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Designing online conferences to promote professional development in Africa

Tony Carr
University of Cape Town, South Africa
University of Oslo, Norway

ABSTRACT

This article considers how online conferences can support professional development across Africa and reviews elements of the literatures of social learning, online professional development and online conferences. The e/merge online conference is then described in terms of design features and participation metrics. This sets context for discussion of the results of a qualitative analysis of statements by engaged online conference participants concerning the affordances of the online conference and their experiences of learning during the conference. Online conferences have become an increasingly well-accepted mode of delivery and interaction for professional development processes. This is partly driven by changing online conference designs, improved bandwidth and increasing take-up of internet services globally. The growth of online conferences is also in part a response to the travel costs, security fears, and ecological impacts related to traditional face-to-face conferences. The *e/merge* online conference series on the use of educational technology in Africa is an example of how online conferences can enhance professional networking and development of practitioners and researchers. Such conferences can bring together professionals with shared practices, facilitate learning at the boundaries of overlapping communities of practice and bring African and global experiences into a shared conversation about new opportunities and local contexts.

Keywords: *Professional development; online conferences; communities of practice; landscape of practice; conference design; educational technologists*

INTRODUCTION

Increased interest in online conferences globally is largely driven by convenience of participation, savings in travel and accommodation costs, and ecological concerns. In Africa, where members of specialist professions are physically dispersed across large distances, online conferences can play a key role in professional networking and development. This role is especially important in emerging professions such as educational technology, which are characterised by uneven trajectories of development and reconfiguration. After reviewing some of the generic conference design issues which are relevant to both face-to-face and online conferences I will discuss how the affordances of online conferences provide further possibilities for engagement in time-bound professional learning communities. Thus designers of online conferences can remediate (Bolter 2001, p.23) the notion of a conference to produce events that only in part resemble their face-to-face precursors.

This article considers the affordances of online conferences as convenors of learning across a landscape of practice for professional development in Africa and explores the drivers of participation in conference activities through content analysis of statements by highly engaged participants. It is the first of a series of three articles of which the second will focus on the contradictions in an online conference system and the third will explore the relationships between formal online discussions and the use of social media within an online conference which uses both conversational spaces. The challenges faced in the current article relate to the theoretical

underpinnings and related design choices which can support online professional development conferences for an emerging profession across varied African contexts including shifting disparities in infrastructure, skills and experience.

The current article introduces the "*e/merge*" series of online conferences on the use of educational technology in Africa which attempted to create engaging time-bound experiences of community of practice interaction including legitimate peripheral participation and conversations among and with experts although it soon became evident that valued interactions were also taking place across the boundaries of the communities of practice engaged in the conference. The uniqueness of the first *e/merge* online conference in 2004 resulted from 1) its primary focus on the online knowledge sharing, networking and professional development of colleagues in Africa; 2) the design of a system with multiple modes and technologies of communication to support engagement by participants; and 3) the effective use of a team of trained online facilitators to support the leadership of presenters and participation by delegates. *e/merge 2012* involved 272 participants and presenters from Africa and five other continents through sharing of presentations and conversations in online discussions and live meeting rooms. The selection of participant statements will focus on the affordances for learning in an online professional community that were described by engaged participants.

I will suggest that the opportunities for deeper professional development arise from the affordances of the online conference for social learning as participants engage in time bound community of practice interactions and boundary conversations within the landscape of practice where professional identity and expertise are formed. Thus a well-designed online conference can bring members of related communities of practices into engagement about shared boundary objects. In particular the opportunities for engagement within a landscape of practice (Wenger 2010, p.183) may facilitate the development of relational agency (Edwards 2005, pp.169-170) which is essential to working effectively across professional and organisational boundaries.

The primary research question in this article is: How can an online conference support professional development in Africa? This first requires setting the context relating to the professional development of educators in African higher education and then a literature review to answer three initial questions namely:

1. What are the affordances of online learning within and across the boundaries of communities of practice for professional development?
2. What are the generic challenges in designing engaging conferences that support learning by participants?
3. What are the specific challenges of designing online conferences for networking and professional development?

Then it becomes possible to engage with two further research questions:

4. How do highly engaged participants in an online conference describe their perceptions of the affordances of the online conference and their experiences of learning in the conference?
5. How did the design of the e/merge online conferences support professional development within the landscape of practice?

The answers to questions 1-3 draw on a review of the literatures of professional development, social learning, conference design and online conferences. My engagement with questions 4 uses quantitative data to set context and then requires the qualitative lens of a content analysis of statements by conference participants from online discussions, chats, blogs, interviews and the end of conference surveys. I then attempt to answer question 5 in the ensuing discussion and the

conclusion. This will draw on both the literature review in questions 1-3 and the engagement with qualitative data in question 4.

PROFESSIONAL DEVELOPMENT NEEDS

The efforts made by African universities to apply ICTs to teaching and learning challenges depend crucially on the work of a small yet growing number of educational technologists. Even when seen on a global scale educational technology is a new area of scholarship and profession. African educational technologists face the dual challenge of keeping up with international developments in pedagogy and technology while seeking to ensure that the local use of educational technology appropriately addresses teaching and learning needs within the very different contexts of their universities.

This dynamic process is complicated because there are very few practitioners in relation to growing needs in a rapidly changing technological environment. Educational technologists with specialist skills tend to collaborate on local projects as members of small teams which include colleagues with a range of generalist and specialist skills in a local collectivity of practice (Lindkvist 2005) which provides limited access to community of practice within their specialisation. Given the resource constraints and institutional weaknesses experienced by many African universities, the work of educational technologists may include operating across several educational technology specialisations, becoming change agents sometimes up to policy level, and taking on management responsibilities as well.

One avenue to grow educational technology capacity in African higher education is by growing and strengthening new and existing networks and working across institutional boundaries to develop a strong cadre of educational technology 'professionals'. Hodgkinson-Williams and Czerniewicz (2007) recommend that the formal or informal development of educational technologists for African higher education should focus mainly on the development of capabilities that enable them to adapt to change, generate new knowledge and continue to improve their overall performance and practice. The ongoing extension of broadband internet access across Africa and the propensity of educational technologists to make use of online resources and communication facilitate the growth of online learning events and networks for educational technology researchers and practitioners.

LITERATURE REVIEW

This literature review starts by exploring the affordances of online learning within and across the boundaries of communities of practice for professional development. The next step is to consider the generic challenges in designing engaging conferences that support learning by participants. The final part of the review engages with the specific challenges of designing online conferences for networking and professional development.

1) From Communities of Practice to the Landscape of Practice

Participation in communities of practice can provide several benefits to educators including mutual support and collaborative processes of staff development (Young and Mitchell 2003; Eib and Miller 2006). Viskovic (2006, p.333) suggests that institutions can use communities of practice to "encourage change by working with 'what is already there'". One of the most pervasive changes faced by education in recent decades is the integration of new technologies within teaching and learning processes which implies a need to learn new practices and modify existing practices. To Eib and Miller (2006), educator communities of practice offer a way to

nurture “the sense of connectedness and collegiality that is vital to continuous innovation and improvement in post-secondary institutions”.

Etienne and Beverly Wenger-Trayner's thinking about professional development published in Wenger (2010) and Wenger-Trayner and Wenger Trayner (2014) provides a useful metaphor. For Wenger-Trayner and Wenger Trayner (2014, p.13) the body of knowledge of a profession is fundamentally a landscape of practice. Thus the landscape for a particular profession includes the practices of that profession and related professions as well as the practices of the recipients of the professional service, regulators, managers and researchers. Wenger (2010) suggests that "Through learning, the landscape shapes our experience of ourselves: practices, people, places, regimes of competence, communities and boundaries become part of who we are. Identities become personalised reflections of the landscape of practices”. This metaphor can transfer to the professional challenges faced by educational technologists if we focus on the specific constellation of communities of practice related to this emerging profession.

The landscape of practice of educational technologists then includes the practices of educational technology researchers, policy makers, university managers, academics, students and IT practitioners. At an even more specified level, we could consider the practices of course designers, online educators, online facilitators, web designers, graphic designers and other specialisations within the field of educational technology. Learning at and across boundaries is a vital practice for professional survival and development, especially when a profession is so new that most of its members were originally trained in other domains.

Learning within a landscape of practice may also have significance beyond the sharing of practices and experiences across professional and organisational boundaries. In an era when professions are being reconfigured and projects increasing require multi-disciplinary teams there is a growing need for relational agency described by Edwards (2005, pp.169-70) as "a capacity to align one’s thought and actions with those of others in order to interpret problems of practice and to respond to those interpretations". Thus learning within a landscape of practice may also support the development of relational agency among participants. As suggested in Edwards (2010, p.30) relational agency includes the development of know-who which “involves the social capability to establish relationships to specialised groups in order to draw on their expertise” (Lundvall 1996, p.6). Increasing demand for educational technologists and ongoing technological change result in dynamic collaborative relationships among specialists and between generalists and specialists. Thus know-who becomes an essential professional capacity.

Online interaction is well recognised as useful for professional development in a wide range of professions including architecture (Roberts 2009, Faulconbridge 2010), law (Levin 2005, Hara 2007) and medicine (Boulos, Hetherington and Wheeler 2007, Chretien, Goldman and Faselis 2008). The literature of online and mixed mode teacher development includes the professional development of school teachers (Barab, MaKinster and Schekler 2004, Lock 2006, Mouza 2002) and university educators (Sherer, Shea and Kristensen 2003, Schrum, Burbank, Engle, Chambers and Glassett 2005, Wilson and Stacey 2004). Learning online is widely understood as particularly helpful in the development of technical competence and skills and perspectives related to teaching with technology (Davis 2007, Wilson and Stacey 2004) and the administration of online courses (Ertmer, Bai, Dong, Khalil, Sung and Wang 2002). Sherer et al. (2003, pp.193-4) assert that an online faculty learning community can “enhance professional effectiveness in teaching and learning and become a much-needed resource surviving the rapid changes in teaching technology” by “creating a vehicle to expand knowledge and learning opportunities for faculty, individually and collegially”.

Success factors for online educator learning communities include collaborative inquiry (Lock 2006, Vrasidas and Zembylas 2004), integration with face to face/local professional development

processes (Treacy, Kleinman and Peterson 2002, Schlager and Fusco 2006), reflective conversation (Yang and Liu 2004), technical support (Treacy et al 2002), and support by educators (Lock 2006) and facilitators (Yang 2004). Online professional learning communities and networks face several challenges relating to both social and technical design (DiMauro and Gal 1994). Barab et al. (2004) discuss six system dualities of online professional communities "whose interplay can drive system innovation and are useful for characterizing system dynamics" (p 254). These tensions include the "duality of having a system that allows diversity, while at the same time maintaining a certain level of coherence in communities" (2004, p.250). Barab et al. then assert that "[i]t is the diversity of skills, abilities, and perspectives that drives the growth of the community" (2004, p.251). This resonates with boundary learning experiences in a landscape of practice (Wenger-Trayner and Wenger-Trayner 2014) which is larger and more diverse than a single community of practice.

2) Contested Notions of Conference Design

Designers of online conferences face an array of challenges which are endemic to the design of conferences as a social technology for professional networking and learning. The problems of large conferences are well described and sometimes scathingly critiqued in the limited literature on conference design. In a live online meeting during the Spaces of Interaction online conference convened by the Association for the Advancement of Computers in Education (Association for the Advancement of Computing in Education 2009) about improving conferences, Betty Collis suggested that most conferences are not designed for learning. The economics of conference management often seems to lead to a focus on the rapid throughput of multiple tracks of presentations in packed schedules, which allow minimal time for engaged reflective conversation within scheduled sessions or for conversations across tracks. Ravn and Elsborg (2007, p.3) state that "we may well question the efficacy of such massive one-way communication. While there has been extensive experimentation pretty much everywhere else in the educational world, the conference, seen as a forum for learning, stills pegs the learner in the role of passive receiver of information." A sampling of conference organisers' manuals, which are available online, suggests that a justified focus on issues such as funding, logistics and protocol may sometimes crowd out an explicit focus on learning. However, there are some encouraging statements in this regard. The International Association of Workplace Professionals Planning Guide (2010, p.3) suggests the desirability of "a Conference Program that stimulates and challenges people at all levels in the field of workforce development".

Studies of conference design also suggest the need for conferences to provide opportunities for effective networking and reflective learning in communities of practice and inquiry. Zelmer and Zelmer (1991, pp.14-15) list several motivations for informal interaction including "exchanging information with colleagues", "meeting potential colleagues", "talking to old friends", and "exploring employment opportunities". Howarth et al. (2007, p.7) also suggest varied reasons for conference attendance that include "learning new techniques, methods, and technologies." They recommend the design of conference activities that support participants in "exploration and inquiry". Ravn and Elsborg (2007, p.6) consider the elements of conference design which can engender deeply transformative learning by participants. They conceptualise conferences as spaces for learning which require "substantial and entertaining presentations" in combination with "facilitated processes and activities that induce people to interpret actively what they hear, relate it to their ongoing interests and projects, and to share inspiration and knowledge with each other at the conference" (Ravn and Elsborg, 2007, p.23).

The traditional form taken by conferences has been challenged repeatedly over several decades. Mill (1970, pp.5-6) describes an environmental conference in the late 1960s which included a loose schedule, participants dropping in an out of events, information booths, rock bands,

experiential activities and participants who insisted on speakers coming down from the stage to engage with them. He argues that "The purposes of conferences will change. There will be fewer information-giving sessions and more information exchange; fewer passive audiences and more participative groups" (Mill 1970, p.4).

More recently, the traditional notion of the conference has been challenged by the rise of the "unconference" which originated within the technology industry but has been used across several sectors including education, librarianship and media. The organisers of the 2007 Common Repository Interfaces Group Unconference assert that "An un-conference is a combination of the best parts of a conference (face-to-face discussions generating new ideas, passionate debates and genuine information exchange) with all the PowerPoint stripped out. The agenda is set by the attendees on the day in a very simple and direct way." Follett 2006 describes the character of an unconference as "somewhere between that of a bazaar and that of an intellectual salon".

Proponents of radical conference redesign are supported by a growing body of resources including work on participatory conferences by Segar (2010), the Compass guide "to participatory learning, training and knowledge sharing methods" (International Labour Organisation, 2014) and a compendium of liberating meeting structures (McCandless and Lipmanowicz, 2014). One of the most interesting examples of a radical conference design is the cluster of South by Southwest conferences (SXSW, 2016) held annually in Austin, Texas. These conferences combine elements of professional development conference, tradefair and festival with a wide variety of event formats including high energy plenary presentations, panels, experiential workshops, film and video shows, concerts and networking events sometimes disguised as parties.

From literature discussed thus far, it would seem that conference designers need to accept and revel in multiple paradoxes as they design and develop a complex, emergent conference ecosystem. It may be that the ideal professional development conference negotiates multiple interdependent and dynamic balances including balancing formal interaction with spaces and opportunities for informal engagement. It may include presentation of information and ideas with the learning of perspectives, practices and relational agency through conversation across the landscape of practice presented by the broader conference community. Effective professional development conferences also facilitate integration of delegates in a temporary conference community that includes respect and space for individuals to pursue their own interests. These design features also apply to the design of online conferences even while virtual interactions reconfigure the notion of spaces for engagement.

3) Online Conferences for Professional Development

> "*An online conference is a structured, time delineated, professional education event that is organised and attended on the Internet by a distributed population of presenters and participants who interact synchronously and/ or asynchronously by using online communication and collaboration tools."*
> (Anderson and Anderson 2010, p.5).

While online conferencing tools, including online discussion forums and chat rooms, have been in use since the early 1970s (Woolley, 1994), the notion of the international online conference for academic and professional communities is a more recent phenomenon. In 1984 Lisa Kimball organised an online conference that was available to participants networked through several mainframe computers. Another early model was the e-mail based online conference as exemplified by the Online Distance Education Conference initiated by Terry Anderson in 1992 (Anderson and Mason, 1993) for distance educators who could not travel to an annual face to face conference.

Since the mid-1990s, rapid increases in both bandwidth and processing power available in developed countries in particular have influenced the technologies and form of online conferences. The proliferation of low-cost live online meeting technologies has fuelled the shift towards online conferences that attempt to replicate a face-to-face conference experience of intense synchronous interaction over a few days. Some online conferences now make effective use of Web 2.0 tools such as wikis, blogs (Blog Action Day 2014) and Twitter to design conferences and unconferences that are increasingly driven by the energy and passions of their participants. In conference communities with access to significant bandwidth, the use of 3D simulation environments such as Second Life (Special Libraries Association Maryland Chapter, 2009) has become normal over the past few years. Two models which used loosely coupled toolsets include the Radical Inclusion conference (Neumann, 2010) which allowed presenters to freely choose their own environments, and HASTAC 2010 which included a conference website, blogs for events, Second Life and Google Wave. Some other examples of interesting designs for online conferences include the Follow the Sun Conference (Institute of Learning Innovation, 2012) which took place non-stop for 48 hours across several time zones, and the Educause Virtual Conference (Educause 2016 which takes place annually in tandem with the face-to-face conference but also includes exclusively online events. Currently, most online conferences attempt to replicate face-to-face conference formats through exclusive or predominant use of synchronous presentations. Examples include the Move Beyond Addiction Conference (Recovery 2.0 2016) and the Interconnectivity in Music Therapy conference (Online Conference for Music Therapy, 2016).

Designing and facilitating online conferences involves negotiating the balances faced by organisers of face-to-face conferences in a developing medium with an expanding toolkit. Online conferences then challenge us to consider how online communication facilitates reshaping or remediation (Bolter, 2001) of the notion of a conference since the newer technologies allow for different modes of interaction and transformed experiences of conference participation. By using the key affordances of asynchronous and synchronous communication environments (Laurillard 2002, Bender 2003, Palloff and Pratt 2007), online conferences can include communication across space and time, extension and deepening of conversations, and bring together participants who would be unlikely to meet in a face-to-face setting. Thus, an online conference can provide opportunities for social learning both in temporary communities of practice and in the landscape of practice which brings members of related communities of practice into engagement about shared boundary objects.

THE E/MERGE ONLINE CONFERENCES ACROSS AFRICA

One example of a technologically remediated conference is the e/merge series of online conferences on the use of educational technology in African universities. This series of online conferences attempted to create time-bound experiences of community of practice interactions for participants across asynchronous and synchronous environments including formal presentations of research findings and reflections on practice, skills based online workshops and participant initiated learning conversations. These conferences offered opportunities for participants to engage with both research and practice however the research papers were mostly focused on the analysis and improvement of practice in educational technology interventions. This is the kind of conference that would count for continuous professional development points in an organised profession.

The e/merge online conference organised by the Centre for Educational Technology at University of Cape Town was run successfully as a biannual event in 2004, 2006 and 2008. The last e/merge online conference was held in July 2012 and the project was then transitioned into the formation of the e/merge Africa network which offers regular online professional development

events mainly for educational technology practitioners and researchers in African higher education.

The conferences were designed as special events to support the sharing of good practice and the growth of communities of practice among educational technology researchers and practitioners across Africa and beyond. This design was geared to a highly dispersed and diverse participant community with widely varied Internet access conditions and practices concerning online communication. e/merge ran for two weeks in July and consisted of four overlapping three day phases of conversation concerning clusters of related papers, presentations and online workshops. The allocation of events to phases mostly represented a curation of events by themes which were defined only when the full list of accepted events was known. The definition of the phases was also influenced by some logistical aspects such as longer workshops which stretched across two or more phases. The four phases were surrounded by a wrapper of the welcome phase and the farewell phase. Appendix 1 gives a detailed overview of e/merge 2012 events across the four phases.

The presenters and participants were partnered by a trained online facilitation team with multiple roles including creating a sense of a welcoming community, supporting delegates in their learning about online conference participation, facilitating rich, reflective conversations and providing regular summaries and daily updates. While the bulk of the interaction occurred in asynchronous discussion forums there was increasing use of synchronous interaction to raise the level of energy and connection among participants, and several *e/merge 2008* participants ran conference blogs. In *e/merge 2012* the conference community extended the e/merge conversations beyond the formal conference environment into Facebook and Twitter. The social media presence of *e/merge 2012* grew the conference network beyond the registered participants and provided opportunities for low overhead peripheral participation.

The e/merge design was informed by three metaphors. Firstly e/merge was an academic conference with peer review and publishing processes and discussion of papers and presentations. This metaphor co-existed with a strong community of practice metaphor where participants engaged in practice based conversations with peers and experts. The third metaphor of e/merge as a party was a key driver of social interaction and community building during the conference. More than a third of *e/merge 2008* participants including several facilitators had been involved in *e/merge 2004* or *e/merge 2006* and carried a social culture from one e/merge to the next. After a gap of four years, sixty-two of the *e/merge 2008* participants joined *e/merge 2012*. Within e/merge the formal interaction was enlivened and enriched by the informal conversations and by opportunities for participant initiated conversations in an Open Space forum. e/merge was as much about the nurturing and celebration of community as an opportunity to exchange information and learn about the development of good practice in African and global contexts. Community building interactions were seen as fundamental to participant engagement in the formal learning agendas of the conference and to ongoing interaction between participants after each conference because of the benefits of enhanced safety and trust within the conference community in supporting congruent and mutually respectful collegial relationships. The most overtly social celebrations of community took place in the humour and reflections of daily teatime chats and the Café forum and in the *e/merge 2012* end of conference party where participants joined a Facebook event to contribute nominations of music for an online conference playlist.

E/MERGENT ONLINE CONFERENCE DESIGN PRINCIPLES

The key design principles developed through the e/merge conference series include 1) the importance of social design and facilitation in promoting the development of a vibrant conference community; 2) the benefits of providing spaces and time for reflective conversation; 3) the need for multiple modes of engagement for a very diverse group of participants; and 4) the customisation of a stable yet versatile technological platform supported by a highly experienced team. These principles have also been applied beyond the e/merge online conference series in the development of activities in the ongoing e/merge Africa (2016) professional development network.

1) **Social Design and Facilitation**: It is likely that for many delegates the sense of participation in a community is a precondition for sustained intellectual engagement with the more substantive conversations. This is especially true for first time online conference participants who are more likely to read than to post messages in the scheduled discussions of presentations and papers. It was also observed that participants started developing more substantive conversations about conference themes within these congenial social spaces as well as in the forums dedicated to formal interaction. The Open Space forum for participant initiated conversations also ensured that the conference topics reached beyond the scheduled programme. Our trained facilitators played an essential role across the conferences in growing and asserting the existence of a conference learning community and culture which included significant peer facilitation by participants.

2) **Reflective Space**: Extending the conversations about each cluster of papers over a period of at three days allowed participants to dip into and out of conversations several times and meant that any participants who wished to had ample opportunities to engage directly with the authors and presenters. The time allowed for conversation was a necessary though not a sufficient condition for reflective engagement and was well aligned with the busy schedules of participants and the varied bandwidth conditions across the region.

3) **Multiple modes of engagement**: Participants arrived with different professional contexts and interests but also with varied experiences of online interaction and local bandwidth conditions. By using a range of technologies we were able to cater for participants with differing bandwidth conditions and levels of comfort and experience with online communication technologies. By offering a variety of ongoing asynchronous conversations and several live online meetings the conference also provided opportunities for formal and informal participation by delegates with demanding work and family schedules across several time zones. Providing event resources in multiple formats also allowed for even participants with very limited and unreliable bandwidth to access the concepts and data required for participation.

4) **Customisation of a well featured, stable technology platform**: Each of the conferences used a customised version of a generic learning or online community environment which was chosen for a variety of reasons including stability, features that could support conference interactions and sometimes opportunities to innovate within an open source environment used at University of Cape Town. Innovation included new versions of communication tools in *e/merge 2008* and curation and detailed setup of Wordpress plugins to provide a very versatile conference environment which would allow participants to make creative use of multiple communication channels. The depth of experience in our UCT learning technologies team meant that any technical problems during the earlier conferences were rapidly resolved.

Use of the generic Sakai environment in 2008 involved considerable work on developing an online conference interface that would make the functionality easily available to participants and could facilitate their navigation of a complex, highly featured site. By applying sound usability design principles we were able to make the conference available to participants with a wide range of web literacies and experience. A similar approach was used for the customisation of the Wordpress and Buddypress environment for *e/merge 2012*. The change of environment for the 2012 conference involved the conference team in a rapid learning curve which was supported by a freelance web designer and the services of an external provider with deep Wordpress expertise.

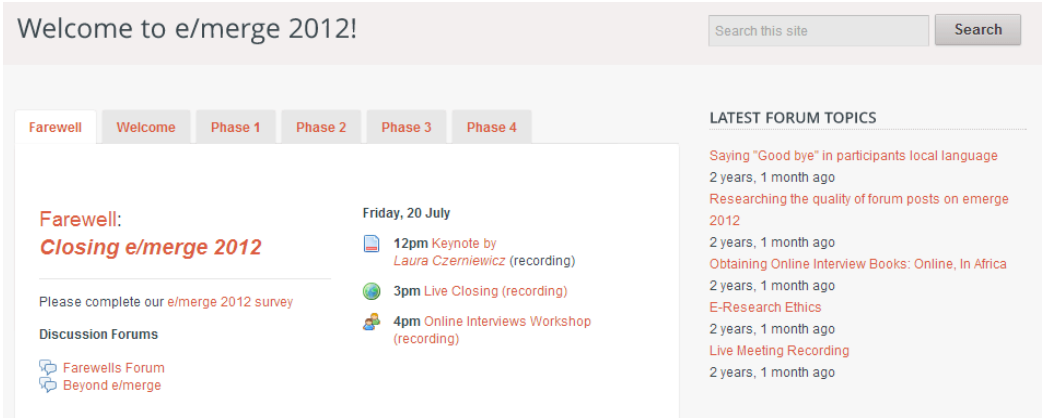

***Figure 1**: Screenshot of the e/merge 2012 conference interface*

RESEARCH ON THE E/MERGE CONFERENCES

The research on the e/merge online conferences started as a reflective practice project about the *e/merge 2004* conference (Carr, Marquard, Cox and Brown 2005) which explained the design of the conference and analysed the key role of facilitation including peer facilitation among participants. Over time the conference model was refined in the development and facilitation of *e/merge 2006* and *e/merge 2008*. Since *e/merge 2008* the research has focused explicitly on the design of online conferences for professional development including the nature of interactions between engaged participants within as well as at and across the boundaries of temporary communities of practice (Carr, Czerniewicz and Brown, 2010). In retrospect the early focus on learning in communities of practice facilitated the participation of members of multiple communities of practice and participants across research-practice divides. The current article, which shifts the focus from community of practice to social learning in a landscape of practice, is part of a larger research inquiry concerning online conference design. This includes two further articles in development which focus on 1) the contradictions in the conference activity system and 2) relationships between conference interactions in a social network and the formal conference discussion environment within larger conversations across both environments.

Question 4: Experiences of engaged participants

Question 4 asks: “How do highly engaged participants in an online conference describe their perceptions of the affordances of the online conference and their experiences of learning in the conference?” This question is driven by the importance of a core group of highly engaged

participants to conference interactions as they offer invaluable peer facilitation and share specialist knowledge, insights and experiences.

Methodology

In responding to question 4 I approached all of the conference interactions including post conference survey data which describe experiences and perceptions of participation in order to identify statements relating to the affordances of online conferences for learning, and learning from peers and experts within and across communities of practice. There were several clusters of statements from interactions from the large datasets for *e/merge 2006*, 2008 and 2012 which directly spoke to these issues. The statements relating to the affordances of online conferences and experiences of learning during the online conference were then grouped thematically into four categories. The four categories of interaction across space and time, scope for reflective engagement, learning in the conference community, and learning about online interaction were chosen because they each emerge from a qualitative analysis of the data and because they relate directly to key concepts highlighted by the literature review as well as to elements of the conference design. Many of the statements included composites of a variety of concepts and thus had multiple codings. In selecting the examples of data to include in this article I have chosen strong voices and vivid descriptions that exemplify the potential richness of the online conference experience.

The dataset

The dataset from the e/merge conferences arose from interests in online conference participation patterns, the nature of online conference interaction in discussion forums and chats and in participant descriptions of their online conference experiences. Data gathering and capture included online participation data, logs of online discussions and chats, and participant evaluation surveys at the end of each conference as shown in Table 1.

Table 1: *The e/merge conference dataset*

	Forums	Survey	Blogs	Facebook Group	Live Meetings	Interviews
e/merge 2006	X	X			X	
e/merge 2008	X	X	X		X	X
e/merge 2012	X	X		X	X	

The self-documenting and easy recording features of the online conference environments facilitated data gathering. Further data available for analysis includes post-conference participant interviews (*e/merge 2004* and 2008), recordings of live online meetings (*e/merge 2008*, 2012), conference blogs (*e/merge 2008*) and social media postings (*e/merge 2008* and 2012). The conference registration process for all four conferences included use of anonymised conference data for research on the improvement of online conferences within the privacy conditions for messages posted by participants.

The data cited in this article is drawn from the 2006, 2008 and 2012 conferences however *e/merge 2012* represented a significant departure from the previous model because of the prominent role played by interaction in social media. Table 2 shows the main events that comprised e/merge 2012.

Table 2: *e/merge 2012 events*

Presentations	38
Online Workshops	6
Live Online Meetings	42
Forum Posts	1217

This conference included 38 presentations and 6 online workshops. The schedule offered 42 live online meetings including presentations, question and answer sessions, workshop meetings and teatime chats. The distribution of forum messages between formal and informal conversations was highly skewed towards formal discussion about the scheduled keynotes, presentations and workshops with 61% of the 1217 forum posts which included posts from the conference team. The change from an almost even distribution of posts between formal and informal engagement in *e/merge 2008* may have related partly to greater experience of online interaction among the *e/merge 2012* participants and to a shift of much of the informal interaction to the *e/merge 2012* Facebook group.

Table 3 shows some key participation metrics for e/merge 2008 and 2012. *e/merge 2008* involved 224 logged in participants including delegates from 11 African countries and from five other continents. The *e/merge 2012* conference included 383 registered participants and presenters from 25 countries across Africa and from four other continents.

Table 3: *Participation in e/merge 2008 and 2012*

	e/merge 2008	**e/merge 2012**
Participants	224 logged in	383 registered
African countries	11	25
Continents	6	5
Forum Posts	1617	1097
Participants responsible for 80% of forum posts	41	40

As shown in Table 4, a total of 136 participants in e/merge 2012 posted messages to the online conference forums, 67 posted messages in Facebook and 118 participated in live online meetings and discussions. The move from an online learning environment to Wordpress and the importance of interaction within the *e/merge 2012* Facebook group meant that it was more difficult (and perhaps inherently less meaningful) to track users within the software. Delegates dipped in and out of the conference depending on their schedules and topics of interest. The bulk of the asynchronous interaction in *e/merge 2008* came from a core group of 41 highly engaged participants who posted 80% of the 1617 discussion messages spread across 31 forums and many of the live presentations attracted over 25 participants. There was a very similar distribution of forum posts in *e/merge 2012* where the 40 most prolific posters accounted for 80% of the 1097 forum posts posted by participants excluding the core conference team. There were 42 live online

meetings in *e/merge 2012* compared with 30 in *e/merge 2008* and 67 *e/merge 2012* participants posted messages in the *e/merge 2012* Facebook group.

Table 4: *Participant activity in e/merge 2012*

	Number of Participants
Posted to forums	136
Posted to Facebook	67
In Live Meetings	118

The e/merge conferences opened technological possibilities for participants and presenters but these were not evenly taken up. The bandwidth in many African countries could not support access to even a conservatively managed online meeting server and it seemed that participants in their first online conference were often unable to allocate time for engagement in e/merge. While many *e/merge 2012* participants based in some of the larger African cities experienced the benefits of bandwidth afforded by several undersea cable projects along the African coast these gains were very unevenly distributed. Time constraints and established practices meant that presenters often simply shared a paper or a PowerPoint Presentation. Twelve of the 44 presentations and workshops made use of narrated presentations and there were 32 scheduled live online meetings with presenters and workshop leaders.

RESULTS CONCERNING ENGAGED PARTICIPATION

e/merge participant statements from forums, chats, live meetings, participant surveys and interviews describe four ways in which the traditional conference experience was remediated including interaction across space and time; scope for reflective engagement; learning within a community: and learning about online interaction. Table 5 below categorises 161 statements by participants that describe positive experiences of participation and learning. Most statements contained two or more ideas which resulted in multiple codings. While the category of learning in community was by far the most important numerically there were several powerful statements concerning the other three categories. Some of the less prevalent categories are also likely to overlap conceptually with the learning in community category. As an example participants who refer to learning in community during an online conference may simply assume the affordance of interaction across time and space.

Table 5: *Statements describing engaged experiences of participation*

Category	**Number**	**Percentage**
Interaction across time and space	21	13,0%
Reflective engagement	18	11,2%
Learning in Community	141	87,6%
Learning about online interaction	32	19,9%

1) **Interaction across space and time**

This category incorporates 21 statements that referred to participation across physical distance or the convenience of engaging with the conference during gaps in the participant's schedule. Delegates from Iceland and South Africa participated from and in between face-to-face conferences. A Tanzanian facilitator in the closing meeting of *e/merge 2012* reflected that "There was no way I could otherwise attend any physical meeting with my few months baby at hand, was glad no one could actually see me here". . Some statements suggested that participation in the conference involved a blurring of the divide between virtual and face-to-face interaction. In a post conference interview after *e/merge 2008* B from Uganda reported that "I felt I was in South Africa and when I was not on I felt maybe there are people there, I'm supposed to go to the room." In a conference blog a South African participant reflected that "it really was like I was there, with everyone else, not here in my office."

The affordance of interaction across time and space supported communication during the conference however it could not be fully realised due to ongoing work and family commitments experienced by most delegates. In contrast to the fear of impersonal online communication the facilitation by conference hosts and the use of spaces for informal interaction supported warm communication and community building. Many participants popped regularly into the Cafe' forums for virtual refreshments and a friendly chat.

2) **Scope for reflective engagement**

This category contains 18 statements which describe how asynchronous communication and the availability of conference resources throughout and after the conference support considered and reflective engagement within the conference and continuation of learning after the conference. L from Nigeria was relieved to find in that in *e/merge 2008* "the site and its contents would still be accessible even after the conference is over". A from South Africa enjoyed being able to read the discussions quietly at a time that suited her. The extension of conversations beyond the short sessions experienced in face to face conferences allowed delegates to engage more reflectively with the topics discussed and permitted a wider range of participants to communicate directly with regional and global experts. Two *e/merge 2008* participants blogged about the reflective space of an online conference in contrast to the rushed schedule of most face to face conferences. One of their blog posts described the need for "time to absorb and formulate my questions" and reflected that "Online conferences gives you time to read, absorb, reflect, formulate and ask". In one of the online chats an e/merge presenter likened the experience to "reading a journal article and then being able to ask questions of the author directly and discuss it with many people in one go". A South African participant in *e/merge 2012* who had participated in several of the e/merge conferences was able to engage in the meta-reflection of "(m)apping my own progress with regards technology itself and my thinking about technology from conference to conference".

3) **Learning within a community**

This category contains 141 statements about learning from and with peers and experts and about support for participants within the conference community. The large number of statements in this category requires a brief exploration of 9 ideas expressed by participants within this category as shown in Table 6.

Most of the 141 statements in this category contained several aspects of learning within the conference community that supported multiple codings. The five most prevalent aspects were 1) learning from experts; 2) engaging with shared challenges; 3) learning from and with peers; 4) human connection; and 5) interesting topics. Other aspects with fewer examples included a sense of being supported as a participant; useful knowledge gained during the conference;

passionate engagement by the community and sometimes a sense of renewed passion; and a sense of feeling supported as a researcher or presenter.

Table 6: *Aspects of learning within the conference community*

Sub-Category	Number	Percentage
Learning from experts	87	61,7%
Engaging with shared challenges	57	40,4%
Learning from and with peers	48	34,0%
Human connection	38	27,0%
Interesting topics	29	20,6%
Supported as a participant	21	14,9%
Useful Knowledge	13	9,2%
Passion	11	7,8%
Supported as researcher/ presenter	5	3,5%

The implication is that participants felt welcomed and accepted in a community of peers and experts where the large, geographically and professionally diverse community within the landscape of practice created opportunities for learning within and beyond the scheduled conversations. Thirty-seven participant statements referred specifically to a sense of human connection with other participants while 29 of the 52 respondents to the *e/merge 2012* survey regarded the conference as “warm and friendly”. The sense of membership in a community with porous boundaries was both a precondition and a feature of learning interaction. G from Swaziland reported in *e/merge 2012* that “Through all presentations and forums that I was able to be part of, I now value more than before the cultural capital gained from all”. M from South Africa stated that “As I say goodbye, I feel like one waving at a community that I talked, dined, and stayed under the same roof with.” One *e/merge 2008* participant went so far as to blog that "Maybe it was exactly that notion that resonated - a kind of Woodstocky feel only with better hair and cooler clothes, and far nicer toys. But that sense of idealism, of belief, of... of passion!" An *e/merge 2006* participant reflected that “most of the things that I scratch my head thinking of, are faced by a couple if not a dozen more people".

Beyond feeling a sense of connection with colleagues across the conference 49 participant statements from the 2006, 2008 and 2012 conferences referred to engagement with shared challenges. Eighty-four statements referred to learning from experts while a further 42 statements referred to peer learning within the temporary conference community. This included both scheduled events and the value of informal interaction and participation in a community of practice where ideas and challenges were shared. An *e/merge 2008* participant posted that "the exposure to so many ideas from so many different contexts and feedback on your own ideas is what makes me coming back!" Over the three conferences the value of e/merge for less experienced researchers became evident. Another *e/merge 2008* participant stated that "the e/merge conference really creates a very positive forum for exchanging points of view with more experienced people".

It may also be of interest that 60 (42.6%) of the statements coded for learning in community also referred to ways in which technology enabled their experience of the online conference. The e/merge conference community could not have met under the roof of a single face to face

conference for logistical and financial reasons. Low (or no) conference fees and the freedom from travel time and travel and accommodation costs facilitated the recruitment and involvement of participants and presenters.

4) **Learning about online interaction**

This category contains statements about how the experience of participation in the conference supported experiential and reflective learning about the nature and uses of online learning processes. e/merge was the first online conference experience for most participants including a surprising number of presenters from outside Africa however a third of *e/merge 2008* participants had taken part in one or both of the previous conferences. The conference environment became a focus of personal learning and a shared boundary object as manifest in peer support interactions in all the conferences about mastering the environment. The requirement to engage online then accentuated the role of e/merge in facilitating experiential learning about the use of online environments to support learning interactions. A UK based participant shared as a highlight in the *e/merge 2012* closing session that "I felt it was easier to ask questions of experts and get to hear other perspectives in a safe space, as compared to a f2f event where I tend to be quiet". Some of this learning occurred within scheduled online workshops to teach skills for teaching and leading within online environments including online facilitation workshops in 2004 and 2006 and workshops on the use of social media in teaching in *e/merge 2008* and 2012. For many participants the learning about online interaction arose from reflection on their experience of participation in the conference. When B from Uganda was interviewed after *e/merge 2008* he described a clear experience of transfer from experiential learning about the motivating effect of quick feedback during e/merge to practice in his online teaching. As a result he said that "I borrowed your experience and I also used it because you feel so good when someone gives you feedback".

DISCUSSION

LEARNING IN THE LANDSCAPE OF PRACTICE

The participant statements describing engagement in three e/merge conferences relate to interaction across time and space, reflective engagement, learning in community, and learning about interaction. Most of these statements describe experiences of learning in an online professional community including learning interactions about shared issues with experts and peers, a sense of human connection and a variety of interesting topics. These aspects of learning in the online conference community are consistent with social learning within communities of practice characterised by legitimate peripheral participation and learning concerning shared practices both across gradients of expertise and with peers. The key aspects of the conference learning community mentioned by participants are also consistent with learning across different communities of practice eg those of researchers, educators and technologists which are focused on using educational technologies to improve student learning in African higher education. Given the number of first time participants in the online conferences and the challenges of supporting sustained online learning interactions across the two weeks of each conference it is likely that the design features of social design and facilitation, support for reflective engagement, multiple modes of interaction, and the customisation of a well featured, stable technology platform provided a complex technical and social system which was able to support participant engagement in the diverse conference community within and across several communities of practice. There is no claim here that all participants will benefit from online conferences. Indeed it is understood that the same system which supported experiences of connection and engaged learning for many participants could also generate experiences of disconnection for others.

The e/merge conferences opened a landscape of practice to educators, educational technologists, researchers, educational managers and some policy makers which provided opportunities to share theorised understandings, concepts, experiences and practices and to engage in reflective conversation with colleagues across Africa and globally. The affordance of convening learning interactions through boundary conversations within the larger landscape of practice was as important as the initial goal of facilitating opportunities for learning within temporary communities of practice (Carr, Czerniewicz and Brown, 2010).

The multiple practitioner and researcher specialisations and contexts brought the conversations a complexity and richness because of the wide range of practices and conceptual tools. To share a practice with others a conference participant has to engage in reflection on their own practice. Similarly in visiting an unfamiliar practice eg when an educator learns for the first time about new research concerning the use of social media in education there is new information about the landscape that can be taken back home to inform local practices (Wenger 1998, p112).

Beyond the sharing of practices and reflection on professional identities it is also arguable that the opportunity for intense engagement with colleagues across multiple contexts and professional specialisations was a learning encounter in relational agency (Edwards 2005. During e/merge conferences participants were able to experience intense engagement in a landscape of practice which brought together professionals across several communities of practice who were unlikely to ever meet face to face. This can be very valuable for colleagues who mostly operate in isolation from their peers across the continent.

The opportunity to engage in first-hand communication with global and regional educational technology experts was also cited as a highlight by many participants The extended online experience of e/merge also facilitated powerful experiential learning, particularly by first time online conference participants about learning and collaboration with peers in the online environment and about the design and facilitation of online learning experiences. The online workshops on topics such as online facilitation, research using online environments and social media tools for educators overtly supported experiential and reflective learning of emerging digital practices for online teaching and research.

CONCLUSIONS

Traditional conferences are designed primarily for content delivery rather than to support learning by delegates (AACE 2009) however it is possible to design conferences which engage their delegates in powerful learning experiences (Ravn and Elsborg 2007) that support their professional development. Online conferences are designed to take advantage of multiple affordances of digital communication technologies including communication across time and space, scope for reflective engagement and access to a widely dispersed network with international and regional peers and experts. Online conferences offer powerful opportunities for the professional development of a profession dispersed across a continent with limited opportunities for local community of practice interactions such as the growing number of educational technology researchers and practitioners across Africa (Carr, Czerniewicz and Brown, 2010). These affordances of online conferences for professional development are enhanced by the extension of broadband internet access and by the propensity of educational technologists to make use of online resources and communication.

The e/merge conference series started as an attempt to create time-bound experiences of participation in communities of practice for educational technology practitioners and researchers across a continent where the newness of the profession and economic and logistical constraints limit access to colleagues locally, regionally and globally. Supporting these interactions involved a

focus on effective facilitation and maintaining careful balances between the metaphors of academic conference, community of practice and party. Within the e/merge online conferences participants and presenters were able to learn together about changes affecting the use of educational technology, engage with new approaches and conceptual tools, consider shared practices and to join boundary conversations by taking a walk in a complex landscape of practice (Wenger 2010,183) where professionals with related expertise and roles shape both their identities and expertise by confronting the complex challenges which arise from competing demands from other actors in their professions.

Online conferences such as those in the e/merge series support the professional development of participants by convening and facilitating interactions in a temporary professional community which extends across countries and continents and includes members of related professions including practitioners and researchers in a large landscape of practice. The conference can then support social learning within the landscape of practice in several ways. These include stretching the interaction geographically across diverse local contexts; interactions about shared boundary objects across multiple communities of practice; convening boundary conversations across communities of practice; and using the tools and processes of the online conference as shared boundary objects.

1. Stretching the interaction geographically supported larger temporary communities of practice which more easily permitted critical mass in specialist professional interactions. This was especially important for participants who only have small local communities of practice. It also facilitated knowledge sharing and reflection on the application of more generic principles and tools to a range of African contexts where educational technology professionals often face severe constraints relating to physical infrastructure, institutional capacity and the availability of scarce technical and boundary working skills.

2. Participants from related and sometimes overlapping communities of practice were brought into shared conversations because of professional challenges related to boundary objects which are held in common. Thus educators who teach with technology, professional educational technologists across a range of specialisations, researchers and higher education managers all have an interest in the appropriate and effective choice, use and support of institutional learning environments.

3. The conference organiser convened conversations within multiple communities of practice and boundary conversations across the research-practice divide. This process was assisted by the prevalence of participants with multiple professional priorities often related to their unfolding career trajectories including practitioner-researchers and researcher-practitioners. Thus most of the research presentations were also engaging and useful for colleagues in primarily operational roles and practice-based presentations often attracted the participation of researchers of similar processes.

4. The existence of the tools and processes of the conference as shared boundary objects spurred both individual and more collective experiential and reflective learning trajectories about online conferences and the possibilities of online learning. In this way the highly technologised environment of the conference was congruent with some of the professional challenges faced by educational technology researchers and practitioners rather than simply being a way to bring participants together cheaply and efficiently across time and space.

The encounters at the boundaries of individual expertise and existing communities relied crucially on the ability of the conference to facilitate rich virtual interactions across time and space which could support deep, reflective engagement in learning about the practices of educational

technology researchers and practitioners and about the experience of participation in a temporary online conference learning community. An analysis of statements by participants suggested five features of highly engaged experiences of participation in an online conference. These included a blurring of the differences between online and face to face interaction, use of the time available for reflection and extended conversation, the value of shared reflection on common and diverse experiences in a temporary community of practice, the motivating effects of participating in a special event with peers and experts who communicate a passionate engagement with their research and operational projects, and experiential learning about the possibilities of online interaction for teaching and professional collaboration.

In the landscape of practice formed by the diverse conference community participants could engage consciously and implicitly with the formation of their complex professional identities as educational technologists through reflection on their own practices and expertise in relation to those of other delegates with a shared interest in the use of educational technology but different professional identities and practices. Their engagement in online conversations heightened the focus on the practices of effective online interaction and may have increased interdependency in a community who were mostly learning these skills together. Thus both the most apparently trivial of community building interactions and the most profound online conversations about research and practice may have supported the development of relational agency (Edwards 2005) as a capacity that was transferable beyond the conference.

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APPENDIX 1: E/MERGE 2012 ACTIVITIES ACROSS FOUR PHASES

Phase 1: "Setting the Scene" included a keynote on openness in education and papers on e-learning trends across Africa; emerging technologies; multi-university studies; open education; and learning design.

Phase 2: "Systems and Strategies" included keynotes on a hybrid e-learning approach and instructional design patterns and papers on the use of online learning environments; learning design online learning environments; e-learning strategy; learning design and on addressing access issues in schools.

Phase 3: "Networks for Learning" included papers on the use of social media in teaching and learning; professional networks and knowledge and technology practices of educators.

Phase 4: "Disruption and Openness" included keynotes on open practices and digital humanities and papers on open education; teaching with social media; student learning experiences; learning design and e-learning quality.

Workshops: The six online workshops were about teaching with social media; learning analytics; online facilitation; enhancing peer learning; content curation; and online research interviews.