scope

Contemporary Research Topics

Learning and Teaching: 2009

Scope: *Contemporary Research Topics (Learning and Teaching)* is peer-reviewed and published annually by Otago Polytechnic/Te Kura Matatini ki Otago, Dunedin, New Zealand.

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

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An online version of the journal is available at
http://www.thescopes.org/flexiblelearning/index.php
ISSN 1179-951X (Print): ISSN 1179-9528 (Online)

Submissions for *Scope (Learning and Teaching)* are invited from those involved in any aspect of teaching and learning with a focus on blended learning. Submissions should be sent in hardcopy and electronic format by 31 July for review and potential inclusion in the annual issue to the Editor, Scope (Learning and Teaching) at Otago Polytechnic/Te Kura Matatini ki Otago, Private Bag 1910, Dunedin, New Zealand, email: thescopes@tekotago.ac.nz . Please consult the information for contributors below and the hardcopy or online versions of this issue for examples. Peer review forms will be sent to all submitters in due course, with details concerning the possible reworking of documents where relevant. All submitters will be allowed up to two subsequent resubmissions of documents for peer approval. All final decisions concerning publication of submissions will reside with the editor. Opinions published are those of the authors and not necessarily subscribed to by the editor, or the institution.

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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Printed and bound: University of Otago Print, Dunedin, New Zealand.

Cover image: by Rowan Wernham

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Learning and Teaching:
November 2009

REFLECTIONS ON RECIPROCITY

Professor Leoni Schmidt and Terry Marler

Kia ora!

This is the first edition of Scope (Learning and Teaching) which has arisen from Scope (Flexible Learning) – and therein lies a tale. The world of pedagogy is moving fast in the twenty-first century, but not necessarily in a straight line. The tedious and circular arguments over definitions of open learning, flexible learning and blended learning are slowly subsiding as it is realised that these are all subsets of the concept of *ako* – reciprocal learning and teaching, the experience of everyone involved in education, whether formally or informally.

The linear progression that does seem to be occurring in tertiary education is from a lecture-format delivery mode towards a socially constructivist model, with more opportunities for student-centred learning[1]. In many cases this does involve technologies, but often all that is required is a greater attention to learner needs and attributes, which may have shifted in recent generations. Hence the increased use of problem-solving, game-like activities, and a range of media to engage students – not new, by any means, but perhaps with more evaluative knowledge and thoughtfulness than previously. Often the path towards student-centred learning requires no more than a recognition of already-existing opportunities in informal settings; in fact, the distinction between learning in the community and learning in a formal institution is losing its boundary – arguably a temporary 19-20th century industrialised world distinction[2]. On the other hand, the blurring of these boundaries may prevent us from recognising the value of each; understanding the balance between formal and informal learning in appropriate settings can only further the process of lifelong learning.[3]

Accordingly, a commonality to be found in the articles in this edition is that of the overlap of formal and informal learning, Some of the articles explore the capture of informal learning moments and their subsequent use in formal contexts, while others speak of the value of playful experiences to inform learning. A traditional and time-honoured framework for both formal and informal learning is critiqued as interfering with real learning in one article. Technological tools and their uses are described in some of the papers, and yet the concepts of relationship and reciprocity seem also to form a common thread, whether it be the *ako* between facilitator and candidate, sports team members, or chef and apprentice.

Catriona Timms-Dean introduces us to a new word – *glocal* – in her discussion of flexible practices to promote reflection in a Masters level paper. She explores the concept of learner choice within traditional institutional restrictions, but also discusses the cultural importance of face to face relationship in teaching and learning. She suggests the involvement of open educational resources to enhance "glocal" uptake and to connect students of indigenous studies across many nations.

Out of a necessity to interact with clients at a distance, facilitators of the Centre for Assessment of Prior Learning at Otago Polytechnic have seen the similarity of their role to that of eModerators. **Christine McConnell** and her colleagues explore the relationship between facilitator and candidate, and its gradual transition towards ownership by the candidate during the facilitation process. The formalising of knowledge gathered informally lies at the heart of the RPL process, but this group have gone further along the path of digital immigration than many of us in order to enhance the accessibility of the process.

Mobile technology is being used in creative ways in many traditional areas, including that of the master-trainee relationship. In all trades, there are valuable moments of practical learning which are often imperfectly stored in the memory. However, visual learning can be stored, and **Adrian Woodhouse and Maxine Alterio** describe an award-winning example of the use of short video clips of cookery skills to enhance learning and assessment practices. Learners were themselves involved in the production of video resources, and peer learning soon became a feature of the process. The practicalities of the use of mobile technologies are well documented, but the theoretical underpinning of the resultant transformation seen in the *ako* of the commercial kitchen is not ignored.

In "Artdata" **Tony McKinnon and Hadley Hodgkinson** argue for research towards renewing conventions within teaching. Their focus is on level 4 courses and they challenge the model approach followed by many visual arts educators in New Zealand and Australia, whereby " ... the conceptual and visual interest of the student is formulated at the outset through the study of others". They would rather have the student's work at the centre of the teaching and learning process and they argue convincingly for this approach.

Angela Blachnitzky contributes an article entitled "Interactive Objects: A Successful Project in An Interdisciplinary Design Basics Course" in which she describes a particular project in her teaching of design basics. She concludes that part of "the success of the project was that design basics were not only taught but also researched, owned and experienced by the individual students within their chosen design disciplines …"
"Using Smartphones and Mobile Web 2.0 to Create a Mobile Computing Platform for Tertiary Education" is a contribution from a team: **Isaac Flitta, Thomas Cochrane**

and Roger Bateman. They point out that smartphones are tools which can be "utilised within tertiary education to create context-independent collaborative learning environments …" beyond the classroom or lecture theatre. The article illustrates the potential for teaching and learning with smartphones by analysing students' responses to a particular third-year design project.

Thomas Bley and Ralf Hebecker report on a first-year project within design studies, a project entitled "Calvinball – Design a Sport". Their article presents three contemporary design education models in order to explain the context within which the project was developed. Further to this, a detailed description and analysis of the project illustrate the tenets deployed through developing the work with the students. Experiential learning took place and this is demonstrated by the way the authors unfold the project for their readers.

After some production delays, this edition of Scope has enabled the authors to tell the stories of their changes in perspective of the learning and teaching process. These experiences will hopefully inspire reflection on the value of informal learning and its capacity to build relationship and community, whether mediated through technological tools or more traditional methods. We sincerely thank the authors for their contributions and encourage those who would like to join this debate to contact the editors for the next edition.

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INTERACTIVE OBJECTS: A SUCCESSFUL PROJECT IN AN INTERDISCIPLINARY DESIGN BASICS COURSE

Angela Blachnitzky

Design Basics Education

Design schools worldwide have adopted the Bauhaus teaching concept of the preliminary course, in which common interdisciplinary basic design instruction precedes and prepares for degree-specific, project-based education. The Bauhaus was very distinct in its pedagogical goals and precisely specified the main aims of the preliminary instruction as developing students' design ego and sharing a basic understanding of design as a foundation for the instruction on form and work that will follow.[1]

The Bauhaus pedagogy is still influencing basic design curricula today. Many schools are teaching common two-, three- and multi-dimensional basic elements and principles, because they underlie any art and design discipline. A recent international survey by Boucharenc, in which he analysed basic design teaching practice in 118 design basics courses from 26 countries, found out that the fundamental themes of point, line, space, colour, structure, material, proportion, etc., are still taught in the conventional segmented manner or step-wise.[2]

A design basics course has to cater for mixed groups of students with diverse backgrounds in regards to skills, knowledge, motivation and thinking style. Ideally, a differentiated teaching model, as described by Tomlinson, should enhance students' attitudes to learning and themselves, and act as an extension of the curriculum. It should take individual backgrounds into account in order to maximise the learning potential of every student.[3]

One main differentiation model, which is predominant in art and design schools, involves grouping students within different programmes such as communication design, industrial design, photography and media design. In this "different classes/ different tasks" model, students are already in their first year of tertiary education, mainly working on discipline-specific tasks and with discipline-specific materials (Figure 1). While this model seems to be effective in regards to students acquiring the maximum discipline-related knowledge in their limited study timeframes, it seems not to be suitable for students who are not yet sure which programme will be the most suitable for them. Students in this model also miss out on getting to know the basics of other disciplines and opportunities to take part in design discussions involving a wider audience.

Figure 1: Grouping model – Different classes/Different tasks.

The opposite model is a basics course, which allows students to be together in combined interdisciplinary classes, and in which all students work on several different tasks from various disciplines. This is the "one class/different tasks" model (Figure 2). The advantages here are the broadened minds of the students in regards to understanding other programmes, and their informed understanding in choosing further areas of study. An additional benefit for the school is the cost-related efficiency of reaching a larger group of students with a smaller number of lectures. A critical factor in this model is the motivation of individual students. Some students might already be very aware of the tasks they like doing and, if they have to learn something that they consider irrelevant, they might easily become counter-productive and discourage the learning experience of the whole class.

Figure 2: Grouping model – One class/Different tasks.

In practice, the gap between the programme-differentiated model on one hand and the integrated-programme model on the other is filled by various combinations of both models. Often schools decide to offer a certain number of "core" courses, which are compulsory either for all students or for specific programmes, and to provide additional optional "elective" courses.

Interactive Objects: The Project

While I was teaching at the design department of the Munich University of Applied Sciences in Germany, the design school started its newly formed Bachelor degree, with 105 students and disciplines consisting of communication design, industrial design and photography. Media design and illustration were possible specialisations within communication design. As the department followed the integrated-programme model, I was challenged to teach interface design basics to this large group of individual students from all design disciplines. I was the course coordinator and the only tutor, with eight hours' (9am–5pm) contact time per week.

Building on my media design teaching experience with students from faculties other than design, I decided first to get to know the individual students better, in order to decide which project might be most appropriate. Very quickly it became clear that the students were extremely diverse, not only in their design interests but also in regards to their computer and software know-how. While some students had already been developing websites for their own customers, other students had no relevant computer experience at all. I could have started teaching these less able students software skills or required them to learn a great deal on their own, but somehow I wanted all to be able to get started in designing something straight away, without having to spend any time on the process of learning software – which I did not consider essential for photography and industrial design students anyway. Rather than following the integrated-programme model and just doing my bit with one interface design-specific task, I developed a more holistic task which allowed students to stay motivated by being able to work within their own disciplines, but also taught them the basics of interface design in a wider sense, as well as interaction design. I call it the "one class/one task/different solutions" model (Figure 3).

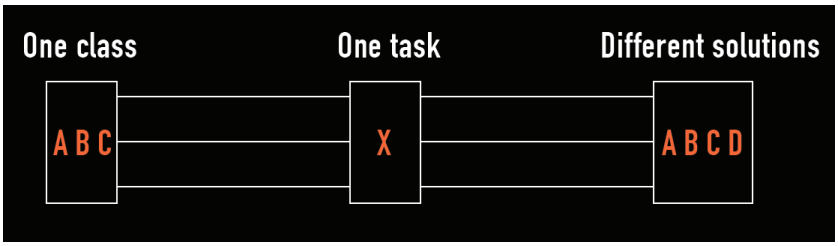

Figure 3: Grouping model – One class/One task/Different solutions.

I used the "one-class/one-task/different-solutions" model to develop the task to design "interactive objects." This task included the making of one or more interactive objects, which were to be interesting to look at and fun to use. Students could choose either a perception phenomenon or a design principle from the areas of their own interest as the subjects for their "toys for designers." The design challenge was to combine form

and function in an innovative way, in order to make the user curious enough about the object so that he/she would want to interact with it, but also to make the object stable enough that users could not easily break it.

On the first day, as I introduced the task, I brought lots of interactive children's toys along, like flip-books, lift-the-flap-books, spin-tops and other small games and puzzles. In addition, I showed books and websites dealing with visual perception phenomena and optical illusions. Interestingly, this first session was enough to create a high level of interest in the project and to give the students lots of ideas. These ideas continued to be discussed in the following sessions, in which I made individual appointments to support every single student or small group of students (in the case of group work) in their individual direction and work progress.

In the third week of the seven-week project I already felt that all the students were very excited about their own designs and were looking forward to fine-tuning and finishing their prototypes, so that they could go off and actually create the final objects. At that stage, the students were engaging to a high degree in individual and independent research, based on their subject areas, and were keen to learn more about the relevant design basics.

In the fourth week, an additional motivator helped students to move on quickly with the making of their objects: we were given the chance to have top billing on the University of Applied Science's website for four weeks. This took the form of an interactive online advent calendar in which, every day, a certain number of different objects were showcased. In addition, we exhibited the actual objects in the foyer of the main university building. An additional challenge for the students was to provide names, photos, descriptions and instructions for use for their objects. They were required to present the objects themselves in the exhibition and benefited from the experience of "real" user testing. The exhibition was entitled "Jedes Türchen ein Objekt – und zwar ein interaktives" (Behind every advent calendar door there is an object – in fact an interactive one).

Figure 4: Interactive objects produced by photography students.

Figure 4 shows interactive objects that were designed by photography students. Left image: A face was photographed three times in different situations. The eyes, mouth and nose were sliced up in such a way that the various features can be put together in different combinations by the user. It is astonishing that all the "faces" produced seem so different; it is hard to believe they were taken of only one person. Middle image: The user slides different-coloured transparencies on top of each other to understand the making of a colour photograph. Right image: A camera obscura was reconstructed. At first the camera did not work, but then the student realised that the user needed darkness in order to see the image.

Figure 5: Interactive objects produced by communication design students.

Figure 5 shows interactive objects designed by communication design students. Left image: Different-coloured patterns on transparencies can be moved on top of a paper pattern with complementary colours to create a mix of patterns. Middle image: Various letters from different font faces can be rotated within a roll. Through a window, details

of the letters can be seen – the user thus learns how much detail needs to be provided for a single letter to be recognised. Right image: In this object simultaneous contrast can be experienced. The squares can be removed from their underlying colour base, compared and replaced on top of another colour.

Figure 6: Interactive objects produced by industrial design students.

Figure 6 shows interactive objects designed by industrial design students. Left image: A puzzle made from cubes enables different basic patterns to be constructed, but also allows various pattern combinations through its modular construction. Middle image: A three-dimensional puzzle in which three of the five Platonic solids – octahedron, dodecahedron and icosahedron – need to be rotated into specific positions in order to fit into the correct slot. Right image: An object that is pre-folded but that can be manipulated by the user in order to produce interactions of pattern, structure, light and shadow.

Figure 7: Interactive objects produced by media design students.

Figure 7 shows interactive objects designed by media design students. Left image: The interactive Benham-Twister – users can regulate their individual viewing speeds in order to see colours where in reality there are only black and white lines on a spinning disc. Middle image: Various cut-out patterns can be rotated to produce a light projection with changeable colours. Right image: An object that allows the viewer to experience how a film is made – various images are rotated at different speeds to produce a fluent animation.

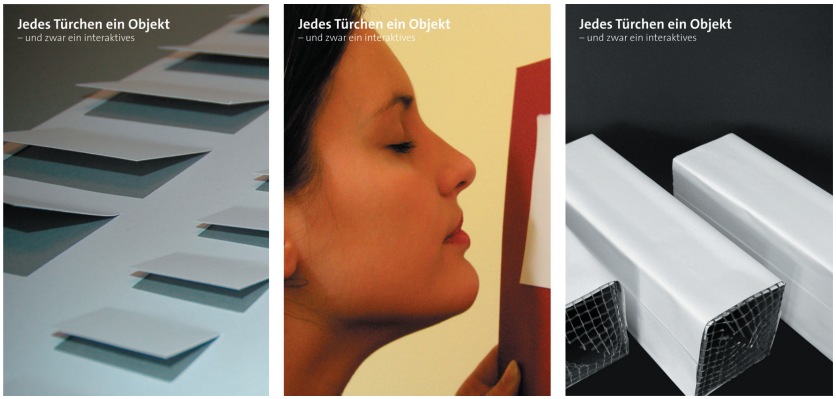

Figure 8: Interactive objects produced by various students.

Figure 8 shows interactive objects that did not fit into predefined categories. Left image: Students explored the sounds that various cut-out shapes and sizes of paper make when touched by a finger. They cut out a large number of paper shapes and mounted them on several walls in the exhibition. The user could experience a symphony of paper-sounds. Middle image: Students explored our ability to smell and differentiate between various odours. Right image: Users could touch different letters and numbers placed in a fumble-cylinder and try to identitfy them.

Conclusion

In all, the project resulted in a wide variety of interactive objects. The spectrum spanned flip-books, feel-boxes, changeable images and interactive sound-toys. Part of the success of the project was that design basics were not only taught but also researched, owned and experienced by the individual students within their chosen design disciplines or in other disciplines. Another aspect was the quality of the objects. They were impressive not only through their formal aesthetics, but also because they made perception experienceable and brought physical phenomena to life.

All the student projects can be downloaded from the Internet at:
http://www.blachnitzky.co.nz/munich_students.pdf.

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USING SMARTPHONES AND MOBILE WEB 2.0 TO CREATE A MOBILE COMPUTING PLATFORM FOR TERTIARY EDUCATION

Isaac Flitta, Thomas Cochrane and Roger Bateman

Today's smartphones are mobile multimedia computers – in Nokia's words, "It's what computers have become." Smartphone manufacturers have seen the potential of partnering with online social software (Web 2.0) sites (e.g., Flickr, YouTube, Vox, Ovi) to produce mobile computing platforms to capture and share our daily lives with friends and family, "anywhere, anytime." These tools can be utilised within tertiary education to create context-independent collaborative learning environments. Pedagogical design of learning experiences using mobile Web 2.0 allows a tutor to create rich learning environments for students beyond the classroom or lecture theatre.

This paper illustrates the potential of these technologies by analysing students' responses to a third-year product design project, which transformed a traditionally paper-based learning journal into an interactive, collaborative, online e-portfolio using mobile Web 2.0 technologies. Examples and scenarios are shown to illustrate how the implementation of mobile Web 2.0 technologies have impacted and transformed some of Unitec's Bachelor of Product Design courses. Students were provided with a Nokia N95 smartphone, a Bluetooth folding keyboard, and a 1GB 3G data account. They created an online eportfolio, and used the smartphones to capture and record learning events and ideas from a variety of contexts. The learning outcomes included the development of a far more media-rich and critically reflective collaborative experience than was previously possible using traditional approaches. Students were dynamically involved in new knowledge and co-creation, facilitating an explicit social learning environment.

BACKGROUND

This research project is concerned with appropriating the benefits of Web 2.0 anywhere, anytime, using mobile Web 2.0 (Web 2.0 services that are formatted for use with mobile devices) and wireless mobile devices (or WMDs). This appropriation of Web 2.0 tools within a social constructivist pedagogy facilitates what has been termed "pedagogy 2.0."[1] The emergence of these technologies has challenged many educators to attempt to understand the extent of their influence on student learning environments.

Definitions of mobile learning (mlearning) have focused initially upon the mobility of the devices and, more recently, the mobility of the learners. Sharples proposes a form

of Laurillard's conversational framework,[2] excluding the teacher, to define mobile learning by its contextual and informal learning characteristics: "The processes of coming to know through conversations across multiple contexts amongst people and personal interactive technologies."[3] Recent research into mlearning has highlighted the contextual "awareness" of mobile devices,[4] and the ability to "span" learning contexts.[5] However, what is unique about WMDs for mlearning is their ability to bridge contexts – i.e. to provide ubiquitous connectivity independent of the context of use, thus linking multiple contexts into the learning environment, continuing learning "conversations" via social presence and communication technologies. The WMD's wireless connectivity and data-gathering abilities (e.g., photo-bloging, video recording, voice recording, and text input) allow for bridging the on- and off-campus learning contexts – facilitating "real world learning." In particular, the context-bridging and media recording capabilities of today's smartphones make them ideal tools for mobile blogging. Smartphones allow a user to send text, photos, video and audio directly from the site of recording to the user's online blog.

Lave's situated learning model argues that learning as it normally occurs is a function of the activity, context and culture in which it occurs (i.e., it is "situated").[6] Social interaction is a critical component of situated learning, and learners become involved in a "community of practice." Collaboration and communication with peers and lecturers can be maintained in any context, using WMDs with a variety of communication technologies (email, online LMS, instant messaging, audio and video conferencing, SMS, MMS, mobile phone calls, etc).

Research Methodology

The basis of the research methodology used for this project is "participatory action research," and forms part of a wider research project investigating the potential of the mobile Web 2.0 as a phenomenon constructed by both lecturers and learners in the context of tertiary education. Yoland identified the key characteristics of participatory action research (PAR) as follows: *the researcher is a participant; the researcher is the main research instrument; PAR is cyclical in nature, involving action followed by reflection followed by informed action; and it is concerned with producing change.*

The wider aims of the research are to:

1. identify the key factors in integrating Wireless Mobile Devices (WMDs) within tertiary education courses
2. assess the challenges/advantages that these disruptive technologies present to established pedagogies
3. assess the capacity at which these WMDs can be utilised to support learner interactivity, collaboration, communication, reflection and interest, and thus provide pedagogically rich learning environments that engage and motivate the learner.

4. assess the extent to which WMDs can be used to harness the potential of current and emerging social constructivist e-learning tools.
5. support learning environments that embed multimedia literacy.

CASE STUDIES

This paper focuses on the effects of mobile Web 2.0 on the pedagogical development of the product design students and staff at Unitec, Auckland, New Zealand. The project was designed to show relevant constructs based on the experiences of the students and lecturers and their reflections as determined through actions.

The methodology involved uses a combination of structured surveys and semi-structured focus groups with both students and lecturers to enable them to reflect in detail on their experiences of using the technology.[7]

Third-year Design Project Paper

The overall aim of the final-year design project paper is to consolidate the application of design criteria to design process through facilitating an individual, final-year design project. The mobile Web 2.0 technologies were used to facilitate some of the assessment deliverables of the course. Students used blogs and e-portfolios to record pictures, videos and articles related to their project to and reflect on their design process. These were made available to the lecturers to provide direction, support, guidance and advice for design project management and address any relevant design issues. Students were assessed on this evidence to direct, organise, manage and document an entire final-year design project. Three major New Zealand companies participated in the final-year design project: Scion, a New Zealand Crown Research Institute providing expertise for biomaterials development; Design Mobel, designers, manufacturers and makers of beds; and Queensberry, designers and manufacturers of luxury wedding albums. The project evolved around the development of product design teams formed between the students and these external clients. The project design brief was to develop a commercially viable product for the assigned client. Student blogs and other Web 2.0 tools were used to record and reflect on their design processes, and were made available to the client for comment and interaction.

New Product Commercialisation (NPC) Project Paper

The NPC course assignment is a group project and requires multiple participations from group members and as well as from students in the class. Every week, each student is required to find an article that raises issues related to NPC in magazines such as *Design and Business, Idealogy, Bright and Unlimited*. The article may be directly relevant to the description of a particular NPC or it may simply raise issues that can be discussed in terms of NPC – e.g., the impact of imports, a clever marketing initiative, or tax changes for R&D. Using a blog as a means of communication, the student must write a synopsis of the article followed by their own interpretation of the points raised

(500 words per post). The synopsis and comments are published in a blog along with a link to the original article, either as a web-link or the magazine's details for the submission.

The major deliverable in this course was the creation and maintenance of a blog that provides a concise overview of successful product development and commercialisation processes. The blog must reflect the importance that design plays in this process. Collaboration and interaction between group members are important aspects of the project – each student works with their group to refine their understanding of their chosen article and any additional comments on it using the "comments" feature of each blog. This process is repeated weekly. It is expected that each member of the work group will be familiar with the selected article and be able to assist the author in reporting back.

MODUS OPERANDI

Students and staff were each supplied with a Nokia N95 WiFi/3G smartphone and folding Bluetooth keyboard. Students used the smartphone for recording and uploading evidence of their design development process and models to their Vox blog (http://www.vox.com) and other online media sites such as YouTube for video. The smartphones are also used as a communication tool between students and with teaching staff for immediate feedback via instant messaging, email and RSS (Rich Site Summary, a format for delivering regularly changing web content) subscriptions. Students are responsible for paying for a voice call and text message account, but are reimbursed the cost of a 1GB/month 3G data account.

The project is supported weekly by a "community of practice"[8] which consists of the course lecturers, the student volunteers, and the researcher who is also the "technology steward"[9] for the community of practice. An interactive concept map illustrating the integration of the mobile Web 2.0 technologies with the smartphone is available at http://ltxserver.unitec.ac.nz/~thom/mo- bileweb2concept2.htm.

STUDENT LEARNING EXPERIENCES

An example of student blog posts for the NPC paper and comments from their classmates are set out below. The post (Figure 1) and comments (Figure 2) show significant engagement and critical reflection by multiple parties and within multiple contexts. The blog facilitated the posting of student reflections on examples of new product commercialisation and the extra dimension of peer critique of these ideas, with the ability to respond and enter into a collaborative "conversation." The use of WMDs (smartphone) facilitated searching for examples anywhere, anytime, and the ability to upload supporting media directly to the student's blog. Lecturers viewed and commented on student blog posts using their smartphones and Bluetooth keyboards, and subscribed to student blogs via RSS. However, students tended to read each other's

More Desktop Manufacturing

Springwise (August 5, 2008).
http://www.springwise.com/style_design/more_desktop_manufacturing_for/

INTRO:

For my Week TWO I have written about the evolving way that customers are becoming more involved in the design (and manufacturing) process. As an NPC topic, the important aspect discussed is the role of the designer within that process, much to do with the current generation of young people. And as far as product designs are concerned, it touches on designers embedding and implementing levels of customisation available to the user.

SYNOPSIS:

This article talks about the ability for consumers to design and manufacture their own one-off products. It mentions New Zealand company Ponoko, which lets people upload their designs to be put through the laser cutting process using 2D vector images, and then constructed into 3D. If they're good enough these user designs can even be sold to others through Ponoko.

As the use and technology of 3D printing becomes more prevalent, the more people are beginning to find out about it, not just limited to designers and other product related industries. More often now, 3D print makers are beginning to target a wider audience, making themselves more and more accessible to a wider audience of the everyday consumer than ever before.

MY THOUGHTS:

By making these quick manufacturing processes more accessible to the general public, is really tapping into the 'make-it-yourself' trend. A trend not limited to physical objects, but widely seen in the entire concept around the Web 2.0, looking to greater interaction and participation resulting in user based content.

Its all about letting people doing what they want and having options which they can control. Especially the growing buying power of current Generations Y and Z, where through the products they own they're always looking to be different, to distinguish themselves from others, and essentially 'fight the power'. This has help spark the global rise in creative expression, a movement which Idealog Magazine refers to as a "renaissance revisited."

Customization of products has been somewhat limited in the past with whats in the shop is all that you get. Now more and more companies are allowing people to specify different colours, materials, patterns, etc, in their products. Letting people 'design' the entire products themselves looks to be just the next evolutionary stage in the cycle, and in the future it wouldn't be surprising to see people create designs with more complexity as technology and the world changes over time.

For companies that produce their own products, it seems they'd need to consider allowing their consumers the creative freedoms and ability to take that product, and do with it what they want. Whether that be altering the specifications before they receive the product, or as more of an aftermarket exercise, the flexibility need to be there.

With global factors such as money getting tighter as well, with growing prices across the board the slow down in mass consumerism is also likely to see people more careful with their purchases, and if you can give them options and 'exactly' what they want, then that's the only edge you need over the competition.

Figure 1: Screenshot of student NPC blog posts.

blogs on their laptops. This is an example of a socially constructed use of the technology rather than an affordance of the technology itself.[10] Students were encouraged to subscribe to each other's blog via RSS feeds to enable automatic notification of new posts for discussion. Additionally, Vox features a weekly "neighbourhood update" email service that students could receive and read on their smartphones. This facilitated a social constructivist learning environment.

In another scenario, a student used the smartphone's camera to record still images and video podcasts outlining significant and iterative steps in the design process of a snow kite harness. This allowed the student to reflect and critique his design work and

design methodology using visual media, rather than simply creating a text-based book or online journal. This process took place over the six-month product design project. Video clips were recorded from the design studio on Unitec campus, from the testing locations, and from test flights during two ski-field trips in the South Island of New Zealand. The course lecturers were able to follow the student's blog posts anywhere, providing design advice and guidance. Footage of the most significant design steps taken over the course of the student's design project were later edited and compiled into a ten-minute video published on YouTube (the maximum video length allowed on YouTube) for showcasing and sharing with the wider community. This illustrates the affordances of mobile Web 2.0 tools to facilitate user content creation and sharing, in addition to context-independent (ubiquitous and seamless) input from lecturers.[11]

In another illustration of how students used the mobile Web 2.0 technologies to deliver their assignment from virtually any context, four of the students decided to go on a mid-term "research" trip to the snowfields of Queenstown to test their design prototypes. However, this coincided with a delivery of a scheduled presentation on the NPC assignment outlined above. In order to keep the presentations on schedule, the students used the smartphones provided to record their NPC presentations and uploaded them to their corresponding Vox blogs for the rest of the class and the tutor to view and comment on, in almost real-time. To "prove" they were in Queenstown they also blogged mobile videos of their campervan and Queenstown scenery!

During the course of the 2008 academic year, teaching staff were away on business or holidays overseas (in Japan, the UK, Spain and France) as well as several New Zealand centres outside Auckland (Rotorua, Tauranga, Napier and Hastings). While they were away, staff used mobile Web 2.0 technologies to stay in touch, create a virtual design studio and pass on relevant information to students from virtually anywhere.

During April 2008, a staff member visited Kyoto, Japan, to participate in a conference that took place during the teaching semester. The use of mobile Web 2.0 technologies allowed real-time text, video and still images of the conference, various sites, design features, and local architecture to be easily and immediately uploaded to the staff member's blog for students to see and share.

In a second case, another staff member was required to make a trip to the UK and France, taking valuable time away from teaching. At this stage, students were well advanced into their projects, and having a staff member overseas posed a potentially difficult situation for them and the programme. The use of mobile Web 2.0 technologies allowed the staff member, his colleagues and students to stay in regular contact, sharing comments and project concerns – in effect, a "virtual studio situation" was created. When the staff member returned, there was no need for time-consuming catching-up to take place and students were not significantly disadvantaged by his taking time away from studio teaching.

KEY CHALLENGES AND RECOMMENDATIONS

The integration of mobile Web 2.0 technologies into the Bachelor of Product Design has highlighted several key issues.

Unfortunately, the benefits of these technologies are not gained without difficulties. Using these technologies placed new and increased time, organisational, and pedagogical demands on the lecturers. Perhaps the most difficult of these challenges is the question of providing constant feedback to students using the technology. Once a project is created and mobile Web 2.0 technology is embedded in the context of a course, lecturers often finds themselves responsible for supporting the resulting postings. While this may not pose a significant problem the first or even the second time it occurs, it can be difficult to manage over the course of a year. This requires a change in time management and a refocus on regular formative feedback, rather than the traditional summative end-of-project feedback and assessment procedures. When this is implemented, the benefits for students and tutors in being continuously engaged in the projects is realised, creating a much lower reliance upon end-of-project presentations and summative assessment.

Another challenge associated with the introduction of mobile Web 2.0 is the number of courses within the programme adopting the technology. The major design project is focused on individual student work. In contrast, NPC course assignment is focused on a group project and requires multiple participations from all students. It is important, however, that lecturers continue to provide support appropriate to the type, scope, size, and pedagogical input of the technological aspects of the projects introduced into courses. The extra management load thus created for lecturers may lead to a reduction in the quality of the final product – potentially reducing the quality of the experience for the students.

A final challenge associated with using this technology is that it must be consistent within the programme. Many of these projects are initiated by lecturers keen to use the technology to enhance the students' learning experience. However, leaving it to individual lecturers to instigate such projects adds another layer of complexity and challenges for time management that may discourage others from using the technology. Creating a course-wide strategy for the integration of mobile Web 2.0 technology within the entire programme supporting these innovations is now a goal for 2010.

CONCLUSION

The use of the Web 2.0 technologies has demonstrated the potential to create an increase in student engagement with the learning environment. Higher levels of student reflection and critique were achieved compared to those previously seen with more traditional assessment procedures. "Anywhere, anytime learning" – learning that is context-independent and context-bridging – has been facilitated and used appropriately, even in unforeseen scenarios.

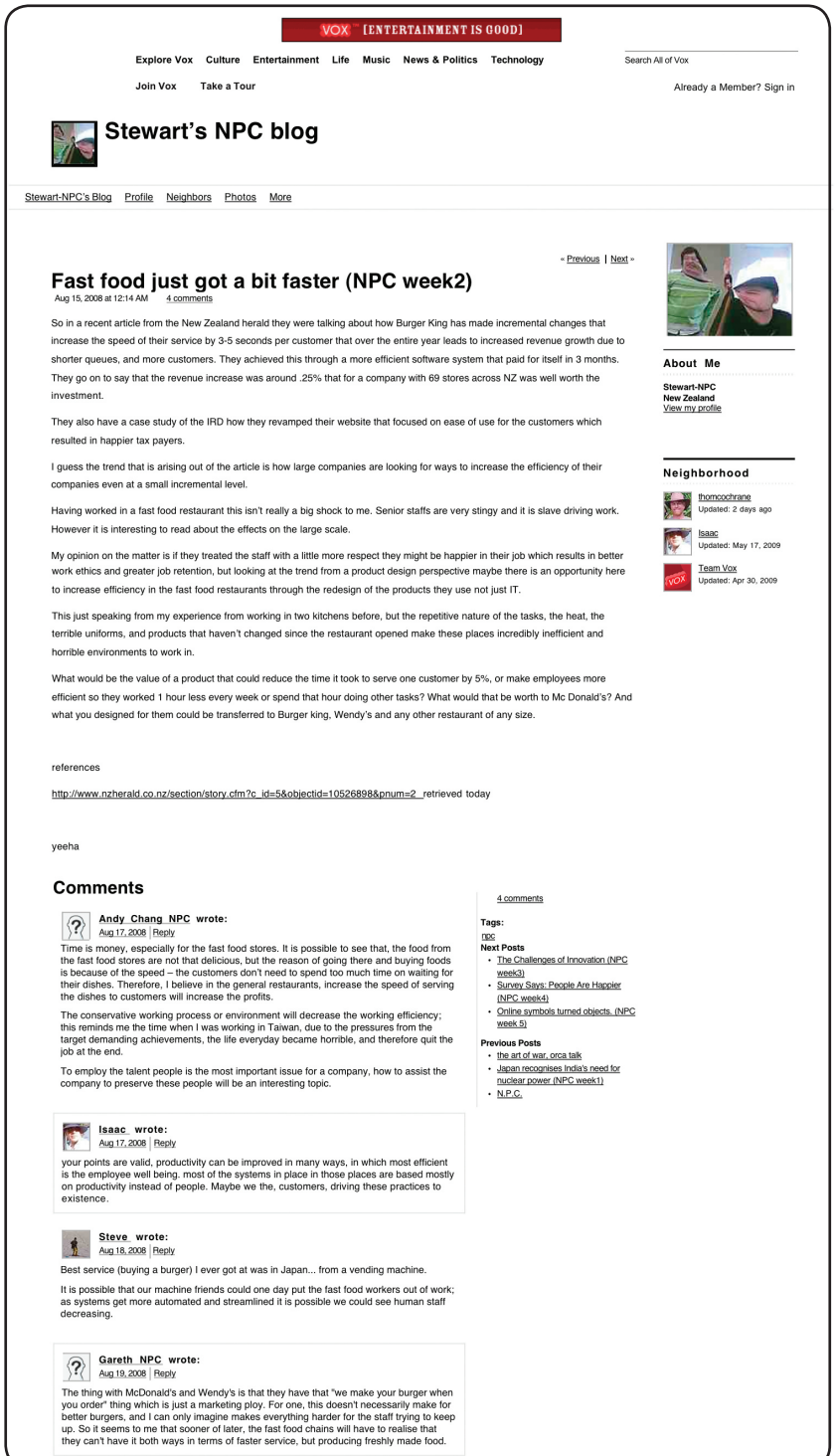

Figure 2: Screenshot of student NPC blog and comments.

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ARTDATA

Toni MacKinnon and Hadley Hodgkinson

This paper will offer an outline of our own ideas in response to the pedagogical orthodoxy that prevails in New Zealand. It identifies conventions within teaching practice that could be reviewed through research. We would like to see a closer examination of practice in art education, and the aim of this paper is to call for qualitative and quantitative research to be at the centre of this analysis. Integral to this research, we suggest, is the imperative that institutions and the departments within them explicitly identify approaches that they take in the delivery of their programmes.

In 2009, in reviewing our programme in its inaugural year, we began to look at other institutions, both here and in Sydney, to find examples of level 400 courses. Our hope was to find a fresh approach, an innovative programme that we could emulate. We found ourselves observing that, despite details of difference, approaches were much the same in Sydney as they were in New Zealand. It occurred to us that, while teachers would talk about notions such as "avoiding a house style" or "developing a critical approach," the differences within these contexts were in fact insignificant. Learning from example was not going to provide solutions to failings in our programme; it was going to perpetuate the status quo.

A somewhat cursory search revealed a paucity of pedagogical research or analysis. There was little if any statistical evidence that what we did was serving the best interests of our students. It seemed evident that there was little interrogation of structure or course content; there was a general acceptance of the status quo. For us, fundamental questions remained unanswered and any real justification of our approach was not provided by hard evidence.

In her paper "Self Directed Learning in the Visual Arts,"[1] Kerry Williams uses the term "enthnomethodology" when she challenges our existing teaching practice in tertiary art and design education. Williams says that we make sense of what it is to teach by observing the approach that other teachers take. We concentrate our attention on what we share with other teachers who perpetuate the methods applied, producing our mutually shared understanding of what art teaching is. Williams proposes that as teachers we make unqualified assumptions about what is best practice, assumptions that are based on that which we do and not on that which we know.

Confirmation that our assumptions are correct is found in the artworks that our students produce. Good work "proves" good learning, and the work that students produce becomes the justification – if we need some – that our methods are valid. This is to say that we define our teaching practice through our understanding of that which has gone before us in both the secondary and the tertiary teaching sector and that our own approach is predicated on this. A move away from this deterministic model might see us interrogating the success of this approach through statistical evidence of student performance in future contexts.

In part, we question the notion of established practice as model. Inherent in this is the manner in which we compel the students to gaze on existing precedents as a starting point for their art-making in both the classroom and the studio. The idea of the "artist model" as the central teaching tool in New Zealand schools began with a University Entrance prescription in the mid 1970s written by a visionary art educator, Ted Bracey. Following on from the ideas of Eisner, Bracey sought to elevate the place of art education in academia through the introduction of contextual research. Framed in terms of what he called "knowing that"[2], in its original context Bracey's approach intended to open teachers' and students' eyes to a world of artistic rigour with a glance at the international scene, and to give them leg up out of an inward-looking art experience of self-expression and creativity that prevailed in New Zealand schools at the time. Bracey's ideas have been developed in New Zealand art schools for 30 years and have remained the cornerstone of our teaching and assessment processes.

It is not the concept of the artist model that we contest, but rather the way in which "knowing that" is facilitated. We propose that the notion of the artist model or art context as central to the development of "artistic interest" is problematic. This "model"-based approach to art education is the unchallenged and primary method by which most art education takes place in New Zealand and in Australia. It takes the form of "knowing" in primary schools, the artist model in secondary art, the art proposal or proposition in our scholarship exam, "research contexts" in tertiary undergraduate study, and the "formation of the creative production project" in postgraduate study. At each level, the conceptual or visual interest of the student is formulated at the outset through the study of others.

In recent years this method has been interrogated with greater rigour in the context of Masters and PhD study. In working with students to identify their interests and conceptual premises, art and design programmes have for all intents and purposes rolled out the artist model approach in the development of a proposition for the production of artefacts. We see a direct link between what a Masters student goes through when they are compelled to formulate a written proposition at the outset of their Masters project and what we do with a Year ten student when we preface a painting brief with the work of Shane Cotton or a graphic brief with David Carson.

The potential outcome for the student's work is limited at the outset. Our contention is that, if we continue to preface the production of artwork with the art of others, we prioritise imitation, relegate innovation and fail to widen the gene pool.

In his case study of the PhD programme at Coventry School of Art and Design in England, Scrivener argues the inconvenience of what we might call the research topic, and questions the project proposal. He describes its position at the start of a project as "problematic":

> The notion of theory and practice, the idea of a coherent body of knowledge that prescribes practice, may be problematic in the context of visual arts. … It may be more useful to consider practice as an activity that garners and exploits mental and physical resources through reading, thinking, imagining, looking, reflecting, drawing and painting, etc. to achieve goals relevant to a given domain such as fine art. … Each practitioner garners some of this material; however it is not necessarily garnered for the purpose of a particular piece of work, it may be garnered to build and refine one's mental resources, that is, it does not necessarily determine the work.[3]

Naturally, we can acknowledge that the art student at any level is rewarded when their own work is brokered by identified precedents. In this way they eliminate the potential for "bad" work by matching their outcomes to the identified established practice. The question here is: can bad artwork be good research? Or perhaps, can good art be bad research?

An alternative to the conventional approach is to put the student's work at the centre of the proposal design. This is not to prioritise the intuitive but to allow production, the artefact, to generate the initial ideas and frame up the issues within the body of practice. Research is used to provide insights into existing work, providing the context for reflection, reasoning and rationalising the outcomes of the project itself.

To some, it is clear that the use of established precedents as "model" is convenient in rationalising the subject of assessment. It is undoubtedly rational to measure the success of a project through the relationship that the project sustains between the intention and the artefacts' communication of that intention. This makes sense and subordinates the assessor's own interests or connoisseurship to the author's intention or interest. It is far easier for an assessor to identify an artistic intention in the work of a fledgling or postgraduate art student when that intention is sited in the work of established practice. As art educators, our own art knowledge comes into play and, as assessors, we quickly make connections which advantage the student who is operating within these established contexts.

However, perhaps there is more value in placing greater emphasis on an understanding of the methods involved in artistic practice. We suggest that it is here that the real learning is situated for students at 400 level, and we suspect that this applies to students and practitioners at all levels. An understanding of the methodological approach provides insights into the artist's interests and, by way of understanding the method, much is understood about the rationale behind the resulting production.

In her essay on educational practice in a tertiary context, Williams proposes that when we teach in relation to a given artwork we undermine the active properties within it. "Teachers," she says, "fail to acknowledge the complexities of the properties inherent in an art work."[4] There are many and complex underlying but active properties at play here. With reference to Foucault in relation to text, Lacan in relation to the gaze and Danto in relation to the politics of art, Williams argues that, by delivering educational outcomes through the artworks of others, we undermine these complex properties. Without proposing that we need to gain an understanding of these standard philosophical ideas, it seems fair to say that, if we use the artefacts themselves as the text for an educational paradigm, we run the risk of missing the point.

Using methods of art practice rather than artworks as texts would seem to minimise the risks apparent here. However, if this is indeed the case we have no right to assume it. The fact is that there is so little in the way of existing research into the effects or success of our collective practice that we simply don't know that this is the case.

If as a profession we were asked to face the facts, chances are we would struggle to know which way to turn. Where are the facts? We all accept that pedagogy is the art or science of teaching. But it is mostly art and little science. We can find no research in New Zealand that pertains to our subject – nothing that contains facts or figures, nothing that can substantiate our current educative practices, nothing that points the way to a more invigorated and informed student. There is little doubt that, as teachers, we reflect on our own teaching practice and evaluate its weaknesses and merits. We appreciate the different dimensions of situations and experiences, and the way they relate one to another. We draw upon and make use of a wide array of information. However, we also have to be able to place our individual experiences and understandings in a wider context – which, we would argue, is a context that should be provided by research outcomes.

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FACILITATING RECOGNITION OF EXPERIENTIAL LEARNING: FLEXIBILITY IN TOOL SELECTION

Christine McConnell, Willie Campbell, Rayna Dickson, Piers Heaney, Robyn Hogan and Kate Vercoe

We are a group of practising facilitators who are privileged to work with candidates who seek the award of whole qualifications and have broad and deep knowledge gained through experience, rather than through formal education. "APL is about transforming personal experience derived from the work context into 'learning'".[1] We call the process of taking candidates on a journey from experience to conscious knowledge facilitation. We can find no better description that this, using Rayna Dickson's words:

> Facilitation is a process that involves preserving each individual candidate's unique experience and understanding while preparing and challenging them to test that against a pre-determined set of outcomes.

It was developed as a face-to-face process where the facilitator engages with the candidate to develop their ability to articulate their understanding in order to move it from intuitive knowledge to conscious knowledge.[1]

Reflection on our work as facilitators led to an acknowledgement that the key to successful facilitation is the candidate-facilitator relationship. The process starts with relationship building and this continues throughout, from first meeting, to disengaging once assessment has been completed. We understand facilitation as having four or five phases – described below.

A: Engagement

The supportive relationship begins here. It encourages and affirms the candidate, recognises their vulnerabilities, and lets them feel safe enough to take risks. It enables them to start by describing their roles, experiences, projects and case studies.

B: Reflection

We encourage the candidate next to step back, up or out from their experience so that they can reflect on it, because reflection leads to the recognition of knowledge. The emotionally supportive relationship is particularly important here because of "the emotional concomitants of reflection" for many candidates.[2] While the candidate begins to build confidence in their ability to know, they may also be searching for themselves and inner confidence. Vulnerabilities may surface as awareness progresses.

C: Reframing
In this phase we challenge the candidate and take a more directive role in reviewing and reframing the candidate's experience and knowledge to meet the outcomes of the qualification. The emphasis is on further critical reflection and analysis. New learning may also be introduced here, if necessary to meet outcomes. This can be achieved, for example, by identifying appropriate learning methods and resources such as readings or workshops for the candidate to undertake. We then support the candidate to integrate their new learning into the whole.

D: Taking Ownership and Final Shaping of Assessment materials
Here the candidate is confident in their ability to 'know'. They recognise their knowledge and see what is required to proceed to assessment. Progress may be rapid. With the anticipation of imminent assessment, candidates may experience anxiety and doubt. Again the supportive relationship is vital.

E: Assessment, Debrief and Disengagement
Throughout this phase the facilitator is still actively supportive and emotionally engaged with the candidate. Reports from assessors are given orally to candidates, in most cases, at the end of their assessment. If assessment is complete, the facilitator-candidate relationship brought to an end.

Boud, Keogh and Walker cited in Moon describe the following "elements" in "re-evaluating experience" [2]

association … relating new data to that which is already known

integration … seeking relationships among the data

validation … determin(ing) the authenticity of the ideas and feelings which have resulted, and

appropriation … making knowledge one's own.

They relate these non-sequential elements to a constructivist view of learning, and for us they also relate to facilitation.

Although we talk about phases in facilitation, we are also clear that it is not a linear process. There is a start point and an end point, but the phases may be circular, or zigzagging; iterative or spiralling – anything but one after the other! We are clear that the phases are usually necessary and can be identified, just not in any prescribed order. In addition, the stronger the facilitator-candidate relationship, the more uncertainty or turbulence can be tolerated.

We also consider that Kolb's Experiential Learning Cycle (Figure 1) relates to the facilitation process. Moon's diagram is adapted below to show the cyclic concept of reflection and recognition of learning and knowledge.[2]

Figure 1: A version of Kolb's experiential learning cycle, adapted from Moon.[2]

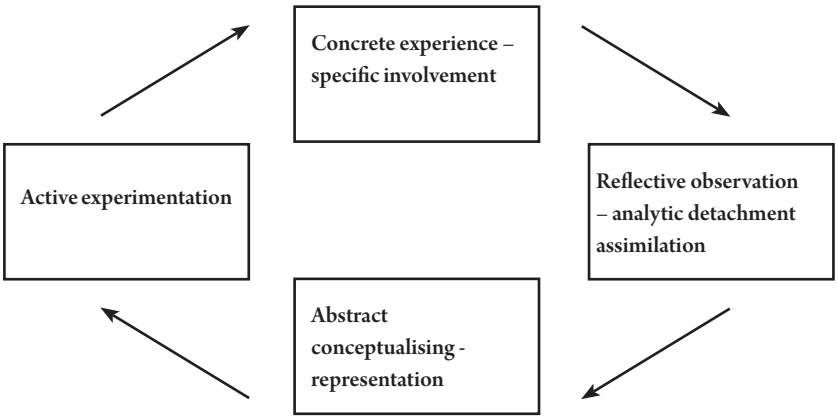

Figure 2: Suggested relationship between facilitation process and reflective learning models proposed by Boud et al, and Kolb cited in Moon. [2]

CAPL facilitation process	Boud et al's constructivist learning elements	Kolb's experiential learning cycle
A: Engagement, hunting and gathering	Association	Concrete experience - described
B: Reflection	Integration	Reflective observation
C: Reframing (possibly new learning)	Association (with new learning)	Reflective observation
D: Taking ownership	Appropriation	Abstract conceptualising – shaping owned knowledge into abstract models
E: Assessment and Disengagement	Validation	Active experimentation – candidate can apply their models to new experiences

The CAPL facilitation process is flexible by definition because the candidate is at the centre of it, rather than a timetable or an academic prescription.[1] The usual mode has been face-to-face and one-on-one (although in some cases group workshops have been facilitated). We are now challenged with the practicality of this mode when many of our candidates are not able to meet us face-to-face.

As facilitators we own the facilitation process and feel morally obliged to make it work effectively. Inherent in this intention is our choice of the most suitable communication tools to use for each candidate. The main tool is ourselves (as the conscious professional self), including our intentionality,[6] our creativity, active listening, drawing out of knowledge, and linking candidates to the right outcomes. When to use a particular communication tool is related to the phase that the facilitation process has reached, and also to the strength of the trust and confidence developed between facilitator and candidate. We also select the best role to play in relation to the candidate's needs and the strength of the relationship, such as Supporter, Motivator, Challenger, Guide.[2] With distance candidates we use the telephone and e-mail more, and candidates supply us with written, auditory and visual materials on which we provide feedback that in turn leads to progress.

Figure 3: Facilitator's conscious use of tools in relation to candidate's progress

	Facilitation Process A: Engagement	Facilitation Process B: Reflection	Facilitation Process C: Reframing	Facilitation Process D: Owning	Facilitation Process E: Assessment
	Choice of conscious professional self as e.g. Encourager, Motivator, Director, Consultant, Educator, Supporter, Challenger, Guide (Moon, 1999)				
Tools	Oral communication	Oral communication	Oral communication	Oral communication	
	Whiteboard	Whiteboard	Whiteboard		
	Paper, pens, pencils	Paper, pens, pencils	Paper, pens, pencils		
	Post It Notes	Post It Notes	Post It Notes		
	Diagrams, mindmaps	Diagrams, mindmaps	Diagrams, mindmaps		
	Workbooks	Workbooks			
	Skills-based c.v.	Development of skills matrices	Readings, workshops, websites for new learning		
	Stimulus questions	Stimulus questions			
	Telephone	Telephone	Telephone		
		e-mail	e-mail		
	Free writing	Free writing	Editing	Editing	

It is clear from Figure 3 that we are exercising more choice early in the process and that as the candidate takes more ownership and control of the articulation of their knowledge and skills, we step back and the choice of tools becomes theirs. Vygotsky would refer to such a process as guided competence.[9] When there is a work to be done, we work together and place a solid scaffold around the candidate so they become more competent in our presence. As their competence grows we reduce the guidance, and eventually the candidate reaches readiness for assessment – on their own.

As we are used to working with candidates face-to-face, we often experience frustration when we cannot see our candidates, or at least relate synchronously. Because of this frustration we are ready to find ways of enhancing distance facilitation. We are now considering social networking tools, Skype, Wikis, computer conferencing, blogs, and video conferencing.

Prensky pointed out the differences between students who have grown up with computer and digital technology (called "Digital Natives"), and many of their teachers who have not (called "Digital Immigrants").[3] We CAPL facilitators are all Digital Immigrants with "accents" that show us up when we communicate with Digital Natives. For example we might print out our e-mails, or post someone hard copy instead of sending them a link. Prensky recommended channelling learning through computer games. As Immigrants, learning to feel comfortable and confident with digital tools takes a while. When VanSlyke replied to Prensky's idea, he concluded, "Rather than focusing on the development of computer applications that teach, I am in favor of creating better tools for teachers, and then helping teachers become better users of the tools".[8] VanSlyke's attitude is more inclusive than Prensky's when applied to us as facilitators.

Because our candidates have needed time to gain the very experience that we shape to match qualification outcomes, they are often Digital Immigrants themselves. We have to be learner-centred when we consider digital tools. Do candidates have access to computers with sufficient connectivity? Do they know how to use the tools? How can we be sure that we are including them and treating them equitably?

The value of participants reflecting on experience during computer mediated conferencing (CMC) is promoted by Salmon.[4] As such reflection encourages learning, Salmon suggests that the e-moderator of CMC has a role in facilitating opportunities for participants to reflect. The parallel of the facilitator role with the e-moderator's role is obvious. With Salmon's five-stage model of e-moderating our need to be practitioners who are confident and familiar with CMC tools is underlined.[5] Hand-holding and guidance from technical experts is needed at first, but is reduced as learners progress. We are the learners here, as many of our candidates will be.

In summary, we have presented a reflective snapshot of ourselves and our practice as we work towards enhancing our distance candidates' facilitation experience. We contemplate Siemens's idea that our very thinking is changed by the tools we use.[7] Just as digital cameras have reshaped our concept of the art of photography, so will using digital tools reshape the facilitation process. The benefits lie in what a tool allows us to achieve, not just the tool itself.[10] As we learn to use new tools we become more capable and confident, as well as more discerning about the right tool to choose at a particular phase of the process. As a community of practitioners, we are committed to sharing our experience with digital tools,[10] and becoming more flexibly responsive to our candidates' needs.

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Short biography

Each of the authors is a practising Facilitator in the Centre for the Assessment of Prior Learning at Otago Polytechnic. This article is the result of a series of reflective focus meetings and was shaped into its final form by the senior author, Christine McConnell, who is also a Senior Lecturer in the School of Applied Business at Otago Polytechnic. Her post-graduate qualifications are in teaching and human resource management.

HE AKORANGA PĪNGORE TĒNEI? TEACHING ABOUT LANGUAGE REVIVAL ON-LINE – IS THIS FLEXIBLE LEARNING?

Catriona E. Timms-Dean

Language revitalisation can be described as a glocal phenomenon that affects many communities, both Indigenous and non-Indigenous, around the world. Glocalism has been described by Roland Robertson as the amalgamation of *global* and *local* to make a blend, and refers to the transposing of local realities over global experiences.[8] So, language revitalisation can be described as inherently glocal, as local communities experiencing language shift are finding global solidarity in facing the threat of language death. This article will discuss the genesis and development of MAOX 415 Te whakahauora i ngā reo taketake (Indigenous language revitalisation), a 400-level paper taught as part of the Master of Indigenous Studies in Te Tumu, School of Māori, Pacific and Indigenous Studies at the University of Otago (UO) in Dunedin, New Zealand.[9] This will be considered in terms of its applicability to flexible learning and teaching practice, both now and in the future.

Narrative

In 2000, having recently been admitted to the University of Otago doctoral programme in Māori Studies, I was asked to be a student representative on the newly established Indigenous Studies Working Party (ISWP). ISWP had been launched to consider the possibility of developing Indigenous Studies as an undergraduate or postgraduate major at UO. It was chaired by the then Dean of Māori Studies, Tānia Ka'ai and included membership from across the UO, predominantly from the Division of Humanities.

My main role as a student representative was akin to that of a research assistant. I was charged with undertaking two pieces of research to support ISWP in deciding (a) what level the programme should be pitched at, undergraduate or postgraduate, and (b) whether there was demand for such a programme. Firstly, I completed a survey of international examples of Indigenous Studies, primarily through a methodology based on internet searches or 'googling'. The main finding was that the majority of international Indigenous Studies programmes were offered at Masters level. My second research task was to develop and summarise a survey of interest in Indigenous Studies. The target group for the survey was 200 and 300-level students enrolled in papers which had been identified as containing an Indigenous Studies component, for example, POLS 309 Comparative Indigenous studies.[13] The survey found that an overwhelming number of the students surveyed (approximately 80%) were at least mildly interested in studying Indigenous Studies, but that the majority would prefer

the subject to be available at the undergraduate level. Despite this finding ISWP went ahead with proposal to offer the programme as a postgraduate option as the theories and models associated with Indigenous Studies was considered more appropriate to a higher level of study.

My final role as a member of ISWP was to write my own course to be included as an elective in the programme. This was based on my doctoral research topic, Indigenous language revitalisation. I first taught the paper in 2005 as a face-to-face option with a class of four. The following year I was asked to reconfigure the paper to be taught wholly on line via BlackBoard. The result was MAOX 415 Te whakahauora i ngā reo taketake (Indigenous language revitalisation) which I taught for the second time as a distance paper in semester two, 2008.

The Master of Indigenous Studies (MIndS) was first offered in 2003 comprising one core paper, INDS 501, and two electives from an offering of two per semester (four per year). Students also need to complete a supervised research report as the culmination of their studies in the programme. Te Tumu describes the programme as 'a postgraduate course that focuses on issues and research pertaining to Indigenous peoples, particularly the reinvigoration of Indigenous cultures and the investigation into the continued oppression of Indigenous peoples'.[9] Initially, the programme was offered face-to-face but in 2006, the MIndS was first offered as an distance programme.

Now I will discuss the structure and assessment of MAOX 415 with a view to consider the applicability of this to flexible learning practice as the course stands today.

MAOX 415 Te Whakahauora i Ngā Reo Taketake (Indigenous language revitalisation)

MAOX 415 aims to undertake a critical examination of language decline and revitalisation in Aotearoa New Zealand, Hawai'i, Éire Ireland, and Alba Scotland. The paper is delivered via BlackBoard with learners supported by a course reader (hard copy), course outline (hard and soft copy), on-line discussion board, and communication via email, telephone and face-to-face (if available). Each week's learning is on a topic-based approach with reading material provided through the course reader. Students are encouraged to research beyond the confines of the course reader and a number of other resources, particularly in the form of web links, are made available via the BlackBoard site. Students are also encouraged to consider case studies other than those focussed on in the course. For example, when I taught the paper in 2006, one of the students was particularly interested in revival of Samoan language among the New Zealand-born Samoan community in Dunedin.

There are five assessment tasks which students are required to submit. Two of these

assessments are due weekly and require learners to engage with the course material provided for each week's topic. This provides a large proportion of the structure of the course as there is no synchronous communication built into the course. One of these weekly assessments is a research diary, which is a record of each learner's thoughts. This is expected to include a critical reflection of the weekly readings and an analysis of how these are culturally or personally relevant. The other weekly assessment is a discussion board entry which requires learners to contribute to the discussion threads that are posted by the lecturer on the BlackBoard. Learners are also encouraged to add their own discussion threads on aspects of the course that are relevant or of interest to them.

The other three assessments are one-off tasks that have set submission dates throughout the semester. The first of these which is also the first assessment that learners undertake is a group task which requires learners to work in small groups to develop a definition of language revitalisation using their own experiences and ideas, as well as available literature. This is worth 10% of the course's final mark.

The last two assessments are linked and comprise the main focus of the course assessment. These are a research proposal and a subsequent research report. The research proposal requires learners to provide a outline of their proposed research report topic. This must include an abstract, a summary of their proposed research methodology, an indication of their intended medium of delivery (essay or report format, oral presentation or other format), and finally a bibliography of proposed resources. The research proposal provides a number of opportunities. Firstly, it allows learners to practice the art of writing a research proposal, an important academic activity utilised in relation to submission to programmes such as the Doctor of Philosophy, and much employed in relation to research funding and academic publications. The research proposal also gives me the opportunity to provide support and guidance to learners as they embark upon their major piece of research for the course. I am able to vet intended topics and ensure that they meet the requirement that the research topic includes a comparative element. It also gives me the chance to suggest any resources or support that may be available for learners to access. Finally, it allows me to identify any research methods which may require ethical approval and to facilitate this process with the learner(s) involved. The research proposal contributes to 10% of the final mark for the course.

The final assessment for the course is the research report. This is a major piece of work which is worth 40% of the learners' final marks for the course. The main restriction in terms of topic is that the report must include some point of comparison, whether that be between case study languages, or between sites of language revival (for example, a comparison of mainstream and Indigenous education initiatives).

All five assessments have been developed to provide opportunities for success and a good learning experience, both socially and academically. The weekly assessment tasks have been designed to engage the learners in the course material. The group task assessment aims to encourage learners to interact and build relationships with each other. The research proposal provides an opportunity to develop strategic learning around the writing of a research proposal. The final assessment seeks to give learners an opportunity to explore an aspect of language revitalisation that particularly interests them. Furthermore, it may also allow them to select a research topic that is related or can contribute to their MIndS research report.

Therefore, here is a course that is taught through BlackBoard using asynchronous communication and a combination of weekly and periodic assessments, both formative and summative. But does this constitute flexible learning practice? As stated by Collis and Moonen "it's not just about distance".[3] So if not distance education, what is flexible learning? And is MAOX 415 an example of it?

Flexible Learning Practice

Flexible learning is characterised by "the provision of choice for the learner in terms of at least some of the following: time, place, content, learning style, assessment types, and collaborative or independent learning". [17] This is further extended by Collis and Moonen when they state that "flexible learning is a movement away from a situation in which key decisions about learning dimensions are made in advance by the instructor or institution, towards a situation where the learner has a range of options from which to choose with respect to these key dimensions". [3] They also define some dimensions of learning flexibility in a table (10) which includes the following elements:

- Flexibility related to time
- Flexibility related to content
- Flexibility related to entry requirements
- Flexibility related to instructional approach and resources
- Flexibility related to delivery and logistics

Another aspect of flexible learning practice worthy of consideration in relation to MAOX 415 is flexible assessment. As stated by Collis and Margaryan, "options are offered to learners, not only about time and place and pace of learning, but also relating to… forms of assessment".[2] Wood and Smith describe flexible assessment as "assessment that involves some kind of choice on the part of the student" [18]. So, rather than giving students a prescribed assignment question that students must respond to or expand on, flexible assessment could either give learners some choice between assignment options (for example, 'answer one of the following…') or could allow students to prescribe their own topic or question to explore. It could also give students some control over how they answer the question, by allowing for a choice of media. This can in turn feed into meeting the needs of different learning styles in the classroom.

Clearly then, flexible learning is not a simple strategy to implement. It is multi-faceted and as it is reliant on "learner choice", it is necessarily dependant on the values and priorities of learners as opposed to those of teachers.[3] So, does MAOX 415 constitute an example of flexible learning practice? If so, in what ways does it meet this definition? And how could flexibility be incorporated further in the course's design?

MAOX 415 and Flexible Learning Practice

I believe that as MAOX 415 stands today, it already encompasses some aspects of flexible learning practice. Firstly, there is flexibility in terms of time for interacting with the course. MAOX 415 is a distance paper that utilises asynchronous communication via email and discussion board threads. This allows for learner choice in terms of where and when they access information.

The second aspect of flexible learning practice that the course (and the MIndS programme) offers is in terms of entry requirements. According to the programme's degree regulations, "an applicant who is not a graduate may be considered on the basis of alternative qualifications or satisfactory training and experience in management, administration, or leadership in indigenous communities. Such preparation must be equivalent to a degree, and the applicant must provide evidence of ability to undertake advanced level academic study".[9] This allows for recognition of prior learning in terms of a learner's aptitude and ability to complete the programme.

The final way the MAOX 415 allows for flexibility is in terms of assessment options. The research proposal and research report require students to develop and research their own research topic or question. There are some restrictions in that all reports need to include a comparative element. This can either be between two case study languages or between two similar platforms of revival. Despite this restriction, there is added learner choice in that learners are encouraged to look beyond the four case study languages presented in the paper and to consider other case study languages or examples of language revitalisation which may be personally or culturally relevant to them. The motivation for this level of choice for learners is that, as Masters students, they can focus their research in terms of their overall research topic which is required for the MIndS, or in terms of their own research interests. This makes the MAOX 415 research report more relevant to them and/or applicable to their other studies.

The other flexible assessment option that MAOX 415 students have open to them is the medium in which they choose to present their work. Options include written work (essay or report format), oral work (presentation or video recording), or other format (such as a website or multimedia presentation).

In terms of other aspects of flexible assessment, this is also included in the weekly discussion threads, as students are encouraged to add their own threads to the

discussion board, rather than simply relying on those posted by me as the instructor. So, clearly then, MAOX 415 can be described as an example of flexible learning, particularly in relation to assessment and also as a distance paper which utilises asynchronous communication approaches. How, though, could this flexible approach be strengthened in MAOX 415? What further aspects of flexible learning practice could be utilised? And what problems and/or benefits could these approaches bring?

Looking to the Future…

Here we have a course with some aspects of flexibility already built into the delivery. What now can be done to further increase this as an example of flexible learning practice? First of all though, I want to consider the issue of whether this should be done. Why is flexible learning so important? My first stop in answering this question was the UO website to look at their official documents.[13] Although the *University of Otago strategic direction to 2012* does not mention flexible learning, it does state that there will be "a continued commitment to distance learning, especially at the postgraduate level" [12] (sec 3b, par. 4). This is taken further in the *Distance learning plan 2005-2007* which recommends this mission statement for distance learning at OU: "The University is committed to flexible delivery of quality distance learning, which is responsive to the changing needs of the learner and society".[10] This document also uses Moran and Myringer's (1999, 60. cited in [17]) definition of flexible (and open) learning as "approaches to teaching and learning which are learner-centred, free up the time and space, place and methods of learning and teaching, and use appropriate technologies in a networked environment".[10] So, UO does have a commitment to flexible learning, although this seems to be considered as a synonym or an appendage to distance learning. My primary reason for making this assumption is the lack of reference to the flexible learning in the UO *Teaching and learning plan 2005-2010*.[11] Nevertheless, flexible learning is one of the important issues in tertiary education today.[18] For this reason I will consider how MAOX 415 could be developed to provide more flexibility in terms of learner choice. In particular, the inclusion of podcasts and open education resources (OER) into MAOX 415 will be considered.

The first way I would like to include more flexibility into MAOX 415 relates to the lack of opportunities students have to visually interact with the lecturer. Previously when teaching MAOX 415 in 2006, I included a virtual chat session via the chat applet included in the BlackBoard software. This allowed for synchronous communication and also an interactive focal point for the course. At the time, the chat component attracted 10% of the final course marks as a sweetener in terms of getting students to engage in this medium of communication. However, a number of problems were experienced with this including individual accessibility issues. For this reason and others, I have decided to forego the virtual chat element in favour of weekly discussion board entries, which will attract the same 10% weighting for this year's course intake. Other communication will take place via a weekly email to participants informing them of the weekly requirements.

There are a number of issues with the lack of face-to-face or real-time communication in the course. It is fairly clear to me that without these elements, there may be some flow on effects in terms of a lack of the social elements of learning.[6] Clearly, there is a difference between seeing and hearing someone speak, and reading what they have written on paper, in a discussion thread or in an email. Another important consideration with regards to this and in light of the course's association with Māori Studies is the idea of *te kanohi kitea* (the face that is seen). Traditionally and up until recent times, this concept and the associated idea of *kanohi ki te kanohi* (face-to-face interaction) has been a preferred medium of interaction in Māori and other cultures, including those of the Pacific Islands. Although in a recent seminar, Mason Durie refuted this in relation to younger Māori in particular[4], there may still be some concerns in regard to this cultural preference in the context of MAOX 415. Of particular note is the fact that many of the learners who have enrolled in the course, both past and present, fall into the category of 'mature' students, a group which may prefer *te kanohi kitea*. For this reason, some inclusion of this aspect should at the very least be provided as an option, particularly in light of flexible learning's focus on student choice. This demand is further strengthened in terms of providing resources that cater for different learning styles, including those of visual and aural learners.

Having decided that the ability for students to see me and hear me would be beneficial, I would like to provide a weekly podcast to learners in addition to the weekly email that I currently send to all participants. The current email provides a weekly diary of events, an outline of the week's topics and associated learning and assessment tasks, references and links to other resources beyond the weekly readings, as well as any other relevant information or reminders about upcoming occurrences. The idea of a podcast seems to be the most appropriate to me in that all that is required for learners to access these is a computer and broadband internet connection, which are already requirements for course. Furthermore, podcasts have advantages over other similar formats such as Skyping or video-conferencing, in that podcasts do not require learners to purchase other equipment such as webcams or headsets. Finally, UO have recently announced the launch of Otago on iTunes U as a means to providing learners and the general public with access to video material from and about OU. iTunes U is described as "a dedicated area of the iTunes Store featuring free lectures, lab demonstrations, campus tours, and more" [15] (sec. 1, par.2). This would allow students the option of accessing the podcast from their home computer and could be added to the weekly email as a link. Alternatively, students could have the option of receiving either or both forms of communicating weekly events and reminders, via email and through iTunes. This would cater for the idea of student choice implicit in the concept of flexible learning practice.

The second element of flexible learning practice I would like to include in MAOX 415 is that of Open Educational Resources (OER). According to Wikipedia, OER

are "educational materials and resources offered freely and openly for anyone to use and under some licenses to re-mix, improve and redistribute".[16] The inclusion of OER is advocated by Left who states that best practice in flexible learning should include making non-restricted information available to the public and publishing this is ways that enable portability and re-use.[5] The idea of OER and their relationship to flexible learning practice has been considered in depth by Leigh Blackall.[1] The primary example of OER identified by Blackall is Wikipedia and other associated sites which are under the umbrella of the Wikimedia Foundation. Examples of OER include internet self-publishing services such as blogs, audio, video and photo sharing services often referred to as Web2.0 or social media.[1] So, how could OER be woven into MAOX 415 to achieve the aim for best practice outlined by Left?[5] The main opportunity I see for this in terms of MAOX 415 is via assessment tasks such as the research diary, the research report and the group task. Providing training and incentives for learners to develop and utilise blogs and wikis for the submission of assessments would be one way of encouraging the use of OER in this course. Other tools to encourage this could include a course blog and a course wiki with examples of and links to OER about language revitalisation. These are currently housed in the BlackBoard site. Training would need to be offered in terms of the strategic learning associated with blogging and using wikis. An amendment to the group task which I am considering would see the assessment developing into an annotated bibliography of OER related to language revival to be undertaken in small groups. Each entry would include a full reference, and a short summary of and personal response to the resource.

I find the prospect of incorporating OER into MAOX 415 an incredibly exciting one for two main reasons. Firstly, it would be a platform for my own professional and personal development in terms of creating OER, something which has been on my personal 'to do' list for about a year. Furthermore, the opportunity feeds into the inherent glocalism of language revitalisation, which is often supported on the internet by OER. The idea of contributing to this body of knowledge and the glocal implications of this is significantly appealing to me. However, there are some issues I need to consider if I am to go ahead in including OER into the design and delivery of MAOX 415. First off, I myself need to provide opportunities for learners to develop skills in OER, either by teaching these skills myself, or by accessing support from elsewhere. Another concern might be learner hesitance to engage in OER. There is a certain security in the private nature of assignment submission via email or post in that your work and words are only for the eyes of the marker. Publishing the same material as OER could cause some stress to learners, hence it could be provided on an optional basis, thus catering for the idea of learner choice. Finally, I am unaware of OU's attitude to assessment via OER and would need to liaise with relevant departments and individuals to ascertain the appropriateness and acceptability of this approach. Despite these misgivings, I have high hopes for the inclusion of aspects of OER into the design of MAOX 415 in 2009 and beyond.

In conclusion, this article has discussed the genesis and development of MAOX 415 Te whakahauora i ngā reo taketake (Indigenous language revitalization), a paper in the MIndS offered through Te Tumu, School of Māori, Pacific and Indigenous Studies at UO in Dunedin, New Zealand. I have considered the concept of flexible learning in relation to MAOX 415. Despite finding that the course does already constitute an example of flexible learning, have found that this element of the paper could further enhanced through incorporating flexible elements such as podcasts and OER into the course and assessment design. This is particularly relevant in terms of the language revival as a glocal phenomenon which is often supported by flexible materials and OER offered via the medium of the world-wide web. The potential development of the course to include these aspects fills me with excitement as it would allow learners to engage with and contribute to the body of resources for language revival around the world.

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Catriona E. Timms-Dean

Catriona, known as Kate, was born and bred in Dunedin and has genealogical links to the Ngāti Raukawa tribe of Manawatu, as well as Scotland and England. She completed two undergraduate degrees in Māori Studies in the late 1990s and is currently working towards completing her doctoral thesis. Her research explores language revitalisation tactics being used to regenerate the Māori language in Aotearoa New Zealand and Scottish Gaelic in Alba Scotland. Kate works as a senior lecturer in the Treaty Education and Training Unit at Otago Polytechnic. She is married to Conway, an artist from Perth, Australia. They have a blended family of six children and step children. Kate loves to spend her spare time playing pool and working in her vege patch.

CALVINBALL – DESIGN A SPORT
A CASE STUDY OF A FIRST YEAR DESIGN STUDIES PROJECT

Prof. Thomas Bley & Ralf Hebecker

Abstract
In 2007 and 2008 we conducted a six week long project module at the Design Studies Department at the University of Otago titled 'Calvinball'. The module was part of the first year design course DESI 121 (Design Form and Function). Both the process and the results of this project module suggest that Calvinball is a successful example exploring and applying relevant principles of contemporary design in education.

In this paper we aim to:
- present our understanding of the specialities of worldwide design education and
- introduce the Calvinball project together with its inherent teaching principles.

Three contemporary design education models are explained in order to contectualise how we developed the Calvinball project.

1. Design Education Models
Design cannot be taught. Yes, there are skill driven aspects, like in any other profession, which can be trained and learned, but the knowledge needed to truly innovate and improve the manmade environment will only accumulate through exploration and discovery.

Socrates is often quoted as having said: 'I know that I know nothing'. Which is a wrong interpretation of his '**οἶδα οὐκ εἰδώς**' (*oída ouk eidós*)[1]. It should be translated to 'I know that I am not a knower', but the English language does not have a noun for knowing, so possibly the closest translation would be 'I know as a non knowing'. The lesson to be learned from this is that the emphasis has to be on the question, not the answer. Only if students learn how to ask they will be able to find answers to any challenge. Ideally they will be able to examine any problem or opportunity in a playful and disrespectful manner. It is not learning by doing, but learning through thinking.

Therefore, design education has to be set up in a dialectic, not a didactic fashion. Educators should provide a platform for discourse, and ideally going as far as designer and design researcher Gui Bonsiepe, who is asking for a 'viscourse' [2] – a visual discourse: designers have to be competent in the verbal and numeric languages as well as the visual language.

Design is a discipline offered in almost all kinds of higher education, from art schools to universities. The quality of those programmes does not depend on the nature of the institution, but the programme and environment they offer their students to explore and discover.

1.1 Art school: master and apprentice model

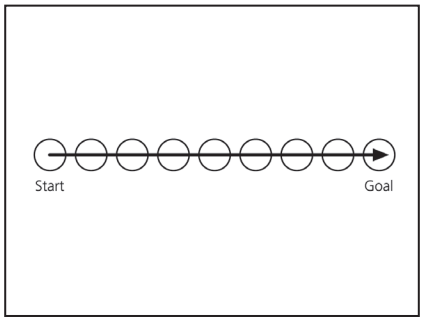

Figure 1: Art school model: one linear path from start to goal.

The most traditional form of design education is found in the art school model, where the apprentices learn from their masters in a studio setting (Figure 1). The master and apprentice model has the advantage that someone learns from someone who has proven to master her/his art. The disadvantage lies in the lack of diversity and although one will be able to learn a particular craft and way of expression, it will at some point require a departure from the original to create something new.

1.2 Universities

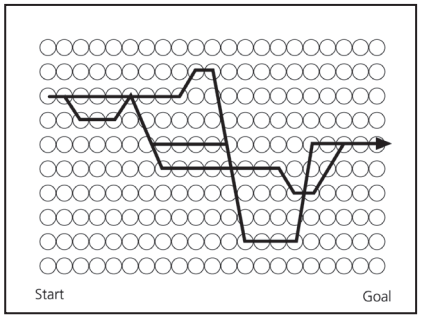

Figure 2: Still largely linear approach, but the many disciplines allow transient studies and exchange between many disciplines.

Secondly, there is the university scenario, characterised by a curriculum split into digestible and interchangeable pieces (Figure 2). The university model has the advantage of promoting a clear image of the outcome through defining profiles and the consequential way on how to achieve it.
However, this is at the same time the biggest disadvantage: as design is a rather fast developing and changing profession, curricula take a long time to develop and tend to stay around even longer. Accordingly, the learning profiles will rarely reflect upon any current and definitely not any future trend.

1.3 Advanced design programmes

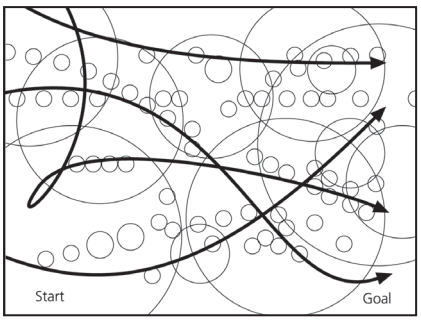

Figure 3: Advanced design programmes, e.g. Köln International School of Design: more flexible curriculum, fully project based.

Last, but not least, more advanced design programmes have shifted to a project driven environment as any design challenge is considered a project (Figure 3). In recognition of the disadvantages of the above learning environments, some more advanced design programmes have shifted the emphasis from defining profiles and educating towards providing content in an interdisciplinary environment. The major difference is that the responsibility for the learning and the curriculum is transferred to the individual student.

The clear disadvantage of such programmes is that students need to know what they like to achieve. However, as knowing is an important part of design, this kind of challenge can actually be considered a preparatory exercise to not only survive, but to prosper in the design profession.

2. The Calvinball project

Calvinball, a six week project module for the first year course DESI 121 (Design Form and Function) at the Design Studies Department at the University of Otago, was our response to typical problems in the design education: too rigid, too complicated, too slow, too theoretical and generally too reluctant. We were looking for a design project capable of overcoming these limitations.

Figure 4: Calvin & Hobbes comic strip by Bill Watterson [3]

Introduced in 1990 by 'Calvin and Hobbes' creator Bill Watterson, Calvinball[4,5] is an anarchic, constantly changing game open to any silly idea the players choose to come up with (Figure 4). Originally meant as a whimsical reversion of everything we had found, it soon became apparent that Calvinball captured the principles that we wanted to incorporate in a charming and intuitive way. These are as follows:

– Accessible
– Flexible
– Playful
– Experienced

Below we will explain these four principles in more detail. We use the terms play / game and sport(s) almost synonymously in this paper. The academic debate around these terms is beside the scope of this paper [6]. However, the following distinctions are important here:

– Sport(s) are a sub category of play/games.
– Sports most often involve physical activity.
– Sports are often multi player or team events.
– Sports have a strong potential to involve meta layers like clothing, heraldry, dress codes, media coverage, sport clubs, rituals etc.

Therefore we chose to specifically ask for the design of a sport and not a game.

2.1 Accessible

Good design means to make complexity accessible, even appear to be (but not to be) simple. Apparent simplicity enables quick access, effective use and outstanding results – whether it is with an ATM, a MP3 player or a design course. For the design of an accessible interface it is enlightening to refer to some of the user motivation patterns Jenifer Tidwell presents in her book 'Designing Interfaces' [7]. The first 6 of the total of 12 user motivation patterns appear to be generally useful for the design of social interaction, or, as Tidwell distinguishes it: "These patterns (...) describe human behaviors, not interface elements, and they're not prescriptive like the patterns in other chapters."

Pattern	Motivation
1. Safe exploration	'Let me explore without getting lost or getting into trouble.'
2. Instant gratification	'I want to accomplish something now, not later.'
3. Satisficing [8]	'This is good enough. I don't want to spend more time learning to do it better.'
4. Changes in midstream	'I changed my mind about what I was doing.'
5. Deferred choices	'I don't want to answer that now; just let me finish!'
6. Incremental construction	'Let me change this. That doesn't look right; let me change it again. That's better.'

Table 1: The first six of the 12 user motivation patterns described by Jenifer Tidwell in 'Designing Interfaces'.

Figure 5: The sport 'Hoop' in action.

2.2 Flexible

Generally, fixed curricula are a strange idea – since the students are changing from semester to semester, and with them talents, weaknesses, aspirations, interests and perspectives. The Köln International School of Design [9] responded to this in the early 90s with transferring the responsibility for the selection of the curricula to the individual students. That is, specific for each student and every new semester. This takes the willingness of educators to re-evaluate and adjust own expectations constantly. The potential rewards are that students learn to act responsibly and the results can surpass initial expectations.

Our way to implement this was an intentionally sparse briefing only stating a couple of common goals and leaving the ways to accomplish these quite open (Table 2).

Your project should include …

- A brilliant, weird idea. Can combine existing, must end with something new.
- Set of rules (and suggestions how to effectively bend or break them).
- Definition of a playing field.
- Definition and prototypes of equipment.
- Branding:
  - A cool name for the new sport,
  - an even cooler logo, and
  - an Olympic icon.
- Colours, heraldry, uniforms, dress codes etc.
- A test run (world premiere).

Table 2: first part of the briefing.

Parallel to the tutorials the project exposed the students to a series of lectures, featuring academic and professional guest speakers from a broad range of sports-related fields.

Table 3 shows the second part of the briefing with the selection of topics and fields for the students to choose from (Table 3).

Your team must cover all fields, but you can specialise in …

- Concept, ideation, look & feel,
- Rules, regulations, umpiring,
- Equipment development,
- Branding, corporate design,
- Game / event planning and execution,
- Media coverage: journalism / filming, editing / commenting,
- Cups and prizes, or
- Audiences and merchandising.

Table 3: second part of the briefing.

This open brief was well received: all teams created an original sport and nearly all groups designed logos and other 'corporate design' elements like an Olympic icon, colour schemes etc. Some teams focused their further activities on the design of play ground layouts, equipment or schematics and info graphics.

Others specialised on the rules – and experienced how fast they can become too complicated if not questioned and simplified rigorously. One team even produced a stop motion film with a preliminary instalment of their sport as puppet animation.

2.3 Playful

Figure 6: 'Duo'.

Sports as a sub category of games appear to be a familiar subject for the students. Students think that this would be an easy task, and partially that is true. At the same time it is a Trojan horse: the students might be experienced in playing sports or following it on media, but they are usually not too experienced in the intricacies of developing a generally agreeable rule or actually constructing a goal that survives the first round of tough game play. On top of this, Watterson's Calvinball is not even a real sport. It's a self-changing game and can be interpreted as game of negotiation. Its first rule says: it has to be played differently each time. This defeats one of the fundamental paradigms of a game: the rules are above discussion. It is also this rigid setting that Calvinball opposes.

Not too surprisingly, none of the student teams bothered with the idea of such a nomic (self-changing) game. They just ignored this part, perhaps sensing that going down this road at this point would lead straight into chaos.

Calvinball is not so much a model sport (it is more an 'anti sport'). It's an invitation to mesh and mix up pre-existing concepts and to see what happens, at high speed. At the same time it is a subtle reminder that design should never stop looking for new, surprising solutions.

Figure 7: 'Slumberball'.

2.4 Experienced

Approaches to this assignment varied. Many groups of students started the assignment by quickly collecting and collaging ideas, rules, equipment etc. and only at a later date did they undertake editing, processing and disposing. Some teams struggled with developing or surpassing their first concept. The more successful teams quickly acquired vast amounts of concepts and options to choose from *and* then managed to refine these options into a final game plan. Interestingly, the teams with the most convincing sports often started with two or more strong game concepts and developed them in parallel to a late point before eventually deciding upon the final choice.

The outstanding sports were those designed by teams that got out early and tested the elements of their game and the overall game plan and flow. The difference in quality between tested and non-tested games was considerable. This is not new and applies to all fields, but it is worth re-emphasising: successful design needs user and field tests as it is impossible to anticipate all the occurrences during an actual test run.

Figure 8: 'Sackaroo': frisbee meets potato sack.

Ideally, 'real' user testing would include questioning external users to introduce the fresh perspective of uninvolved users into the project. User testing comes often with the high expectations of established user research methods.

Steve Krug offers a refreshingly accessible approach for user testing [10], which is helpful even if it is originally targeting web site testing. Albeit the tight schedule of the Calvinball project did not leave much room for these more sophisticated methods, the better teams managed to emulate user tests by involving guests from other teams or just by performing the fresh approach themselves. These teams had the valuable opportunity to adjust and improve their concepts. For the other teams the official presentation was their first run.

3. Results

Calvinball is a good example of a successful design project for first year design education. All student teams delivered new sports and, perhaps even more importantly, all of them seemed to learn from and enjoy both the process and the results.

General findings include:

- Many student sports started as mesh ups / remixes of existing games, and were refined during the process.
- Great sports have simple rules and a limited number of objects involved.
- Quite a few student sports used triangular or circular playing fields and had more than two opposing teams.

In retrospect and with the experience of two years of this project design we think it is fair to summarise that good design and good design education seem to share these principles:

1. Good design should be accessible, even appear to be simple. Ideas derived from user interface design or interaction design can be a helpful guide to achieve true 'user simplicity'.
2. Good designs and design projects should, as far reasonably possible, flexibly react to the talents and perspectives of the participants and the project environment.
3. Playfulness and enjoyment appears to be valuable ingredients of successful design projects – and perhaps a distinctively 'designerly' criterion.
4. Design has to be experienced and tested. This applies to the general design process and to design solutions in development. Good designers should be hungry to try out their ideas and solutions with and on real human beings. Simple user testing methods, test runs and iterations circles and a public presentation should be mandatory elements of any design project.

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USING MOBILE LEARNING TECHNOLOGIES TO SUPPORT ASSESSMENT PRACTICES

Maxine Alterio & Adrian Woodhouse

Introduction

Mobile learning technologies have the potential to support learners prepare for assessments. This article narrates the mobile learning and assessment journey of learners and lecturers involved in a Certificate in Professional Cookery (Level 4) programme. After outlining the backstory which led to this development, we provide an overview of current literature. Assessment considerations are then highlighted, followed by a description of how movie clips and iPods impacted on learners' experiences by enhancing their levels of engagement with course content and improving their assessment outcomes. We also draw attention to the challenges faced by lecturers in the initial stages and describe unexpected benefits. Lastly, we offer guidelines for others embarking on a similar journey and we outline our plans for further mobile learning (mLearning) advancements within a catering context.

Keywords: mLearning, visual learners, vocational literacy, assessment practices

The Backstory

Like many tertiary institutions, Otago Polytechnic offers a range of mLearning opportunities to meet the complex needs of learners who combine study with employment. Initially lecturers in the School of Hospitality (including Adrian, co-author of this article) introduced these developments for pragmatic reasons, such as meeting the needs of learners who were unable to attend practical demonstrations for a variety of reasons, including outside work commitments. Timetabling additional sessions was not considered viable due to heavy lecturer workloads. Nor was it possible to order additional food for repeat demonstrations because of tight budget constraints. As part of a review process, the lecturers analysed the demographics of their learners, discovering many were high users of technology, a finding which led to the exploration of other possibilities, such as delivering course components using various mobile learning technologies. Movie clips and iPods proved particularly popular with learners who preferred visual learning approaches to develop vocational literacy skills. The use of mobile learning technologies is increasing in higher education contexts for a range of reasons, as evident in the literature.

Literature Review

In the last decade a burgeoning array of Third-Generation mobile learning technologies has changed the landscape of learning and assessment and the expectations of learners who operate in media-rich contexts. Mobile learning, or mLearning, appeals to *Net-Generation* learners who have grown up with technology. [7,17,18,19,25] Wikipedia[26] defines mLearning as "the term given to the delivery of training by means of mobile devices, such as mobile phones, PDAs [personal digital assistants] and digital audio players". Such portable devices are capable of storing significant amounts of data, including static and moving images. Used in conjunction with interactive learning and assessment approaches such devices have the potential to transform higher education.[1,13,16,22] Research findings such as Atwell's[2], suggest that mLearning provides learners with independent and collaborative experiences, offers them opportunities for spontaneous, informal and situated learning and supports the development of vocational literacy. Shih and Mills[23] contend that mobile technologies support "learning anytime and anywhere, just in time, just for me, and multimedia (text, voice, image, or video) messaging". Real-time online short-burst learning activities, along with digital storytelling and 'mobblogging' journals, are also popular. Selena Chan, winner of the 2007 Prime Minister's Supreme Award for Tertiary Teaching Excellence, links micro-learning and content delivery with mobile devices.

> Micro-learning refers to small learning units that are delivered for short learning spurts. They deliver 'micro-perspectives' within learning, education and training and provide a way for organising learning material in order for the material to be disseminated in a structured and planned learning sequence. For the moment, micro-learning provides for a natural fit with the way in which content may be delivered via mobile devices.[10]

Prensky[19], another key supporter of mLearning, contends that processes, such as observing, questioning, reflecting and practicing can be achieved using cell phones. He also maintains that learners who struggle with traditional methods benefit most from using mobile technologies as they are familiar visually orientated tools.

Some educators suggest that mLearning may encourage a skimming mentality or surface learning approach and discourage deep learning, which seeks to link previous knowledge to past experience and encourages critical thinking. In response, Chan[10] urges lecturers to rework their conventional resources, engage learners in interactive activities and implement a range of checks to ensure mLearning is an effective approach. From a pedagogical point of view, the growth of mLearning has implications for assessment practices.[21,25]

Assessment Practices

Innovative learning approaches are often implemented with great enthusiasm but without sound pedagogical guidelines which Shih and Mills identify as a major issue for mLearning.[23] Naismith et al also highlight significant challenges, as well as posing the question "how can the use of mobile technologies help today's educators to embrace a truly learner-centred approach to learning?".[16] Such technologies do, however, offer opportunities for spontaneous, personal, informal and situated learning.[23] Strategies to support assessment practices are less well developed. mAssessment is still in its infancy. In her *Guide to Assessment,* Bloxham stresses the importance of assessment, saying it "shapes the experiences of students and influences their behaviour more than the teaching they receive".[5] She contends that better assessment practices lead to improved student learning, a view backed by Gibbs and Simpson who contend that "there is more leverage to improve teaching through changing assessment that there is changing anything else".[12]

Bloxham[5] draws on the work of Earl[11] to differentiate between assessment **of** learning, assessment **for** learning and assessment **as** learning. Assessment **of** learning, the traditional view, focuses on making judgements about learners' summative achievements for selection and certification purposes, as well as institutional accountability and quality assurance requirements. Assessment **for** learning, which is formative and diagnostic, provides information which informs how practices might be changed to better meet the needs of learners. It also acknowledges the potential benefits of feedback on learning.[4,6,8] Assessment **as** learning has two interlinked purposes: firstly, learners **do** much of their learning when they work on assignments and revise for assessments; secondly, moments of learning also come through active involvement in self, peer and group feedback and assessment practices and processes[4]. Valentine concurs. She conducted a series of case studies which "highlighted the importance of engaging learners on their own terms and also the need to evaluate a wide range of assessment methods"[25] (32). She concluded that digital mobile devices provide diverse "multi-media learning support options that can enhance and engage learners in compelling and pedagogical sound ways" (37).

Struyven, Dochy and Janssens maintain that learners are generally open to innovative assessments if the associated tasks are "authentic and meaningful" and if they are "involved as active and informed participants"[24] (4-5). Certainly mLearning does appear to appeal to visual learners but where does it stand in relation to mAssessment possibilities? We now draw on the experiences of Otago Polytechnic cookery lecturers and learners to advance this matter further.

The Main Story

In June 2007 the cookery lecturers, including Adrian, began filming aspects of their programme. There was no funding so these movies had to be produced in a cost effective manner and be easily accessible to learners. The lecturers used Microsoft Moviemaker, a freely available software package which produced movies of a reasonable quality. Each movie demonstrated how to prepare a particular dish and was accompanied by a step-by-step lecturer-driven narrative. Following discussions between participating lecturers and after seeking learner feedback, the narratives were refined down to key phrases and a music track was added which appealed to the learner group and their *Net-Generation* culture.

These movies were published on YouTube and on a Videoblog. The blogsite www.otagocookeryl4.blogspot.com provided learners with opportunities to view the movies and post feedback. The movies were later converted into a format learners could download to their iPods and view without needing an expensive Internet connection. Such developments enabled learners who were absent from practical demonstrations to view their assessment dishes at anytime and in anyplace, as recommended by Shih and Mills.[23]

Initial feedback from absentee learners indicated that they regularly watched the movies, but more surprisingly, learners who had attended the demonstrations also viewed them. Learners commented that the movie clips acted as a refresher prior to their assessments and were easier to follow and interpret than conventional typed recipe formats. These clips particularly appealed to the visual learners, another trend mirrored in the literature.[3,16,22] Many learners viewed the demonstrations while riding the bus to polytechnic, during work breaks or relaxing at home. The lecturers also discovered that learners were accessing YouTube videos around midnight after work and social commitments. In addition, through informal and formal feedback processes, learners acknowledged the efforts made by their lecturers to embrace the mLearning technologies their *Net Generation* use on a daily basis.

Despite the lecturers' reservations about publishing course material on an open access site, such as YouTube, and having others use it, they soon discovered that such practices were commonplace. Unexpected benefits began to emerge. For example, Adrian developed beneficial collaborations with an experienced Canadian mLearning practitioner and accessed resources he could also use, a mutually valuable outcome, which surprised and intrigued him. He realised the benefits outweighed any ownership concerns, which enabled him to become less precious about his movies and to focus on what he could share and also what he could adapt for his teaching. However, the School's mLearning journey was not always straightforward.

Catering lecturers trialled iPods, in conjunction with Internet linked movies, which initially caused time delay frustrations. Slow loading time for learners reliant on dial up Internet connections due to restricted incomes was another challenge, along with downtime maintenance issues due to the popularity of the YouTube site. It was not uncommon to take up to thirty minutes to download a five minute movie. To overcome these delays, the movies were converted through a free download programme called Videora. This programme converts movies into a format that allows them to be uploaded to an iPod. Learners connected their iPods to the lecturers iTunes account and in less than five minutes the entire set of demonstration movies for the year were uploaded. iPods also enabled lecturers to take conventional PowerPoint presentations and turn them into narrated visual stories. Such resources enabled learners to view course content outside conventional classroom hours and better prepare for assessment tasks by developing deeper understandings of the material. A noted industry leader contributed his story, and others have voiced their support for further initiatives.

While the project is still in its infancy, benefits are already emerging. Statistics indicate that the course completion rate is likely to increase by twenty-eight percent in 2008. Practical re-sits are down by seventeen percent and lecturers have noted an improvement in the overall quality of learners' work, as measured against previous years. However, these statistics must be viewed with caution as concurrent developments may have contributed to these outcomes. Firstly, catering lecturers are involved in a Tertiary Education Commission (TEC) literacy project and; secondly, slight changes have been made the delivery of practical lessons. Even so, the statistics are encouraging and suggest that mLearning does have a supportive role to play in assessment practices.

Based on the experiences of these lecturers, attending to three key areas ensured its success, each of which will now be considered.

1. Learners
2. Lecturers
3. Learning *as* assessment.

Learners

Mirroring the experiences of learners involved in the European Commission funded mLearning project[3], Otago Polytechnic's catering lecturers discovered that the majority of their learners wanted to continue using mobile technologies. They reported that such technologies imitated their culture, helped maintain their interest and supported their learning and assessment requirements. mLearning also minimised some of the formality associated with traditional learning approaches and raised learners' self-esteem as they had technological expertise they could share with their lecturers, benefits also reported by Atwell[3]. In addition, learners with preferred visual learning

styles reported that mobile technologies supported their development of vocational literacy skills, a finding substantiated by Atwell's study[3]. Like Naismith et al[16] they also discovered that the portability of mobile technology enabled their learning context to be "extended beyond the classroom into authentic and appropriate contexts of use" (24), such as practicing recipes at work and at home to prepare for assessment tasks.

Demonstrations loaded onto iPods (visual recipe cards) enabled learners to catch up on missed sessions, replay aspects and prepare for the next session at times and places which suited them. Movies also captured visual scenarios, such as local and national competitions, themed dinners and meaningful learning moments for individual learners. For example, Adrian harvested snails at home and asked his learners to prepare and cook them. He filmed the entire process (cooking, consumption, accompanied by facial expressions and emotions, as well as verbal feedback) and used the movie to generate reflective conversations, an approach recommended by McDrury and Alterio.[14] The learners' emotional responses initially included fear, disgust and curiosity, later moving to relief, pleasure and disgust. With the learners' permission Adrian put the movie on a blog linked to YouTube, describing it as "part of the journey of opening their minds". Learners' minds were not the only ones that were opened during the development process.

Lecturers

As Shih and Mills note, learner-centred mLearning approaches must be underpinned by sound pedagogical practices involving lecturer commitment, institutional support and timely training opportunities.[23] Lecturers also need to critically reflect on which mobile learning tools will work best in what ways with which learner groups to deliver what content using which processes[16] and strive to make their classes engaging as well as entertaining. It pays, however, to heed Mellows who cautions that lecturers are in education, not the entertainment business.[15] Chan also asks lecturers to consider the limited incomes of their learners and ensure their mobile tools are practical, affordable and accessible[9]. Nor can lecturers assume that all learners will be familiar with mobile technologies or want to use them. A blended approach of traditional and mLearning strategies provides learners with options and enables them to come to mLearning at a pace that suits them, supported by appropriate in-class training.

Learner-centred mLearning blended approaches can also have transformative outcomes for lecturers.[1,3,25] In this case cookery lecturers embraced learner-centred pedagogy, familiarised themselves with a range of mLearning tools, adopted practices which appealed to visual learners and facilitated learning that mirrored aspects of the *Net Generation* culture. Learners have flexible access to learning resources, as recommended by Shih and Mills[23] enabling them to demonstrate on-going examples of engagement and collaboration, thus meeting requisites for an effective mLearning environment.[9,18,19,20] Mobile learning technologies also helped to reshape the School's assessment practices.

Learning *As* Assessment

Bloxham's[5] observation that learners **do** considerable learning as they work on assignments and revise for assessments motivated lecturers to introduce a range of assessment strategies using mobile technologies, as demonstrated in the following quotation.

> Adrian saw an amazing opportunity with the Internet using blogs and YouTube. Adrian created videos on a daily basis recording practical classes and making them available for students to refer back to for assessment. This proved a very popular way for students to refer back for clarification coming up to assessment time. Not only was this a great opportunity for flexible learning for the students but it still offers assistance if needed now we are in the industry (Student, Certificate in Professional Cookery (Level 4) programme, 2007).

As revealed, learners valued the opportunity to repeatedly view their visual recipe cards to refresh themselves as to how to make certain dishes. These cards also overcame the time delays which can exist in a traditional classroom between demonstrations, practices and summative assessments. Because learners were actively engaged in filming and participating in demonstrations, they developed a sense of ownership of both the process and outcome, a strategy which Struyven, Dochy and Janssens believe improves learning.[24]

The lecturers also ensured that learners were familiar with assessment requirements and expected standards. Feedback during assessment practice sessions was provided in multiple forms, as favoured by Bloxham[5]. Lecturers provided learners with verbal and written feedback. Adrian made audio clips of his verbal feedback, emailing them to learners immediately after class. As part of an active assessment process, he also asked learners to sketch their ideal restaurant layout which he scanned and posted on a desktop. He then engaged each learner in a reflective conversation to develop their vocational vocabulary and critical thinking skills, directions supported by industry.

While mLearning proved largely successful with learners on the cookery programme, particularly those with visual learning styles, lecturers and learners encountered various challenges along the way which led to us to develop a set of guidelines for others embarking on a similar journey.

Guidelines

- Determine the demographics of learners and provide adequate support to those not familiar with mobile technologies.
- Evaluate the use of mLearning technologies from a pedagogical viewpoint to establish whether it is the best tool to deliver certain learning material to particular groups of learners.

- Use technologies that learners can afford, are easily accessible and can be used with the minimum of support.
- Provide time, training and resources for lecturers to familiarise themselves with mLearning technologies and adapt their learning facilitation styles.
- Ensure that the project has sufficient technical support from the onset as movie footage uses significant hard drive space and requires a number of file converters to enable access in multiple formats.
- Start with a small project and monitor its impact on learners. Seek their feedback and make changes accordingly.

The Next Story

We plan to further support the development of mLearning practices within the Certificate of Professional Cookery programme. Two projects have already been identified. The first involves the creation of a digital glossary, as catering industry linguistics is based on international culinary terms. The digital glossary will comprise of short clips containing a brief audio definition of each term, posted alongside a contextualised visual example, providing learners with an enriched descriptive glossary as compared to the current conventional text book format.

The second project involves the development of learner-driven digital stories, focused on specialist events such as competitions, hāngī and themed dinners. We will mentor learners through the process of creating their own digital stories, using static and moving images, music and narratives, which they will construct through reflective conversations with their peers, lecturers and a staff developer. In addition, we hope to encourage industry members and past students to contribute to the collaborative learning process of current learners through the sharing of their own experiences within the hospitality industry.

Conclusion

Although initially introduced for pragmatic reasons, mLearning technologies provided catering lecturers with opportunities to transform their assessment practices by utilising devices already familiar to learners. Learners who preferred to learn visually viewed the movies in a mode that suited them and posted feedback at times that fitted within their working lives. Third-Generation mobile learning technologies now play an integral role in the assessment practices embedded within the Certificate in Professional Cookery programme. Gains have been demonstrated through increased learner engagement with course content; improved vocational literacy and enhanced learning and assessment outcomes. As mEducators, our next challenge is to support learners to create, personalise and contextualise their own digital stories to demonstrate significant learning outcomes and bring about successful completion of assessment tasks.

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