Designing an authentic professional development cMOOC

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While there has been a lot of hype surrounding the potential of MOOCs to transform access to education, the reality of completion rates and participant profiles has tempered this hype such that within the hype cycle MOOCs have already hit the trough of disillusionment. However we argue that embedding cMOOC design within an educational design research methodology can enable the design of authentic professional development model that can indeed demonstrate transformation in pedagogical practice. Our design model links mobile learning theory, practice, and critical reflection within an EDR methodology to create an authentic experience for participating lecturers.

Keywords: Educational design research, cMOOC, CMALT, professional development, mlearning

Introduction

Within their roles as academic advisors and web developer at two different higher education institutions the authors of this paper have explored new forms of lecturer professional development based around the development, nurturing, and brokering of communities of practice (COP) (Cochrane & Narayan, 2014). Based upon principles established by Wenger et al., (Wenger, 1998; Wenger, White, & Smith, 2009), these COPs have generally been comprised of lecturers from a single department of the institution. Typically they have formed a peer support group alongside academic advisors as participants taking on the role of technology stewards. The domain or focus of these COPs has been the exploration of mobile social media as a catalyst for new pedagogical practice (Cochrane, Narayan, & Oldfield, 2013, 2015). The impact of these COPs has been critically evaluated and reported to the wider educational community through the explicit embedding of critical reflection as the scholarship of technology enhanced learning or SOTEL (Wickens, 2006). This has resulted in a wide body of research within a variety of educational contexts that encompasses a network of over 37 co-authors, and over 100 peer reviewed publications. While this approach has demonstrated pedagogical transformation within a range of educational contexts it is inherently a time and resource intense model. With the hype surrounding MOOCs (Massive Online Open Courses) garnering the attention of educators and policy makers world wide, the authors decided to explore how a MOOC could be explicitly designed to upscale our COP professional development model. The goal is to model best practice within the MOOC itself as an extended COP, and to enable the participants to become part of a potentially national and global network of practitioners interested in pedagogical innovation. Therefore we designed the Mosomelt (Mobile social media learning technologies) cMOOC. A variety of lecturer COPs were invited to participate in the inaugural mosomelt cMOOC, with participants joining throughout New Zealand and Australia, and as far afield as France. In this paper we explore the design of the mosomelt cMOOC based around an educational design research methodology that embeds: a framework for linking the theory and practice of mobile learning, the development of an ecology of resources and triggering events, critical reflection via SOTEL, and accreditation of participant eportfolios via CMALT - the certified member of the association of learning technologists (https://www.alt.ac.uk/get-involved/certified-membership).

MOOCs

There are broadly two distinct types of MOOCs that have developed: cMOOCs or connectivist MOOC, and xMOOCs that are defined by a more traditional course structure and transmission model of information. Bates makes a clear distinction between the two types of MOOCs:

> xMOOCs primarily use a teaching model focused on the transmission of information, with high quality content delivery, computer-marked assessment (mainly for student feedback purposes), and automation of all key transactions between participants and the learning platform. There is almost no direct interaction between an individual participant and the instructor responsible for the course… cMOOCs have a very different educational philosophy from xMOOCs, in that cMOOCs place heavy emphasis on networking and in particular on strong content contributions from the participants themselves. (Bates, 2014, p. np)

We are interested in the exploration of transformative new pedagogies that focus upon learner-generated content and learner-generated contexts, and therefore the cMOOC fits our goal better than an xMOOC.

Connectivism and rhizomatic learning

Connectivism (Siemens, 2004) and rhizomatic learning (Cormier, 2008) are the two theoretical foundations behind the development of cMOOCs. Both connectivism and rhizomatic learning decentralise the locus of control of the learning process, focusing upon developing a network of learners that co create the curriculum. Cormier's version of cMOOC design involves the development of an ecology of resources (EOR) to support participant interaction and community, and the development of triggering events designed to ignite participant discussion and investigation leading to the sharing of participant-generated content. Examples of recent cMOOCs include Rhizo14 (Cormier, 2014), developed by Cormier as a six week series of topics to explore. The major downfall of cMOOCs is that the limited guidance offered to learners results in high dropouts and disillusionment (Mackness & Bell, 2015). While the authors have not been enamored by the hype surrounding MOOCs, we have been inspired by examples of open online courses that are not strictly cMOOCs but demonstrate many of their attributes, for example DS106 (Digital Storytelling 106). Based upon connectivism and connective knowledge DS106 is described as "more community than course" (Levine, 2013, p. 54). These examples highlight the critical role of the teacher as the designer and facilitator of the learning experience.

Credentialing MOOCs

Various approaches have been taken towards assessing or credentialing MOOCs (Friesen & Wihak, 2013), including: open badges, and certification of completion via enrolment in a delivering platform such as Cousera and EdX. We were concerned with modeling a cMOOC around a network of COPs, rather than creating a formal course as such, with the focus upon participant-generated content rather than the delivery of prescribed content. Using a cMOOC format allowed us to design mosomelt as a generic framework to scaffold a network of COPs exploring mobile social media in a variety of higher education contexts. Typically the course approval timeframe for developing and formally accrediting a new course is around one year. Instead of credentialing the mosomelt cMOOC itself, we decided to design mosomelt as a participant-driven experience that provides participants with a basis for generating an eportfolio of evidence and reflection upon integrating mobile social media within their own teaching practice. This eportfolio is then curated and submitted towards CMALT accreditation at the end of the mosomelt cMOOC. Assessment of the mosomelt cMOOC is via participation and peer review, with formal accreditation of participant eportfolios via the CMALT process. Thus mosomelt provides a catalyst for participants to gain an external independent credential that already exists, and one that embodies participation within a global community of educational experts. Without the need to credential mosomelt as a formal course we were able to design and begin implementing the mosomelt cMOOC within a period of six weeks – creating a fast curriculum design and development model.

Authentic mobile learning

Burden and Kearney (2015) argue that there is a paradox around the conceptualisation of authentic mobile leaning and its practice when it is often based around classroom activity in formal learning environments. We have argued that mobile learning provides a powerful catalyst

for designing authentic learning environments that bridge formal and informal learning experiences. The key to designing authentic mobile learning is being able to link the unique affordances of mobile devices to the authentic experiences that will broker participation within professional communities. Bannan, Cook and Pachler (2015) argue that "The nature of learning is being augmented and accelerated by new digital tools and media, particularly by mobile devices and the networks and structures to which they connect people (Bannan, et al., 2015, p. 1)." Bannan et al., (2015) identify a range of mobile device affordances, to which we suggest example implementations:

- Collaborative and communicative potential; e.g. Twitter
- Interactivity and nonlinearity; e.g. Google Now
- Distributed knowledge construction; e.g. Google Plus
- Multimodal knowledge representation; e.g. YouTube, Jumpcam, Vyclone
- Authentic/contextualized/situated material, interaction, tasks and settings; e.g. Augmented Reality
- Multi-functionality and convergence; e.g. Siri
- Portability, ubiquity, and personal ownership: e.g. Smartphones
- User-generated content and contexts: e.g. ePortfolios (Behance)

Designing an appropriate ecology of resources for mobile learning will leverage the unique affordances of mobile devices that are relevant to a particular educational context. In particular the crossover between mobile connectivity and social media provides a rich source of resources for social constructivist learning environments.

Mobile Social Media
With the ubiquity of mobile smart devices that offer constant Internet connectivity, Social Media is now driven by a mobile ecosystem consisting of mobile Apps and connected social media platforms. The ubiquity of mobile device ownership provides an opportunity for exploring the design of authentic learning experiences that focus upon student-generated content and student-generated contexts. These learning experiences create explicit links between formal and informal learning. Thus, mobile learning fosters authentic learning that is not defined by the limits of a walled classroom environment (Cochrane, et al., 2015). We have developed a framework for mobile social media enabling creative pedagogies that can be used to link social constructivist learning theory and collaborative practice in the design of an ecology of resources to support authentic mobile learning scenarios. Similar to Bannan et al., (2015) the framework leverages the unique possibilities of mobile learning to move beyond substitution of current pedagogical strategies towards redefining new pedagogical strategies that were previously difficult or impossible to implement within a traditional classroom setting. The framework maps mobile learning practice to supporting theoretical constructs of creativity (Sternberg, Kaufman, & Pretz, 2002), cognition (Danvers, 2003), educational technology adoption (the SAMR framework (Puentedura, 2006)) and resulting ontological shifts across a pedagogical continuum from teacher-directed pedagogy towards student-determined learning (heutagogy), defined by Luckin et al., (Luckin et al., 2010) as the pedagogy-andragogy-heutagogy continuum (PAH). We have detailed this framework in a variety of contexts (Cochrane & Antonczak, 2014; Cochrane & Rhodes, 2013; Cochrane, Sissons, Mulrennan, & Pamatatau, 2013; Cochrane & Withell, 2013), and provide a summary of the latest version of this framework here in table 1.

Table 1: A mobile social media framework for creative pedagogies (modified from Luckin et al., 2010).

	Pedagogy (P)	Andragogy (A)	Heutagogy (H)
Locus of Control	Teacher	Learner	Learner
Course timeframe and goal	Initial establishment of the course and induction into the wider learning community	Early to mid-course: Student appropriation of mobile social media and initial active participation	Mid to end of course: Students actively participate within an authentic community of practice
Cognition Level (Danvers, 2003)	Cognitive	Meta-cognitive	Epistemic
Knowledge production	Subject understanding: lecturers introduce and	Process negotiation: students negotiate a	Context shaping: students create project

context	model the use of a range of mobile social media tools appropriate to the learning context	choice of mobile social media tools to establish an ePortfolio based upon user-generated content	teams that investigate and critique user-generated content. These are then shared, curated, and peer-reviewed in an authentic COP
SAMR (Puentedura, 2006)	Substitution & Augmentation: Portfolio to ePortfolio Focus on productivity Mobile device as personal digital assistant and consumption tool	Modification: New forms of collaboration Mobile device as content creation and curation tool	Redefinition: Authentic Community building Mobile device as collaborative tool
Supporting mobile social media affordances	Enabling induction into a supportive learning community	Enabling user-generated content and active participation within an authentic design COP	Enabling collaboration across user-generated contexts, and active participation within a global COP
Creativity (Sternberg, et al., 2002)	Reproduction	Incrementation	Reinitiation
Ontological shift	Reconceptualising mobile social media: from a social to an educational domain	Reconceptualising the role of the teacher	Reconceptualising the role of the learner

This framework creates the foundation for the first stage of an educational design research methodology for curriculum redesign.

Educational design research (EDR)

Laurillard (2012) makes the case for curriculum design to become a collaborative and design-based activity. In a similar way we are interested in connecting research approaches/methods and design processes. Educational design research (EDR) provides a suitable methodology for innovative curriculum redesign.

> Design research… integrates rigorous, long-term cycles of applied and empirical research as part of a complex, evolving design process attempting to positively influence and effect change in a learning context through the building of a design intervention through which we uncover pedagogical principles that may be applicable and researchable in similar situations. This is often conducted through identifying and investigating a learning problem, the design and development of an educational innovation and its trial, and iteration in multiple contexts over time. (Bannan, et al., 2015, p. 3)

Mor (Emin-Martinez et al., 2014) defines a cycle of steps for enacting EDR within curriculum design that he calls the design inquiry of learning:
Imagine: Define an educational challenge that you would like top address.
Investigate: Analyse the context, refine the challenge, and identify a suitable pedagogical approach.
Inspire: Review examples of past innovations and apply the insights from those to your project.
Ideate: Conceptualise a solution.
Prototype: A rapid crude implementation to test your ideas.
Evaluate: Assess the extent to which your design meets its objectives, identify areas for improvement.
Reflect: Produce an account of your design process, the learning experiences you derived from it, and their outcomes.

Bannan (2010) proposes a simpler four stage Integrated Learning Design Framework (ILDF) that encapsulates the design enquiry process: informed exploration, enactment, evaluation of the local impact, evaluation of the broader impact.

The intersection of EDR and mobile learning
Bannan et al., (2015) argue that the intersection of mobile learning and educational design research provides an approach to deal with the inherent 'messiness' of mobile learning. We agree, and propose a curriculum design methodology that is encompassed by an EDR methodology, informed by our mobile social media (MSM) framework, implemented through the design of a mobile social media EOR and a series of triggering events, and evaluated through participant feedback and embedded within a SOTEL research-informed practice approach. Table 2 outlines our simplification of this methodology that links theory, practice, and critical reflection within an EDR methodology.

Table 2: The intersection between mobile learning and EDR

Methodology	Educational Design Research			
4 stages of ILDF	Informed Exploration	Enactment	Evaluation: Local Impact	Evaluation: Broader Impact
Intersection with mobile learning	MSM Framework informing curriculum redesign	Rhizomatic Learning: Developing an EOR Designing Triggering Events Participant Feedback		SOTEL
Connecting theory and practice	Theory	Practice		Critical Reflection

We used this methodology to guide the development of the mosomelt cMOOC, as outlined in the following section.

Our research questions
1. What will an appropriate EOR for sustaining and accrediting an authentic professional development cMOOC look like?
2. How can we design cMOOC-triggering events that focus upon authentic participant-generated mobile learning content?

Case study: The mosomelt cMOOC

We have found that reconceptualising teaching and learning around new pedagogies requires a significant timeframe to allow for multiple cycles of course redesign, implementation, and critical reflection. In general our professional development COPs have a life cycle that span from one to several years and involve multiple iterations of pedagogical redesign, implementation, and reflection based upon a SOTEL approach. Therefore we decided to implement the mosomelt cMOOC around a full academic year calendar of two twelve-week semesters, rather than the short six-week timeframe typical of many cMOOCs. Our second design parameter was the embedding of the CMALT accreditation process, which allows six months for portfolio curation and submission. The mosomelt cMOOC was therefore designed in two halves: twelve weeks of triggering events exploring the potential of mobile social media in education, followed by twelve weeks of guided participant eportfolio creation for CMALT submission. The mosomelt cMOOC was designed primarily as a framework to link our own professional development COPs, but also to open this to participation from a potentially global community. Hence while mosomelt is designed as a cMOOC the 'massive' characteristic is the least important design parameter.

Designing a mosomelt cMOOC EOR
The ecology of resources supporting the Mosomelt cMOOC was based around an online community discussion forum using Google Plus (G+), participant personal journals using Wordpress, and wider community communication using Twitter. A hashtag (#mosomelt) is used to curate the range of mobile social media platforms explored throughout the mosomelt cMOOC via curation tools such as TAGSExplorer (Hawksey, 2011) and TAGBoard (http://tagboard.com). The mosomelt EOR provides participants with a structure for curating an

eportfolio of evidence and critical reflection for submission towards CMALT accreditation. The mosomelt EOR includes:

3. A G+ community provides a group forum for discussion and sharing of ideas related to the #mosomelt cMOOC. G+ also creates a hub for linking the core social media platforms explored throughout the cMOOC.

Wordpress.com is used to provide an outline of each week's triggering event for the mosomelt cMOOC. Wordpress.com is also the recommended platform for participants to create their own reflective blogs and eportfolios, although any blog host with an RSS feed can be used.

A self-hosted installation of Wordpress (http://mosomelt.org) is used to create a participant generated project bank where participants can upload project ideas and comment and rate other participants projects. The project bank utilizes a custom version of a theme developed for the DS106 course (Levine, 2014). Mosomelt.org also hosts a signup form for the participants to enter their contact details to become active participants within the mosomelt cMOOC, including: their G+ profile, Twitter username, and blog address. Participant blogs are then syndicated on Mosomelt.org to enable peer feedback and commenting on one another's blog posts.

Twitter provides a link between participants and their social media activities via the #mosomelt hashtag. Twitter provides an avenue for participation within a global network of like-minded lecturers as well as a broadcast and communication channel for #mosomelt.

Designing a series of triggering events

The 24 weeks of the mosomelt cMOOC were conceptualised as a series of 24 triggering events, beginning with activities designed to create community, followed by an exploration of the affordances of mobile social media, and then a series of participant generated projects shared through a project bank. The second 12 weeks of the mosomelt cMOOC are designed to guide participants through the requirements of developing a CMALT portfolio based upon the implementation of chosen aspects of their initial 12 week experience within their own teaching practice. The 24 weeks of triggering events are mediated through the mosomelt EOR. The structure of the mosomelt cMOOC in relation to our mobile social media framework is outlined in table 3.

Table 3: Overview of the MOSOMELT cMOOC design

Timeframe	Triggering events	Activity design	Conceptual shift	SAMR
Weeks 1-6 Introduction to mobile social media and the Mosomelt community	Participants explore a series of introductory mobile social media platforms and short production activities, sharing their experiences via an online community.	Participants create a mobile social media eportfolio from a range of mobile social media tools: *G+, Google Hangouts, Google Drive, YouTube, Vimeo, Twitter, Storify, Wordpress, Researchgate*, and are invited to join a G+ community for the course	Teacher modeled educational use of mobile social media and G+ Community participation	Redefinition of course LMS as a collection of student owned mobile social media – building a learning community
Weeks 7-12 Participant generated projects	Team based collaborative projects over six weeks, with several international guest experts sharing their experiences via G+ Hangouts.	Participants explore mobile collaboration and co production, forming project teams using Google Maps, Vine, Vyclone, and Wikitude. Projects are shared for peer feedback via a "project bank".	Beyond content delivery to exploration of contextual & collaborative affordances of mobile	Redefinition of social media as a new pedagogical enabler
Weeks 13-18	CMALT	Participants choose a	Collaborative	Modification

An overview of CMALT requirements	accreditation process begins. Participants design a mobile social media activity for their own curriculum	social learning theory to inform the redesign of a course project for their own students. Feedback is given through the G+ community. Followed by a week of workshops to embed and strengthen collaboration	curriculum redesign	of curriculum
Week 19-24 Implementing and reflecting on TEL	Participants implement and evaluate their pedagogical innovation	Participants use SOTEL as a framework to evaluate their course redesign	Explicit reflection on pedagogical practice	Redefinition of research as reflective practice
End of the cMOOC	Portfolio submission for CMALT accreditation	Participants prepare and submit their eportfolios for CMALT accreditation	Participation within a global educator network	Redefinition of professional development

In the following sections we detail the design of three example triggering events

Exploring geolocation
During week 3 of mosomelt, participants were invited to co create a collaborative Google Map. The outline of the triggering event was:
This week we will explore mobile video production and augmentation via geolocation. You will be invited to collaboratively edit an interactive Google Map, and add a point of interest (POI) with a link to an embedded mobile video. You will receive a link to the collaborative Map through the #mosomelt G+ Community
• Slideshow of how to edit a custom Google Map
• Example custom Google Map

To create and share your own interactive Google Map, login at http://mymaps.google.com. This exercise explores the affordance of smart mobile devices to use their built in GPS and content creation tools (camera, audio and text) to geotag user generated content and create user-generated contexts. User-generated contexts add a contextual layer of information that locates events and experiences within their specific geographic location. Reflect on how can this add value and context to learning activities and experiences. Suggested readings: (Bruns, 2007; Cook, 2007).

Exploring collaborative video
The week 10 triggering event explored collaborative video production: One of the affordances of the merging of mobile Apps and cloud-based social media platforms is the ability for users to not only generate and share their own content but to also collaborate on it's production. Explore and create a collaborative video project using an App such as:
• Vyclone http://vyclone.com
• Jumpcam http://jumpcam.com
• Mixbit http://mixbit.com
• Frame.io http://frame.io
Design an educational scenario that could use collaborative video then upload and share your project outline and any examples via the Project Bank. Reflect on this process on your Wordpress blog. Suggested readings: (Keegan & Bell, 2011; Smith & Byrum, 2013).

Exploring augmented reality
Week 11 built upon the experiences of co creating a Google Map to create an augmented reality layer for the Wikitude App: This week we are exploring the potential of mobile Augmented Reality (AR) – for example Wikitude, or Junaio, download either of these AR Apps to your mobile device, explore some AR content, then create and share a mobile AR project description to the Project Bank for feedback. Rate another participants mobile AR project. Mobile Augmented Reality utilises a smart device's built-in camera and geolocation sensors

FP:47

(GPS, compass, and gyroscope) to overlay the real world environment with digital information, thus augmenting a real-world environment. While mobile AR has predominantly been used for marketing, Museum visits, enhancing Magazines, and other forms of content delivery, there is a range of freely available mobile AR content creation and sharing platforms that can be used for student-generated projects.

Start by downloading an AR App to your device – for example Wikitude, and search the available content for project inspiration. For Aucklanders you can search Wikitude for several examples of Architecture student projects: Archifail, Archiwonder, exploreauckland, and the Wynyard Quarter.

Hints on using Google Maps and Wikitude to create an AR layer:
- Slideshow of creating an interactive Google Map & publishing in Wikitude
- https://picasaweb.google.com/104071444159890894025/InteractiveGoogleMaps?feat=directlink#slideshow/5812319248909539778
- Creating an interactive Google Map for geolocating content
- https://plus.google.com/+ThomCochrane/posts/SAe1pnLvZfu

Reflect on this process on your Wordpress Blog. Suggested readings: (Butchart, 2011; FitzGerald et al., 2013).

Results

In its first iteration the mosomelt cMOOC has attracted over 40 active participants from six institutions across New Zealand, three institutions in Australia (from Melbourne to Darwin), and as far afield as France. In this section we illustrate the impact of the first half of the mosomelt cMOOC with participant feedback from the development of a new professional development COP within the context of public health education. Three lecturers and one of the authors established the Public Health COP using the mosomelt cMOOC as a framework. The lecturers were equipped with iPad minis and iPhones for use throughout the COP. For one lecturer this was her first experience of using a smartphone, while all three lecturers had limited social media experience and no experience of integrating mobile social media into their teaching practice. The first hurdle was the mosomelt signup process that required participants to create and share a G+ profile, a twitter username, and a Wordpress blog address. Creating and remembering usernames and secure passwords took some time, however the lecturers felt empowered when they succeeded and were then able to join the mosomelt G+ Community, Tweet, and blog from the mobile Apps on their iPads and iPhones. Initial reflections expressed a mix of fear and excitement at what they were experiencing:

> My very first blog post- eek not really sure what I am doing…but hoping this will change.
> If technology was a person I don't think I'd make a very good first impression! I just find instructions really hard to follow and invariably find myself in dark corners of Apps where there seems to be no way out and nowhere to get help… Once I'd mastered creating and loading my Vine video it was almost impossible to understand how I'd got into such a tangle. It all seems so simple now! (Lecturer 1 blog posts, March 2015)

> Within moments, two colleagues accessed the blog. THEY think I can…so I CAN. Leaping into exciting territory with inspiring and expert colleagues, week by week. (Lecturer 2 blog posts, April 2015)

Throughout the first 12 weeks of mosomelt interaction the Public Health lecturers became some of the most active participants and their blog posts illustrated a shift towards conceptualising how they could integrate the use of mobile social media into their own teaching practice, including the use of collaborative video and augmented reality:

> Week 10 on Vyclone inspired some notions on how it could be applied to invigorate teaching.
> 1. Four students could video one patient (a student acting as a patient). Each could demonstrate how their video demonstrates their disciplinary perspective, for collaborative discussion and reflection. This promotes and demonstrates the Faculty's commitment to interdiscplinarity.
> 2. One mock disaster event could be viewed from the perspective of four

students. From the roof, the overall perspective on how well the strands were managed. From the ground level, the view of the patient, paramedic and other interveners. Again, this contributes to interdisciplinary teaching and understanding.

Lecturer 1 and I explored Wikitude and Vyclone. We just created our own independent vyclone on the potential of wikitude for teaching health ethics and law. Admittedly amateur but humorous and we hope inspiring. (Lecturer 2 blog posts, May-June 2015)

Back in the office, *Lecturer 2* and I decided to practice our new filmmaking skills by creating a brief clip about the ways in which we thought we could use Vyclone: http://www.vyclone.com/movie/556e670f4a384a0306000012 I managed to forget to start to record and then had my finger over the lens for most of the time! But life is for learning!
I think students would enjoy using this App. It is straightforward to use and its co-creative nature reflects some of the values that we try to instil in our teaching – working together and recognising different perspectives. (Lecturer 1, blog post June 2015)

Overall mosomelt participant feedback thus far has been very positive, and participation levels are high. Table 4 provides an outline of participant activity within the first 12 weeks of the mosomelt cMOOC.

Table 5: Mosomelt cMOOC participant first 12 weeks of activity.

Mobile social media	Activity
#mosomelt Tweets	167 conversations involving 69 users
Google Plus Community activity	150 posts and 244 comments
TAGBoard https://tagboard.com/mosomelt	145 posts
Introductory video production http://vinebox.co/tag/mosmomelt	31 Vine videos 10 Instagram videos
Collaborative Google Map participants	25 participants
Curated social media posts using #mosomelt via Twinesocial http://apps.twinesocial.com/mosomelt	390 Posts
Participant blogs	36 Wordpress blogs with an average of 4 pages each.

Discussion

In this section we discuss the four stages of ILDF within an EDR methodology in the design of the mosomelt cMOOC.

Informed Exploration
While we have used our mobile social media framework to inform the design of a variety of pedagogical interventions this is the first time we have used the framework to inform the design of a cMOOC. The framework guided the choice of an appropriate EOR and triggering events that leverage the affordances of mobile social media for enabling collaborative learner-generated content and contexts. This methodology links both mobile learning theory and practice, and extends to critical reflection by updating the scholarship of teaching and learning for the mobile social media age by inviting participants to become part of a growing global network of educational researchers via collaborative online research communities such as Researchgate.net, Academia.edu, and Mendeley.com.

Enactment
In the first iteration of the mosomelt cMOOC Participants enrolled in Mosomelt by creating their own accounts within the EOR social media platforms and then sharing their G+, Twitter, and blog contact details via signing up using a web form at http://mosomelt.org/signup/. They were then invited to become members of the Mosomelt G+ community, which is public but contributions are only allowed by invited members. Participants were then welcomed into the

Mosomelt community via a mention on the #mosomelt Twitter hashtag, and their blogs were curated into a syndicated page at http://mosomelt.org/participants-blogs/. This EOR provided an open public face to the #mosomelt cMOOC, which not all participants were initially comfortable with. Weekly triggering events were outlined on https://mosomelt.wordpress.com before the start of the cMOOC giving participants a structured outline of the 24 weeks. Each weekly triggering event was then detailed further as both a blog post on https://mosomelt.wordpress.com and as a weekly-pinned post on the Mosomelt G+ community. These were both announced via the Twitter hashtag and the same hashtag on G+. So far participants have been far more active in discussion and conversations around #mosomelt on the G+ community than on Twitter.

Evaluation: local impact
The impact of mosomelt upon the Public Health COP provides an example of transformation of practice. However, not all mosomelt participants are comfortable with publically sharing their journeys, with some COPs preferring to keep their reflections private via collaborating on a Mahara eportfolio. As we head towards the second half of the mosomelt cMOOC and begin focusing upon eportfolios for CMALT accreditation some participants are in catch-up mode. To facilitate this we will run a "winter camp" during the 6 week gap between the end of teaching of the first semester and the beginning of teaching in the second semester 2015. The mosomelt winter camp will consist of four days of workshops that combine both face-to-face modes and online via G+ Hangout covering the 6 project bank project activities. Realistically, some 2015 participants will not be ready for CMALT accreditation this year, while some more experienced practitioners are expected to join the mosomelt cMOOC for the second half to help prepare portfolios for CMALT submission. Thus far we have found the prototype mosomelt cMOOC to be a successful framework for up scaling authentic professional development based around a network of lecturer COPs.

Evaluation: broader impact
At this stage we are halfway through the first iteration of the mosomelt cMOOC, having just completed the first 12 weeks of triggering events. SOTEL is embedded within the mosomelt cMOOC design explicitly during the second 12 weeks as part of the requirements for CMALT accreditation. As participants begin to publish in peer reviewed conference proceedings, book chapters and journal papers this will create a vehicle for transferring the impact of mosomelt to the wider global education community. In the meantime we are beginning to see the wider impact of the mosomelt cMOOC through the analysis of the open mobile social media EOR behind mosomelt. For example, a TAGSExplorer analysis of the #mosomelt Twitter hashtag shows 69 nodes and 167 edges, indicating the growth in peripheral participation in the #mosomelt community beyond the 44 enrolled participants. At this point we have not explicitly advertised the existence of mosomelt, as we are effectively in the prototyping phase of our EDR, hence the modest growth of the community is to be expected.

Conclusions

We have demonstrated the use of an EDR methodology for designing an authentic cMOOC for professional development. Our design model links mobile learning theory via a mobile social media framework, practice via the design of a collaborative community engaged by a common EOR and triggering events, and critical reflection via SOTEL within an EDR methodology to create an authentic experience for participating lecturers. By aligning the mosomelt cMOOC with a pre existing accreditation process we have created a fast development model that is validated via active participation and participant-generated personal eportfolios. The CMALT accreditation process and results will be the subject of further evaluation at the end of the first complete iteration of the mosomelt cMOOC.

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