

## Heutagogy and mobile social media: post Web 2.0 pedagogy

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O'Reilly coined the term Web 2.0 seven years ago (O'Reilly, 2005), yet in the past seven years we have seen limited evidence of wide-spread impact of Web 2.0 on traditional higher education pedagogy. Seven years on, the social media landscape has changed and today's school-leaving students are entering higher education within an increasingly post Web 2.0 society that is predominantly characterised by engagement with mobile social media. We argue that there is a need for higher education to engage with new pedagogies that are appropriate for an emerging post Web 2.0 society. We present a sustainable framework for preparing lecturers to engage with the challenge of post Web 2.0 pedagogies by experiencing the potential of mobile social media within authentic communities of practice.

Keywords: heutagogy, mlearning, Web 2.0, communities of practice, professional development.

### Introduction

The advent of the world wide Web brought about an information revolution (Web 1.0) with the likes of Netscape and Yahoo, while Web 2.0 is characterized by social collaboration and user-customization with the likes of LinkedIn and Facebook. However, Jackson (2012) argues that there will never be a Web 3.0 because the next paradigm shift of the Internet is mobile rather than desktop browser-based. [International Telecommunication Union](#) (ITU) November 2011 statistics (International Telecommunication Union, 2011; mobiThinking.com, 2012) show that mobile broadband Internet connections out-number fixed broadband Internet connections by two to one, and 87% of the worlds population have a mobile phone, whereas less than 16% of the worlds population have access to a desktop or laptop computer. ITU statistics also show that in many developing nations, the majority of mobile Web users are mobile-only, with the highest including Egypt at 70 percent and India at 59 percent of Web use via mobile only. Just as the post-modern society emerged out of modernism, we are experiencing a transformation of Web 2.0 into post Web 2.0 mobile social media. This brings the potential to appropriate new pedagogies that harness the potential of mobile social media to create powerful situated, authentic, and informal learning experiences and bridge these into formal learning (Vavoula, 2007).

As our use of mobile devices, games, and social networks illustrates, information technology can create new experiences. But more important, information technology enables new models. It can disaggregate and decouple products and processes, allowing the creation of new value propositions, value chains, and enterprises. These new models can help higher education serve new groups of students, in greater numbers, and with better learning outcomes. (Oblinger, 2012, p. 11)

However, the challenge is that a shift to the use of mobile Web within education as described by Oblinger (2012) will require two ontological shifts (Cochrane, 2010b, 2012): 1. Re-categorising mobile social media from the domain of informal social interactivity to collaborative tools that enable new pedagogical designs (Kukulska-Hulme, 2010; Laurillard, 2007, 2012), and 2. Re-categorising teaching and learning from teacher-directed pedagogy to enabling student-determined (or negotiated) learning, which has been termed heutagogy

(Blaschke, 2012; Hase & Kenyon, 2000; Luckin et al., 2010). In particular, mobile social media enables student-generated content and student-generated contexts utilizing the affordances of mobile devices, for example using the camera and GPS built into smartphones to display and interact with augmented reality layers created by students (Cochrane & Rhodes, 2011). We use Chi and Hausmann's (2003) definition of ontological shifts:

An ontological shift is merely the re-assignment or re-categorizing of an instance from one ontological category to another... shifting ontologically may be difficult (if not directly told to do so) for three basic reasons. The first is a lack of the alternative category. The second is the lack of awareness of the need to shift. Finally, the third is that it is resource-intensive. (Chi & Hausmann, 2003, p. 432)

This paper presents a sustainable framework to address the three reasons (according to Chi & Hausmann) that make our two identified ontological shifts difficult: The framework (LTDF) provides alternative categories of pedagogy (from teacher-directed pedagogy to student-directed heutagogy), provides lecturers with an authentic experience of mobile Web 2.0, and provides sustained support for these by embedding these shifts within the activity of supportive communities of practice (COP).

## Methodology

The Learning and Teaching Development Fellows (LTDF) builds upon the model of using COP for professional development developed by the researcher as an outcome of a participatory action research methodology (Swantz, 2008), between 2006 and 2010 and summarized in several papers (Cochrane, 2010a; Cochrane, Black, Lee, Narayan, & Verswijvelen, 2012; Cochrane & Narayan, 2011). We have found that one key to pedagogical innovation enabled by technology is developing lecturer competency with the technology (Cochrane, 2010b), creating an awareness of the need for an ontological shift in teaching and learning. Providing a series of short-term professional development workshops is unlikely to provide the support required for these shifts. This then is the goal of establishing and nurturing lecturer COPs, as although this is a resource intense approach, that involves long-term commitments, the results are rewarding. This COP framework was initially developed by the researcher at Unitec, New Zealand's largest Polytechnic, but was then applied to the researcher's new institution, AUT University, New Zealand's newest and fastest growing University. Four examples are provided in this paper. While each COP was unique, a common methodology refined throughout more than 35 mlearning projects was utilized for establishing and nurturing these COPs.

## Communities of practice

Our conception of COPs is based upon that developed by Wenger, which began as a social learning theory (Lave & Wenger, 1991; Wenger, 1998), and has been developed as a framework for collaboration enabled by social technologies (Wenger, White, & Smith, 2009; Wenger, White, Smith, & Rowe, 2005). In our LTDF examples, Google Docs was used to collaboratively create and shape the four LTDF proposals around the formation of lecturer COP. These proposals focused upon identifying and supporting teaching fellows with the capability and passion to engage with the two identified ontological shifts. Each teaching fellow then partnered with the researcher to create the core of a COP within their department of lecturers interested in investigating the potential pedagogical impact of mobile social media within their teaching and learning contexts. The LTDF grants were managed by the institution's central support unit CfLAT (the Centre for Learning And Teaching) and provided funds for time-release for the accepted teaching fellows, as well as funds supporting the dissemination of practice-based research. The Teaching fellows then invited 4 to 6 of their peers to form a COP, that would meet regularly (usually weekly), and establish the use of several core mobile social media tools: mobile blogging, Twitter, Google Plus Hangouts, and a range of mobile social media applications.

Each LTDF proposal was also supported by an associated LATENT (Learning And Teaching ENabled by Technology) grant that provided funds for equipment purchases such as iPhones and iPads for use by the lecturers who joined each COP. Each participant was provided with either an iPhone, an iPad, or both for personal and professional use throughout the COP. Those lecturers who committed to participation within the COP for a full academic year were allowed to keep their devices. The mobile devices were not institutionally managed, but were expected to be used as personally-owned devices by the lecturers, thus providing a model for student-owned devices or BYOD (Bring Your Own Device). The LTDF projects therefore provided iPhones for the lecturers participating in the mobile social media COPs that are used to develop their own eportfolios and research relative to integrating the use of mobile Web 2.0 tools in teaching and learning with their students beginning in semester 2 2012. Research-informed experience will enable the course lecturers to not only

experience the use of mobile Web 2.0 enhanced teaching and learning, but become confident enough to model the use of these tools within their own courses. Potential outcomes of each project for the participants include:

- Active participation in an authentic COP.
- Research and development of a professional eportfolio.
- Publication and sharing of a peer reviewed research output based upon their experience and the impact on their students.
- Development of new assessment and learning activities enabling student-generated content and student-generated contexts via student-owned mobile devices and Web 2.0 tools.

## Four Case Studies: Learning and Teaching Development Fellows 2012

The four LTDF COPs focused upon using mobile social media as a focus for lecturer development, student-generated content, and student-generated learning contexts, or Pedagogy 2.0 (McLoughlin & Lee, 2010) within the contexts of: Journalism, Graphics Design, Product Design, and Public Relations. These are summarized in Table 1, and further described in the following sections.

**Table 1: Four LTDF COPs**

LTDF Contexts	LATENT Project	Project Blog	COP Participants
Journalism	Reinventing Journalism education via Mobile Social Media	<a href="http://ejeteam.wordpress.com">http://ejeteam.wordpress.com</a>	3 lecturers + 1 technology steward
Graphics Design	Heutagogy and Mobile Media Production	<a href="http://mopcop.wordpress.com">http://mopcop.wordpress.com</a>	6 lecturers + 1 technology steward
Product Design	Augmenting the Design Thinking Studio	<a href="http://autproductdesign.wordpress.com">http://autproductdesign.wordpress.com</a> and <a href="http://autdesignjournal.posterous.com/">http://autdesignjournal.posterous.com/</a>	6 lecturers + 1 technology steward
Public Relations	Communities of Practice in Public Relations	<a href="http://icollab12.wordpress.com">http://icollab12.wordpress.com</a>	3 lecturers + 1 technology steward

### Journalism

The Journalism COP was a collaboration with CfLAT to establish a COP based within the Department of Communication Studies at AUT that will establish a group of Lecturer peers and generate collaborative networks both nationally and internationally. This was initially based upon the lecturer's international contacts in the Journalism industry. The COP participants were identified as lecturers who are interested in investigating innovation in teaching and learning using social and mobile technologies within a participatory action research framework. The project built upon the establishment of an initial lecturer COP in collaboration with CfLAT during 2011 (Cochrane, Sissons, & Mulrennan, 2012). Outcomes of this COP are evidenced in the development of several student projects that integrate the use of mobile social media using student-owned devices (smartphones) in Journalism at AUT. The project is supported by an associated LATENT grant project that enables participating lecturers to utilize mobile Web 2.0 tools (for example the iPhone or iPad) in preparation for projects with their students.

The formation of a lecturer COP focused upon mobile social media (in particular Twitter, SMS Polls, and student-generated eportfolios) within Journalism aiming to have the following outcomes:

- Innovation in teaching and learning enabled by technology, in particular a focus upon student-owned devices to enable social constructivist learning environments that engage and empower students, modeling the authentic (Herrington, Herrington, Mantei, Olney, & Ferry, 2009) use of new technologies within Journalism.
- Establishment and development of a Journalism and cross-disciplinary lecturer COP exploring the potential of mobile and social technologies in teaching and learning.
- The COP also explores the affordances of mobile Web 2.0 technologies to enable cost-effective international teams, and remote expert participation, bridging the classroom environment across the

- boundaries of time and geography.
- The Journalism lecturer COP builds upon mobile Web 2.0 projects established in 2011 (Cochrane, Sissons, et al., 2012).
- Outcomes of the project will be presented at appropriate peer-reviewed conferences for critical feedback, such as Ascilite2012, MLearn2012, ALT-C2012.

### *Storifying Journalism*

Mobile social media (particularly Twitter and Facebook) have had a huge impact on traditional Journalism (Hirst, 2011; Rusbridger, 2011), but while there has been a big impact on the content of Journalism education, there has been little impact on the pedagogical practices of Journalism education. The default approach to teaching the impact of social media on Journalism has been by written case studies and student-learning assessed by essay writing critiquing these case studies. The LTDF Journalism COP led to reinventing this case study approach to modeling the use of mobile social media in class, and to get students to collate, curate, and critique actual source content around a mobile social media incident in Journalism. Students chose a breaking incident of mobile social media and used Storify.com either on their iPads or laptops to collate and comment upon Twitter, Facebook, YouTube, Instagram, Flickr and other mobile social media, creating an annotated rich-media story of the event or incident. The assignment question became: “How if at all have social media altered the way journalists and public relations practitioners interact? Use real examples from at least three social media platforms as well as academic sources to back up your arguments” (Assessment schedule 2012). This was then either published to their own blog, or their own Storify.com site for their lecturer to mark. Students interacted directly with rich mobile social media, developing creative rich-media stories that required metacognitive critiques. There was a considerably higher level of critique and creativity evidenced in the Storify.com project in comparison to that evidenced in previous essay versions of the assessment. Students used Storify to express and create very personalized critiques of the impact of social media on Journalism. Two contrasting examples are provided: 1. A student used Storify to create a very engaging rich media story that included many elements of humour (<http://storify.com/carowells/assessment-1-test>), 2. Another student took a more traditional approach to using Storify to enhance an essay, by providing rich media links to the events behind the story, and example contrasting views by experts as video talks (<http://storify.com/shawnmoodie/how-if-at-all-have-social-media-altered-the-way-a>).

The best essays made the most of the platform and the freedom to include multimedia examples. These students also altered their style and the way they wrote into the examples to make their essays fit the medium. Further, by using a mixture of books, journal articles and discussions on social media, these students were able to explore the question far more deeply than most of those who stuck to the more traditional format. Initial feedback from students suggests they enjoyed the opportunity to explore social media in a way other than for social purposes. Most also realize the need to be confident using social media for their future role as professional communicators. In conclusion we believe the use of Storify in this essay was a success. The question was particularly suited to the use of social media tools. (Lecturer blog post, 2012)

This represented a significant pedagogical shift from the previous traditional written essay approach.

### **Graphics Design**

The graphics design lecturer collaborated with CfLAT to establish a COP of Lecturer peers from the department, as well as establishing collaboration both nationally and internationally (for example: Unitec New Zealand, Salford University UK, and the University of Strasbourg) with other lecturers who are interested in investigating innovation in teaching and learning using social and mobile technologies within an action research framework. The COP links with networks already established as part of the Mobile Innovation Network Aotearoa (MINA, <http://mina.pro/>) brokering expertise beyond the physical boundaries of the COP. Outcomes of this COP are evidenced in several student projects that cross international boundaries including student mobile video projects presented at international mobile film festivals (for example <http://www.mobilefilmfestival.com>). The COP builds upon relationships established nationally and internationally in 2011 via the ELVSS11 ([http://www.youtube.com/playlist?list=PLB2FFDB84091FD488&feature=mh\\_lolz](http://www.youtube.com/playlist?list=PLB2FFDB84091FD488&feature=mh_lolz)) and iCollab11 (<http://icollab11.wikispaces.com>) projects (Cochrane et al., 2011). The project was supported by an associated LATENT grant project that enabled participating lecturers to utilize mobile Web 2.0 tools (for example the iPhone) in preparation for projects with their students.

The formation of a lecturer COP focused upon mobile media, in particular mobile film making with the

following goals:

- Enabling innovation in teaching and learning enabled by technology, in particular a focus upon student-owned devices to enable social constructivist learning environments that link informal and formal learning both locally, nationally and internationally via a virtual international COP.
- Exploring the development of collaborative student-generated mobisodes as digital stories in an international team-based context.
- The COP also explores the affordances of mobile Web 2.0 technologies to enable cost effective international teams, bridging the boundaries of time and geography.
- The lecturer COP builds upon mobile Web 2.0 projects established in 2011 with Unitec and Salford University, and the MINA project (<http://vimeo.com/groups/mobileprojects>).

#### *Graphics Design: mobcop12*

A lecturer COP was established to explore the potential of mobile social media in graphics design education. The COP was titled mocop12 – mobile COP 2012. Six lecturers were supplied with an iPhone 4S and committed to meeting together weekly to investigate mobile social media. The COP established the use of mobile social media tools for communication and collaboration, including: Twitter, Wordpress, and Google Plus. Those COP members with previous mobile social media experience (including the LTDF fellow and the researcher as a technology steward) created an initial programme of mobile social media tools to investigate:

- Social media overview
- An introduction to Twitter
- An introduction to Blogging
- An introduction to Google Plus Hangouts
- What is RSS – how to manage social media
- Social video via YouTube and Vimeo
- Mobile livestreaming via Bambuser
- Mobile eportfolios via Behance
- Collating and curating mobile social media via Storify.com

Participants wrote an initial mobile social media proposal for implementation with their students in semester two 2012 at the beginning of the COP. This was then rewritten at the end of the first semester after their mobcop12 experience. These project outlines were uploaded and shared as Google Docs and provided a reified reflection activity evidencing significant development of the lecturers' understandings of the affordances of mobile social media for education and pedagogical change. The projects included:

- Creating a short interactive Web documentary using iPhone 4S's to interview members of an orchestra
- Exploring letterpress type development using the iPhone 4S camera and creating an app that can turn captured imagery into vector type
- Exploring mobile film making
- Developing stop frame animation on the iPhone, with project progress reported via student blogs

#### **Product Design**

The overall aim of the Product Design Learning and Teaching Fellowship was the formation of a lecturer COP focused upon enabling Design Thinking through the use of social, mobile, Web 2.0 and digital media technologies. The COP provides the lecturers with an authentic experience of the development of a learning community enabled by technology. This will then be implemented and modelled by the lecturers within the course itself.

Specific outcomes include innovation in learning and teaching through:

- The development and exploration of an mlearning infrastructure in the department using contemporary technologies (mobile and Web enabled tools) for lecturers;
- The exploration and use of student-owned mobile and digital media devices to enhance the studio environment that link informal and formal learning beyond the physical studio space. This includes the ability to better capture observations, and reflections in the research and design process, and to better collaborate with other team members in Design Thinking projects;
- The further exploration and application of an online Design Thinking resource in mobile learning

environments, specifically the use of it on mobile, technologies such as laptops, tablets (iPad), and smart phones;

- The exploration and use of student-generated, Web 2.0 enabled e-portfolios in learning environments. This will include the use of Linked In as the 'hub' to integrate a variety of portfolio elements including CV's, project documents (PDF files), photographs (Flickr, Picassa), video (YouTube), and blogs; and
- The exploration of the potential for a 'smart', Web enabled, mobile assessment tool, to be used in the assessment and feedback of Design Thinking project (this is a scoping exercise in the context of the overall project).

The COP spans 2012, and provides time release and support for one lecturer as the coordinator and research partner with CfLAT. In addition LTDF funds were used for reporting the outcomes of the underlying project such as the presentation of papers in the proceedings of a number of international conferences. A COP was established involving the entire Product Design department (including lecturers from the undergraduate, postgraduate Product design programmes, and the Bachelor of Business, Design major, with a total of eight participating lecturers) to investigate and explore innovation in learning and teaching using social, mobile and digital media technologies. The overall goal of the COP was to explore and evaluate the use of contemporary technologies, for example the mobile phone, tablet, Web 2.0 portfolio tools, to 'augment' and enhance constructivist Design Thinking studio environments (both physical and virtual), and to support the learning and teaching process. The technologies will be used in: the delivery and support of teaching, in the process of eportfolio creation, and assessment of Design Thinking projects by students. An informal survey of Product Design students at the end of 2011 indicated the ubiquity of smart phone ownership amongst the students, and this enabled the implementation of innovation in teaching and learning utilising student-owned devices.

#### *Product Design: Busstop moblogging*

This student project involved research, analysis and the design of one or more 'product' interventions that clearly improve and enhance the experience of bus patrons (users) in Auckland. The project was undertaken in conjunction with Auckland Transport, a division of the Auckland Council. Students utilized their own smartphones to aid observation and role playing research to identify poor experience 'touchpoints' in the Auckland bus journeys. Key to the implementation of mobile social media in the project was the formation of a collaborative blogging platform using Posterous.com and the use of student-owned smartphones to augment the formal studio aspects of the Design Thinking process. Posterous was selected as a good mobile blogging platform because of its clear and simple interface, ease of use, the ability to upload images and text from email, and because it had a good mobile app for smartphones and tablets. In addition to using blogging, students were also asked to undertake some of their research using social media platforms such as Facebook and Twitter surveys to enlist feedback on peoples bus journey experiences, and on the ideas and concepts the students generated through the Design Thinking process.

This project represented a significant conceptual shift on the appropriateness of mobile social media for education by the lecturers. Previously the lecturers had limited their online interaction with students to official institutionally hosted and managed systems such as Blackboard (for course documentation) and Mahara for student eportfolios. Neither of these systems were particularly mobile accessible, and neither were they open to much student customization.

#### **Public Relations**

The goal of this LTDF project was to build capacity for innovation in teaching and learning within the Public Relations Department via the establishment and nurturing of a COP of lecturers in partnership with CfLAT. The departmental Teaching and Learning Fellow championed the establishment of this COP and modelled examples of innovative social constructivist practice enabled by technology, leading to transformed teaching practice. An outcome of is COP the further development of two existing global collaborative projects, leading to several student-centered projects within Public Relations courses at AUT, supported by a LATENT grant. This COP builds upon two international collaborative mobile and Web 2.0 projects during 2012: GlobCom (Gordon & Picherit-Duther, 2009), and iCollab12 (Buchem, Cochrane, Gordon, Keegan, & Camacho, 2012). These projects provide authentic collaborative projects for the Public Relations lecturers and students to engage with peers in building international communities, enabled by mobile social media tools. Three key mobile social media tools utilized included: Twitter, Google Plus Hangouts, and Polleverywhere.com. In addition, for one of the projects students experimented with virtual platforms such as Wiggio, Google Docs and Beehive to facilitate team collaboration and share material.

*Public relations: Icollab12, students as global mobile social media reporters*

The core of the icollab12 project was a COP of lecturers across four countries established in 2011 by the iCollab11 project exploring student-generated digital identity and social media reporting across New Zealand, UK, Spain, and Germany (<http://icollab12.wordpress.com/about/>). As part of the iCollab12 international project, students in each participating country were required to move beyond the ‘classroom’ and use their skills in digital communications and social media content production to become transmedia reporters or citizen journalists. The students worked in groups to develop a series of reports for (and in collaboration with) an international audience. The main focus of the project was to produce rich media reports on Social Media in a) their local community, and b) their chosen industry (for example: Web, computing, creative, gigs). Their reports were then presented to students in Germany, Spain and New Zealand – in turn, their fellow iCollab12 students overseas produced parallel content. At the end of the project, students in each country were asked to vote for the best “Social Media” report, and the winners received an iTunes voucher. The following link is to an example YouTube playlist of the final student presentations for iCollab12 project: <http://www.youtube.com/playlist?list=PL4C72B10F1B2AC723>. For several of the student groups the icollab12 project was a non-assessed project that added an authentic collaborative experience to their course, but did not contribute to their summative assessment. The level of student engagement in this non-assessed project was beyond the expectations of the lecturers. For example, the New Zealand lecturer reflected upon the iCollab12 project:

The New Zealand AUT University postgraduate students worked enthusiastically on this collaborative project with the students at Salford University in the UK as well as two other groups (Germany and Spain), guided by the researcher as the technology steward. The students presented their projects in class while streaming a live feed via Qik and also posted them on the project collaborative blog to get feedback from these students, and the public at large... This project was not graded but the students were extremely motivated to create what has become a student-led project. (AUT Lecturer, 2012)

Embedding the use of mobile social media within authentic team-based projects led to significantly increased student engagement and creativity.

## Discussion

Each of the lecturer COPs utilized a common methodology, as outlined in Table 2. This framework recognizes the uniqueness and creativity of each COP allowing for tailoring the use of mobile social media to each context.

**Table 2: Example Product Design COP framework.**

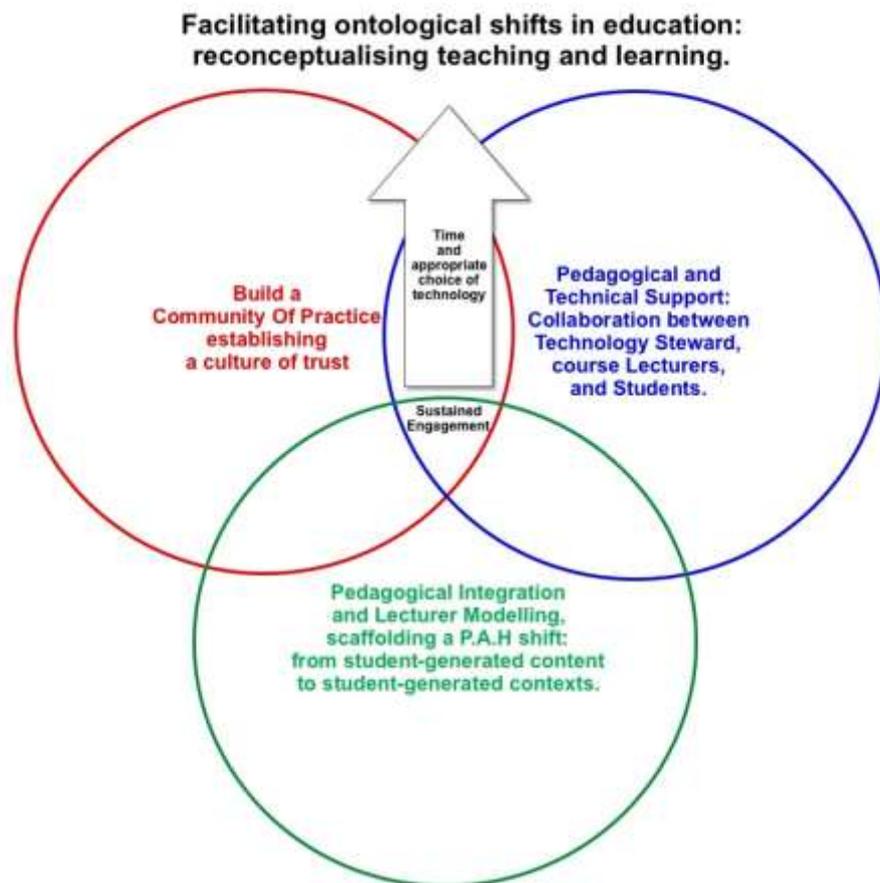
<b>mLearning COP Stages</b>	<b>Timeframe</b>	<b>Outcome</b>
Establish weekly COP with lecturers and technology steward. Establish support requirements. Completion of an initial survey that explores participants prior pedagogical beliefs and practice. Establish lecturer eportfolios. Establish a collaborative research agenda and research questions, and establish ethics consent procedures.	Semester 1	Staff reflect upon their prior pedagogical beliefs and practice. Staff share their current course outlines and assessment strategies for collaborative editing via Google Docs. Staff develop competency with mlearning. Staff explore mlearning pedagogies. Staff develop pedagogical mlearning activities based on social constructivist pedagogies
Mlearning projects with staff and students. Implementation of the mlearning activities within each course and assessment.	Semester 2	Students establish mlearning eportfolios. Increased student engagement. Flexible delivery. Facilitating social constructivist pedagogies and bridging learning contexts.
Lecturers publish and present case studies based on project implementation, these then inform the design of the following iteration of the project.	End of Semester 2 and beginning of following Semester	Collaborative research writing based on prior and redeveloped course outlines and outcomes via Google Docs.

The reified activity of the COPs established around the LTDF's have been used to broker the impact on student learning by showcasing student projects coming out of these COPs. These have provided tangible examples of post Web 2.0 pedagogy in action. Thus far the examples have come from the practice of the LTDF's, as they establish COPs of their colleagues, and have begun the process of drawing them in from the periphery of post Web 2.0 practice into full participation within these COPs. Typically this involves a process of initial personal appropriation of the affordances of mobile social media for increasing lecturer productivity. This is then followed by an investigation of the pedagogical potential of these tools, and finally by an investigation of how these tools enable new pedagogies and the design of learning activities and assessments that focus upon student-generated content and student-generated contexts.

The LTDF lecturer COPs intersect with a variety of other COPs, including:

- Each student course cohort
- The four lecturer COPs a part of a wider LTDF COP made up of the four Teaching Fellows and the technology steward
- Individual course projects

This framework addresses the three issues confronting ontological shifts (Chi & Hausmann, 2003): The first is a lack of the alternative category, addressed by reframing pedagogy from teacher-directed to enabling student-generated content and student-generated contexts (heutagogy). The second is the lack of awareness of the need to shift, addressed by building a COP that provides authentic experiences while building a culture of trust. Finally, the third is that it is resource-intensive, addressed by providing sustained pedagogical and technical support throughout the projects. Addressing these three issues provides the foundation for significant pedagogical change based upon sustained engagement, enabling an ontological shift from teacher-directed pedagogy to student-directed heutagogy, as illustrated in figure 1.



**Figure 1: Nurturing ontological shifts leading to heutagogy.**

In Figure 1 we use Luckin et al.'s (2010) concept of the Pedagogy-Andragogy-Heutagogy (P.A.H) continuum as a measure of pedagogical change as the projects evidence shifts along this continuum from teacher-directed (pedagogy) to student-directed (heutagogy). The examples, one from each LTDF COP, illustrate the use of mobile social media in education to enable shifts from teacher-directed pedagogy to student-generated content and student-generated contexts within the four LTDF course contexts. In each of these projects the LTDF fellows engaged in modeling the use of mobile social media tools alongside their students and colleagues.

### Next steps

The next step in developing this framework will be evaluating its impact within the four contexts outlined during 2012 and beyond, and continuing to bring other lecturers from the periphery of these COPs into full participation within new COPs in other departments. We have begun to do this by celebrating and showcasing the innovative and creative work that students have created as outcomes of these four COPs. This has taken the form of symposiums and published research outputs by the participating lecturers based upon reflective teaching practice informed by the framework (Cochrane, Antonczak, & Wagner, 2012; Cochrane, et al., 2011; Cochrane, Sissons, et al., 2012; Withell, Cochrane, Reay, Gaziulusoy, & Inder, 2012). An analysis and review of the impact of the LTDF model at the end of 2012 will be used to compare the institutional impact of this model in comparison to the previous model of just-in-time lecturer support combined with the delivery of a series of professional development workshops for lecturers. Initial results indicate that the LTDF model is providing significantly more support for innovation and pedagogical change than the previous institutional support model, and thus institutional funding for the LTDF model is likely to continue.

### Conclusion

We have presented a framework for preparing lecturers to engage with the challenge of post Web 2.0 pedagogies by experiencing the potential of mobile social media within authentic communities of practice. These COPs use mobile social media as catalysts for redesigning learning activities and assessments around student-generated content and student-generated contexts. We have also provided examples of resultant projects that utilize these new pedagogical approaches focusing upon learning for the future of post Web 2.0 or mobile social media. The institutional sustainability of this LTDF framework will be evaluated at the end of 2012.

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