

# CMALT cMOOC: Developing a scalable lecturer professional development framework

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This paper outlines the design stage of a project that reimagines lecturer professional development around a network of communities of practice scaffolded by a cMOOC (connectivist Massive Open Online Course), where sustained collaborative engagement with innovative teaching practice is recognised via established international peer-based professional accreditation pathways such as CMALT (Certified Member of the Association for Learning Technology). Informed by a design based research methodology, the CMALT cMOOC leverages a network of national and international collaboration and innovative teaching expertise, providing an agile and scalable framework to support the development of participants' CMALT portfolios as evidence of critical engagement with new modes of practice and enhanced student outcomes.

## Introduction

Kopcha, Schmidt and McKenney (2015) identify three phases of design based research (DBR): analysis and exploration, design and construction, and evaluation and reflection. Kopcha et al., argue that DBR studies can provide depth by reporting upon each specific phase. Thus this paper explores the design and construction phase of a design based research project based upon McKenney and Reeves' (2012) model. The overall project aims to evaluate the implementation of an agile and scalable framework providing an authentic professional development experience using innovative teaching and learning approaches that participants can then apply to their own teaching praxis. The project reimagines lecturer professional development (PD) as a network of communities of practice within a cMOOC (connectivist Massive Open Online Course) hub, where sustained collaborative critical engagement with innovative teaching and learning praxis is recognised via CMALT accreditation (Certified Member of the Association for Learning Technology). MOOCs come in two main types: xMOOCs and cMOOCs (Bates, 2014), while xMOOCs focus upon content delivery and a transmission model of teaching and learning, cMOOCs focus upon globally connecting peer learners and facilitating shared experiences. The CMALT cMOOC aims to scaffold a network of communities of practice (COPs) exploring technology enhanced learning in a variety of higher education contexts, it also provides a platform for developing and nurturing global research collaborations.

The CMALT cMOOC is a professional development support strategy and is designed based upon up-scaling

the researchers' community of practice (COP) model of lecturer professional development (Cochrane & Narayan, 2016c). Key to this model is the embedding of the scholarship of technology enhanced learning or SOTEL (Haynes, 2016), within lecturer praxis supported by a collaborative curriculum design process. The cMOOC provides a framework to support the development of lecturer COPs across a series of several weeks of participation throughout the academic year. The cMOOC is not conceptualised as a professional development course in the traditional sense, rather a mutual and collaborative initiative of willing participants to work together in order to enhance their understanding and knowledge of technology enhanced learning and teaching. Participation in the cMOOC is open, free and largely participant driven. Participants are not assessed in anyway (there are no assessments events or grades attached to any of the activities the participants undertake for the duration of the cMOOC). The CMALT cMOOC is a true endeavour to nurture scholarship of learning and teaching through a community and collaborative based approach. The outcome of the CMALT cMOOC is the development of lecturer eportfolios of technology enhanced learning practice that can be submitted for accreditation via the Certified member of Learning Technologists (CMALT) process (<https://ascilite.org/get-involved/cmalt/>). Thus the CMALT cMOOC is designed to support the development of innovation in teaching and learning practice and deepen reflective practice via SOTEL. The next phase of the research will evaluate the effectiveness of the CMALT cMOOC model and help inform the redesign of subsequent iterations. The role of the researchers in this



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cMOOC is that of a guide and facilitators and play no role in the CMALT certification/accreditation process. The certification process is totally independent of CMALT cMOOC and is undertaken by a third party organisation based in Australasia (<https://ascilite.org/get-involved/cmalt/>) and the UK (<https://www.alt.ac.uk/certified-membership>). The researchers in the CMALT cMOOC are not teachers nor are the enrollees students. There is no distinct hierarchy as in a traditional classroom, rather the CMALT cMOOC is a community attempt to grow teaching praxis in a variety of teaching and learning domains.

## 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). 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 that support 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 (Milligan & Littlejohn, 2014; Salmon, Gregory, Lokuge Dona, & Ross, 2015). Laurillard (2016) 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. While MOOC completion rates are typically low (Jordan, 2014), analysis of MOOC participation data indicates the effectiveness of the MOOC format for professional learners (Kill & Stroud, 2016; Milligan & Littlejohn, 2014). Therefore MOOCs can be powerful experiences for a motivated core group of participants (Mackness & Bell, 2015).

Increasingly higher education institutions globally are under pressure to demonstrate the effectiveness of their academics in teaching and learning, with implications for levels of government funding. Currently every university in New Zealand offers their own version of a PgCert as a

key professional development strategy. The ineffectiveness of this as a strategy is demonstrated by the low level of uptake by academics. We propose a reimagined PD strategy leveraging professional accreditation pathways. Professional accreditation pathways are based upon demonstrating alignment with the UK professional standards framework (UKPSF). Two of the most mature accreditation pathways are through the Higher Education Academy (HEA) and the Certified Member of the Association for Learning Technology (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 85000 fellowships since 2003 (<https://www.heacademy.ac.uk/recognition-accreditation/hea-fellowships>), while CMALT (Deepwell & Slater, 2012) has just over 360 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 plus current membership of either ALT or Ascilite professional societies 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 practice 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, 2016). Both HEA and CMALT map to the UKPSF areas of professional activity, core knowledge, and professional values. In comparison to HEA accreditation, CMALT adds the integration of technology within these areas of teaching practice more explicitly than HEA (Association for Learning Technology (ALT), 2015). CMALT accreditation is thus highly relevant to lecturers who integrate and engage with technology in their teaching, and those who support technology enhanced learning (for example eLearning designers). Thus we have mapped the design of the project cMOOC to the CMALT accreditation pathway as an appropriate measure of the development of technology enhanced learning practice and reflection. It also builds upon the close links between the international communities of

educational technologists represented by Ascilite (Australasian Society for Computers In Learning In Tertiary Education) and ALT (Association for Learning Technology, UK) to facilitate a supportive community (<https://ascilite.org/get-involved/cmalt/>).

## Methodology

We have piloted the concept of a PD cMOOC through the design and implementation of two iterations of the Mosomelt (Mobile Social Media Learning Technologies) cMOOC (Cochrane & Narayan, 2016a; Cochrane, Narayan, Burcio-Martin, Lees, & Diesfeld, 2015), with a structure outlined at <http://mosomelt.wordpress.com> and a supporting G+ Community <https://plus.google.com/u/0/communities/10639365203803851791?cfem=1>. With the development of the CMALT cMOOC we aim to test and evaluate the scalability of this concept by collaborating with like-minded individuals, departments, and institutions both nationally and internationally in this project.

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 (Cormier, 2008). 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 CMALT cMOOC, illustrated by the EOR designed for the pilot 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](#)
- A [survey](#) of participant engagement with SOTEL
- [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 design of the CMALT cMOOC scaffolds a network of communities of practice of lecturers across national and international higher education institutions. The cMOOC focuses upon facilitating collaboration and critical discussions between the participants, and the sharing of user-generated content, rather than the delivery of a prescribed body of pre-developed content. The design of the cMOOC is mapped to the CMALT accreditation

pathway as an appropriate measure of the development of technology enhanced learning practice and reflection, that also builds upon the close links between Ascilite and ALT (<https://ascilite.org/get-involved/cmalt/>) to facilitate a supportive community. The design and implementation of the cMOOC is founded upon a qualitative design based research (DBR, often used synonymously with Educational Design Research or EDR) methodology.

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 project will involve multiple case studies involving each of the partner institutions and their experiences of participating in the cMOOC and in modifying the framework for their own institutional priorities. The impact of the project will be demonstrated through the completion of participants CMALT accreditation. The DBR framework consists of four iterative stages: literature review; design of prototype cMOOC; evaluation of the impact of the cMOOC on participants' practice; and, evaluation of the transferability of the cMOOC framework into other educational and organisational work-related contexts via the development of a set of design principles for peer review and publication.

## Research questions

Two research questions guide the overall project design and evaluation of the impact of the CMALT cMOOC framework:

1. Can a cMOOC provide a scalable and agile framework to support authentic lecturer professional development?
2. How effective is an ecology of resources (EOR) based upon social media for sustaining an authentic professional development cMOOC and supporting the development of participant eportfolios for CMALT accreditation?

## Research design

Participants will be drawn from academic development units across New Zealand, in partnership with three leading international educational technology research units. This includes six tertiary education institutions across New Zealand, and three international academic development unit partners. Each member of the research team will coordinate a local COP of lecturers as practitioners exploring the development of eportfolios and SOTEL to enhance and reflect upon their teaching praxis. Each COP will be comprised of 4 to 6 lecturers and

an academic advisor to base the projects within a collaborative design-based research methodology. These COPs will be formed within a department that will meet weekly face-to-face to support one another as they participate within the wider CMALT cMOOC online network. We aim for approximately 50 participants in the first iteration of the CMALT cMOOC. While this number of participants is hardly 'massive' in the traditional sense of a MOOC, we are more interested in the quality of the participant experience and the capacity to scale this model in future iterations.

### 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), and through our prior experiences of developing PD cMOOCs to support projects such as the #NPF14LMD AKO Aotearoa funded project (Cochrane & Narayan, 2016b; Cochrane, Narayan, Burcio-Martin, et al., 2015; Frielick et al., 2014). The six design principles (DP1-DP6) are summarized as:

- DP1: Creating a supporting ecology of resources
- DP2: Nurturing a network of communities of practice
- DP3: Design of activities to trigger sharing of participant-generated praxis examples
- DP4: Modelling collaboration and active participation within a global community
- DP5: Embedding SOTEL within an EDR framework
- DP6: Mapping activities and user-generated content to existing accreditation pathways

These design principles inform 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 sharing of participant-generated praxis examples
4. Accreditation of participant eportfolios via CMALT

The CMALT 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) SOTL model of scholarship for the open social scholarship age. The cMOOC is designed around a series of triggering events intended to facilitate the sharing of participant-generated content, open scholarship, and

SOTEL within a foundational DBR methodology (Bannan, Cook, & Pachler, 2015), connecting theory, practice, and critical reflection. We have applied McKenney and Reeves (2012) generic model of educational design research to the context of designing the CMALT cMOOC. Figure 2 outlines the generic EDR model aligned to our key supporting learning theories and frameworks embodied in our six design principles (DP1-DP6) added to the diagram in italics.

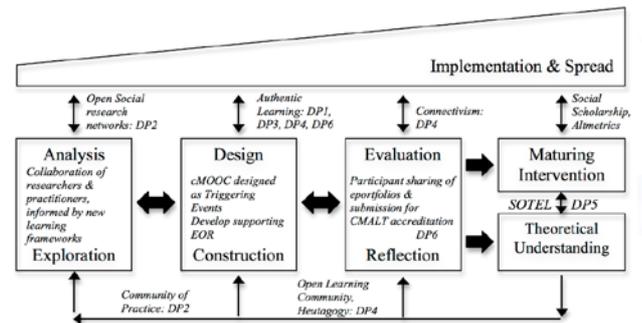


Figure 2: Generic model of EDR (from McKenney and Reeves, 2012; p159) applied to the design of the CMALT cMOOC framework.

While McKenney and Reeves do not assign a separate phase to the wider dissemination and evaluation of research (they label this maturing intervention and theoretical understanding in their generic model), we follow Bannan, Cook and Pachler (2015) in assigning this as a fourth DBR/EDR phase via Haynes (2016) definition of the scholarship of technology enhanced learning (SOTEL). The goal of our framework is to enable the explicit design of learning experiences around new pedagogies such as rhizomatic learning (Cormier, 2008), social constructivism (Head & Dakers, 2005; Vygotsky, 1978), heutagogy (Hase & Kenyon, 2007; Luckin et al., 2010), authentic and ambient learning (Herrington, Reeves, & Oliver, 2009), and connectivism (Siemens, 2005). The principles and values that inform the development of participant CMALT portfolios are (from CMALT Guidelines, <https://www.alt.ac.uk/get-involved/certified-membership/cmalt-support/>):

- A commitment to exploring and understanding the interplay between technology and learning.
- A commitment to keep up to date with new technologies.
- An empathy with and willingness to learn from colleagues from different backgrounds and specialist options.
- A commitment to communicate and disseminate effective practice.

The content of a CMALT portfolio should include several sections that each includes a description of what the participant has done, recent evidence to support this, and

reflection upon what was learnt. The CMALT portfolio can take a range of digital formats including: A Word document; A Google Site; An e-portfolio; and a PODcast or VODcast. Table 2 provides an indicative overview of a model of the CMALT cMOOC design mapped to the CMALT portfolio criteria, based upon our Mosomelt cMOOC prototype (Cochrane, Narayan, & Burcio-Martin, 2015).

## Data collection

### 1. Ethics consent process

At the beginning of the first iteration of the CMALT cMOOC participants will be 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. Participants will be informed that their social media activity and online profiles will be public, but their data will not be included in analysis if they choose to later withdraw from the project.

### 2. Pre cMOOC survey

In order to gain insights into the prior experiences and teaching strategies of the participants we will invite participants to complete a simple SurveyMonkey survey in the first week of each iteration of the cMOOC. The #mosomelt pilot survey indicated that while #mosomelt 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%). Similarly, we anticipate that participation in the CMALT cMOOC will challenge 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.

Table 2. CMALT cMOOC weeks 1-7 model outline

Topic	CMALT mapping	Triggering events
Week 1	Introduction to CMALT accreditation process and establishment of participant eportfolios, and Developing a contextual statement	Participants invited to join the CMALT cMOOC G+ community, and share ideas and social media via the #CMALTCMOOC hashtag. Setup of individual Wordpress eportfolios, ethics consent, and initial participant survey of prior experience. Shared collaborative participant map. Creating a concise biography and professional goals on Wordpress, and shared research profiles on: Researchgate, Academia.edu, Mendeley, ORCID, and LinkedIn. Introductory Webinar
Week 2	Exploring operational issues	Blog post or VODCast discussing the constraints and benefits, technical knowledge, and deployment of learning technologies. Digital Literacy mapping exercise. Exploring innovative pedagogies – guest webinar from international partner.
Week 3	Exploring learning, teaching and assessment	Invitation to participate in SOTEL survey. Sharing assessment designs for peer feedback via Google Docs and a shared Project Bank via Wordpress. Webinar on TEL frameworks
Week 4	Exploring the wider context	Blog post or VODCast discussing legislation, policies and standards, and exploring the wider impact of Altmetrics and SOTEL. Webinar on collaboration
Week 5	Collaboration and Communication	Share examples of how you collaborate with your peers - this could be an interactive Google Map of research presentations or a team project, a G+ Community, a social media hashtag, a Twitter 'Moment' of a collaborative event, etc. Group G+ Hangout
Week 6	Choosing a specialisation	Blog post or VODCast describing an area of specialisation relevant to your context. Hangout sharing specialisations
Week 7	CMALT portfolio publication options	Overview of digital publishing formats and CMALT portfolio submission requirements. Invitation to further PD cMOOCs such as Mosomelt. Invitation to final participant survey. Participant Hangout reflecting upon their CMALT cMOOC experience.

### 3. *Participant ePortfolios*

cMOOC participants will be invited to locate themselves on a collaborative participant map. The map will create a geographical context for the cMOOC that can be built over multiple iterations. Participants will be invited to link elements of their social media portfolios into their own points of interest on the collaborative map. The map will be public, however contributions to the map will be limited to cMOOC participants. This will help create a sense of participation within a global community. For example, the #mosomelt map generated 533 views in 2016. Participants who submit completed portfolios for CMALT accreditation will be invited to share their portfolios as examples for others. We will model and encourage the development and sharing of open educational resources, and active participation in open research networks.

### 4. *Social media activity*

Participants will sign up for the cMOOC by creating and sharing several social media profiles via an online form. These include: Twitter, a blog site, and Google Plus. As participants sign-up they will be welcomed into the community via a Twitter post and invited to become members of the cMOOC G+ Community. Their blogs will also be curated via RSS feeds into a shared blog roll. These form the basic communication and community channels for the cMOOC.

### 5. *Post cMOOC survey*

Participants will be invited to complete an online evaluation survey at the end of the CMALT cMOOC.

## Data analysis

We will use triangulation of shared project activity via a variety of social media, community posts and comments, interviews, surveys and focus groups from the six institutional partners, and the identification of design principles for authentic designing professional development cMOOC. Participant social media usage will be analysed via visual conversational analysis tools such as TAGSExplorer (Hawksey, 2011) for Twitter. Other social media usage analytics such as Google Street View and YouTube views and peer ratings will provide analysis of the geographic reach and impact of the project artefacts. The participants are all peer participants, with no links between the project and formal career progression requirements at any of the participating institutions. All participant data will be anonymous.

## Ethical and quality assurance processes

The project will apply through each of the participating institutions' ethics committee for ethics consent. All participants will be supplied with an information sheet regarding the aim and scope of the research, participants will choose to participate in the research by signing

consent forms (administered by a third party), and surveys and interviews will be conducted by a third party. There are no departmental reporting lines between the researchers and the participating lecturers and therefore no issues impacting performance appraisals. There are no foreseen conflicts of interest between the participants and the researcher or the co-researchers of the project. The CMALT cMOOC does not involve any formal assessment processes, assessment is purely via participation and formative peer feedback. The CMALT accreditation process is external to the participating institutions and the researchers, and is part of an existing third party accreditation system administered by Ascilite and the UK Association for Learning Technologies as third party professional societies. The researchers and lecturers will collaborate as peers within the project COPs with a shared domain of interest of exploring creative pedagogies for better student outcomes. Participants will be made aware that participation in the research is voluntary, they can withdraw at anytime, and participation or non-participation will not impact their career progression or CMALT submissions. The framing of the project around a network of COPs also means that any identified issues can be discussed and dealt with in a timely matter as each COP will meet weekly face-to-face. Publication of the research will be targeted towards high-ranked open access peer reviewed journals and conference proceedings, and the Altmetrics (Priem, Taraborelli, Goth, & Neylon, 2010; Williams & Padula, 2015) impact of the research will be tracked via social media such as Twitter conversations, and the development of participating researcher and lecturer ORCID (Open Researcher and Contributor Identifier) profiles (Buckland & Bass, 2015; ORCID, 2015). Two external SOTEL research experts will be asked to become moderators and advisors for the project, and will meet with the research team at least once per year.

## Next steps of the project

Initial reaction to the CMALT cMOOC project have been very positive, with over 130 interested readers and 21 followers on our Researchgate project page <https://www.researchgate.net/project/CMALT-cMOOC-Developing-a-scalable-lecturer-professional-development-framework>. The project aims to produce direct and tangible outcomes for students through developing an agile and scalable framework for lecturer professional development, enabling lecturers to design and implement innovative teaching and learning strategies for their students. Laurillard (2016) argues that professional development MOOCs can indirectly benefit disadvantaged learners. The project cMOOC will provide participating lecturers with an authentic experience as learners themselves within an innovative collaborative framework that will model new pedagogical strategies that they can integrate into their own teaching praxis,

improving student experience and outcomes. The project cMOOC will be mapped to the five key areas of CMALT accreditation. Each of these key areas has benefits for learners. Students will benefit from lecturers who gain deeper understandings of how to integrate educational technology within the curriculum and the supporting infrastructure requirements. Students will also directly benefit through the design of more authentic learning experiences and assessment strategies. Participating lecturers will also develop the confidence to have a voice within their institutions around the critical issues surrounding educational technology. Participants will be supported by participation within a global network of educational technologists and this collaborative experience will influence their design of collaborative learning experiences for their own students. Students will also benefit from their lecturers exploring new and emerging technologies for teaching and learning within a supporting framework.

As an integral element of participation in the project, participants will design and share examples of best practice and innovative teaching and learning activities and strategies. This will form a database of learning activities and assessments that can be used and modified by the participants, their colleagues, and potentially any interested academic globally. Learners will directly benefit as the participants put into practice these new strategies and critically reflect upon them as part of their CMALT portfolio. Thus participant's CMALT portfolios will provide critical evidence of their engagement and implementation of innovative teaching and learning strategies and technology integration. As a global community CMALT membership (Deepwell & Slater, 2012) initiated in 2005 (<https://www.alt.ac.uk/certified-membership>) is currently around 360 members. The project will provide a catalyst for significantly increasing this select membership, in particular growing current New Zealand membership from 6 current holders to between 60-100 by the end of the project. As each of these lecturers will be teaching at least 25 students each, the project will have direct impact on at least 1200 students over the first two years of the project, and many more beyond. Beyond the end of the project we anticipate participating institutions will continue with versions of the project cMOOC and CMALT accreditation, with intakes of lecturer cohorts every six months, leading to an annual completion of CMALT throughout New Zealand higher education institutions by an estimated 100 new members per year.

#### Project timetable

1. Literature review by primary research team: early 2016
2. Development of cMOOC professional development framework, and the evaluation of the Mosomelt cMOOC (Cochrane & Narayan, 2016a): 2016

3. Establishment of community of practice of the principle researchers from each institution: 2017
4. Establishment of local communities of practice at each participating institution comprised of a principle researcher and 4 to 6 lecturer practitioners each: semester 1 2018
5. Design, implementation and evaluation of CMALT cMOOC: semester 2 2018
6. Identification of design principles for designing authentic learning experiences from first project iterations: end of 2018
7. Redesign of the CMALT cMOOC for a second iteration in 2019
8. Analysis of research project results and development of transferable design principles for designing authentic professional development via a cMOOC framework and CMALT accreditation: 2019
9. Publication and dissemination of research: end of 2019

## Conclusions

In this paper we propose reimagining higher education professional development as a network of communities of practice supported by a cMOOC mapped to the CMALT accreditation pathway. Using a design based research methodology the cMOOC is designed to model innovative teaching practice and provide a transferable framework (Salmon et al., 2015) that leverages 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. The CMALT cMOOC is designed to facilitate an authentic, flexible, agile, and scalable academic PD experience. We have informed the design of the cMOOC through the identification and implementation of six design principles. While this paper focuses upon the design and implementation phase of the project, future papers will focus upon the evaluation and reflection phase of the DBR project.

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