

Heutagogial approaches to mlearning: from student-generated content to international co-production

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ABSTRACT

Mobile devices have disrupted and reinvented traditional media markets and distribution: iTunes and the iPod now rule music industry distribution channels, Twitter has reinvented Journalism practice, iTunes and the iPad are disrupting book publishing via ebooks and ibooks, and the television and movie industry are struggling to respond to the impact of iTunes, YouTube, Vimeo and mobile devices. These game-changes have also impacted and reinvented performing and screen arts higher education. We critique the changes brought about in a case study of film and television higher education from explorations of student-generated mobile movie production to facilitation of international student mobile media co-production teams supported by the development of an international Community of Practice (COP).

Author Keywords

Mlearning, heutagogy, co-production, Community of Practice (COP)

INTRODUCTION

Over the past four years the teaching of an higher education Film and Television course has undergone significant transformation as the lecturers have attempted to engage with the impact of mobile devices and new forms of media distribution on the industry. This journey has also led to significant pedagogical transformation, as the lecturers have undergone conceptual shifts in the understanding of their roles and the roles of their students in a post web 2.0 world. Many IT commentators are pronouncing the issuing in of a post web 2.0 era: not web 3.0, but the mobile web.

Social companies born since 2010 have a very different view of the world. These companies – and Instagram is the most topical example at the moment – view the mobile smartphone as the primary (and oftentimes exclusive) platform for their application. They don't even think of launching via a web site. They assume, over time, people will use their mobile applications almost entirely instead of websites. We will never have Web 3.0, because the Web's dead. (Jackson, 2012)

Jackson (2012) postulates that Web 2.0 companies (founded from 2002 to 2009) such as Google and Facebook may fade into irrelevance in a post web 2.0 world unless these companies can make the conceptual shifts that a mobile-focused world brings. This post web 2.0 world is characterized by in situ (contextual) real-time sharing and collaboration, enabled by today's powerful mobile smartphones. It is a world where Internet use is mobile-first or even mobile-only. Mobile broadband subscriptions out-numbered wired Internet connections in 2010 (Acharya & Teltscher, 2010), the iPhone became the most popular camera used to upload photos to Flickr during 2010 (MobileFuture, 2010), and tablets such as the iPad or Kindle Fire have become a popular medium of choice for reading and media viewing. This shift is illustrated by two recent incidents:

- Facebook's flagging IPO share prices have been attributed to its weakness in mobile (Gustin, 2012; Miller, 2012). Facebook has embarked upon a mobile buying spree trying to bolster its mobile presence, such as the acquisition of Instagram.
- Obama recently made a call for all US Government services to be mobile enabled within a year, and is quoted as saying "Americans deserve a government that works for them anytime, anywhere, and on any device" (Melvin & Bull, 2012, p. 1).

This paper recounts the transformational journey that the lecturers and researcher have been on in forming a Community of Practice (COP) for reinventing a Film and Television course in response to a mobile post web 2.0 world. Key to this has been the changes implemented within an elective course on emerging technologies, that began with a mobile technology focus, but have now moved from enabling student-generated content on mobile devices to enabling collaborative design of authentic international student co-production teams. This change has been paralleled by a pedagogical shift from teacher-directed content (instructivist pedagogy) to student-negotiated and student-directed heutagogy as well as collaborative learning. Not only has the teaching paradigm been transformed, but the curriculum design process has also undergone a transformation from a course written for delivery by a sole lecturer to the co-creation of a collaborative curriculum by an international community of practice of expert lecturers. This transformation echoes Laurillard's (2012) call for teaching to become a collaborative design science.

A 21st century education system needs teachers who work collaboratively to design effective and innovative teaching, and digital technologies are the key to making that work. Teaching is now a design science. Like other design professionals - architects, engineers, town planners, programmers – teachers have to work out creative and evidence-based ways of improving what they do. (Laurillard, 2012)

Heutagogy

New approaches to collaborative design of education such as that called for by Laurillard require new pedagogies. Heutagogy is used to describe the type of student-directed pedagogy usually reserved for the domain of post-graduate students (Blaschke, 2012). However, Hase and Kenyon (2000) argue that “heutagogy is appropriate to the needs of learners in the twenty-first century, particularly in the development of individual capability” (Hase & Kenyon, 2000, p. 1). Building on this, Luckin et al., (2010) argue that heutagogy can be seen as a progression along a continuum of pedagogical approaches from teacher-directed pedagogy to student-centred andragogy and finally student-directed heutagogy. This pedagogy-andragogy-heutagogy (PAH) continuum can be designed using mobile devices to facilitate learner-generated contexts: “The key aspect of Learner Generated Contexts is that they are generated through the enterprise of those who would previously have been consumers in a context created for them” (Luckin, et al., 2008, p. 3). The Film and Television elective projects aimed to facilitate a shift along the PAH continuum from the previously teacher-directed pedagogy of the course to a more heutagogical approach where the focus moved to student production and collaboration.

Communities of practice

Communities of practice (COP) is a social learning theory (Lave & Wenger, 1991; Wenger, 1998) that was used as the basis for supporting the Film and Television elective projects by the establishment of a learning community of the participants around each project. COPs are based upon Vygotsky’s (1978) social theory of learning where learners learn from more experienced members and are gradually brought from the periphery of a learning community into its core. Thus initial peripheral observation with limited participation (or legitimate peripheral participation) is part of the process.

Mobile Web 2.0

Mobile web 2.0 leverages the affordances of mobile devices (in particular the geolocation, augmented reality, and instant creation and sharing of multimedia affordances of smartphones) to enhance the collaborative affordances of web 2.0 (O’Reilly, 2005). Thus mobile web 2.0 provides a powerful platform for enabling learner-generated contexts for heutagogy. While there are examples of mobile web 2.0 projects that leverage these unique affordances such as Cook (2010), the mlearning research literature has been critiqued for a predominant focus upon teacher-directed content delivery to mobile devices and a proliferation of short term case studies (Kukulka-Hulme, Sharples, Milrad, Arnedillo-Sanchez, & Vavoula, 2009; Rushby, 2012; Wingkvist & Ericsson, 2011).

RESEARCH METHODOLOGY

The Film and Television elective course projects were situated within a wider participatory action research (Swantz, 2008) project that investigated the potential to transform pedagogy using mobile web 2.0 (Cochrane, 2011). Each of the Film and Television elective course iterations formed a significant action research cycle within the wider research. While this paper focuses upon the context of the 2009 to 2012 Film and Television projects, the wider research has covered contexts from Architecture, Landscape Design, Product Design, Computing, Graphics Design, Accountancy, Business and Law, Civil Engineering, and Journalism (Cochrane, 2012).

Research Questions

A review of the mlearning literature led to the identification of gaps in the understanding of mlearning, and the development of the research questions, which were:

1. What are the key factors in integrating Wireless Mobile Devices (WMDs) within tertiary education courses?
2. What challenges/advantages to established pedagogies do these potentially disruptive technologies present?
3. To what extent can these WMDs be utilized to support learner interactivity, collaboration, communication, reflection and interest, and thus provide pedagogically rich learning environments that engage and motivate the learner?
4. To what extent can WMDs be used to harness the potential of current and emerging social constructivist e-learning tools?

Context

The researcher partnered with a Film and Television course lecturer establishing a lecturer community of practice (COP) within the Performing and Screen Arts (PASA) department in 2008 and 2009 to increase awareness of and create momentum for integrating mlearning into the PASA curriculum in 2009. The predominant pedagogy in the PASA department was based upon an apprenticeship model, with very high staff to student ratios, expensive computer-based video and audio editing equipment, and therefore high costs and low profit margins. These factors had led to low investment in the supporting technologies for the courses: there were no dedicated general purpose computer facilities for

students, expensive video and audio computer editing suites were not networked, and the school had no wireless network coverage. Consequently teaching methods were face-to-face instruction with no integration of the wider institution's online LMS into the courses, as students had little opportunity to access online material. The researcher and PASA course lecturer therefore saw the introduction of mobile Web 2.0 into the department as an ideal opportunity to disrupt the status quo, introduce ubiquitous wireless connectivity and facilitate a move to social constructivist pedagogies using cost-effective mobile Web 2.0 technologies.

RESULTS

2009

The outcome of the lecturer COP in 2009 was the development of an ambitious mlearning project within the third year New Technologies course in semester two, involving 25 students and 2 course lecturers alongside the researcher as the technology steward. The resulting project focused upon an investigation of the potential of mobile Web 2.0 technologies within the field of Film and Television. Timetabling pressures led to a rather different mlearning project COP formation scenario than previous projects facilitated by the researcher. The project consisted of an introductory session by the researcher where the students were supplied with Dell Mini9 netbooks and Nokia Xpressmusic 5800 smartphones and given an overview of their use and the Web 2.0 applications, followed by a gap of two months, then five guest lecturer facilitated COP sessions covering the Film and TV context affordances of the smartphones within a period of two weeks (<http://www.youtube.com/watch?v=00d-t0F9AzY>). The COP timeframe was therefore compressed and intense. Students were very enthusiastic about the project, but tended to leave their mobile film projects to the last minute due to the pressures of all of their other final year project assessments occurring around the same time.

2010

The success of the 2009 mobile Web 2.0 project in the third year of the Bachelor of Screen and Performing Arts course drew in lecturers on the periphery of the community of practice around the project, enabling an opportunity to extend the introduction of mobile Web 2.0 across all courses of the degree program in 2010. While this was an exciting development it also represented a significant drain on the resources of the researcher and core lecturer as technology stewards across several new initiatives at once, leaving less time available for refreshing the third year mobile Web 2.0 project. The 2010 mobile Web 2.0 third-year student project was effectively a repeat of the 2009 project but the students were supplied with the much better Nokia N97 smartphone. However student expectations had changed dramatically in the 12 months between the 2009 and 2010 projects. Whereas the 2009 project represented a new experience for students with the first introduction of wifi access across the department and provision of wifi capable mobile devices, the 2010 students were not impressed with the perceived dated user-interface of the Nokia N97 in comparison to the then available iPhone 3GS and Android-based smartphones. The 2010 third year project failed to establish a sense of sustained community, with students producing mobile film projects at the last minute in order to simply meet the requirements of the course within their busy last semester of their degree. This led to a rethink of mobile Web 2.0 integration into the course for 2011.

2011

The compressed nature of the 2009 and 2010 projects did not facilitate a sustained engagement or sense of learning community formation. The 2011 mobile Web 2.0 project was therefore refocused upon a second year Film and Television course where a regular and sustained COP could be established as the basis for the mlearning integration, involving a weekly COP between the students, the course lecturer and the researcher. The lecturer-directed nature of the course has been reinvented to now focus upon a student-negotiated team-based mobile film production project. Students are supplied with a combination of either an iPhone 3G, iPhone 3GS, or iPod Touch4, and an iPad1 each. These mobile tools were then explored as mobile film creation, editing and sharing devices. The scope of the mlearning project was also extended to include a dimension of international collaboration involving the remote participation and presentation within the mlearning COP by a Film and Television lecturer in the UK with experience in mobile film festival projects. The use of Twitter and a Twitter hashtag were introduced with the 2011 ELVSS11 project. This was used for enabling communication and sharing across the time zones and distance between NZ and the UK. Real-time remote lecturer presentations were also enabled via Skype sessions projected on to a large screen for interaction with the entire class. Student response to the 2011 project was extremely positive, and some very creative student-generated mobisodes (short mobile videos) and student reflections upon the project can be viewed on the YouTube channel <http://www.youtube.com/elvss11>.

Elvss11

This project involved 25 Film and Television students in New Zealand producing and sharing mobile films on iPhones in collaboration with a mobile film-making specialist in the UK. The 2011 Film and television course elective "entertainment lab for the very small screen" (ELVSS11) explored team-based student-generated mobisodes (short mobile video episodes) using iPhones to capture video in unique ways, and iPad1's to edit and upload the mobisodes to YouTube. As the students were learning conventional filmmaking methodologies within their wider programme of study, ELVSS11 was an experiment in acquiring video footage with a whole new set of tools, and preparing their films for delivery in a whole new way for viewing upon mobile devices, and thus exploring a new mindset as regards their film-

making craft. The five team mobisodes and student reflections on the project are available on the YouTube channel: <http://www.youtube.com/user/ELVSS11#g/u>. Using the iPhones students explored and made examples of filming techniques and positions that were unachievable via traditional film making using standard production-level digital cameras and crews (see for example <http://youtu.be/GgnbWiMd2C0>). They also critiqued the advantages and limitations of the small screen format (see the following student reflection for example <http://www.youtube.com/watch?v=uq6YUt9UAJU>). This project not only explored an innovative use of mobile technology, but also enabled the course lecturer to reinvent the course's underlying pedagogy. The course was redesigned from a set of content-delivery lectures, to developing student-negotiated and student-generated team projects that were supported by the input of a range of mobile learning experts, both locally and internationally. Each face-to-face class session involved an overview of an aspect of mobile video production, and was followed by student-led discussions (enhanced with a live Twitter feed) around the development of their mobisode projects. Class notes and outcomes were negotiated with the students and made available on Google Docs. Remote guest lecturers from Wellington (NZ) and the UK (Salford University) were brought into the class via live Skype feeds, with interaction and questions enabled via both the live and asynchronous use of Twitter (for example http://youtu.be/Q427tf8e_00). A pre-project survey of the students showed that very few were using Twitter, therefore the use of Twitter was encouraged and modelled in class by the setup of dual projection screens to enable a live Twitter stream to be shown throughout each class. This facilitated interaction with the remote guest lecturers, and provided a record of brainstorms and ideas generated during the classes. At the end of the project the guest expert lecturers recorded and shared feedback on the final student videos via ten minute VODcasts on YouTube (for example: http://youtu.be/I5ohdxS-B_k).

This project led to the establishment of an international lecturer community of practice (initially comprised of the lecturers involved in the elvss11 project, and extended by invitation to other interested lecturers) exploring the use of mobile social media within student collaborative co-creation mobile video projects such as the subsequent elvss12 project. This lecturer COP emerging out of the elvss11 project was sustained using Twitter and Google Plus Hangouts as core communication tools, and Google Docs as a collaborative platform for collaboratively designing the elvss12 project.

Elvss12

This project built on the ELVSS11 project to launch an international student mobile film co-production project involving student teams in New Zealand, France, and the UK, (<http://elvss2012.wordpress.com/participants/>). The ELVSS11 project established partnerships with like-minded lecturers around the world, which in turn led to developing the elvss12 project as an international collaboration, initiated and managed by the PASA course lecturer. Thus in 2012, the elvss project became a three-country collaboration, including students from Unitec in Auckland, New Zealand, Salford University in Manchester, UK, and from Université de Strasbourg in Strasbourg, France, with a total cohort of 37 students.

There were two main projects in which the students engaged: 24 Frames 24 Hours, and Mobile In, Global Out. "24 Frames 24 Hours" is a regularly occurring international collaboration in which people capture footage representing a two-hour slice out of a pre-set 24-hour period. They then cut that footage down to a two-minute film and posted it on the 24 Frames 24 Hours Vimeo.com channel. ELVSS participants contributed to this effort individually, as an introduction to the concepts and the practice of collaborative mobile video production. "Mobile In, Global Out" was the major project of ELVSS12, where students formed four global teams, to create four different mobile movies that addressed the topic of environmental sustainability. Each team consisted of nine members: 2 New Zealand members, 5 UK members, and 2 French members. Each team chose from a provided list of sustainability sub-topics to address and also from a list of story genres through which to shoot. The main collaboration tools used by the teams included: Google Docs, Google+ Hangouts to facilitate a global team that bridged the timezones between the three countries. Google Docs has more specifically facilitated the heutagogical approach of this project via involving and their empowering the students in updating and changing submissions deadlines as well as meetings and feedback dates and times with all the lecturers. In these synchronous and asynchronous meetings, they co-wrote the movie script they would be making. The requirements for each team's movie were to be comprised of three sections: a NZ section, a UK section and a France section. Each team was to shoot and edit their own section that was then edited into one central story concept. Teams shared their mobile video footage – both within the team and between teams – using a shared 100GB Dropbox account. The final edited versions were posted to the ELVSS12 YouTube channel <http://www.youtube.com/elvss2012>. A summary of web 2.0 activity associated with the project was collated via a Google Reader Bundle (<http://tinyurl.com/7hbmm25>), providing a simple summary of the reified activity of the ELVSS12 student COPs for the lecturers to track.

At the end of the project, the project mentors (the ELVSS12 lecturer COP), including the technology stewards and the lecturers associated with the project, viewed the final versions and gave reflective feedback on video to the students on their individual pieces. Unitec students edited their sections on their iPads so the NZ portions were fully mobile in their creation. The other participating students used their own personal mobile devices for the project. All of the students participated in the creation of a group Wordpress blog for their team movie project, and most of the students also kept a personal WordPress blog, journaling their ELVSS12 experience. These included personal video podcasts that reflected on the process and how their view of filmmaking was transformed by this experience. Examples of these are collated in the ELVSS12 YouTube channel. What was different about the ELVSS12 project in comparison to the previous three

iterations of the Film and Television elective was that students from different disciplines and different countries participated in an authentic international collaborative project enabled by mobile and social media. The students also had more ownership of the assignment in deciding collegially about its content, its style, creating a shift along the pedagogy-andragogy-heutagogy (PAH) continuum. The final four videos can be found on the project blog: <http://elvss2012.wordpress.com/projects/>.

DISCUSSION

The four iterations of the integration of mlearning into the Film and Television course have evidenced a progression from an initial focus upon the affordances of mobile devices to the establishment of student-negotiated projects within international co-production teams. The culmination of these project iterations have led to the development of an international community of practice of mobile media lecturers and experts, and reified in the ELVSS12 project. Thus we explore the ELVSS12 project in more detail here.

Table 1 provides a summary and comparison of the four iterations of the mlearning project within the Film and Television course.

Year	2009	2010	2011	2012
Project Title	New and Emerging Technologies	Visual Media Technologies	ELVSS11	ELVSS12
Project Hub	Blackboard	Blackboard	Moodle	Wordpress
Participants	N=25 students N=3 lecturers	N=20 students N=3 lecturers	N=20 students N=3 lecturers	N=37 students N=6 lecturers
Mobile Devices	Nokia Xpressmusic 5800 and Dell Mini9 netbooks	Nokia N97 and student-owned laptops	iPhone 3G and iPad1	iPod Touch and iPad2, student-owned smartphone
Pedagogy	Andragogy	Andragogy	Heutagogy	Heutagogy
Project Focus	Mobile Device affordances	Digital Identity	Co-production	International co-production
Web 2.0 Tools used for collaboration	Vox Ning Qik Livestream	Typepad, Blogger or Wordpress Ning Qik Livestream	Wordpress Twitter Qik Skype	Wordpress Dropbox Twitter Facebook Google Plus
Outputs: YouTube channel http://www.youtube.com/user/	09unitec	UnitecPASA10	ELVSS11	ELVSS12

Table 1: Comparison of four project iterations

Figure 1 illustrates the interrelationship between the ELVSS12 lecturer community of practice and the three student cohorts in New Zealand, the UK, and France. Figure 1 shows the key mobile web 2.0 tools used by the lecturers to facilitate international communication and collaboration at the intersecting boundary points of the four communities of practice involved in the project: the foundational lecturer COP that included three course lecturers and three mobile media experts, and the three course cohorts situated in each country. These tools included: Twitter, Google Docs (now Google Drive), Facebook, Soundcloud, Wordpress, Google Plus, and Dropbox. These tools were chosen because of their support for multiple devices and the fact that they each have an excellent free mobile application. The use of these tools reified the activity and flexibility of the ELVSS12 lecturer COP, resulting in the production of boundary objects that were then used by the participants to broker the concept of an international co-production project to the three groups of students, and to anyone interested in following the progress of the project. This structure became a model for the four international student teams and enhanced students' engagement in general. While initially invisible to the students, the ELVSS12 lecturer COP that formed the foundation for the project was made explicit to the students by three reified activities of the COP: firstly by lecturer commenting and participation in the student team projects via mobile social media (such as Twitter, and Facebook discussions), secondly by two scheduled group Google Plus Hangouts (<http://tinyurl.com/8w52vy2>), and finally by the invitation of student representatives from each team to participate in the last few ELVSS12 lecturer G+ Hangouts (<http://tinyurl.com/cjgqpye>).



Figure 1: Brokering the ELVSS12 lecturer community of practice

There is still much room for improvement in the next iteration of the ELVSS project. The greatest student outcome of the ELVSS12 project was their international co-production team experience. In comparison to the ELVSS11 videos, there was little evidence of engagement with the unique affordances of mobile devices in their movies. For example the ELVSS11 teams created movies that featured QR Codes, and experimental shots and production techniques that were unobtainable using larger conventional production film cameras. Mobile devices were certainly used extensively for international collaboration via Twitter and Google Plus Hangouts, Facebook chat and text messaging. However the effort required to establish and nurture these international teams meant that there was less time for creative effort to be put into the mobile film production itself. It took time to bring all of the student participants from legitimate peripheral participation within the project COP into full participation. This COP development timeframe needs to be designed for within the course structure. The four iterations of the Film and Television elective (2009 to 2012) have all illustrated the need to design significant time within the projects for students to appropriate the educational use of mobile web 2.0 for collaboration and communication. The main limitation with international collaborative projects between the northern and southern hemispheres is the complete inversion of the academic year between the two, making coordination of project timeframes very difficult. Google Docs were used by the lecturers to map out critical timeframes and events around the ELVSS12 project. This needs to be done at least six months in advance before the start of such a project to allow synchronisation of times within the collaborating courses.

ELVSS12 student reflections

As part of the project students were asked to provide a reflective blog post at the end of the project. Representative student posts are shown here.

I feel that the whole module was a good experience in that it allowed communication and ideas to progress through the use of social media from one side of the world to the other. I feel that this process has many advantages and possibilities because it allows you to learn from people from other cultures and share you ideas to produce something that is unique. The whole group, ours and the other groups worked extremely well as a whole to produce their films and I think everyone gained something from doing this exercise. (Student1, 2011)

The main thing really to my experience is that doing this project with people from UK, France and New Zealand, there is that CONNECTION ... and RELATIONSHIP that has been established with everybody.

A sort of bonding that is unique in a sense and that I believe is very important “ That is Social Tech, Peer and Experiential Learning “. (Student2, 2011)

Students were particularly appreciative of their international team experience during the ELVSS12 project, and the sense of participation within a community with a similar vision spanning three countries. The fact that the student expressed some positive feelings about the advantages and possibilities of the process is supporting the focus and the use of heutagogy as a key methodological approach.

ELVSS12 lecturer reflections

Lecturers also provided reflective feedback on the project in the form of videos for the student teams to watch, and personal blog posts.

What’s quite beautiful is the shift towards an emergent CoP model where learners are gradually taking on responsibilities and becoming coordinators...

With ELVSS12, it’s about the lived experience – it’s the students who are experiencing this collaboration, alongside us as lecturers. The boundaries become blurred however. We start to meet one another’s friends/families (in the spirit of the project we may hangout any place/any time). It’s beautiful.

ELVSS12 is also about learning through frustration (at least, I think it is). To hear the students speak so eloquently about international communication and collaboration from a distance, and with such deep understanding of the issues, I do believe that even if the films are maybe not so polished as they had hoped, they’ve actually taken away something much more valuable from this collaboration – the ability to collaborate, co-create, coordinate a major project with people that they have never met.

The sense of relationship created by the use of mobile web 2.0 tools throughout the project was one of the strongest themes running through both the student and lecturer reflections on the ELVSS12 project. The brokering of the lecturer COP to the student teams via the participation of student team representatives in the weekly Google Plus hangouts made the sense of partnership, relationship, and collaboration that the lecturers had built up explicit to the students. We need to note also the “frustration” which is one of the key components of the pedagogy-andragogy-heutagogy (PAH) shift: while flexible and reactive, this approach can generate frustration and tension as students reconceptualize their role as active participants and self-directed learners.

Recommendations for the future

In keeping with the heutagogy theme of the paper, recommendations for future iterations of the ELVSS project came from the students themselves. The following are ten student recommendations that serve as discussion points.

10 Tips for the Next Time

1. Same start dates if possible would be ideal
2. Smaller groups are easier to manage
3. Clearer assignment of stuff to do
4. Group representatives should be appointed at the start
5. Global platform for blogs, data, rushes, and text
6. Maybe 3-4 platform to use Facebook, Dropbox, Google Hang-out, Youtube, Twitter
7. A guidance note given in advance for example after the groupings been done and representative appointed. First thing would be FACEBOOK LINKS AND EMAILS for every group member.
8. Groups to establish proper delegation of responsibilities.
9. All work should be marked doing the project so that everybody participates and not just don’t care.
10. Tell all students to buy their own mobile phone with a camera on it. (Student blog post, 2012)

Some of the key issues (1,9) raised in this student feedback relate to managing the difference in course start dates, assessment deadlines, and semester breaks between three different countries – this will always be difficult to manage, but not unsurmountable with appropriate pre-planning. Other issues identified by students relate to the scaffolding of heutagogical paradigm used within the project (3,7). Students need time to develop the teambuilding and collaboration skills required to make the co-production teams successful (2,4,8). These teams need to leverage the skills of the participants, identifying early within the project a team leader, and assigning production roles appropriately to team members. A set of common web 2.0 tools for collaboration needs to be agreed upon by all of the teams (5,6,7). Finally the projects need to focus upon student-owned devices for creating a sustainable approach within a variety of contexts where a common device platform is practically impossible (10). Providing students with an authentic international co-

production team experience takes these students beyond their previous learning experiences that have largely been within teacher-directed or andragogical paradigms. However founding the projects within a supporting community of practice of expert international lecturers provides a framework to scaffold these paradigm shifts.

CONCLUSIONS

The investigation of the impact of mobile devices on the Film and Television industry led to the transformation of an elective course from a series of teacher-directed lectures to the nurturing of an international community of practice of expert lecturers who collaboratively design a curriculum that enables students to form international mobile co-production teams. This represents a pedagogical shift along the PAH continuum from teacher-directed pedagogy to student-negotiated heutagogy. The Film and Television elective projects have leveraged the ability of mobile devices to enable student-generated content, and facilitate collaboration and communication across geographical and timezone boundaries. The 2012 iteration of the project has created the foundation of an international lecturer COP that provides a model for future international collaborative projects.

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