

## Evaluating a Professional Development cMOOC: Mosomelt

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**Abstract:** This paper focuses upon the evaluation stages of the design and implementation of a lecturer professional development cMOOC embedded within an educational design-based research methodology. In the design and development stages the first iteration in 2015 of the cMOOC informed the redesign of the second iteration in 2016. In this paper the overall impact of the cMOOC is evaluated via evidence of active participation, a post-survey of the 2016 participants, and evidence of impact through the development of participant eportfolios. Based upon our experiences we propose a transferable and scalable lecturer professional development framework that can be mapped to established teaching and learning accreditation pathways such as CMALT.

**Keywords:** cMOOC, Design-Based Research, Educational Design Research, Professional development, CMALT.

### Introduction

Traditional approaches to university lecturer professional development focus upon either attendance of a series of workshops, or undertaking some form of graduate or post-graduate qualification (certificate, diploma or Masters) in higher education. The goal of these professional development activities is the development of teaching and learning skills and critical engagement with learning theories, ultimately leading to better learning experiences for students. The endemic problem with these approaches is the low rate of uptake of these qualifications by academics who are either swamped with the demands of teaching and research workloads, or see no need of exploring new pedagogies beyond those that they experienced themselves as students. The problem is two-fold: firstly, one of access, and secondly one of scalability. MOOCs have been proposed as solutions to the flexible access and scalability of education. MOOCs come in two main types: xMOOCs and cMOOCs (Bates, 2014). MOOCs began as a form of connectivist learning (hence named cMOOCs or connectivist MOOCs). However, the predominant form of MOOC has become the xMOOC that is typified by access to a series of online course content leading to a paid certificate of completion, with the market leaders in MOOC delivery being hosted by either the Coursera, EDX, or Future Learn platforms. These xMOOC platforms have exhibited large numbers of participants, for example, Future Learn launched their first courses in September 2013 enrolling 4,077,604 participants since then (<https://www.futurelearn.com/about>).

The Mosomelt (Mobile Social Media Learning Technologies) cMOOC (<http://mosomelt.wordpress.com>) was designed in 2015 as a supporting framework for a network of predominantly face-to-face departmental communities of practice in a variety of discipline contexts, spanning six national higher education institutions and reaching participants from across the globe. Mosomelt has undergone two iterations, beginning in 2015 with 51 participants, and relaunched in 2016 with a further 23 participants. Over these two iterations Mosomelt has connected 74 participants from 8 countries. Though Mosomelt was not 'massive' in participant numbers, it did represent a new approach to facilitating lecturer professional development and collaboration across a wide variety of curriculum contexts and geographic locations.

## Literature review

Barnett argues that we live in a rapidly changing world where education must refocus as “learning for an unknown future, in short, for an ontological turn” (Barnett, 2012, p. 65).

Construing the pedagogical task as the formation of authentic being turns us towards neither knowledge nor skills as central categories but rather to certain kinds of human qualities. They are the qualities that both make authentic being possible and are also, in part, generated by a drive towards authenticity. They are qualities such as carefulness, thoughtfulness, humility, criticality, receptiveness, resilience, courage and stillness. The achievement of qualities such as these calls for a transformatory curriculum and pedagogy which are themselves understood to be and practised as endeavours of high risk; high risk not just for the participants but also for the academic staff in their educational roles. (Barnett, 2012, p. 76)

An ontological turn implies a reconception of one’s self or being: for learners this is a shift from passive receptor of knowledge to active participation in new knowledge creation and professional participation, while for teachers this is a shift from gate-keepers of knowledge and assessment to collaborative co-learning and modelers of professional practice. This calls for new models of lecturer professional development (PD) that model active participation within authentic contexts supporting a culture of pedagogical change. These new PD models need to be agile, sustainable, scalable, and authentic.

Examples of new models of Lecturer Professional Development include flexible online courses ranging from certificates of teaching to Masters of higher education, and the development of communities of practice (McDowell, Raistrick, & Merrington, 2013). The default approach has become the provision of an in-house Postgraduate Certificate of Teaching and Learning in Higher Education (PgCert) (Hall, 2010). MOOCs have also begun to emerge as platforms for teacher professional development (Kill & Stroud, 2016; Salmon, Gregory, Lokuge Dona, & Ross, 2015). Laurillard argues that the MOOC format is predominantly suitable for highly self-directed and motivated learners, such as teachers who regularly engage in professional development to hone their teaching skills.

The demographics of massive open online course (MOOC) analytics show that the great majority of learners are highly qualified professionals, and not, as originally envisaged, the global community of disadvantaged learners who have no access to good higher education. MOOC pedagogy fits well with the combination of instruction and peer community learning found in most professional development. (Laurillard, 2016)

Analysis of MOOC participation data indicates the effectiveness of the MOOC format for professional learners (Kill & Stroud, 2016; Milligan & Littlejohn, 2014). While MOOC completion rates are typically low (Jordan, 2014), they can be powerful experiences for a motivated core group of participants (Mackness & Bell, 2015). Most MOOCs are short in duration, typically spanning six weeks of activity.

### Theoretical foundations:

Hall (2010) argues that there has been a lack of theorising around the application of professional standard frameworks to professional development activities. Hall suggests an engagement with new and emergent educational development theories such as rhizomatic learning. The design of the Mosomelt cMOOC was informed by a mashup of learning theories and frameworks including:

- Connectivism (Siemens, 2005)
- Social constructivism (Head & Dakers, 2005; Vygotsky, 1978)
- Rhizomatic learning (Cormier, 2008)
- Conversational framework (Laurillard, 2001)
- Authentic learning (Herrington, Reeves, & Oliver, 2009)
- Constructive alignment (Biggs, 2003)
- Heutagogy – or student-determined learning (Hase & Kenyon, 2007; Luckin et al., 2010)
- Creativity (Kaufman & Sternberg, 2007; Sternberg, Kaufman, & Pretz, 2002)
- Ontological pedagogies (Barnett, 2012)
- Design Based Research (DBR) or Educational Design Research (EDR) (Bannan, Cook, & Pachler, 2015)
- Scholarship Of Technology Enhanced Learning (SOTEL) (Wickens, 2006)

We detailed the choice and implications of these theoretical foundations in our earlier papers on the design of the Mosomelt cMOOC (Cochrane, Narayan, & Burcio-Martin, 2015; Cochrane, Narayan, Burcio-Martin, Lees, & Diesfeld, 2015). What links these theories and frameworks into a cohesive strategy is the focus upon designing learning environments around student-generated content and student-generated contexts to facilitate authentic collaborative learning experiences.

## Professional Accreditation Pathways

Kill and Stroud (2016) argue for the importance of certifying or accrediting learning within MOOCs. While xMOOCs are primarily driven by gaining some form of accreditation upon completion, cMOOCs have typically been characterised more by participation and collaboration with like-minded peers and experts. Professional accreditation pathways developed well before the advent of MOOCs as a way of assessing and credentialing lecturer professional development, but some have recently been designed to map to accreditation pathways (University of Leeds, 2016a). Two of the most mature accreditation pathways are through the Higher Education Academy (HEA) and the Certified Member of the Association of Learning Technologists (CMALT), both of which are based upon the UK Professional Standards Framework (<https://www.heacademy.ac.uk/recognition-accreditation/uk-professional-standards-framework-ukpsf>). HEA has accredited 75000 fellowships since 2003 (<https://www.heacademy.ac.uk/recognition-accreditation/hea-fellowships>), while CMALT (Deepwell & Slater, 2012) has just over 340 accredited members since 2005 (<https://www.alt.ac.uk/certified-membership>). HEA has four levels of membership accreditation, two of which require a combination of portfolio and accredited course completion (Associate Fellow and Fellow), with the two higher levels evidenced solely through portfolios (Senior Fellow, and Principle Fellow). CMALT is based around a portfolio mapped to the UK Professional Standards Framework (UKPSF) (Association for Learning Technology (ALT), 2015; Deepwell & Slater, 2012), and requires renewal of the portfolio every three years for continued accreditation. While the goal of professional accreditation pathways is to provide an evidence pathway for good teaching practice, they have been criticised for focusing upon measuring prior experience rather than being an effective vehicle for professional development themselves, and a reflection of a neoliberal regulatory environment (Connell, 2009; Gosling, 2010; Hall, 2010). However, much work has been done on mapping these professional accreditation pathways to various professional development activities, including courses, and MOOCs such as the Blended Learning Essentials xMOOC (University of Leeds, 2016b). Both HEA and CMALT cover four areas of professional teaching practice, with CMALT adding the integration of technology within these four areas of teaching practice to a higher level than HEA. We chose to map the design of the Mosomelt cMOOC to the CMALT accreditation pathway as an appropriate measure of the development of technology enhanced learning practice and reflection, and also build upon the close links between Ascilite and ALT (<https://ascilite.org/get-involved/cmalt/>) to facilitate a supportive community.

## Methodology

The design and implementation of the Mosomelt cMOOC is founded upon a qualitative educational design research (EDR) methodology (Table 1), that is supported by an ecology of social media resources (Figure 1).

## Research questions

In evaluating the impact of the Mosomelt cMOOC framework we chose two research questions to focus the evaluation of the first two iterations:

1. How effective is an ecology of resources (EOR) based upon social media for sustaining an authentic professional development cMOOC and providing a participant eportfolio for accreditation pathways?
2. How can we redesign the cMOOC-triggering events based upon participant feedback?

## Participants

The initial 51 participants for the 2015 Mosomelt cMOOC were drawn predominantly from the participants of a national six-institution higher education project #npf14lmd (Frielick et al., 2014). The Mosomelt cMOOC was relaunched in 2016 with 23 participants mainly from Auckland University of Technology (AUT University), however interest and participation from global participants was generated through Twitter and Google searches, leading to sign-ups from as far afield as Canada, and Venezuela. Across 2015 to 2016 Mosomelt has had 74 members from 14 different HE institutions across 8 countries. Many of the participants formed small communities of practice within a department that met weekly face-to-face to support one another as they participated within the wider Mosomelt online network.

## Guiding design principles

Design principles were identified through the literature on designing authentic learning and scaffolding innovative pedagogies (Cochrane, Narayan, & Burcio-Martin, 2015; Cochrane, Narayan, Burcio-Martin, et al., 2015). These can be summarised by the following six design principles:

- Creating a supporting ecology of resources
- Nurturing a network of communities of practice
- Design of activities to trigger participant-generated content sharing
- Modelling collaboration and active participation within a global community
- Embedding SOTEL within an EDR framework
- Mapping activities and user-generated content to existing accreditation pathways

These design principles were reified in four key elements of the project:

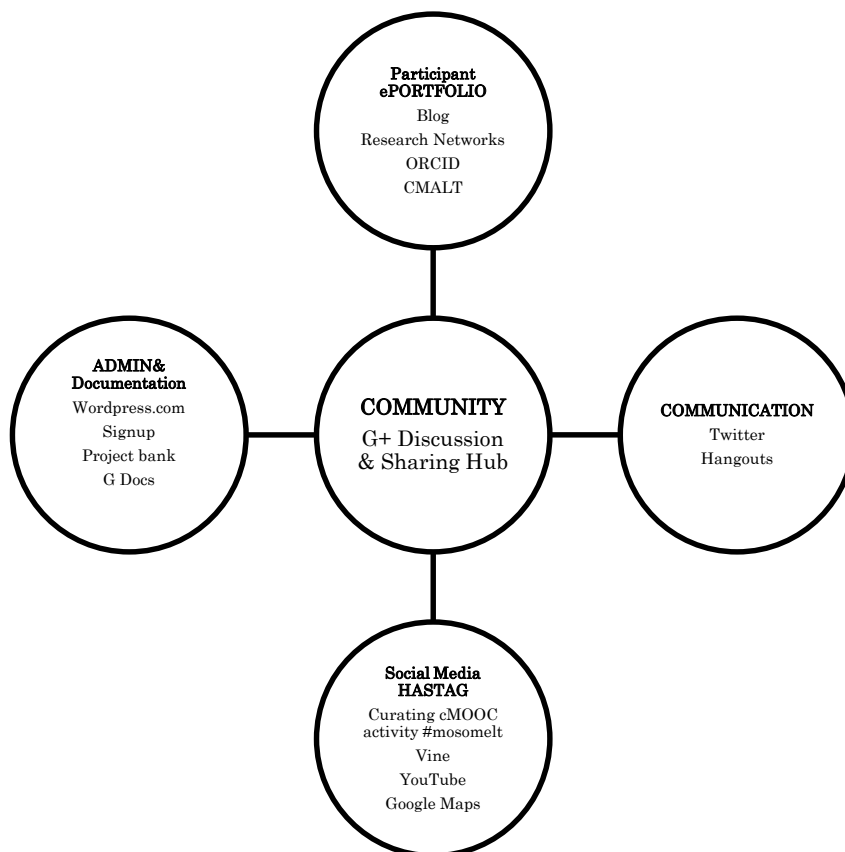
1. Establishment of an online network of face-to-face communities of practice
2. Design of a supporting Ecology of Resources (EOR) using mobile social media
3. Design of weekly activities to trigger participant-generated content sharing
4. Accreditation of participant social media portfolios via CMALT

The Mosomelt cMOOC scaffolds a network of COPs exploring technology enhanced learning in a variety of higher education contexts, and also provides a platform for developing and nurturing global research collaborations. The cMOOC explicitly integrates SOTEL through preparing participants to submit eportfolios for certified membership of the association for learning technology (CMALT) accreditation, effectively updating Boyer's (1990) fourfold DIAT (Scholarship of Discovery or SOD, Scholarship of Integration or SOI, Scholarship of Application or SOA, and the Scholarship of Teaching and learning or SOTL) model of scholarship for the open social scholarship age. The cMOOC was designed around a series of triggering events intended to facilitate the sharing of participant-generated content, open scholarship, and SOTEL within a foundational EDR methodology (Bannan et al., 2015), connecting theory, practice, and critical reflection (Table 1). Table 1 illustrates the mapping of these guiding concepts within an EDR framework.

**Table 1: EDR framework**

<b>EDR</b>	<b>Stage 1</b>	<b>Stage 2</b>	<b>Stage 3</b>	<b>Stage 4</b>
<b>4 stages of learning design</b>	Informed Exploration	Enactment	Evaluation: Local Impact	Evaluation: Broader Impact
<b>Boyer's DIAT model</b>	SOD	SOI	SOA	SOTL
<b>Intersection with mobile learning</b>	Mobile social media framework informing curriculum redesign	cMOOC designed upon Rhizomatic Learning: Developing an Ecology of Resources Designing Triggering Events	Participant Feedback & Redesign	Informed by the scholarship of technology enhanced learning (SOTEL), accredited via CMALT
<b>Connecting theory and practice</b>	Theory	Practice	Evaluation & iterative redesign	Critical Reflection

After two iterations of the cMOOC in 2015 and 2016, this paper focuses upon the evaluation stages of the EDR framework. The design and enactment phases of the Mosomelt cMOOC are reported in prior publications (Cochrane, Narayan, & Antonczak, 2015a; Cochrane, Narayan, Antonczak, & Burcio-Martin, 2016; Cochrane, Narayan, & Burcio-Martin, 2015; Cochrane, Narayan, Burcio-Martin, et al., 2015). Figure 1 illustrates the use of a collection of mobile social media and social networks to support the Mosomelt cMOOC.



**Figure 1: Mosomelt Ecology of Resources (EOR)**

Cormier (2008) refers to the design of a collection of tools to support learning as an ecology of resources (EOR). In our case the ecology of resources utilised to support the Mosomelt cMOOC include:

- A [WordPress course hub](#)
- [Google Plus Community](#)
- A collaborative [Participant Map](#)
- A social media hashtag for curation: #mosomelt, with [Twitter analysis](#) via TAGSExplorer (Hawksey, 2011)
- A prior teaching practice survey of the participants: [Post PowerPoint Survey](#)
- [The Project Bank](#) for sharing participant curriculum design ideas
- A [blog roll](#) of participant reflective blogs
- An archive of online webinars, reflections, and tutorials via [YouTube](#)

The use of social media to support the Mosomelt cMOOC community also provided rich data for evaluation, for which ethics consent was achieved through the AUT ethics committee 13 May 2016, AUTEK Reference number 1669.

### Redesign of Mosomelt 2016

As part of the iterative enactment stage of our EDR framework, reflections on the 2015 Mosomelt cMOOC (Cochrane, Narayan, Burcio-Martin, et al., 2015) informed the redesign of the cMOOC in 2016. The first 2015 iteration of the Mosomelt cMOOC was designed to follow the two twelve week academic semesters of the New Zealand academic calendar, with 24 weeks of sustained participation. However, we found that participant activity decreased after the first six weeks, and again after the end of the first twelve weeks. We compared our 2015 experiences with other MOOCs and found most MOOCs follow a 5 to 6 week timeframe for sustained participant engagement. Hence we refocused the second iteration of the Mosomelt cMOOC in 2016 around the first six weeks as community building, with the second six weeks offered as optional for further exploration. The second twelve week activities in 2016 were refocused as a guide for independent CMALT portfolio preparation. We also integrated the links between the various social media sites in a simpler menu structure on the Wordpress.com hub, and created a shared Mosomelt EOR concept diagram (Figure 1) to facilitate participant understanding of the specific use of each social media site within the Mosomelt EOR. The weekly triggering events were updated and previous links checked to make sure they were still active. Finally, we made sure that any social media curation tools and hashtags allowed continuity between 2015 and 2016 to create an expanding database of user-generated content as resources for future participants.

## Results and Evaluation

In this section we evaluate the impact of the Mosomelt cMOOC as a professional development strategy via evidence of active participation of both the 2015 and 2016 participants, including: a pre Mosomelt survey, a participant collaborative Google Map, and the Mosomelt social media EOR. We also analyse a post-survey of the 2016 participants, and the development of participant eportfolios for potential CMALT submission.

### Data collection and analysis

#### *Ethics consent process*

At the end of the second iteration of the Mosomelt cMOOC participants were invited by an independent colleague to view an online consent form, online participant information document, and participate in an anonymous online feedback survey using Google Forms.

#### *Pre Mosomelt survey*

In order to gain insights into the prior experiences and teaching strategies of the participants we invited participants to complete a simple SurveyMonkey survey in the first week of each iteration of the cMOOC. The survey indicated that while participants had experience of using a variety of technologies in teaching, the use of a presentation tool such as PowerPoint/Keynote/Prezi as their main teaching tool dominated their in class use of technology (65% 2015, 64% 2016). The prior use of any form of social media in teaching was typically used by less than 20% of respondents. 50% of respondents associated their teaching practice as student-centred (andragogy), with social constructivism and problem based learning being the most popular theoretical frameworks employed (57%). Mosomelt challenged participants to move beyond teacher-centred presentation technologies and their accustomed safe set of interaction tools to explore technologies that enable student-determined learning environments.

#### *Participant Map*

In 2015 the Mosomelt participants were invited to locate themselves on a collaborative participant map. In 2016 we created a second layer to the map for 2016 participants, creating a geographical context for the cMOOC that built over the two iterations. Participants linked elements of their social media portfolios into their points of interest on the collaborative map. Initially the map was made private in 2015, generating 71 views from the participants. In 2016 the map was made public, with contributions limited to Mosomelt participants. The map generated 533 views in 2016.

#### *Social Media Activity*

Mosomelt participants were required to sign up for the cMOOC participation by creating and sharing several social media profiles via an online form. These included: Twitter, a blog site, and Google Plus. As participants signed-up they were welcomed into the community via a Twitter post and invited to become members of the Mosomelt G+ Community. Their blogs were also curated via RSS feeds into a shared blog roll. These formed the basic communication and community channels for the cMOOC. Participation with these social media channels is summarised in Table 2, comparing the activity of the 2015 and 2016 cohorts.

**Table 2: Comparison of 2015 and 2016 Mosomelt cMOOC participant activity**

Mobile social media	Activity in 2015 for 51 participants	Activity in 2016 for 23 participants
#mosomelt Tweets (Summarised in a <a href="#">replay</a> )	167 conversations involving 69 users	659 conversations involving 159 users
Google Plus <a href="#">Community</a> activity	150 posts and 244 comments from 51 members	90 posts and 34 comments from 74 members
Introductory video production <a href="http://vinebox.co/tag/mosmomelt">http://vinebox.co/tag/mosmomelt</a>	31 Vine videos 10 Instagram videos	4 Vine videos 7 MSQRD videos
Collaborative <a href="#">Google Map</a> of participants	29 participants, 71 views	11 participants, 533 views
Curated social media posts using #mosomelt via Twinesocial <a href="http://apps.twinesocial.com/mosomelt">http://apps.twinesocial.com/mosomelt</a>	390 Posts	241 Posts
Participant <a href="#">blogs</a>	36 WordPress blogs with an average of 4 pages each.	12 WordPress blogs with an average of 7 pages each.

Table 2 indicates that while there were fewer new participants to Mosomelt in 2016 than 2015, external interest and continued participation from the 2015 cohort created a high engagement with the Mosomelt social media EOR, particularly Twitter and the collaborative Google Map.

### *Post Mosomelt survey 2016*

2016 participants were invited to complete an online evaluation survey at the end of the twelve weeks of the Mosomelt cMOOC. The survey questions are attached in the appendix of this paper. We received replies from 10 of the 23 2016 participants, representing a 44% return rate. 70% of respondents had more than 11 years of teaching experience. 80% of respondents indicated that their Mosomelt experience made a significant difference in their teaching practice - moving beyond teacher centred pedagogies and teaching platforms to learner centred socially collaborative learning spaces. The most helpful aspects of the Mosomelt experience were rated at 80% as:

- Being part of a Community of practice
- Learning new technologies
- The weekly activities

Followed by 70%: Working with a technology steward, noting that not all participants were part of a face-to-face COP. Exploring SOTEL and the option of CMALT accreditation were rated at 50%. Hence participation within a learning community was the most highly valued aspect of Mosomelt by the participants. All respondents stated that the facilitation and use of social media tools in Mosomelt (WordPress, Project Bank, Twitter etc.) helped them learn, share, create and co-create new meaning and understanding of learning and teaching. They indicated that the use of social media tools in their teaching practice after Mosomelt increased to over 60% compared to less than 20% prior to Mosomelt, with 70% integrating the use of Google Plus Communities and Twitter into their courses. General responses to how Mosomelt has impacted participants' teaching practice were of the theme "Inspired and new knowledge to make learning more interactive" (Participant post Mosomelt survey feedback, 2016).

### **Development of participant eportfolios**

For most Mosomelt participants this was their first sustained experience of creating an eportfolio based around a reflective blog and social media. Their blog posts detailed the critical incidents in their Mosomelt journey and also gave insights into the wider impact of Mosomelt into their professional practice and curriculum design processes, as illustrated in the following examples.

*[I] Now use WordPress as a professional development tool for personal reflection and sharing of these reflections with the #mosomelt community. While I don't use this tool in the classroom setting I feel it informs my teaching and helps me to be more reflective of my teaching practices. In addition, using WordPress for reflecting on my own experiences learning to use new digital tools has impacted on me being more mindful and aware of how my students approach their learning and helps me to consider their diverse learning styles when introducing them to new tools. I'm now much more open to looking for and considering new digital tools and have started to follow several people on Twitter who discuss their use of such tools. (Participant post Mosomelt survey feedback, 2016)*

Thank you for being our fearless leader. Our team has benefitted and digital capability skyrocketed... There have been many surprising benefits:  
The mosomelt process inspired team building and strategic planning.  
And exploration of the pros and cons of MOOCs.  
And articulation of our collective teaching philosophy.  
And views on optimum teaching.  
And our understanding of student priorities and preferences.  
And how we can refresh our content and delivery. (Participant G+ comment, 2016)

### *CMALT Reflections*

To date eight Mosomelt participants have submitted CMALT portfolios for accreditation, three have reached accreditation, with a further seven in process. Participants can use a wide variety of eportfolio formats, but we encouraged the use of WordPress as an eportfolio hub to build upon participants' Mosomelt blog reflections. Participants initially found the prospect of creating a reflective portfolio for CMALT submission daunting, and although it was a time-consuming exercise those that have thus far submitted CMALT portfolios for accreditation found the experience empowering. The following is an example participant reflection on the CMALT portfolio production process.



First glance at the CMALT accreditation application I thought “cripes, another long-winded essay I can do without” but I am embarrassed to say, that I actually LIKED writing about myself ... The portfolio I was required to produce, forced me to apply my practical teaching resources within a learning and teaching technology context. It made me realise how much I had achieved while on auto-pilot, just getting on with ploughing through the coursework and bringing new ideas to it for 12 years. (Mosomelt participant blog post, 2016)

Example participant CMALT portfolios:

- <https://daniellemulrennan.wordpress.com/>
- <https://mattguinibert.wordpress.com/cmalt-portfolio/>
- <https://thomcochrane.wordpress.com/cmalt/>
- <https://atz119.wordpress.com>

The variety in the CMALT portfolios illustrates the flexibility and creativity enabled by this approach to professional practice portfolio production.

## Discussion

In this section we discuss the key findings regarding the evaluation of the impact of the Mosomelt cMOOC, and plans for the future – proposing a scalable framework for professional development via networks of COPs.

### Nurturing a community of practice

None of the 2015 participants unenrolled themselves from the Mosomelt Google Plus Community, with several 2015 participants becoming active more experienced peers within the 2016 iteration of Mosomelt, while the remainder continued in a more peripheral participation mode. Thus although the 2016 cohort was smaller than that of 2015, the 2016 participants felt part of a larger community that was building over time. This was reified in the participant collaborative map, where we created a new layer of points of interest for the 2016 participants to add themselves while keeping the 2015 participants as a separate layer on the map. Key feedback from continuing 2015 participants included the value of the webinar series and the face-to-face Winter Workshop in the 2015 iteration of Mosomelt that we did not include in 2016. The 2015 participants valued the opportunities to virtually and physically meet with COPs in other discipline contexts and institutions. We plan to reintroduce these in the third and subsequent iterations of Mosomelt. In the short term we will begin a webinar series of reflections from the first cohort of CMALT accredited submitters.

#### *Evaluation: local impact*

At this stage we have completed two iterations of the mosomelt cMOOC, having just completed the first 12 weeks of triggering events of the 2016 cohort. SOTEL is embedded within the mosomelt cMOOC design explicitly during the second 12 weeks as part of the requirements for CMALT accreditation, and this will be the focus of the remainder of the year for 2016 as we help participants through this process. The Mosomelt cMOOC is now one of the institution’s key strategies for up scaling authentic professional development based around a network of lecturer COPs. A more general PD parallel pathway has also been developed as a unique approach to support the HEA fellowship accreditation scheme pathway named AKO Aronui.

#### *Evaluation: broader impact*

Many participants have begun to publish in peer reviewed conference proceedings, book chapters and journal papers based upon their reflective practice journeys for the first time, creating a scholarly base 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 as evidenced in Altmetrics (Cochrane, Narayan, & Antonczak, 2015b; Priem, Taraborelli, Goth, & Neylon, 2010). Altmetrics provides an indication of the impact of research publications based upon conversations generated in social network sites such as Twitter, Facebook, Mendeley, and Google+. For example, a TAGSExplorer analysis of the #mosomelt Twitter hashtag shows 159 nodes (users) and 828 edges (conversations/interactions), indicating the growth in peripheral participation in the #mosomelt community beyond the 74 enrolled participants.



## Design principles

The two iterations of Mosomelt have reinforced the importance of the design principles behind the design and development of the cMOOC:

- Creating a supporting ecology of resources
- Nurturing a network of communities of practice
- Design of activities to trigger participant-generated content sharing
- Modelling collaboration and active participation within a global community
- Embedding SOTEL within an EDR framework
- Mapping activities and user-generated content to existing accreditation pathways

Of these the least developed so far are the integration of SOTEL and CMALT accreditation, however these will be more explicitly explored in following iterations of the Mosomelt cMOOC concept of a network of professional development COPs through national and international partnerships.

## A Scalable Framework for Mapping a PD cMOOC to accreditation pathways

While the specific focus of the Mosomelt cMOOC has been the exploration of mobile social media to enable student-determined pedagogies (Heutagogy) in higher education we believe the concept of a cMOOC as a framework for network of professional development (PD) COPs can be applied to a variety of contexts (Domains of interest). We propose reimagining PD as a network of COPs or cMOOCs designed around domains of interest, with a meta cMOOC equivalent to a PgCert in higher education.

Example domains of interest may be:

- The scholarship of technology enhanced learning (SOTEL)
- Flipped classroom
- Mobile learning
- AR and VR
- BYOD

These cMOOCs can be designed to model practice and provide a transferable framework (Salmon, Gregory, Lokuge Dona, & Ross, 2015) that leverage existing global accreditation via creating evidence for participant portfolios for submission to HEA and CMALT, without the neoliberal connotations of mandating completion of a generic PgCert in higher education.

We propose a reimagined PgCert as a cMOOC facilitating a base level of effective, flexible, agile, and scalable academic PD. Beyond mandating academics complete an accredited PgCert (Hall, 2010) we believe Mosomelt demonstrates the potential of a PD cMOOC that is designed around the following principles:

- Conceptualised as a collaborative Network of COPs
- Webinars facilitating both global expert and local participant input
- Flipped content as triggering events designed to stimulate participant discussion and user-generated content
- Accredited via HEA or CMALT Portfolios
- Integrating SOTL/SOTEL explicitly through brokering collaborative reflective practice publications

We aim to test this concept by collaborating with like-minded individuals/departments/institutions both nationally and internationally in future iterations of Mosomelt.

## Conclusions

Although hardly massive in numbers (74 participants over two years) the Mosomelt cMOOC as a concept and model for developing a culture around open scholarship and social media has been effective in scaffolding curriculum redesign, supporting innovative participant practice, and connecting practitioners from a variety of curriculum and geographic contexts. Key to the effectiveness of the Mosomelt cMOOC framework has been the development of a supporting community and collaboration infrastructure based upon an ecology of social media resources. Secondly the design of the cMOOC was explicitly based upon a series of triggering events to stimulate participant collaboration and sharing of their experiences and new pedagogical strategies. These triggering events were redesigned in light of feedback from the first iteration of the cMOOC. An EDR methodology has guided the design and implementation of the cMOOC, and we have identified six potentially transferable design principles. Mosomelt is still a 'work in progress', but the exciting element is the unique creative potential unleashed through the diverse participants with the focus of Mosomelt around user-generated content and discussions. You are welcome to join us on this journey by signing up for #mosomelt at <http://mosomelt.org/signup/>.

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## Appendix: 2017 Post Survey Questions

1. How many years for teaching experience do you have?
2. Prior to enrolling for Mosomelt, what would you say was your primary teaching style? (1 being teacher-centred - 5 being entirely learner-centre)
3. What part did technology play in your teaching prior to your enrolment in Mosomelt? (1 LMS focused only - 5 being entirely open based on social media and other open learning platforms)
4. How would you rate your professional development experience in Mosomelt?
5. What factors helped or hindered your experience in Mosomelt? (Choose as many apply.)
6. The facilitation and use of social media tools in Mosomelt (WordPress, Project Bank, Twitter etc) helped me learn, share, create and co-create new meaning and understanding of learning and teaching.
7. Briefly outline the changes you have made to your teaching (if any) directly resulting from your journey in Mosomelt.
8. Select the tools you have explored and are now using in teaching your subject. (Select as many apply.)
9. Do you intend submitting a CMALT portfolio? If yes, what have you found valuable about the CMALT process?
10. Do you have any suggestions that will help improve Mosomelt for future iterations?
11. Would you like to participate further in this research by giving us permission to use your portfolio as a source of data for informing the findings?

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