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MOOCs: Designing for the Unknown Learner

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MOOCs: Designing for the Unknown Learner

University teachers are faced with a problem of ‘knowing’ their learners when teaching on a Massive Open Online Course (MOOC). This paper explores and analyses what the University of Edinburgh has come to know about its recent MOOC participants, highlighting one particular course. We draw attention to barriers and enablers from co-existent understandings and expectations of course design, and from an abundance of highly-qualified participants. We compare characteristics of participants who report a positive experience with those who do not. Mixed messages about teacher presence may have implications that go beyond MOOCs. We contemplate whether the participant group should be seen as a single massive multivocal entity. The paper concludes with a discussion of the potential opportunity for MOOCs to challenge standardization, homogenization and commodification of education. Shifting attention from the achievements of an individual to what can be done with a multitude, MOOCs may open up new educational arenas.

Keywords: course design, multitude, voice, constructivist, dialogue

The authors of this paper bring two broad perspectives to the analysis of a relatively recent educational phenomenon – the Massive Open Online Course (MOOC). One perspective reflects the University of Edinburgh’s strategic decision to engage in six very distinctive and different MOOCs delivered at the beginning of 2013 before anyone else in the UK had tested the water. Two

of the authors have been responsible for the overarching management and support of all of the University of Edinburgh's MOOCs (at the time of writing 24 in number with a combined enrolment of over 1.4 million). The other two authors were members of the five-person team that designed and delivered *E-learning and Digital Cultures* (EDCMOOC). This second, and more dominant, perspective therefore focuses on insights about online teaching from experienced practitioners in digital education facing massive numbers of participants for the first time. We have integrated these perspectives in order to highlight contextual, disciplinary and pedagogical factors in teaching at scale. We first provide a macro view of Edinburgh's part in the MOOC phenomenon to establish a context for the more interpretive account of the teacher experience that follows. We conclude with some suggestions for how teachers should envisage and design for their 'unknown learners'.

The context: the first UK MOOCs

In 2011 the first MOOCs that attracted very large media attention were launched by computer science professors at Stanford University (Beckett 2012), and these were followed rapidly by the formation of three US-based companies, Coursera, edX and Udacity, which offered MOOC-hosting services for selected partner universities (NYT 2012). The worldwide media attention led to some extravagant claims that MOOCs would disrupt traditional higher education, would bring elite university education to the masses, and would facilitate anyone achieving university degrees for no, or

very low, fees. It also caused many university senior management teams and individual professors to reflect on what their course of action should be; some hesitating or deciding against offering MOOCs, and others deciding that they wished to step into a new and exciting field of education. Partnership with the new MOOC companies was not open to all universities, and at that stage they were very selective and preferred high-ranked research-intensive universities ('Ivy League' equivalent). In early 2012 the University of Edinburgh was invited to join Coursera, and after due diligence and discussion at senior level, decided in favour, and began designing its first MOOCs in the second half of 2012 for launch early in 2013. The reasoning and development process is described in more detail in Haywood et al (2015). In the rest of Europe, École Polytechnique Fédérale (EPFL) de Lausanne in Switzerland joined Coursera at the same time, and in the UK, the University of Edinburgh was soon followed by the University of London International. Since that time, several UK universities have begun offering MOOCs, either through one of the US companies or (the majority) through the UK MOOC company, FutureLearn. Many MOOC companies now exist worldwide (see <https://www.mooc-list.com/> for the current list). Some universities offer their MOOCs through more than one company; for example, University of Edinburgh is with Coursera, edX and Futurelearn.

From the outset, the University of Edinburgh staff involved in creating and delivering its MOOCs agreed that valuable educational research could be carried out with them if data were gathered consistently. These have been

reported through academic channels, and also through an open website:

<http://moocs.is.ed.ac.uk/>

Others have followed a similar pattern of research and publication (Liyaganawardena, Lundqvist, and Williams 2015; Guo and Reinecke 2014; Tanmay et al. 2014; Wilkowski, Deutsch, and Russell 2014). Our findings have been reasonably consistent over time and in line with those reported by others for MOOCs hosted by the US and UK companies. In brief, these are that MOOC learners are mainly working adults, 25-45 years old, well-educated, drawn from across the world but with English-language countries dominating. They enrol to learn new information and skills but around 20 per cent on average have career enhancement in view and wish to gain certificates at the end of the MOOC. As enrolling is free and effectively anonymous, only about half of those who enrol turn up in the first week. Many leave after a short time: some only wanted to access information resources, some were curious about MOOCs and online learning, and some were affected by pressure of time. MOOCs vary in their composition of learner demographics and study intentions, and these specific compositions generally appear to change only slowly between repeat offerings of each MOOC, although a trend in the Edinburgh MOOCs is towards fewer US and UK participants and more younger learners. More detail can be found at <http://moocs.is.ed.ac.uk/>.

Competing models of course design: constructivist, instructionist and connectivist

Given the numbers involved, the usual exhortation in course design manuals to ‘know your learner’ (for example Biggs and Tang 2011) did not seem to apply to the design of the MOOCs. However, for the two authors of this paper from the instructional team for EDCMOOC, getting to know our learners would be our normal starting point for teaching on a new course. In our day-to-day online teaching, we recognise that the learner brings existing knowledge to the new educational experience and actively builds on this to construct new learning. We value the idea of the role of the teacher as an ‘orchestrator of experience’ (Caine and Caine 1994), and see the strength of dialogue through the tutorial engagement of teacher and student, or in an ongoing ballet of reciprocal peer tutoring. The learner can thus be supported and challenged by a tutor, peer or colleague more knowledgeable in the immediate epistemological or semiotic domain. In other words, we espouse a social constructivist approach to course design and delivery: an approach frequently associated with a technology-supported learning environment (Selwyn 2011). When that environment supports many thousands of participants, however, questions arise about how well the learner can be known.

A teacher embarking on a MOOC might feel compelled to seek alternative perspectives to their day-to-day teaching – perhaps falling back on older methods, or alternatively being more innovative (depending, of course,

on their starting point). The literature suggests both options, although the choice of teaching philosophy can be fairly complex, as we discuss below in considering whether more traditional methods are necessary for accommodating many unknown learners, or whether a more novel approach altogether is needed.

The constructivist perspective might be distinguished from an older instructionist philosophy of course design where curricular content is ‘transmitted’ from the teacher to the learner. Online, more instructionist-based courses will comprise carefully structured content and frequent testing of learners to check that that the content has been absorbed and retained. They might be performance driven, with an emphasis on very tightly worded learning outcomes or behavioural objectives. There are many examples of online courses that conform to this rather traditional approach, including many of the MOOCs that emerged around 2012 when we were starting to join the discussions. However, these were not the first examples of MOOCs and therefore not the only models available.

The origin of the expression ‘Massive Open Online Course’ and its abbreviation was a response to the power of networked connectivity as an engine to drive highly motivated, personally relevant and socially situated learning. While this shares some of the precepts of social constructivism, there are those who argue that a new paradigm is required for thinking about learning (and therefore course design) for the 21st century (Siemens 2005). Siemens argues that even *social* constructivism fails to recognise that some

learning happens outside of individual people, for example learning that is distributed, networked and may be stored in and manipulated through technology. The theory of connectivism was espoused and practised by Canadian educators George Siemens and Stephen Downes in the initial phase of MOOCs, and indeed the expression MOOC was coined by Dave Cormier in 2008 in dialogue with Siemens about their *Connectivism and Connective Knowledge* Course (CCK08).

Connectivism has been contrasted with the model of teaching exposed through the newer yet apparently more traditional MOOC offerings coming from organizations such as Coursera, Udacity and edX. Certainly on the surface these appear to be rather instructionist in their conceptualization. Although liberal and inclusive in intent (often promoted as addressing global problems related to lack of access to educational opportunity), their combination of curation of resources and administration of objective testing presents a very different picture of the potential of the online, the open, and the massive from that of the original MOOCs. This has led Stephen Downes (2012) to coin the distinction between the original cMOOC (connectivist) and the xMOOC, (continuing a pattern started by edX with a more traditional focus on knowledge duplication). However, recent analyses suggest that the xMOOC/cMOOC dichotomy is inadequate for capturing the pedagogical nuances of the burgeoning MOOC offerings becoming available (Bayne and Ross 2014). It is not surprising to find these differences: course design is

inevitably influenced by designers' underpinning values and beliefs about learning (Toohey 1999).

Thus although MOOCs are just a few years old, by 2012 there were already many competing pedagogical approaches underpinning their course design. This opened up scope for confusion in terms of expectations and norms in relation to MOOCs. When the University of Edinburgh signed up to run six very different MOOCs through Coursera, managers, teachers and administrators discovered that there were distinctive participant expectations of how courses would operate. These expectations came not only from previous experiences of MOOCs but also from previous experiences of being a student in more conventional academic settings. In addition, the Coursera platform encapsulated some of the xMOOC practices in the affordances it provided for materials and activities. While very open to new ideas, Coursera were clear about their expectations of professional level video recordings (tending to be very content-based), objective computer-marked tests, and peer-assessed assignments.

Expectations of what a course 'should be like' affect teachers as well as learners and platform owners such as Coursera. The first question that occurs to teachers embarking on a MOOC is frequently: 'But how does it scale?' and there may be a concern that scaling is impossible within the teachers' usual pedagogical paradigm. We saw six attempts to answer this question of scale, in the University's first six MOOCs.

The University of Edinburgh’s report on its first run of MOOCs

(MOOCs@Edinburgh 2013) draws attention to the different approaches to course design and structure adopted by the experienced teams: two from each of the University’s three Colleges. Table 1 is taken from this report and illustrates considerable variation; the E-learning column stands out as particularly different because of the novel curriculum design of *E-learning and Digital Cultures* MOOC. Rather than video lectures, the team curated, introduced and questioned freely-available short films and academic literature to form the content of the course.

Table 1: Comparison of course structures employed across Edinburgh MOOCs

Course structure	Equine Nutrition	AI Planning	Astrobiology	E-learning*	Critical Thinking	Philosophy
Number of academics	1	2	1	5	5	7
Number of teaching assistants	4	3 (+ 20 Community TAs)	2		2	4
Total team	5	6	3	5	7	11
Length of course (weeks)	5	5	5	5	5	7
Total number of videos	14	80	32		15	36
Total length of videos (minutes)	211	674	326		109	239
Average length (minutes)	15	8	10		7	7

□ *E-learning & Digital Cultures used a novel curriculum design*

Beyond the numbers: exploring dialogues and demographics

In the following two sections (Who comes first to a MOOC? and What kind of learners (dis)like MOOCs?) we draw on some conversations among MOOC participants, their teachers and the public to explore how those participants are constructing their understandings of the MOOC itself. We consider how teachers and course designers attempted to get to know their learners at scale in *E-learning and Digital Cultures* – where the tensions between a social constructivist perspective and an instructionist-inspired platform have had an impact on both design and delivery of the course. We ask what was distinctive about the participants on this course, and ultimately question whether the learners we have started to get to know are similar to those who are likely to come later – and even whether they were the students for whom the course was originally designed. Indeed, we tend to use the word ‘participants’ or ‘learners’ as opposed to ‘students’ as the latter suggests a particular relationship to which we cannot actually aspire. As educators, we are having to revisit our own perspectives on course design to take account of this new environment for our work: our first cohorts of participants have been doing this as well.

The conversations we draw on have been found in forums, blog posts, artefacts, academic papers and books (including some written by our own MOOC participants). We have selected conversational or dialogical exchanges to bring out emerging shared understandings of MOOCs and their practices;

we intersperse these data, however, with some coming from more monological or factual accounts such as results of surveys and demographic statistics. The results provide a ‘story’ that combines hard facts and a range of perspectives on their meanings and implications.

We make reference (with permission) to two publicly available blogs produced by our participants and give their URLs. However, we do recognize that these may have a limited ‘shelf-life’. Following a refusal of permission from one blogger, we have also taken care over how we cite comments from other blogs and forums. While the refusal is itself interesting, it is mentioned mainly to illustrate the complexity of the efforts to synthesise and paraphrase our findings in the sections below.

Who comes first to a MOOC?

Although the learners were initially unknown to us, we soon heard from them and we see this as a response to the use of social media as a design element established by colleagues in the team even before the course began. The successful #EDCMOOC Twitter hashtag sent out two months before the start of the course quickly established the abbreviation of the course name. By using blogs, Twitter, Google hangouts and other social media we encouraged connection among participants in ways more in keeping with a cMOOC approach. Indeed, the participants connected themselves – far beyond our expectations – and then reported ‘On how #edcmooc did a cmoooc on Coursera’ (Roegiers 2013). Sara Roegiers begins her post:

By demonstrating that you could build a very “open” course on Coursera, the University of Edinburgh team in charge of E-learning and Digital Cultures succeeded in breaking down some walls between the large-scale free course (called xMOOC by some critics) and the cMOOC connectivist learn-fest.

How did that happen?

<http://sararoe.wordpress.com/2013/02/27/on-how-edcmooc-did-a-cmooc-on-coursera/>

and then proceeds to itemise the reasons exactly why she thinks it happened, much of it summarising and linking to other people’s work.

The packed blogpost not only tells other potential and actual edcmooc learners about the course, it tells the teachers on the course how it was being received. We were able to see not just Roegiers’ impressions but all those other people she linked to (including ourselves). It received several replies, and Roegiers herself came back to link to others who had made the xMOOC/cMOOC connection. Following that link thus takes the explorer to several other connected conversations, which are arguably all contributing to the whole learning experience.

Roegiers’ blog thus provides an example of how the work extended beyond the Coursera platform, and also highlights that many of the

participants of the first run of EDCMOOC were students and educators. Though the course was aimed at people interested in education as well as digital culture, it was designed to target learners at about first year undergraduate level. However, the initial survey by the University of Edinburgh of those who had signed up for the MOOCs indicated that 61 per cent of participants on EDCMOOC had postgraduate degrees and 60 per cent were employed in education. It should be noted that this does not vitiate the claim that the learning opportunity was available to those who previously had not accessed formal education.

The educational focus of EDCMOOC certainly meant that teachers were attracted who were themselves already engaged in, or contemplating, MOOC activity. A number of participants reported in blogs and forums that they were not 'typical' learners as they were just looking in to find out what all the fuss was about. There was much existing knowledge about the topics presented and even the activities involved were not really new to them. While the openness of a MOOC means that the University does not exclude participants on the basis of low previous academic achievement or experience, it also cannot exclude participants who have the benefits of high levels of previous academic experience. This raises the question: is it possible to build a learning environment in which all levels of previous experience can profitably and creatively interact? It could and should be a marvellous opportunity for reciprocal support and benefit.

For the second run, we added a survey question about the relationship of the MOOC to the participants' area of academic study and discovered that for a high number (71 per cent) previous study had *not* been in a subject area related to *E-learning and Digital Cultures*. The high proportion of well-qualified teachers had itself prompted us to probe further in this area, and in this way even the demographic information might be regarded as stimulating further dialogue.

In addition, the authors of this paper are not the only stakeholders interested in the demographics as well as the experiences of the participants, as the high number of views (~5000) of the first year report on all six MOOCs will testify (MOOCs@Edinburgh 2013). Many people are joining conversations about MOOCs and our willingness to share these findings has been commended at numerous conferences. Our participants were also doing research on MOOCs, and EDCMOOC is the subject of a number of participants' publications, for example: a paper on peer learning through social media (Purser, Towndrow, and Aranguiz 2013); one in praise of asynchronous participation (Bali and Meier 2014); a book entitled *Invasion of the MOOCs* (Krause and Lowe 2014). Thus data and impressions gathered from early MOOCs at the University of Edinburgh feed into discussions not just about MOOCs but about their broader educational implications. Our unknown learners seem to be people very much like ourselves.

From the above, it can be seen that among the 'findings' of our inquiry we can highlight that our participants tended to be highly educated, involved

in education and that many wanted to engage in dialogue about educational issues. Absences are also interesting: recruitment is low in certain parts of the world; participants who did not engage in the MOOCs also did not engage in surveys at the end of them. We want to include these observations in our discussion, but analysis is more difficult.

The University of Edinburgh's participant survey and exit survey of people who had signed up to its six initial MOOCs brought out a number of important issues, including: previous educational achievement, employment, age profile, nationality, previous experience of MOOCs. The Coursera MOOCs of course have their 'home' in the United States, and it is no surprise that the US was the top country of residence by a long way at 28 per cent. The UK was second at 11 per cent. However, it is still the case that the majority of participants are from outside of the United States, as pointed out by one of the authors in *Invasion of the MOOCs* (Decker 2014, 8).

The low recruitment from China (across all six initial Edinburgh MOOCs) is also reflected in online distance courses at the University of Edinburgh. While China is second only to Scotland in recruitment to campus-based Masters programmes at Edinburgh (Scotland 1419, China 1022) when it comes to online Masters the figures are starkly different (Scotland 243, China 4). This does suggest an issue worthy of further exploration. Differential levels of MOOC publicity between world regions are likely to be a major contributing factor, but anecdotal evidence suggests that there might be cultural or political constraints either imposed on or emanating from some

countries. Campus-based Chinese students have told us that distance learning is not highly regarded.

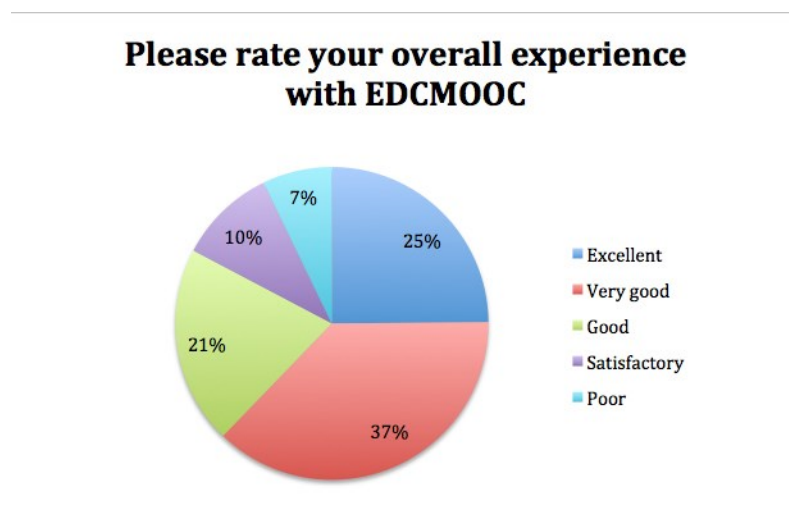
Care needs to be taken over drawing implications from the demographic statistics as many questions can be asked about what is not there. For instance, very few respondents to the Edinburgh survey said that they had ‘never logged onto the course once live’ (MOOCs@Edinburgh 2013) and yet we know that only 40% of those who enrolled accessed the sites in the first week. Those who never accessed the site then become a very large proportion of registrants whom we know little about.

While the above also suggests caution in claims about learner satisfaction, it is perhaps reassuring to know that 98 per cent of exit survey respondents indicated that ‘they felt they got out of the course(s) what they wanted’. What they wanted was mainly to learn new subject matter and to find out about MOOCs and online learning. The MOOCs@Edinburgh Group report concludes that: ‘It is probably reasonable to view these MOOC learners as more akin to lifelong learning students in traditional universities than to students on degree programmes, which is a common comparison being made’ (P.32).

With an initial recruitment of over 300,000 and response rates to questionnaires of around 25 per cent of that figure, it would be easy to find qualitative comments that support any view of MOOCs. This is also true of dialogues encountered through the process, and of course we are being selective here to make a case for variety of response, which may actually be

overstated. It is thus useful to anchor any such observations in the quantitative data, and also to bear in mind the reservations on the generalizability of those, as already identified. But it is true to say that there may have been *some* more polarised responses to EDCMOOC than to the others from the University of Edinburgh. While the positive messages about Edinburgh MOOCs were generally reflected in those about the EDCMOOC, 7 per cent did report finding their overall experience ‘poor’ (see Figure 1), which is slightly higher than the other five initial Edinburgh MOOCs (although still low). We follow up aspects of likes and dislikes about EDCMOOC in our discussion in the following section.

FIG. 1. Overall experience of EDCMOOC.



What kind of learners (dis)like MOOCs?

The hybrid nature of EDCMOOC – argued by some, as we have seen, to be a connectivist MOOC on what was then a fairly xMOOC platform – brought out both strongly positive and strongly negative feelings, which were expressed in the discussion forums, publicly accessible blogs and in the exit evaluation. It has been important for the team to be able to contextualize the more extreme comments by considering the satisfaction levels represented in Figure 1. Comments praising EDCMOOC for taking a ‘connectivist’ stance contrast with those criticizing lack of teacher presence and lack of structured content. While some participants loved the creativity and opportunities to follow their own interests, others derided the chaos and complexity that left them not knowing what they ‘should’ be doing. Some welcomed the links with many other people; others immediately recommended ways of making the massive more manageable – ‘I’d love to be put in a group’. The themes of digital utopia and dystopia – part of the object of study in the MOOC – were mirrored in analyses of the MOOC form as the future of education. In short, two broad frames of reference, the social constructivist and the instructionist, seemed to be in tension. Blogs and forum posts began to be populated with guidance for coping at scale, advocating either a more relaxed approach or a more structured one. Some of this advice has been feeding into the development of MOOCs in general as the EDCMOOC has spilled out into public discussions, especially with a continuing Twitter presence at #EDCMOOC.

However, that tension between the desire for structure and instructionism and the appeal of connection and social constructivism, though clearly present, was not the only response. There were other positive and negative responses – and many combinations of the two. We began to notice some participants as individuals, especially as strong public responses were themselves picked up by others and amplified through various media, including the higher education press. Comments in people’s blogs included observations that even when there were opposing views about the MOOC itself, at least people were willing to engage in conversations about it, thereby all becoming a part of a community and an ongoing dialogue about higher education and its practices.

One participant, who had required his students to take the MOOC, expressed relief at moving ‘back to our own class that actually is about “E-Learning”.’ (Krause 2013). This generated much discussion: agreement, disagreement, links to alternative perspectives and further observations from the author and the EDCMOOC team. It was not only the content, however, but also the delivery that made the MOOC end with a ‘meh’ for Krause:

The ... problem that really frustrated me by the end was an absence of teaching and leadership.

Now, this was intentional on the part of the team teaching this course, clearly: they did not want to have a series of “talking head”/”sage on the stage” lectures because, as their manifesto

makes clear, they are trying to question that idea of online education as just being delivered content from an expert to students. I get that. But when you have a “talking head” lecturer, at least then you have a common or “center” to grab on to as the discussions unfolds. Here there was really not a there there.

<http://stevendkrause.com/2013/03/06/e-learning-and-digital-cultures-ends-with-a-meh-edcmooc/>

This example is an interesting one as Krause went on to edit the book *Invasion of the MOOCs* (Krause and Lowe 2014) a publication that contains references to EDCMOOC (among others) with a slightly more negative stance. However, even here we were also invited to participate and again this finding feeds into our tentative conclusions.

The extract above relates to the notion of teacher presence, a topic already of interest to us, and one we discuss with our MSc students. Our attempts to avoid guru status possibly backfired as our welcome at our first Google hangout illustrated that many people wanted to see us, live. Yet in an early debate in a discussion thread entitled ‘Where are the professors?’ it became clear that some people did not actually need or want visible professors while others manifestly were desperate to attract our attention. We partially responded to this in the second run of the MOOC with additional video

presence (though still not talking head lectures) and in the third run experimented with a ‘teacher bot’ – a Twitter bot that responded automatically to combinations of words in an #EDCMOOC tweet. Our intention was to explore further what digital teacher presence at scale might mean, and what might be a proxy for it (Bayne 2015). Although it is impossible to infer any causal connection, following these interventions there was a notable reduction of the more hostile commentary in the forums about absent professors. The broadly favourable reception of the Teacherbot by the third cohort suggests that for at least some of our unknown learners a ‘common or “center” to grab onto’ expressed by Krause (2013) above might be something other than a video of a lecture.

The course design team have been reflecting on their experience, aided not only by this continuing stream of commentary but also by dialogues with colleagues at conferences. We’ve pondered the evidence that some students may have had a wonderful experience but did not actually ‘get’ some of the key messages. We have been contemplating ways of supporting ‘lost’ learners and having a greater presence at scale without compromising our view that digital education can be the privileged mode of learning, rather than a deficit-laden one. The MOOC as a structure is an opportunity to explore this precept further: getting to know what our unknown learner (dis)likes is part of this, but will not (and cannot) mean trying to please everyone in the long run.

We conclude by suggesting an alternative way of viewing the seemingly insurmountable problem of differing perspectives – whether they are known about in advance or not.

Conclusions and Implications

All six of the initial MOOC teams at Edinburgh were faced with designing for the unknown learner, particularly at the outset in 2012. We all came to know something about our learners, and interestingly the demographics and dialogues did not change hugely across three iterations of the six courses. We have perhaps not yet exhausted the initial interest – in the case of EDCMOOC predominantly from already very experienced academics and teachers. Our supposed target learners – worldwide participants interested in level one undergraduate study – were probably there in smaller numbers and less distinctive voices, so to some extent the jury is out.

We are still reflecting on what a MOOC actually is and what it tells us about online practices. If it is simply a commodity, then strategies to maximize the ‘likes’ over the ‘dislikes’ will be sought. This tendency can be seen in the agonizing over retention figures on MOOCs. However, getting to know who has been on the EDCMOOC is bringing to light an important feature of the unknown learner (and, as so often happens with digital education) one that has always been there: when there are a lot of learners we will be unable to reduce them to one set of characteristics. The openness of a MOOC also serves to highlight that we cannot impose any limitations on what

learners' characteristics should be, based on their previous experiences and qualifications. We suggest that this also has a bearing on other considerations of 'unknown learners': now that we do know our students rather better, we do not feel that we should have designed the course any differently.

However, this is not to say that we should not think about learners: there is an alternative way of conceptualising the unknown learner on a MOOC. As Knox (2013) advocates, it is now time to 'embrace the massive'. A member of the EDCMOOC team himself, Knox proposes that rather than trying to fix the problems caused by having so many unknown learners, we should explore and harness what we can do at scale. Knox is not alone in seeking an alternative to treating the unknown learner as a single being. By avoiding binaries of the one and the many, or by seeking to resolve them, we are missing the opportunity to recognize the dynamic of interanimating voices (Bakhtin 1981). Thus our experiences with EDCMOOC have reinforced and extended our sense of being involved in dialogues with learners. MOOCs have the potential to help us revisit Cory Doctorow's contention that 'Conversation is king. Content is just something to talk about.' (Shirky 2008). Now, conversation that involves many people is possible in a way that it was not in the print era – and the examples we have used in this paper have highlighted that.

We find some support from writers who conceptualize digital engagements as participation in a global dialogue. For example, Rupert Wegerif (2013) suggests that we need a dialogic education for the digital age,

emphasising preservation and augmentation rather than the need for one voice to supersede another. The use of ‘digital critical dialogue’ advocated by Hilton (2013) proposes an approach to course design that allows the ‘differences between participant perspectives...rather than agreement’ (p. 609) to emerge rather like the ‘conversations’ we have used in this paper. These authors and others offer frameworks that might support new ways of thinking about designing our MOOCs that do not rely on an individual simply receiving, constructing, connecting and performing – from, with, and to other individuals – but recognize our shared engagement in a new form of educational practice that does not necessarily throw out the older ones.

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