types of clinical questions and research designs (e.g. prognosis, diagnosis and screening, qualitative research);
- used the same structured format of: background questions relevant to the tutorial content; provided clinical scenario and question; provided research article and critical appraisal tool (see diagnosis and screening tutorial example Box 1);
- ran for a period of two weeks with designated participants responsible to lead the discussion which was facilitated by a lecturer; and,
- were terms requirements for participants to undertake in order to complete the course.

Box 1. Diagnosis and screening provided tutorial resources included:

<p>A clinical scenario adapted from July (2002) which provides the context to the critical appraisal and subsequent decisions to use the selected assessment tool (or not).</p>	<p><i>You are working as a district nurse. You are visiting Jack Spratt. He is a man with a diabetic leg ulcer. He is eating well, taking his hypoglycaemic medication regularly, his glucose concentrations are within a normal range. He lives alone since his wife died two years ago and his children live overseas. He comments that "his ulcer is taking for ever to heal" and that he feels permanently tired. You notice that he does not seem to take care of his appearance, nor seem particularly interested in world events. You wonder if he might be depressed and you want to use a simple assessment tool to assess this possibility.</i></p>
<p>An article reporting a New Zealand study using a two-question verbal screening test for depression.</p>	<p>Arroll, Khin and Kerse (2003)</p>
<p>An appraisal framework from Sackett, Straus, Richardson, Rosenberg, & Haynes (2000). with three key areas and associated questions</p>	<ul style="list-style-type: none"> • Is this evidence about a diagnostic test valid? • Does this (valid) evidence demonstrate an important ability of this test to accurately distinguish patients who do and don't have a specific disorder? • Can I apply this valid, important diagnostic test to a specific patient?

Reality of Learning

So, was learning online a reality? These perspectives were a timely reminder that online delivery is not a universal experience – it has multiple realities since each participant “will respond according to his or her individual needs” (Salmon 2000, 28). Lecturer course impressions from the 2004 evaluations confirmed the findings of Lewis and Price (2007) that: a) collaborative dialogue occurred within a community of learners; b) the level of critical thinking was more developed than in equivalent face-to-face study blocks; c) Salmon’s (2002) model provides one way to analyse course development and delivery.

The teaching team reviewed the delivery strategy for 2005. The purpose of the next section is to use Salmon’s (2000) five stage model of online teaching and learning to illustrate selected refinements to course delivery and the learning evident in participant discussions. It provides a framework to illustrate the way in which particular skills and learning develop as each stage builds on the preceding stages. In order of sequence the stages are: Access and Motivation, Online Socialisation, Information Exchange, Knowledge Construction, and Development.

Stage 1: Access and Motivation

Access to the site and motivation to participate are fundamental to online learning. A challenge for some participants in the 2004 group had been “variations in the IT skills capacity of nurses and the frailty of some telecommunication infrastructures” (Lewis & Price 2007, 143). In 2005 the initial face-to-face orientation session in the course was expanded to include step-by-step learning activities designed to support participants to enter and utilise the site in order to minimise anxiety and promote technological confidence. Resources included printed instruction sheets to navigate the site and activities utilizing links to materials and practice technical skills such as sending a brief posting or attaching a file.

Stage 2: Online Socialisation

As Salmon (2000, 28) notes, the online environment is an “alien world for many participants” and this particularly applies to many nurses aged over 30 who enrol in the course. They have not grown up with computers and have become ‘digital immigrants’ by necessity (Prensky 2001). The online environment does not provide visual and auditory cues which are available when meeting face-to-face. Therefore, participants have to learn with the guidance of the lecturer the ‘ways to be’ online; for example, accepted behaviours such as styles of posting (brief, lengthy or use of symbols to denote emotion) and responding to each other. In 2004 and 2005, the face-to-face orientation activities provided the opportunity to test out posting styles and gain a sense of group identity before participants began leading tutorials.

Respect for different views is fundamental to face-to-face postgraduate debates and it was evident that participants worked to sustain this in their online postings. For example, individuals thanked people for the previous comments which were then used as a platform to build on a new piece of information or question. Whilst Salmon (2000, 29) notes that "This stage [online socialisation] is over when participants start to share a little of themselves online" it is possible to view the process of socialisation as ongoing in response to new events and activities occurring within the group. For example, socialisation in the face-to-face world includes individuals observing others and then adopting some of those behaviours as they develop their roles and responsibilities within group activities. In the 2005 study group this was evident in the diagnosis and screening tutorial, when at the end of the first week of discussion Joanne posted a new discussion thread (Box 2). Her posting indicated that as a tutorial leader she had assumed the role of e-moderator, which was previously taken by the lecturers. She took responsibility to direct the focus of activities and learning within the discussion, which is akin to Salmon's stage 5 of Development (Salmon 2000).

Stage 3: Information Exchange

Information exchange is a fundamental part of learning and basis of stage 4 (Knowledge Construction) since it provides the basis to pose questions, consider other viewpoints and construct individual or shared interpretations. At the beginning of the diagnosis and screening tutorial, the discussion began with a quick succession of postings which located (transmitted) and confirmed new information which was then used for the construction of answers to the appraisal questions (see Box 3).

As Salmon (2000) notes information sharing can provide a sense of rapid access and connection with others. However, it can create information overload when "e-moderators and participants alike soon find that the 'messiness' of conferencing is in stark contrast to well crafted print or multimedia" (Salmon 2000, 30). In the tutorial, the volume of information was apparent when 91 messages were posted in the two week diagnosis and screening tutorial. As part of aiding participants to develop a strategy to manage the volume of postings, the orientation session included using the 'collect' feature on Blackboard to collate multiple messages. These then can be copied into a Word document that is saved and read at leisure to maximize learning without having to remain connected to the Internet. Lecturers encouraged participants to identify which information is relevant to their learning and which might be 'parked' for future review. This was described as the 'sip and dip' approach where a participant 'sips' some of the available postings and 'dips' into other postings at different times, as opposed to trying to digest in detail all the material in one session.

Box 2. Joanne directed the discussion and illustrated some of the cultural norms of posting that had been established by the group.

Thanks to all the class members who have contributed to our discussion, who have clarified and reinforced our appraisal or who have posed further queries and made us re-think some of our contributions so far.

So -

Can we apply this important diagnostic test to a specific patient?

Is it available, yes,

Is it affordable, yes, less time consuming than the next shortest test tool of 7 questions.

Is it accurate and precise in our setting?

What do others think?

Box 3. Information exchange in the diagnosis and screening tutorial

Comment	Posting
Marti started the appraisal discussion and asked if he had located the correct information	<p><i>Was there an independent, blind comparison with a reference "gold" standard of diagnosis?</i></p> <p>Answer, yes. The "gold " standard in this study was not specific to a particular test as described in the introduction, previous systematic reviews were not effective and were cumbersome and time consuming. However in this article the standard has been evaluated against the schedules for clinical assessment in neuropsychiatry - references 8 and 9 in the article. This seems to be the "gold" standard in this case. However in discussion the author describes a weakness of the study that there was no non-screened comparator. Is this relevant to the gold standard? Should I search the references to assess relevance? [...] I would appreciate some feedback on this question.</p>
Carla confirmed this and wondered to what extent the group needed to check information	<p>Hi Marti</p> <p>I agree with you that there was an independent comparison with a gold standard, presumably blind although not specified. I guess we take the author's word for it that the reference test is a valid "gold standard"...but I also wondered if we should be looking at the references to check it out.</p>
Joanne replied to confirm and expand the detail	<p>For referencing the two question screening tool against a gold standard I think that Arroll et al relied on both Whooley et al, and the US preventative services taskforce who between them evaluated 48 screening tools. The US Preventative Services did not recommend a screening tool but Whooley et al indicates that all screening tools returned similar results and recommended the two question instrument for use in primary care because of its simplicity.</p>
Christine agreed and identified a learning point	<p>Yes this is right, how time consuming it would be to have to research details for the gold standard in every study. It highlights to me the importance of clear description so the reader is clear about the detail.</p>

Stage 4: Knowledge Construction

Salmon (2000) perceives that in this stage the discussion is participative as individuals share and challenge views in order to construct knowledge. This was particularly visible when Kevin used earlier discussion and key concepts from the tutorial, such as positive predictive values, in order to construct a conclusion that he illustrated visually on a nomogram. He then applied to the situation whether the two-question verbal test could diagnose whether Jack Spratt had depression. This provided information for Christine who then used it as a platform to construct her own interpretation and request for guidance (Box 4), which led to clarification about the role of prevalence in clinical decision-making.

Throughout the tutorial there was opportunity for the facilitating lecturer to pose 'What if?' questions which encouraged participants to extend information for application into different situations. For example; 'What are the consequences of using a screening test which has a high rate of false positives?' and 'What are some recent examples that have been cited in the media?' This provoked discussion about the Gisborne Cervical Cancer Inquiry and the finger prick test for prostate cancer available from local pharmacies. It was evident in some of the postings that participants were demonstrating critical thinking which includes 'cognitive skills of analyzing, applying standards, discriminating, information seeking, logical reasoning, predicting and transforming knowledge' (Sheffer and Rubinfeld 2000, 7).

Stage 5: Development

Salmon (2000) proposes that this stage is grounded in a constructivist view of learning, where participants take responsibility for their own learning and may move beyond the topic area to include analysis of the process of online discussion. This stage was not as visible in the discussions as other stages. This might be a reflection of the requirements for information exchange and knowledge construction in order to complete the tutorial. However, moments occurred such as Sarah's comment when she extended the ideas well beyond the topic area to ponder conceptual links that were relevant to her own practice with older adults (Box 5).

The Experience in 2005

Participant comments (n=32) provide a snapshot of what the experience this year had meant for them.

- Tutorials brought increased confidence in the use of e-resources – starting out was quite scary.
- The chance to review information and then comment was valued.
- Access to material at any time of the day was helpful.
- The option to print and save information was favoured since the spoken word is ephemeral and cannot be revisited.

Box 4. Collaborative Knowledge Construction

Kevin posted an attachment which included a nomogram and explanation:

Assume that in New Zealand 3% of the population experienced some symptom of depression as our pre-test probability [...]. In applying the positive likelihood ratio (2.9) from the study we find the post-test probability that they were depressed to be 10% (see nomogram 1).

Christine responded rapidly to his posting:

I believe once I can work out nomograms they give me a quick clear indication of direction of treatment etc and thanks to the instructions to use nomograms and Kevin's examples I can see how to do it now. Regarding high and low prevalence I imagine that this would affect my decision on whether or not to use a particular diagnostic test. If the prevalence was high I might choose to skip the test. Would this be right?

Box 5. Extending beyond the topic and pondering the process of learning

Thanks guys for the great journey into diagnosis and screening tools etc. [...]

As an aside I have been doing some work on spirituality lately and found it interesting to note in McEwan (2004) the symptoms of depression among older women are given as feeling guilty, bitterness and hopelessness (Hood-Morris, 1996) and the symptoms of spiritual distress include anxiety, guilt, anger and despair (Harrison, 1993). There is a very close similarity between these symptoms [and those in the study of the 2 question verbal test] so is the patient suffering from depression or spiritual distress? I think this ties in nicely to all the answers to question 1 about using the tool and then if there is a likelihood of depression taking it further for in depth investigation. Kevin's info from the Ministry of Health [about a prevalence of 3%] had me intrigued because with my work I would say the opposite is true in elderly people i.e. most have some degree of depression, or is it spiritual distress???

Once again thanks for your hard work.

- Use of Blackboard means that computer maintenance activities are vital (e.g. spam filters and regular system scans).
- The disrupted Internet connections were frustrating.

Forty-three participants completed the course during 2004. Anonymous course evaluation indicated that: 21% favoured online learning; 72% found online tutorials beneficial for the development of critical thinking and appraisal skills; 33 % did not like the e-Learning medium and 28% found the number of postings overwhelming (ranged from 12 to 83 per tutorial). Whilst participants appreciated the environment some would prefer face-to-face learning if given the opportunity (Lewis and Price 2007).

Discussion

There have been several lessons learned over the past ten years. For example, learning new strategies such as those needed for online learning, e.g. Internet and email, discussion forums for sharing clinical examples and debating concepts, as well as problem-solving, on top of coping with challenging content, was inhibiting for students with time limitations. Additionally, becoming competent with computer technologies was an additional hurdle, and although online courses can overcome the issues transposed by geographical distance and work commitments, the students needed extra technical support; a factor reported by others (O'Neill 1998; Sykes 2003). As well as technical support students also needed support to make changes in the way they learned, as they were no longer expected to just receive information and assimilate it, rather they had to engage actively with the content and with each other in more self-directed ways. Phillips (2005) emphasises the need to plan and design a range of online active learning strategies which enhance feedback to the learners, because variation in the learning experience will cater to diverse learning styles which must exist in any student group. Additionally, the interactivity provided with feedback mechanisms (technology – online quizzes, student to student, or student to lecturer – discussion forum, email and chat) contributed to the quality of an online course (Phillips 2005; Hegarty 2004). Not only was the design important to the quality of a learning experience, but also the ability of the teacher to facilitate the learning, and learning to teach well in the online environment had its own challenges (Christianson, Tiene and Luft 2002). Lecturers needed to be more flexible in their approaches; for example, offering a range of learning methods and ways to communicate so that all students were given equal attention and opportunities to interact (Christianson et al 2002). The provision of innovative learning strategies such as portfolio assessments, however, was found to increase the time spent by teachers coaching students to use the portfolio method and in providing individual feedback, and time was a major factor influencing the uptake of eLearning by teachers (Hegarty, Penman, Brown, Coburn, Gower, Kelly, Sherson, Suddaby, Moore, 2005a). The

increase of time needed both for the development of online courses and for eTeaching, as well as the impact on workload have been found to be the main barriers to the uptake of eLearning; for teaching staff there was insufficient time left to learn the new skills required to become competent in using technologies associated with eLearning (Hegarty et al 2005a). Although, the researchers did not find that formal staff development courses and qualifications had a direct correlation with confidence for eTeaching, they did report a relationship between informal staff development and the building of capability for teaching in the online environment. Additionally, the researchers found that overall high levels of self-efficacy of eTeachers in using eLearning tools and methods related to “*confidence in their ability to teach well in a course that required them to use computer technology*” (Hegarty et al 2005a, 117). Additionally, Hegarty, Penman, Nichols, Brown, Hayden-Clarke, Gower, Kelly and Moore (2005b) reported that early adopters of eLearning tended to become engaged in online teaching and learning as a result of their high levels of self-efficacy with using computers and the Internet, as well as their willingness to explore and try new technologies. When the bioscience course was being developed for online delivery, the support for teaching staff in such an endeavour was minimal and informal, and relied on peer support rather than formal staff development; this type of support has been found to be very effective and also prevalent where teachers have high levels of self-efficacy in eLearning (Hegarty et al 2005a). Findings such as those reported by Hegarty et al (2005a; 2005b) were not available to the lecturers involved in the case studies reported here, but they will be useful to inform future lecturers involved in eLearning.

For some students online methods enhanced learning, but for others the environment was intimidating. For example, if students were posting information on Discussion Forums that others didn't understand, or if the information was extensive, there were students who began to feel quite insecure in their own knowledge and understanding of the topic.

Ellis, Torokfalvy and Carswell (1998) emphasise that online activities can suit various learning styles such as reflective, concrete and theoretical. The importance of integrating this insight with planning of course delivery is discussed by Collis and Moonen (2001). The case studies illustrate the ongoing refinement of course delivery, e-moderation and learning by participants and lecturers during the process. It is evident that the current reality of online learning brings benefits and difficulties which include:

- increased accessibility of learning for students, 24 hours per day;
- lack of confidence with technology which can limit learning opportunities;
- adaptation of materials to suit online delivery; and,
- staff developing online courses based on educational principles and refined in response to evaluations.

Although there is no one magic bullet for success in eLearning, there has been much written about the importance of quality online materials and frequent interactions between teachers and learners, and the relationship between relevant staff development, self-efficacy in eLearning and sound educational design (Hegarty 2004; Hegarty 2005a).

Conclusion

As well as lessons learned in the past ten years, these case studies also illustrate how courses can be designed to offer learning opportunities that assist participants with different learning styles studying in rural and urban contexts. These experiences support the premise that online learning is a reality which varies for different participants. As such it provides another medium for learning which does not necessarily replace face-to-face or individual teleconferences with lecturers, rather it is another strategy that can be used in planning course delivery to maximise learning.

For many students, studying online is very challenging, particularly if they have little experience in using computers. Even if students are interested in trying out new strategies for learning, and have plenty of support, constraints such as time can impact on their ability to fully engage. The key learning from these case studies is the importance of flexibility, both in the strategies provided for learning and also in the methods used to communicate with students. Online learning has both benefits and difficulties, and the experiences described in this article illustrate how important it is to take a dynamic approach to the design of the learning materials, and to pay careful attention to providing a high quality learning experience for both participants and lecturers.

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