

MOOC - MAKING AND OPEN EDUCATIONAL PRACTICES IN THE JOURNAL OF COMPUTING IN HIGHER EDUCATION

Czerniewicz, Laura;Deacon, Andrew ;Glover, Michael ;Walji, Sukaina;
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MOOC - MAKING AND OPEN EDUCATIONAL PRACTICES

Laura Czerniewicz, Andrew Deacon, Michael Glover, Sukaina Walji

University of Cape Town

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ABSTRACT

MOOCs have been seen as holding promise for advancing Open Education. While the pedagogical design of the first MOOCs grew out of the Open Education Movement, the current trend has MOOCs exhibiting fewer of the original openness goals than anticipated. The aim of this study is to examine the practices and attitudes of MOOC educators at an African university and ask whether and how their practices and attitudes become open after creating and teaching a MOOC. Activity Theory is used to contextually locate the educators' motivations and to analyse their practices in terms of striving towards an object. With this lens we describe how educators' openness-related practices and attitudes change over time in two different MOOCs. Two sets of conceptions of open practices are used to detect instances of change, providing four dimensions of changed open educational practices. Semi-structured interviews, focus groups, and artefacts provide data for this rare study, which considers these issues from the perspective of the Global South. Through studying the educators' practices in relation to openness, it becomes evident how open practices are emergent and responsive.

Key words

Changing practices, Global South, Open Practices, MOOCs, Open Educational Resources

INTRODUCTION

Pressing educational challenges prevalent in the Global South include the need for high quality and accessible education (Africa-America Institute, 2015; Dhanarajan & Abeywardena 2013). The Open Education movement, centred on the adoption of Open Educational Resources (OER), is purported to be part of a possible solution, where the creation and sharing of OER ignites the possibility of lower cost education, efficiency and pedagogical innovation. Massive Open Online Courses (MOOCs) appear promising for advancing Open Education and much has been made of their disruptive potential to democratize education through providing access to the world's best teachers and courses to anyone with an Internet connection. The MOOC research literature is nascent, but initial claims to MOOCs being a wholly democratizing endeavour have given way to more measured questions and studies that consider the place of MOOCs in the Open Education space (dos Santos, Punie, & Castaño-Muñoz, 2016).

Universities' stated rationales for the development of MOOCs vary considerably. For some, the rationale includes institutional reputation building or attracting fee-paying students. In practice considerable resourcing is required since sustainable business models are not established. While there has been considerable research to date on how learners respond to MOOCs, the motivations and impacts on individual educators offering MOOCs is less well

known and in particular what the influence is on educators' perceptions and practices as relates to their core or mainstream teaching. This is especially the case in Global South contexts where universities and by extension their academics produce only a fraction of both Open Educational Resources (OER) and MOOCs globally (Czerniewicz & Naidoo, 2013).

We were interested to explore whether and how MOOC involvement changed educator practices and in particular whether they became more open. We were cognisant that the relationship between MOOCs and open practices is not clear (Nkuyubwatsi, 2013) and that educators who make MOOCs understand their purpose in quite polarised ways: some educators believe that MOOCs offer the potential to democratise and widen access to education, while others believe that MOOCs constitute privatised teaching that is inferior to face-to-face modes and/or marketing efforts for well-resourced institutions (Evans & Myrick, 2015).

We report on the changing practices of educators leading and teaching the University of Cape Town's (UCT) first two MOOCs which launched in 2015. The two MOOCs studied were six-week courses run on the FutureLearn platform during 2015 and 2016. The first course 'Medicine and the Arts: Humanising Healthcare' (hereafter Med Arts) is an interdisciplinary course introducing the emerging field of medical humanities. Convened by an anthropologist (Associate Professor Susan Levine) and a medical doctor (Professor Steve Reid), the course assembled 16 disciplinary experts across health sciences, social sciences and the arts to bring their perspectives into dialogue about six topics selected by the lead educators. The second course 'What is a Mind?' (hereafter Mind) led by neuropsychologist, Professor Mark Solms. The MOOC explores scientific and philosophical concepts related to understanding human minds from the perspective of neuropsychology (a discipline which the educator founded). Total enrolments for the offerings demonstrate the global reach with Med Arts attracting 13 744 enrolments and Mind some 22 154 enrolments during the period covered in this research. It is noteworthy that 20% of enrolments were participants from Africa, which is much higher than the 4% average for other courses on the FutureLearn platform. Such headline measures only hint at forms of openness and impacts of the MOOC.

Open practices make sense in context, therefore we mapped a larger activity system in which academic practices in MOOC-making occur over a period of time. Following a semi-ethnographic methodology, we interviewed the lead educators of the two MOOCs about their open practices and their experiences of creating and running their courses, capturing change over a ten month period.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Since 2007 'open educational practices' (OEP), or 'open pedagogy', has gained the attention of open education researchers (Geser, 2007; Butcher, 2011). The OPAL study 'Beyond OER: Shifting focus to open educational practices' (Andrade, Ehlers, Caine, Carneiro, Conole, Kairamo, & Nozes, 2011) signalled a growing interest in understanding how OER adoption is enacted as practices in situated contexts, such that the inclusion of OEP is now a "global trend" in OER research (Conole, 2012). Most OEP is premised on the use of OER as a potential catalyst for opening "learning architectures" and "transforming learning scenarios" (Ehlers, 2011, 8), while a recent study lists eight attributes of an open practitioner (Hegarty, 2015). Foundational in the OEP discourse is Wiley's influential '5Rs' framework, which contends that for a resource to be an OER, users must have rights to reuse, revise, remix, redistribute, retain the resource (2013).

Nonetheless there are varied and sometimes contested definitions of OEP; Cronin (2016) usefully differentiates between i) OER- and -legality-focused definitions of open practices and ii) broader conceptions of open practices (which incorporate these OER aspects but include open pedagogies, open learning and sharing). Masterman similarly argues that developing an OEP conceptual framework “involves disparate sources” for OEP as there is a lack of “holistic repertoire of practices currently observable in the field” (2016, 41).

There are currently very few studies that usefully explore the relationship between MOOCs and OEP beyond those which, taking a strict legal definition of OEP as requiring a strict adherence to OER and the “5 Rs”, would reject MOOCs as not being open enough, considering that many MOOCs do not release their materials under Creative Commons (CC) licences (Piedra *et al.*, 2014). Mindful of changing global trends with changed attitudes in a copyright culture and a fluid understanding of what is considered reasonable and has become accepted regarding legality, we argue that narrow conceptions of open practices which afford primacy to the legal aspects of openness are restrictive for investigating emergent open practices of educators, especially in MOOCs. An exchange between Smith (2016) and Wiley (2016) points to these discussions, and we draw on Smith’s argument that it is preferable to “build up a definition [of open practices] based more on what is happening in practice, rather than preconceived theory about open”. In addition to a broader scope of what pertains in the legal space, we also consider the changes in pedagogical approaches important with regards how both MOOCs and OER are engaged with.

Two conceptualisations of open practices we found useful are those by Hodgkinson-Williams (2014) and Beetham *et al.* (2012). Hodgkinson-Williams (2014) synthesises the literature, to develop a framework for describing practices changing towards greater openness. Beetham *et al.* (2012) draw on extensive empirical work, identifying key features of paradigmatic open practices. Hodgkinson-Williams’ (2014) dimensions of openness relate to the ease or difficulty of the process of adopting open education. These dimensions are:

- technical openness (e.g. interoperability and open formats, technical skill and resources, availability and discoverability);
- legal openness (e.g. open licensing knowledge and advice);
- cultural openness (e.g. knowledge on a continuum between homogenous and diverse) and curriculum (on a continuum between institutionalised and autonomous);
- pedagogical openness (e.g. student demographics and types of engagement)
- financial openness (e.g. whether OER should be free or not, funding arrangements).

Beetham *et al.*’s six features of paradigmatic open practices are:

- opening up content to students not formally enrolled;
- sharing and collaborating on content with practitioners;
- reusing content in teaching contexts;
- using or encouraging others to use open content;
- making knowledge publicly accessible;
- teaching learning in open networks.

These two frameworks, offer a broad and differentiated picture of how educators’ open practices and attitudes shift. These frameworks are not specific to capturing open practices in MOOCs, where there is scant research. While legal mechanisms in MOOCs have received some attention (Cheverie, 2013), Hodgkinson-Williams (2014) and Beetham *et al.* (2012) provided conceptual models as starting points; these were combined and refined in an iterative process with pilot data, culminating in four aspects of OEP: legal openness; pedagogic openness and learning in open networks; encouraging others to teach and learn in open networks and reusing content in teaching/other contexts.

- a) **Legal openness**, which refers to knowledge of legal mechanisms used to license learning resources openly as OER, and whether one seeks advice on how to license one's materials.
- b) **Pedagogic openness and learning in open networks**, which relates to the different types of engagement, pedagogical and assessment strategies deployed by educators to facilitate learning for multiple types of learners. Learners in MOOCs tend to be more diverse than those in formal contexts. In an open MOOC the educator must use pedagogic strategies to include and facilitate learning for an unknown, diverse, and global audience.
- c) **Encouraging others to teach and learn in open networks**. An open network can be understood as an open environment for self-directed learning to occur among a network of interacting learners with access to relevant learning materials and information. To encourage others to use open networks for teaching and learning is considered an open practice.
- d) **Reusing content in teaching/other contexts**. This refers to the redeployment of learning resources in teaching or other educational contexts.

Practices of any kind, open or not, only make sense in context, since human activities are poorly understood when viewed as distinct from their context. In Activity Theory (AT), "what takes place in an activity system... is the context" so that "context is not just 'out there'" (Nardi, 1996, 38). Thus we used Activity Theory, as it is a heuristic for explaining how change happens in context and over time. AT is particularly useful for mapping the development of practices of MOOC educators over time because the Activity Systems (AS) allow for the introduction of what are referred to as 'mediating artefacts' or tools into the existing system in which the subject is situated. The 'subject' in an Activity System is the protagonist who strives toward a particular goal, the 'object'. The subject who strives toward a goal is mediated by elements of the activity system: tools, rules, the community, and a division of labour (Engeström, 1987), which in combination make up the system. Activity systems comprise enablers and constraints for the subject. Activity systems are marked by "contradictions", which are understood as "historically accumulating tensions" which can be "dynamic forces of change" within and between activity systems (Engeström, 1987; Engeström and Sannino, 2010, 4; Hardman, 2005, 12). Contradictions are suggestive of innovation in practice and can produce innovative attempts to change the activity (Kuutti, 1996; Murphy & Rodriguez-Manzanares, 2008).

Our rationale for deploying AT as a heuristic is influenced by how AT has been used to study change in educators' practices after introducing new digital tools (Murphy & Rodriguez-Manzanares, 2014, 79-95). Three studies in particular show that AT can be used to track how changes in educators' practice occur, and locate these changes within authentic contexts. Hardman used AT to understand how computers can "transform pedagogy" in a rural school (2005, 2). Another applied AT to examine collaboration between faculty members making online courses and identifying disturbances which emerged, thus providing a heuristic to track the dynamics of how new tools affected pedagogy of educators' practices (Peruski & Mishra, 2003). Murphy and Rodriguez-Manzanares found AT useful for characterising contradictions after educators transitioned to a virtual high-school classroom and found the object had shifted from controlling and teaching towards helping students to learn (2008). In other cases AT provides a lens for describing cases

where educator practices did not change, and where new tools affected them minimally or slowly (Kirkup & Kirkwood 2005; Russell & Schneiderheinze, 2005; Barab, Barnett, Yamagata-Lynch, Squire, & Keating, 2002; Peruski, 2003).

AT therefore provides a valuable lens for practices in context and over time. While it has not, to our knowledge, been used to analyse open practices in MOOCs, nevertheless its use in educational contexts resonates for this study.

Methodology

A qualitative approach was followed. One of the researchers, an embedded observer, who interviewed MOOC lead educators, ran focus groups and observed the process of educators creating their MOOCs. Two researchers were part of the MOOC design team with whom the educators collaborated. While the main source of data was obtained through semi-structured interviews with MOOC educators, data was also obtained through interviews with the lead educator's assistant, focus groups with MOOC educators and MOOC learning designers, and observations of the MOOC making process.

The educators of the two MOOC were interviewed at two time intervals: just before the MOOC was launched (T1) and ten months after the launch (T2). The first interviews provided a baseline for the educators' existing practices as pertains to the conceptual framework, and while similar questions were asked at each stage to enable comparison, the responses to earlier interviews were used to further refine interview questions for the interviews at later intervals. In this way we could observe changes in practices longitudinally but also ascertain where new practices or contradictions might have emerged. At each stage an AT system was developed as for AT to be usefully applied, more than one related system is advised (Engeström & Sannino, 2010). In this paper we analyse two AT systems (T1 and T2).

A total of 22 interviews were conducted. In the analysis these are referred to in shortened form: Medicine and the Arts Lead Educator, Susan Levine at T2 is signified by Med Arts LE12 where the last digit is either 1 or 2 referring to whether the interview was conducted before the MOOC ran (T1) or ten months afterwards (T2). We interviewed both lead educators from Med Arts, and the lead educator and the lead educator's assistant (LEA) from Mind. Guest educators (GE) on Med Arts were also interviewed. We also conducted focus groups (FG) with the educators after the first run of their respective MOOC. Refer to table of abbreviations to relate evidence invoked to their sources.

Table 1: *Abbreviations of evidence sources*

Shortened form	Long form
Med Arts	MOOC 1, <i>Medicine and the Arts</i>
Mind	MOOC 2, <i>What is a Mind?</i>
Med Arts LE1	MOOC 1, Lead Educator 1, Susan Levine
Med Arts LE2	MOOC 1, Lead Educator 2, Steve Reid
Mind LE	MOOC 2, Lead Educator, Mark Solms
Mind LE1	MOOC 2, Lead Educator, Mark Solms, T1
Mind LEAA2	MOOC 2, Lead Educator Assistant, T2
Mind FG2	MOOC 2, Focus Group, T2
Med Arts GE1	MOOC 1, Guest Educator, T1

Interview and focus group data was coded using NVivo 10. The codes were shaped by the AT framework, Beetham *et al.*'s open practice features and Hodgkinson-Williams' aspects of open practices and emerging themes. Through an iterative process of engaging with the data and the two identified frameworks, four dimensions of open practices were identified, allowing for an accurate and more differentiated picture of how educators' open practices shift in the MOOC environment. The key nodes of the activity system were identified through analysis of the interview and focus group data.

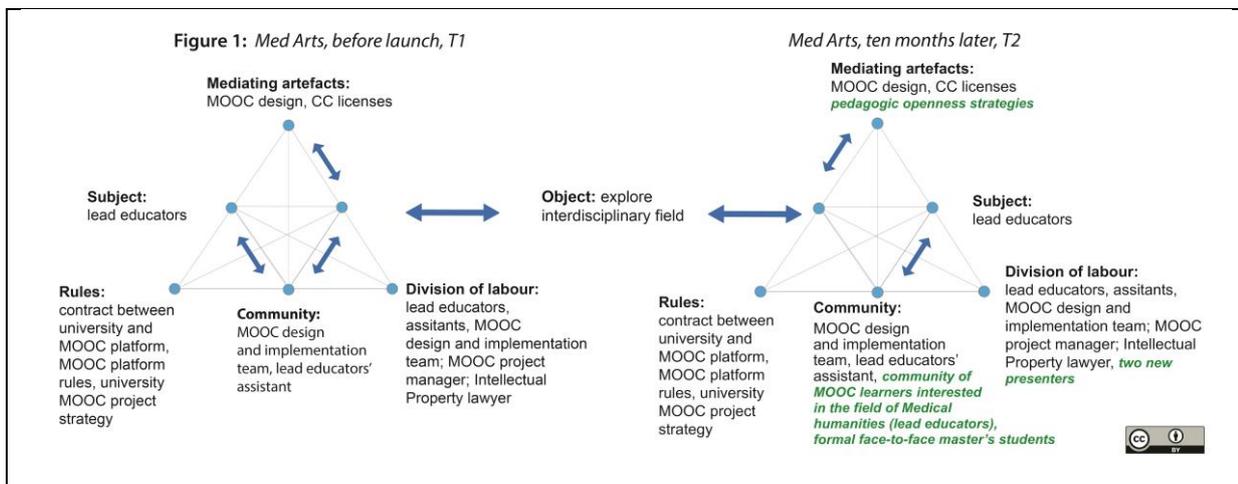
FINDINGS

Mapping the Activity Systems

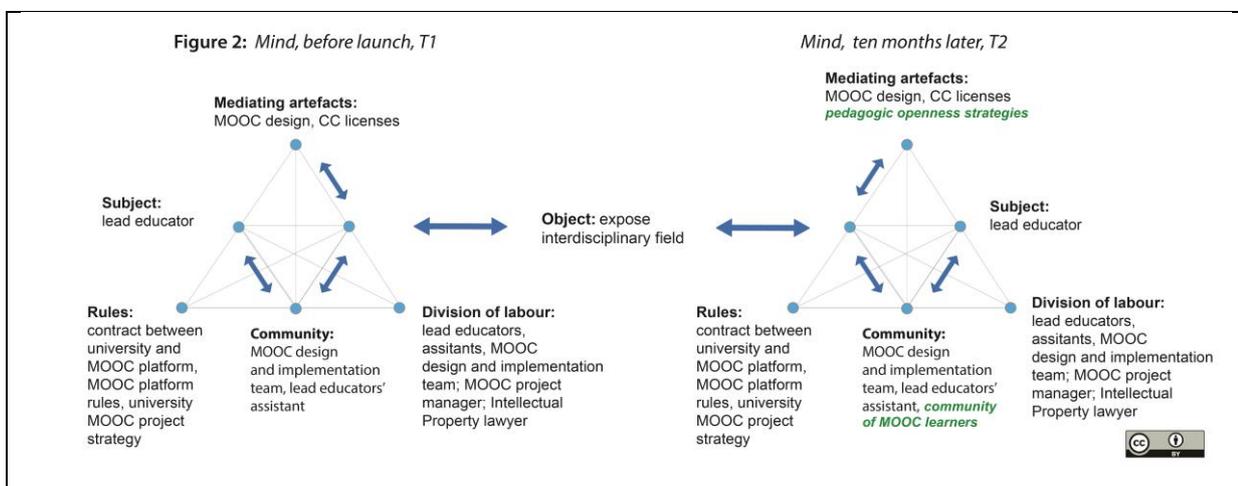
Each MOOC's Activity System was mapped before it was run, providing a baseline for existing practices. The educators - the 'subjects' - chose to licence their MOOC materials with a CC licence. These (openly licensed) OER materials were considered a 'mediating artefact' or tool that when introduced into their activity system would influence how they would be able to achieve their goals for the MOOC. It is important to note that our interest is in understanding how the introduction of OER and CC licences as a tool, along with the MOOC design, influenced educators' OEP. The creation of OER in the MOOC itself is not considered a sufficient indicator of changed open practices given that this was considered a starting point.

The second mediating artefact - 'MOOC design' - refers to the design and production requirements of the MOOC and the MOOC hosting platform (in this case FutureLearn). Other elements that provide a rich description of the educators' contexts include the rules which comprise the contractual obligations between the university and the MOOC hosting platform; MOOC platform rules (e.g. access to MOOC content only for participants); and the university's MOOC strategy. The community refers to individuals and groups. In this case the community consisted of a MOOC learning design team (who collaborate with the subjects to design and produce the MOOC) and the educators' assistants. Once the MOOCs were launched, a diverse and global community of MOOC learners entered the activity system and expanded the community. The division of labour refers to the resources and services available to the subjects for creating the MOOC and how these were organised between the educators and their assistants, the MOOC learning designers, the MOOC

project managers, the university's MOOC advisory committee and Intellectual Property lawyers.



Identifying the 'object' of the system, that is the problem space or aim towards which the subjects strive, was challenging. It emerged that the subjects in both cases had the object of creating a MOOC in order to develop their respective interdisciplinary fields. In Med Arts the object was to *explore* the new interdisciplinary field of the Medical Humanities (Figure 1) whereas in Mind the object was to *expose* those interested in the mind to the ideas of the field of neuropsychanalysis (Figure 2).



Open practices

Legal openness

As an OEP, legal openness refers to knowledge of legal mechanisms used to license learning resources openly, how these were understood and how they were enacted. We are interested in how educators' legal openness changed, what indications there were of changed understandings and how these legal dimensions were engaged with over time.

Before their MOOCs launched, the educators indicated an ideological commitment to sharing learning resources and making knowledge publically available thus implying a propensity for legal openness. Mind LE noted that "whenever anyone wants permission for

anything I always just automatically said yes.” On being asked about the possibility of using CC licences to share materials rather than having to ask publishers for permission to reuse his own materials, one educator replied enthusiastically that “to not have to go through that charade [of having to give permission] I think is great” (Mind LE1).

However, these attitudes did not translate into specific technical understandings of CC. Engaging with the MOOC team to apply CC licences was the initial trigger to an appreciation of the opportunity of legally sharing resources, with Mind LE remarking “there’s... been a dawning realisation that, the ownership of this intellectual property is antithetical to what we are trying to do. We are not trying to own ideas, we are trying to disseminate ideas... I don’t know why we never did it before and I am all for it” (Mind LE1) (See Figure 2). It can therefore be seen how CC licences appear to mediate how the educator considers that legal sharing of learning resources could advance his field (Figure 2, T2).

Ten months later a shift in understanding of how the CC licenses work is observed: “It’s not about ownership of knowledge, it’s the exact opposite. It’s about spreading knowledge. So any mechanism that will enhance your capacity to do that is the one that I like (Mind LE2).”

Similarly the Med Arts educators were also ideologically committed to openness before the MOOC ran: “The idea [is] that knowledge should be shared as far and widely as possible, and not kept to a few elite. And this is one way in which we could do that. I think it’s the right way to go” (Med Arts LE21). In the same way as Mind, this commitment was not accompanied by a clear understanding of how different CC licenses structure permissions. When two guest presenters expressed concerns about openly licensing the content they were invited to create for the MOOC, Med Arts LE2 explained that “we didn’t have all the answers”.

After two runs of Med Arts, the same educator came to understand that intellectual property laws can inhibit the development of a field: “It was a bit of a shock realisation that so many of our intellectual resources are locked up by the journals, the editors, into exclusive subscription-paying agreements. That is a huge problem” (Med Arts LE22).

Shifts in understanding the legal constraints of intellectual property and the possibilities of open licences were apparent ten months after the MOOC was launched. This understanding was broadly limited to understanding the possibilities created by CC licences, and the implications of intellectual property laws that restrict sharing. The educators remained satisfied with a division of labour which saw knowledge of the technical details of copyright and licensing remaining with the MOOC design team.

Pedagogic openness and learning in open networks

Pedagogic openness and learning in open networks relates to different types of engagement, such as the pedagogical and assessment strategies deployed by educators to facilitate learning for heterogeneous learners. Over time a shift to more learner centred approaches to teaching was discernible both within the MOOC and also within the educators’ mainstream teaching. Teaching the interdisciplinary topics of their courses to global and diverse participants meant that the educators had to adopt different pedagogical approaches, which attempted to be inclusive for as many learners as reasonably possible. The educators developed strategies to teach diverse audiences in this open online format. Mind LE decided to start with a broad ranging questions and then extend into more complex terrain; he reasoned that by asking ‘What is a Mind?’ – Mind’s title – the “entry point” for learners is “not daunting, [not] too technical” and that “by making it simple, conversational, of general applicability” learners can be drawn “into the more technical, complicated aspects” of the field (Mind LE1). On the Med Arts MOOC the lead educator emphasised the need for

concision and clear communication. He noted that when developing lectures for the MOOC audience that “you have to think about each word, each sentence, you have to engage people” (Med Arts LE21).

This approach is sharpened through the primary mode of delivering content to learners in a MOOC, which is via short video lectures. The Mind educator found he was compelled to “have clarity of thought” and “really pare down ideas to core essential content” because the participants are “non-technical, non-specialist” and one does not know their background or assumptions (Mind LE2). This mode of teaching, he found, “clarifies [his] own thinking process” and taught him to “convey really complicated material in seven minute chunks” (Mind LE2). Here the ‘MOOC design’ and the anticipated community of MOOC learners mediated how the educators approached the unfamiliar task of teaching a MOOC and enabled him to adopt an open pedagogy (Figures 1 and 2).

As well as influencing the style of lecture delivery, the MOOC design and platform affordances seemed to influence other aspects of course design. After reflecting on, and designing learning materials for the diverse audience, Med Arts LE11 noted that, “in terms of structure... the MOOC, because of the framework, has given me some new skills to think about how to structure assignments, students’ engagement with the lectures (Med Arts LE11)”. These emerging teaching strategies align with the conception of pedagogic openness which views engagement with diverse and disparate learners as shaping pedagogical approaches.

A number of other interesting teaching practices emerged in order to cater for the needs of diverse learners. The massiveness of the MOOC design means direct teaching to each student is not possible. Consequently Mind’s lead educator designed a function where MOOC participants would be prompted to ask the educator a question at certain points in the course. Other students could review questions asked and indicate which questions they would prefer answered. Course mentors selected popular questions and the following week the educator would provide video recorded answers to selected questions, thus providing support and helping to clarify common or general misconceptions. Initially the educator only committed to providing video answers (called ‘Ask Mark’ videos) to select learner questions for the first two runs of the course. Over time his view changed. During a focus group, after the course had run, he committed to giving time to this teaching activity for reruns of the course, noting that “I’m happy to do it... it’s an important part of what works...I really enjoy it” (Mind LEFG2). As the educator’s assistant remarked, the *Ask Mark* video answers, “he felt [were] really useful knowledge to... give to” MOOC learners (Mind LEA2).

An alignment exists between the educator’s teaching strategies necessitated by the MOOC design format and open practices: it was clear that the educators were teaching in an open network and using pedagogic openness for designing the MOOC. What was interesting was the different effects this had on the educators’ openness-related practices and attitudes and how this related to the teaching goal for each MOOC. Med Arts’ diverse audience was particularly appropriate for the interdisciplinarity of the MOOC. The diverse MOOC audience, comprising retired medical professionals to lay persons from across the globe, “broke down...hierarchies of ... profession, age, gender and sexuality” (Med Arts LE12) and enabled “in-depth” and “free-flowing conversation[s]” among learners (Med Arts LE22). In this context the learners’ comments “carried equal weight” (Med Arts LE21) as distinct from the formal university classroom. This provided a means to “open up new conversations” around Medical Humanities and advance the thinking of the field “outside the confines of UCT to a global arena” (Med Arts LE11).

The experience of teaching in a MOOC appeared to challenge traditional student-teacher relationships. The Med Arts educators received crucial feedback from the MOOC participants – via comments, assignments, quizzes, and discussions – on how diverse participants engaged and understood the course. Many participants brought with them a “wealth of knowledge” which allowed co-learning, as opposed to an instructor-instructed model of pedagogy (Med Arts LE12). The diversity of participants distinguishes such feedback from the feedback from conventional students in a face-to-face course. As one guest educator put it, learning in Med Arts was “bi-directional” with learners adding their own rich content to the course by way of links, comments, readings, videos etc. (Med Arts GE1).

The students’ responses prompted the educators to critically reflect on the direction their field should take. The MOOC’s “very international community” reinforced the challenge to contextually locate the field (Med Arts LE12). Witnessing ‘feedback’ from MOOC learners, Med Arts LE1 noted that, “there was nothing that suggested to [us] that it was necessarily a course that came from South Africa, that it was located in a context with massive health inequalities in terms of access to care (Med Arts LE12)”.

The Med Arts educators desired in future to leave audiences with a “much more particular sense of the urgency of the Medical Humanities here”. (Med Arts LE12) Via learning from participants, the educators saw that they had “borrowed a lot of ideas from the way the Medical Humanities is framed in the UK and the US” (Med Arts LE12). For the Med Arts educators, an open pedagogy -widening one’s audience with a more inclusive pedagogy - used in an open teaching network (a MOOC) could inform them about the contours of the field they were developing.

In a similar vein, Mind LE considered the open pedagogy he had adopted in Mind to have usefully advanced the ideas of his field. From Mind LE’s perspective, the MOOC approved an instrument for “influencing your field” and “spreading your knowledge”, had “done very well” and he believed that “it’s clearly getting a message across to those disparate audiences, of a positive kind, regarding what neuropsychology is” (Mind LE2). It can be inferred that the open pedagogy necessitated by the MOOC design requirements and adopted by the educator was considered effective in entrenching the discourse of his field or opening it to new audiences. This allowed the educator to reflect on how to approach his pedagogic strategy going forward. Owing to the small number of specialists “scattered around the world” working in the field of neuropsychology, the educator noted that they “can’t pool [their] resources and create one educational platform in the physical environment” (Mind LE2). From this insight, the educator concluded that the MOOC mode of open teaching had “taught” and “encouraged” him to “use online platforms for teaching people in and about that field” (Mind LE2). Here the educator considered teaching openly effective and he desired to use such methods in teaching in his field.

Encouraging others to teach and learn in open networks

Openness is sometimes talked about as being viral (Bollier, 2009; Weller, 2014) and encouraging others to use open networks for teaching and learning is considered an open practice. For the Mind LE, having seen the extent to which his MOOC had given exposure to his field, now spoke about actively encouraged others to think about the benefits of open teaching and using open content. This educator explained that, the topic came up “as to whether or not [MOOCs are] a bad thing. Is this the end of higher education as we know it? I was able to convey to them my very positive experience; I might have persuaded a few people” (Mind LE2).

Having reflected on the learner comments made during the first run of Med Arts, the educators identified a need for describing the South African context better. Two more presenters were asked to join the MOOC, a well-known performance poet and writer and an Occupational Therapist. This is captured by one of Beetham *et al.*'s conceptions of open practices, namely, 'encouraging others to use open content' and also encouraging others to teach in an open network. .

In a similar vein, Med Arts LE2 remarked that the MOOC was "a very useful way of introducing people to what we're trying to promote... I'm thinking of putting the MOOC link on the back of my business card...that's what I'm writing most commonly (Med Arts LE2)". For both MOOCs there is evidence of changing practices with the educators encouraging others to teach and learn in more open networks.

Reusing content in teaching/other contexts

The study revealed that the MOOC experience prompted educators to reuse content in other learning contexts. Assuming legal sharing mechanisms, such reuse is a core OEP practice. Interestingly MOOC design reuse was observed, which expands on the idea of reuse as an open practice.

The open licences that enabled legal sharing of MOOC materials facilitated this practice. Mind LE was pleased by the MOOC's reuse capabilities; he remarked that the content "can then be redeployed for another purpose" and "morph into other things [resources]" without repeating the work (Mind LE2). Mind LE's involvement in Mind was preceded by his involvement in a different online project ([Talking-head.org project](http://Talking-head.org)), which aimed to offer public-facing interactive learning resources relating to the field of neuropsychanalysis. Creating the content for the MOOC preceded the creation of the talking-head.org project's content. The video content for the talking-head.org project was taken directly from the MOOC, which meant that the content could reach audiences beyond the MOOC. Mind LE remarked that the "Talking Heads project is taking an entirely different shape from what I originally had in mind, because of what we've learnt in the MOOC" (Mind LE2). The educator emphasised that what he had learned making a MOOC "very much enhanced" the latter project (Mind LE2). Here the educator appreciates the benefits of reusing open content and values the open pedagogical design employed in the MOOC to the extent that he wanted it reused in another project. This is what we mean by MOOC design reuse above. Similarly, a prominent psychiatry professor emailed the lead educator for permission to use the MOOC content in an introductory seminar for his registrars. Although CC licenses meant that permission was not required, the request meant that Mind LE was aware of the reuse and noted that the psychiatry professor "wrote rave reviews of how well it went", how it "really got them [the registrars] engaged", "interested in the field", and stimulated conversation among them (Mind LE2). From this the educator considered that there "must be many that we don't know about people using the content" (Mind LE2). In this way the OER resultant from the MOOC was reused and incorporated into a formal course.

Another form of reuse was reusing the MOOC course format to change teaching practices and develop a 'flipped' classroom model where the MOOC replaced some elements of traditional classroom delivery. The Med Arts educators saw how the diverse MOOC audience enabled them to teach and grow their field; they then applied this potential by aligning their face-to-face classroom so that their formal students studied in and interacted with the MOOC and the diverse learners whilst the face-to-face course ran. As Med Arts LE1 observed, the MOOC also "very much suits the learning needs of students here" (Med Arts LE12)'. .

The educators have since changed how they teach the credit bearing face-to-face course: before the MOOC was developed the Master's Medicine and the Arts course comprised weekly face-to-face meetings; by the following year the Master's course had incorporated two further teaching modes, namely the MOOC and public lectures from a South African perspective. Formally enrolled students would take the MOOC, meet weekly for seminars on the Medical Humanities and the MOOC, after which the course would continue with six weeks of public lectures on the Medical Humanities in South Africa.

The educators reasoned that by participating in the MOOC and public lectures, i.e., more open formats, formal students could generate "new ideas" (Med Arts LE22) "create a lot of questions and... interest" and be stimulated to "ask their own questions" (Med Arts LE22). They imagined the MOOC and public lectures' wider audiences would extend the "opening phase of learning" where students learn about the field, who the authors are, and the ideas (Med Arts LE22). The public lectures were used to further sharpen the degree to which the field is contextually-located and engages local challenges. By building the MOOC into their formal Master's course and making participation in public lectures compulsory, the educators demonstrated that they derive pedagogical value from the MOOC's open pedagogy.

DISCUSSION

The seemingly contradictory claims in the literature about openness in MOOCs, OER and OEP have been explained and understood very differently. Educators are confronted with making sense of these contested claims in articulating their position around developing MOOCs, with regards to openness and in particular the creation and use of OER. How the educators came to resolve some of these contradictions was apparent from the interviews, with the educators more articulate on these issues after completing their MOOC.

Both MOOCs in this study had open licences with materials released as OER, which is an indicator of educators' legal openness. All the educators relied heavily on others (namely the MOOC design team) to promote and licence these materials, although they made decisions underpinning the selection of particular licences. Despite handing over the technical aspects, the educators were supportive and clearly came to appreciate the need for support when licencing.

Most of the MOOC materials were OER. However, technically these materials are only directly accessible to those who have enrolled. Thus, although all MOOC content is openly licensed, the OER material would not necessarily be persistently accessible via for example a repository, and therefore strictly speaking could not be considered OER. The educators though have not experienced this as a contradiction. Other facets of the MOOC design go some way to mitigating this apparent contradiction. The frequent runs of the course make the materials available to new cohorts of learners; there are also 'open steps' with learning material that are always available as standalone objects and selected learning materials are shared as OER in repositories. A perceived strength of using the course format for the course content, recognised by the educators, is that learning materials are presented in a context, so that the embedded pedagogy, course structure and cohort of learners collectively give the learning material value for reuse and sharing. Despite the design of the MOOC platform limiting some forms of openness, the educators can - and do - adopt other strategies for sharing and thus adopt open practices through sharing MOOC materials.

Another potential contradiction is that while the MOOC design requirements would seem to encourage OER adoption, because this involves non-registered students copyrighted materials cannot be used without permission and this was felt to be a limitation to how the educators could teach their course. In Med Arts, the educators could not set the same library

readings prescribed for their formal course due to copyright restrictions. They were thus compelled to find OER or open access readings that could be included. Med Arts LE12 saw the “lack of copyright access to key readings in the field” as reducing the “intellectual integrity” of the course while the other lead educator considered this a “limitation ... of the depth of the course” (Med Arts LE22). Here intellectual property laws restricted the educators and forced them to consider OER from other authors; however, their frustration and reluctance suggests that their emerging open practices were mediated by what they saw as a restriction on their teaching freedom.

CONCLUSION

The relationship between developing MOOCs and furthering Open Educational Practices is not a given but nor is the converse the case; educators open practices would not be blocked in MOOC formats. We saw the role of people other than the educators continuing to be important, yet the educators’ understandings of their roles and of the need to draw in others clearly changed over time. Using an Activity Theory heuristic we unpacked the socio-cultural activity in which educators developed their MOOCs in order to further promote their academic fields. The specific focus was on understanding the relationship between OER, MOOC design and the development of open practices. An initial longitudinal study of MOOC educators’ practices prior to the start of a MOOC and after it has run shows the development of open practices especially with regards to understanding and appreciation of legal openness and the value of legal permissions for reusable content, as well experimentation with open pedagogy which is influencing mainstream teaching practices.

Nonetheless contradictions regarding creation and adoption of OER in the MOOCs emerged and while partially resolved, suggest the value of expanding considerations of OEP beyond legal adherence thus capturing a wider range of emerging practices. There are also indications that through engaging open education practices, a better understanding of open educational resources and their value comes to light.

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