

DEVELOPING A MOBILE SOCIAL MEDIA FRAMEWORK FOR CREATIVE PEDAGOGIES

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ABSTRACT

This paper explores an overview of an evolving framework to enable creative pedagogies as applied to three different higher education contexts. Based upon our experiences, we propose a critical framework for supporting and implementing mobile social media for pedagogical change within higher education. Our framework maps the SAMR educational technology adoption framework with three levels of creativity onto the Pedagogy-Andragogy-Heutagogy continuum. We illustrate the use of this framework in the context of three University courses: Communications Studies, Journalism, and Graphics Design. Critical to the framework is the establishment of collaborative communities of practice of lecturers and educational researchers who model the use of mobile social media in their own teaching practice. Implementing our framework has enabled a refocus upon ontological pedagogies rather than previous teacher-directed pedagogies.

KEYWORDS

Communities of practice, mobile, social media, heutagogy.

1. INTRODUCTION

Design and arts education seeks to generate graduates who can think creatively and become active participants of the community of practitioners associated with their chosen field of design. Supporting creativity involves a range of activities and pedagogical approaches.

Creativity thrives in an atmosphere that is supportive, dynamic, and receptive to new ideas and activities. The learning environment has to encourage interactions between learners in which: action and reflection are carefully counter-balanced; open-ended periods of play and 'blue-sky' thinking alternate with goal-oriented problem-solving; stimulating inputs and staff interventions are interwoven with periods in which learners develop ideas and constructs at their own pace; critical thinking and robust debate co-exist with a supportive 'space' in which risk-taking, imaginative exploration and productive failure are accepted as positive processes of learning and, the development of meanings and interpretations is inseparable from material processes and production. (Danvers, 2003, p52)

Thus the creative professions, including the many fields of design, typically require a holistic approach to education focusing upon the learner becoming part of a professional community, involving the dimensions of knowledge, performance and 'learning to become' (Danvers, 2003, pp53-54).

In order to transform students into creative professionals, educators' need to focus upon ontological pedagogies that deal with the process of becoming, rather than pedagogies that focus upon knowledge transfer. This approach could also be extended to other fields. In today's world where the most ubiquitous technology is mobile (ITU, 2011) and mobile internet connectivity exceeds fixed connections, education must include a critical engagement with new technologies including mobile social media.

Having started as craft-based training with rather narrow vocational aims, design education is developing into an interdisciplinary academic field emphasizing research and preparing designers for a knowledge economy. (Yagou, 2007)

Mazur (2012) argues that lecturers are more effective when they focus upon interaction among students by producing active learners. This involves a reconception of teaching where the "focus moves away from the lectern and toward the physical and imaginative activity of each student in class" (Mazur, 2012). Mobile social media enables the design of learning activities that bridge authentic student learning experiences outside the classroom and the formal learning space of the classroom. We argue that mobile social media can be used as a catalyst to enable ontological shifts in pedagogy from teacher-directed paradigms to student-directed paradigms (Cochrane & Bateman, 2013). This involves modeling of the use of mobile social media as a creative tool by lecturers (Cochrane, 2012). Unfortunately the digital native fallacy has provided a convenient excuse for many lecturers to ignore their responsibility to engage with and model the use of mobile social media in teaching and learning. Prensky's (2001) notion of digital natives consisting of millennial students who are physiologically wired differently than previous generations of learners has been heavily critiqued (Sheeley, 2010). It has been subsequently argued that engagement with new technologies in learning is not age related (White & Le Cornu, 2011), but involves a conceptual shift in understanding of the roles of teachers and learners and the empowerment enabled by new technologies. Therefore we have found that we must begin by enabling an ontological shift in lecturers perceptions of the academic and creative use of mobile social media.

2. A FRAMEWORK FOR CREATIVE PEDAGOGIES

Both learners and teachers invariably default to using new technologies within the scope of their prior experiences. This results in what Herrington and Herrington refer to as the phenomena of one step forward for technology, but two steps back for pedagogy.

Despite the significant potential of mobile technologies to be used as powerful learning tools in higher education, their current use appears to be predominantly within a didactic, teacher-centred paradigm, rather than a more constructivist environment. It can be argued that the current use of mobile devices in higher education (essentially content delivery) is pedagogically regressive. Their adoption is following a typical pattern where educators revert to old pedagogies as they come to terms with the capabilities of new technologies. (Herrington & Herrington, 2007)

Thus we find that students and teachers generally adopt new technologies by firstly reproducing activities that they already achieve using technologies they are comfortable with. For example Powerpoint presentations are imported to an iPad or iPhone. However, by creating a mobile social media framework for creative pedagogies we can design and integrate the types of activities and pedagogies that support creativity and move beyond substitution towards redefinition, and move from teacher-directed pedagogy towards student-directed heutagogy. The research question informing the development of a mobile social media framework is therefore: How can mobile social media be used as a catalyst to enable new pedagogies that focus upon student-directed collaboration in and beyond the classroom?

Through implementing a series of over 45 mobile learning action research projects since 2006, we have developed a mobile social media framework to enable creative pedagogies in a variety of educational contexts (Cochrane, 2012; Cochrane & Bateman, 2013). Our mobile social media framework is essentially a mashup of concepts that we have found particularly useful to support the introduction of creative pedagogies via mobile social media. These include: the concept of the Pedagogy-Andragogy-Heutagogy (PAH) continuum (Luckin et al., 2010), and Puente's (2006) SAMR model (Substitution, Augmentation, Modification, Redefinition) of educational technology transformation. Both of these pedagogical frameworks resonate with Sternberg, Kaufman and Pretz (2002) view of creativity involving incrementation (or modification of a current idea) followed by reinitiation (or redefinition). Using this framework we have designed and integrated the types of activities and pedagogies that support creativity and move beyond substitution towards redefinition, and move from teacher-directed pedagogy towards student-directed heutagogy. The implementation of the framework (Table 1) is supported by establishing communities of practice (COP) of department lecturers partnered with educational technologists, and creating a wireless screen-mirroring infrastructure to enable mobile devices to become collaborative tools nicknamed Mobile Airplay Screens or MOAs (Cochrane, Munn & Antoneczak, 2013) see <http://bit.ly/1kN9Ah9>.

Table 1. Creative pedagogies, technology and the PAH continuum (modified from Luckin et al., 2010)

	Pedagogy	Andragogy	Heutagogy
Activity Types	<ul style="list-style-type: none"> • Content delivery • Digital assessment • Teacher delivered content • Teacher defined projects 	<ul style="list-style-type: none"> • Teacher as guide • Digital identity • Student-generated content • Student negotiated teams 	<ul style="list-style-type: none"> • Teacher co-learner • Digital presence • Student-generated contexts • Student negotiated projects
Locus of control	Teacher	Student	Student
Cognition	Cognitive	Meta-cognitive	Epistemic
SAMR	Substitution & Augmentation <ul style="list-style-type: none"> • Portfolio to eportfolio • PowerPoint on iPad • Focus on productivity • Mobile device as personal digital assistant and consumption tool 	Modification <ul style="list-style-type: none"> • Reflection as VODCast • Prezi on iPad • New forms of collaboration • Mobile device as content creation and curation tool 	Redefinition <ul style="list-style-type: none"> • In situ reflections • Presentations as dialogue with source material • Community building • Mobile device as collaborative tool
Creativity (Kaufman & Pretz, 2012)	Reproduction	Incrementation	Reinitiation
Knowledge production	Subject understanding	Process negotiation	Context shaping
Self perception	Learning about	Learning to become	Active participation within the professional design community

3. EXAMPLES

The collaborative design of learning activities and assessments using mobile social media is illustrated in three different higher education contexts as briefly described in the following section. Each case study involved the formation of a COP of lecturers in a department and the researcher. The researcher modelled the use of mobile social media and brainstormed the integration into the curriculum of mobile social media with the course lecturers, who met weekly over a semester to explore the potential of new pedagogies enabled by mobile social media. The types of mobile social media activities that we introduced within each course were designed to move both pedagogy and student creativity along a continuum and are illustrated in Tables 2 to 4 summarising the use of our mobile social media framework.

3.1 Digital Media

The Digital Media project focused upon developing learning communities using Google Plus and the Google Plus App on smartphones and tablets. The researcher and the lecturers established a Google Plus Community to experience and explore the potential of mobile social media within the curriculum (<http://bit.ly/GA4kQW>). The main course assignment was the student team development of a m-learning application. The course assessment requirements were redesigned from focusing upon the submission of written Word report on the development process to the establishment of a team-based project eportfolio using mobile social media such as Google Plus Communities, Blogs and Google Drive. Students were able to use large screen displays or MOAs in class to collaborate on their App development and preview their development directly from their mobile devices, rather than create static screenshots and use PowerPoint presentations of the App as they had previously. Table 2 shows a comparison of an example of one previous assessment outline and the redesigned outline based upon our mobile social media framework.

Table 2. Assessment criteria for an educational mobile web app.

Previous assessment criteria	Redesigned assessment criteria
Your research on the topic you selected to be taught within a folder named "YOURINITIALS_Research"	Your research and media for the project must be uploaded to your Wordpress blog and external media embedded or linked to your blog.
A diagram of your mobile web app as a .pdf named "Diagram"	Make at least a weekly project progress summary blog post, and attach/embed supporting media to this post.
A Mockup of your mobile apps pages as .jpgs or .pdfs named "Wireframe"	Use the hashtag #148302a3 to filter blog posts and media for this assignment.
Your completed mobile web app and all its components contained in a folder named "WebApp"	Create a Google Plus Group for scheduling and recording your group meetings and activity.
Your individual contribution as a .doc names "INITIALS_Contribution"	Create a shared Mendeley library of your references, using APA formatting, and link this to a blog post named "References"
Your references as a .doc named "References"	Your final blog post will be a reflection on the project, including a summary of the team and your specific contribution to the team project - this can include a short 1 minute VODCast uploaded to either YouTube or Vimeo and embedded in your blog post.
Ensure all files are named correctly and contained within a folder labeled "TeamName_Brief4".	

Table 3 shows a comparison of the change in curriculum activities and assessments, with the original assessment approach situated firmly within a teacher-directed pedagogy, while the redesigned assessment activities move towards student-directed heutagogy.

Table 3. Mobile social media in the Communications curriculum

	Pedagogy	Andragogy	Heutagogy
Activity Types	<ul style="list-style-type: none"> Teacher defined projects: course requirements, Project scope Teacher delivered examples Assignments descriptive Assignment submission via Word reports and Powerpoint 	<ul style="list-style-type: none"> Teacher as guide Digital identity: Wordpress journals Student-generated content using smartphones Student negotiated teams in Google Plus Communities 	<ul style="list-style-type: none"> Teacher modelling use of mobile social media within collaborative curriculum redesign team Student-generated contexts: Authentic mobile App design and development
Creativity	Reproduction	Incrementation	Reinitiation

3.2 Graphics Design

This project centred upon the development of a lecturer community of practice to explore the development of a new media minor (<http://bit.ly/1bRNyZR>) consisting of four elective courses over three years of the degree within the school based upon mobile social media (Cochrane & Antonczak, 2013a; Cochrane & Antonczak, 2013b). The goal of this new minor is to transform students into creative professionals, by focusing upon ontological pedagogies (Danvers, 2003) that deal with the process of becoming, rather than pedagogies that focus upon knowledge transfer. Thus the new minor focuses upon extending students' experience and expertise beyond the formal requirements of the course to give them a real world collaborative experience via

mobile social media such as Twitter, live streaming via Bambuser, eportfolios such as Behance.com, and the use of mobile devices to present in class reports and participate in live critique via screen mirroring of their mobile devices to MOAs. The development of the new media minor is structured around four new elective papers across three years, outlined in Table 4.

Table 4. Developing a new media minor based upon our mobile social media framework

Paper	Year	Credit & Level	Cognition level	Assessment activities	Conceptual shift	PAH alignment
Paper 1: Introduction to mobile social media	1	15 Level5	Cognitive	Personal digital identity building and student-generated content	Teacher modeled	Pedagogy
Paper 2: Mobile social media collaboration	2	15 Level6	Meta Cognitive	Collaborate in a team-based project as content creators	Teacher guided	Andragogy
Paper 3: Contextual affordances of mobile social media	2	15 Level6	Epistemic	Establishment of an international team project	Student negotiated	Andragogy to heutagogy
Paper 4: International community of practice	3	15 Level7	Epistemic	Active participation within a global professional community	Student directed	Heutagogy

The final paper of the new media minor features students creating and actively participating in a global team project, giving them an authentic experience of working in a professional community of practice within their discipline. The descriptor of this final course within the minor positions itself firmly within a heutagogical paradigm:

Research, analytical, critical and creative capabilities are developed and refined in this student-generated project. Critical frameworks, collaborations, teamwork, intercultural competencies are explored to situate the students chosen area of research in relevant theoretical and professional contexts. Issues of mobile social media are examined within an international community of practice. Presentation skills are developed to position the research outputs in the setting of a body of work and project timeline and critical dates are negotiated between students and lecturers.

Table 5 shows a comparison of the change in curriculum activities and assessments in the new minor compared to other current papers in the Department.

Table 5. Mobile social media in the Graphics Design curriculum

	Pedagogy	Andragogy	Heutagogy
Activity Types	<ul style="list-style-type: none"> Teacher defined projects: course requirements, Project scope Teacher delivered examples Assignments submitted via institutional Learning Management System (LMS) 	<ul style="list-style-type: none"> Teacher as guide Digital identity: Behance eportfolios Student-generated content: mobile film production Student negotiated teams in collaborative projects 	<ul style="list-style-type: none"> Teacher modelling use of mobile social media within collaborative curriculum redesign team Student-generated contexts: live streaming of events Active participation in global teams
Creativity	Reproduction	Incrementation	Reinitiation

3.3 Journalism

This project involved the collaborative redesign of a New Media Journalism paper from a previous focus upon teaching students rudimentary web 1.0 development skills and the Powerpoint presentation of social media case studies from the lecturers, to providing students with an authentic experience of using and critiquing mobile social media as it has transformed contemporary journalism practice (Cochrane, Mulrennan, Sissons, Pamatatau & Barnes, 2013). The original course descriptor was:

Examines the digital technologies and the issues affecting journalists and online news media sites. Covers the writing, editing and site design skills relevant to online journalism, including digital photography and image editing. Involves newsgathering with the aim of publication on the course website. (Course descriptor, 2009)

The new course descriptor redesigned based upon our mobile social media framework is:

Examines and critiques mobile digital technologies, production and curation of news and social media source material within online news media sites. Covers the mobile recording of news via mobile applications in text, image, audio and video, including crowd-sourcing, live streaming and social media enabled collaboration within extended communities of practice. Involves news gathering with the aim of publication on the course website. Establishes eportfolios which become the basis for a professional entry into contemporary journalism. (Course descriptor, 2013)

The redesigned level 7 course offers students authentic team-based projects in which they are included as active negotiators of the project outcomes (heutagogy). Students now build a professional mobile social media identity throughout the course, and engage with mobile social media both during their class time and beyond class. Thus graduates will be better prepared to become active members of collaborative mobile social media journalism teams, both nationally and internationally. In this context the professional use of mobile social media was actively modelled, including the use of Twitter streams during class, student presentations from their mobile devices (for example: <http://youtu.be/a58l3L5O18E>), guest lecturers via Skype and other mobile live streaming Apps, and interactive crowd-sourced mobile discussion forums.

Table 6. Comparison of original and redesigned assessment activities

Previous assessment criteria	Redesigned assessment criteria
Assessment 1: In-class group presentation (PowerPoint) on aspects of media convergence, new media journalism and web-based reporting (10 marks) and an individual essay of 1000 words (20 marks)	Assessment 1: Students create an extended journalism community of practice facilitated by mobile social media, and curate and publish coverage of a public news event. Student teams then present their stories in class using mobile social media (Prezi, Skype, Vidyocast etc...), while being live-streamed to Bambuser, e.g. http://youtu.be/a58l3L5O18E
Assessment 2: Use the institutions LMS discussion forum to create a web-journalism portfolio – accessible by the class only	Assessment 2: Develop a real world personal journalism digital identity profile using mobile social media (Twitter, YouTube, Wordpress, LinkedIn etc...)
Assessment 3: Learn Dreamweaver for personal web design and production of a news-oriented website	Assessment 3: Students collaboratively curate, critique, and publish a news portfolio enabled via mobile social media tools for publication on the School's website using Storify. This includes the use of Twitter, blogs, live-blogging, Vidyocast videoconferencing, crowdsourcing, Vine and Vyclone. These pieces of content will be curated into a Storify with a total of 500 words giving context and analysis on the social media tool you have used, and how it has enabled the production of the item.

Twitter was used in the redesigned course to facilitate the building of an authentic professional journalism community. An interactive visual map of the Twitter interactions for the class hashtag over one week of the course was created using TAGSExplorer at <http://bit.ly/18nl08G>. The interactive visualization provides a quick overview of Twitter conversations via replies (solid grey lines), retweets (dotted blue lines) and mentions (dotted grey lines). The size of users nodes indicates their relative frequency and can indicate the most influential members and the style of communication, for example a single dominant node would indicate a broadcast mode. Individual nodes with no links indicate sharing of information but not within a conversation. In figure 1 we see that the lecturer is the dominant node that is modelling the use of Twitter to create conversation and engage with the community of students in the course. There are several strong student nodes indicating that the class is indeed developing a community of Twitter users around the course hashtag. The visual map also indicates the serendipitous involvement of twitter users beyond the class and users from the news professional community, thus giving the students an introduction to authentic participation within the professional journalism community. Table 7 shows a comparison of the change in curriculum activities and assessments between the original course outline and the redesigned outline based upon our mobile social media framework.

Table 7. Mobile social media in the Journalism curriculum

	Pedagogy	Andragogy	Heutagogy
Activity Types	<ul style="list-style-type: none"> Teacher defined projects: course requirements, Project scope Teacher delivered case studies Mobile social media activity during class seen as purely social 	<ul style="list-style-type: none"> Teacher as guide Student curation of social media via Storify Student-generated content via Twitter Student negotiated teams 	<ul style="list-style-type: none"> Teacher modelling use of mobile social media within collaborative curriculum redesign team Students actively participate within an authentic professional community
Creativity	Reproduction	Incrementation	Reinitiation

3.4 Summary

In each of these examples we have seen a significant change in pedagogical strategies and the integration of mobile social media in ways that move beyond merely substituting prior activities onto new technologies. By focusing upon a goal of transforming education from teacher-delivered content to enabling authentic collaborative experiences for our students we have leveraged the unique affordances of mobile social media to achieve this within different educational contexts. Critical to this has been the establishment of collaborative communities of practice of lecturers and educational researchers who have modeled the use of mobile social media in their own teaching practice. Reconceptualising the role of the teacher and the learner has enabled a focus upon ontological pedagogies rather than the previous default teacher-directed pedagogies. Future research will explore the transfer of this framework within other higher education institutions throughout New Zealand, and potentially internationally by establishing international COPs.

4. CONCLUSION

In this brief overview we have outlined how mobile social media can be used as a catalyst for creative pedagogies when informed by the concepts of new pedagogical frameworks such as the pedagogy-andragogy-heutagogy continuum, and Puentedura's SAMR framework. We have described the application of a mobile social media framework to three different course contexts illustrating the potential for this framework to be used or transferable in a range of educational contexts and fields to encourage creative pedagogies.

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