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Similarity and difference in fee-paying and no-fee learner expectations, interaction and reaction to learning in a MOOC

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The new pedagogical opportunities that MOOC (Massive Open Online Course) learning environments offer for the teaching of fee-paying students on university accredited courses is of growing interest to educators. This paper presents a case study from a post-graduate taught course at the Open University, UK, where a MOOC performed the dual role of a core teaching vehicle for fee-paying students and also as a 'free-to-join' course for open learners. Analysis of survey data revealed differences between the two groups in respect to prior experience, knowledge, expectations and planned time commitment. The nature and experience of interaction was also examined. Fee-paying student feedback revealed four conditions in which MOOCs could be considered a pedagogic option for taught-course designers. These are: when there is a subject need; when used to achieve learning outcomes; when there is acknowledgement or compensation for the financial disparity; and when issues of transition and interaction are supported.

Introduction

A burgeoning interest in open online learning in recent years raises questions about how best to conceptualise and configure the relationship between MOOCs (Massive Open Online Courses) and paid-for taught courses, together with the importance of understanding the social as well as the technological context of learning environments such as MOOCs (Greener, 2012). The MOOC is an emerging concept (Department for Business, Innovation & Skills, 2013) that has seen the development and launch of hundreds of courses by large and small MOOC providers, most notably Coursera, Udacity, FutureLearn and edX (Belanger & Thornton, 2012; Breslow et al., 2013; Driver & Martinez, 2015; Knox, 2014; Rodriguez, 2013). MOOCs are considered open educational resources that usually carry no fee to enrol and access, although some will charge learners for disaggregated supplementary components such as certificates of participation or assessment. Yet, whilst always presented as a standalone course, educators are interested in what value the online open courses can offer conventional

paid-for classes and how the two approaches can be reconciled in order to add value to the learning experiences of both fee-paying and no-fee learners (Israel, 2014). Indeed, this problem will become even more prevalent as informal MOOCs and formal taught courses become intertwined and decisions about the resourcing, technology, teaching, potential revenue generation, pedagogy and learner benefits are increasingly made with reference to how both function alongside each other (e.g. Yuan, Powell and Olivier, 2014).

MOOCs span a continuum of pedagogic approach from the broadly instructivist 'xMOOCs' to social constructivist or connectivist 'cMOOCs' (Siemens, 2012). The pedagogies employed in open online courses are receiving attention (Bali, 2014; Ebben & Murphy, 2014; Margaryan, Bianco & Littlejohn, 2015; Toven-Lindsey, Rhoads & Lazano, 2015) yet only a subset of MOOCs have been used in taught paid-for courses and an even smaller subset of these have been used in online distance paid-for courses such as the one presented in this paper. Recently Fischer (2014, p.5) has noted that a 'fundamental challenge is to envision and create symbiotic relationships between MOOCs and courses at universities' and certainly the way in which the relationship is conceptualised and described will determine the role and extent to which the MOOC as a teaching approach, as a platform and as a learning tool could be useful to 'conventional' university courses.

An early and still persistent way of portraying the MOOC has been to stress the inherent difference from conventional taught university courses. This holds that MOOCs are much larger, aspatial and open to all, predicated on claimed new pedagogic and business models, agents of disruptive structural change in higher education teaching and accreditation, and a means to 'fix', broaden and extend educational access to more socio-economic groups or geographic regions. Yet, whilst the rise in public awareness and academic agitation is noteworthy, some question these narratives and the degree to which the MOOC represents such a stark departure from prior work in distance, open, and collaborative learning (Daniel 2012; Haggard 2013; Liyanagunawardena 2013; Weller, 2015). There remains, for example, the critical question about how much structural disruption MOOCs can really muster given that, in most cases, they are far from independent of the educational institutions they seek to assail and that they benefit from a range of already inequitably distributed resources and privileged access.

A second conceptualisation of the MOOC has focused on its economic utility. Indeed, in a review of over four hundred media articles about MOOCs, Selwyn and Bulfin (2014) found that economic rather than pedagogic advantages were stressed whilst the revenue 'discovering' role of the MOOC as an advert or shop window for university courses is highlighted in a 2013 US survey where 'increase [in] institution visibility' and 'drive student recruitment' were the most commonly cited primary institutional objectives for MOOCs (Allen & Seaman, 2014). Here the imagined direction of travel is from informal to formal and this is clearly appealing in the search for viable financial models and to open up new segments or geographic areas of the learner market. Even the transition of small numbers from informal to formal may be economically viable. For example, Syracuse University offered MOOC completers a financial discount on the cost of their paid-for taught courses and whilst only a handful took up the offer, the value of new business was estimated as over three times the cost of producing the MOOC (assuming all students completed the taught programme and they had not already been planning to apply) (Finkel, 2013). Yet by offering no-fee courses where

before a fee may have been charged ‘will the [low cost service provision] alternative disrupt or even destroy the current model of the partner institutions that is based in large part on students paying [fees] for their courses and credentials?’ (Anderson and McGreal, 2012). Certainly this raises the question of how a MOOC may impact learner perception of value for money. Furthermore, what is perhaps more often overlooked is that students can also travel in the other direction: that the MOOC could provide an effective route out from formal to informal.

A third and more conciliatory view sees the MOOC as complementary to paid-for courses, either because the course is based on or identical to a paid-for course, or because the MOOC provides an optional learning component for a taught course. The Open Education Resource (OER) University network, for example, sought to design and implement a parallel learning universe to provide free learning opportunities for all students worldwide with pathways to earn credible post-secondary credentials (MacIntosh, McGreal & Taylor, 2011) whilst the EU funded open online course *Business Competencies in a Web 2.0 World* was co-developed by staff at several universities and was offered as both an option to existing Masters students and a standalone course for ‘free-learners’ (Aczel et al., 2011). In other cases, MOOCs are scaled up or re-workings of existing taught courses (e.g. Breslow et al., 2013; Ho et al., 2014; University of Edinburgh, 2013).

A fourth and final conceptualisation of the MOOC relates more to the benefits that a MOOC could offer to the teacher or course designer in achieving their core teaching and learning aims. The focus here is not on the MOOC as a challenger, a marketing strategy or an adjunct to formal learning, but how it could perform key pedagogic, organisational and technological roles within a paid-for taught course (Kolowich, 2013). In such cases the MOOC could be used to help learners gain skills such as self-organisation, self-motivation and technical proficiency (Saadatmand & Kumpulainen, 2014), to develop new elements to an assessment strategy, or to help support the introduction of new teaching approaches such as the ‘flipped’ or hybrid classroom where campus-based students study a MOOC as part of their course, Small Private Online Courses, ‘wrapped’ courses, or the ‘enhanced MOOC model’ (Bruff, et al., 2013; Firmin et al., 2014; Griffiths et al., 2014; Israel 2015; Koller, 2012). Benefits of piloting such approaches include allowing teachers to focus on the better design and use of class time, reducing time spent on teaching or assessment, and potentially higher assessment scores whilst potential issues include students reporting lower course satisfaction scores for the MOOC component of the module and that they felt they learnt less (Caulfield, Collier & Halawa, 2013; Griffiths et al., 2014).

This paper presents a case study of a taught online course that comprised a compulsory block in a module of the Open University’s Masters in Online and Distance Education and was an open online course in its own right that could be joined by anyone. In so doing, fee-paying learners studying at a distance learning university and no-fee learners were brought together in the same learning space. This MOOC falls broadly in to the fourth and final category outlined above and so aims to contribute insights into the pedagogic, social and cultural benefits and problems of using MOOCs within paid-for taught courses. It is framed by two research questions: To what extent do fee-paying students differ from no-fee learners in respect to prior learning, expectations and experiences? And, after having had a shared MOOC experience, to what extent do fee-

paying and no-fee learners support the use of MOOCs in future taught modules and in what circumstances?

Overview of the Open Education MOOC

The MOOC discussed in this paper represents a narrowing of the boundary between formal and informal learning spaces. Fee-paying students experienced the MOOC as the second of a four blocks on a module entitled “Openness & Innovation in eLearning” and free-learners experienced it as a stand-alone course titled ‘Open Education 2013’. In order to clearly distinguish between groups, this study uses ‘fee-paying students’ to refer to registered paying students on the H817 module – the term ‘for credit’ learner is problematic because in the course all learners could earn digital badges for their participation -, and ‘no-fee learners’ to refer to those not registered on the H817 module who joined the MOOC for free. This latter group included *other* current OU students not studying H817. For clarity the term ‘course’ is used to refer to the MOOC itself and ‘module’ to refer to the paid-for H817 module in which it took place. The MOOC was created by The Open University (OU) and presented on its OpenLearn platform. The OU is the largest provider of distance higher education in the UK with a long-standing reputation for delivering open educational resources (Scanlon, McAndrew & O’Shea, 2015). The innovation represented in the Open Education MOOC reflects the university’s mission to provide a flexible, inclusive, supportive and social learning experience.

The decision to use a MOOC in the second of four blocks of the taught module was primarily taken for pedagogic reasons because the subject of the block in question was open learning. It was felt that a MOOC afforded an ideal way for fee-paying students to not only study open learning but do so whilst authentically experiencing it in practice through learning the key concepts in a MOOC environment. The MOOC was free to join and both fee-paying and no-fee learners accessed course content and activities through the OpenLearn learning environment. The course comprised seven weeks of learning with all but the final week consisting of four main activities each lasting between three and six hours (Open University, 2013). Fee-paying students studying the taught Masters module were expected to undertake all activities, whilst free-learners were advised they could select fewer activities if they had more limited time. Besides this, no special provision was made in the learning materials for free-learners joining the course. Both groups of learners benefited from access to an online forum, a course Twitter stream, a ‘blog-aggregator’ (that presented in one place the blog posts that participants were asked to make during the learning activities) and a Google+ community group forum. Two part-time facilitators were employed to support fee-paying and no-fee students in these social areas and the academic author of the course was also active in the spaces. Themes covered in the MOOC included open learning, open educational resources, and massive open online courses.

With respect to the fee-paying students, like every module taught at the Open University, each fee-paying student was allocated a tutor and a tutor group of approximately 15 students for the duration of the module. Teaching was undertaken solely online and each block (including the second block in which the MOOC took place) culminated in a tutor marked assessment and individual feedback to the student. Students had (password protected) access to tutor group and module forums for the

duration of their Master module and the full range of university support resources and infrastructures. Students had to submit their assessment at the end of the block using the usual university-provided online assignment submission software.

No-fee learners were able to join and access all the content, public forums and teaching in the (Block 2) MOOC but had no access to tutor group forums and teaching from the other blocks. Unlike fee-paying students, no-fee learners did not participate in an end of course assessment but instead three open digital badges were created (Cross, Whitelock & Galley, 2014). All MOOC learners were entitled to apply for these badges via the Cloudworks (Conole et al., 2008) website when they had completed the tasks assigned to the badges.

Web logs from the course show that from mid-February to the end of April 2013 around 6,300 unique users visited the MOOC course website and that 2,400 of these visited in the first two weeks. Approximately half (52%) of visitors were from the UK, of which 16% were students at the university. The remaining visitors were from a variety of countries; the top three being the USA (8%), South Africa (3%) and Spain (3%). These data indicate that the course achieved its goal of offering students an authentic MOOC experience in respect to the size and multi-national breadth of participation.

Methodology

Participants

Fee-paying students were registered university students taking the H817 module as part of a post-graduate Masters qualification in Online and Distance Education (MAODE). Most often students on the MAODE course are educational professionals working in Technology Enhanced Learning such as lecturers, or other professionals such as those who own or work in constancy companies. The course is delivered entirely online so some are international students. Of the 70 students studying the 2013 presentation of H817, 50% were women and the majority (69%) were between 40 and 59 years old.

No-fee learners were also likely to be working in a field related to education or OERs. An estimate based on the number of returning visitors to the platform in Week 6 and the number of no-fee learners who exhibited levels of participation similar to that of fee-paying students suggests that around 250 no-fee learners studied the MOOC over the entire seven week duration. Survey data shows that 74% of no-fee learners were women and that the majority (67%) were between 45 and 64 years old.

Pre-survey instrument of prior knowledge and expectation

A pre- and post-course survey was administered to all participants. The pre-course surveys were available in the week prior to the beginning of the MOOC and the post-course survey was opened at the culmination of the course. The pre-course survey sought to address two elements of the first research question: prior learning and expectations. The importance of prior learning and skills to study experience has been noted by many (e.g. Kop & Fournier, 2010) so the pre-course survey asked learners if they had participated in a MOOC before and three closed-response questions about their

prior knowledge and experience. Learners responded on a five-point scale of '1-novice' to '5-expert.' The three aspects of prior learning asked about were: prior knowledge of the social learning tools they would be using (hereafter termed Web 2.0 tools), their knowledge of the main course topic (OERs), and their knowledge of the specific learning environment (MOOCs). This question format had been used in a previous survey of a similar MOOC about learning design (Cross, 2013). It was also felt important to understand student expectations and motivations for joining the MOOC. A number of studies have sought to understand such expectations (Lui et al., 2014; Saadatmand & Kumpulainen, 2014; Milligan, Littlejohn & Margaryan, 2013; Cross, 2013) in order to seek explanations for what by conventional standards are very low retention rate, to inform design, delivery, and navigability of MOOCs, and to distinguish between intrinsic and extrinsic motivations. Given the range of possible backgrounds and reasons for studying the course, an open-response question was used in the pre-course survey that asked learners what interested or excited them about the MOOC.

In addition to the broad question about expectation, the survey also asked a closed-response question about how much time the learner anticipated spending on the MOOC each week. Firmin et al. (2014) have found that measures of student effort such as number of sessions logged in and weeks of greater than minimum time of effort were strong predictors for achieving a pass so yet Lui et al. (2014) report mixed results in respect to time learners intended to spent on live and archived version of two courses. Finally, the pre-course survey for the Open Education MOOC asked no-fee learners about their age, gender and whether they were currently studying at the OU (this information already being available for OU students). Whilst the questions asked of learners were the same, for operational reasons the surveys to the fee-paying students and no-fee learners were managed by different survey systems.

Post-survey instrument of experience

The post-course survey included a core set of five closed-questions and five open-response questions. The first research question was addressed by asking learners four open-response questions about their experience of learning with other participants, what they liked about the MOOC, what they did not like about the MOOC, and how the course could be improved. Fee-paying learners were also asked to rate their knowledge and understanding of Web 2.0 tools. Meanwhile, the second research question was addressed with two questions: a closed-response question that asked if more Open University courses should include a block that takes place in an open MOOC environment and a follow-up open-response questions asking for an explanation or clarification of the response.

Data analysis

Open-response question data comprised of approximately 25,000 words and was examined using a grounded theory approach in order to identify emergent themes (Charmaz, 2006). The primary author undertook the initial analysis by coding each comment and a random sample of these were validated by the second author. Quotations were selected later in the analysis to illustrate emerging themes or specific points of interest. Neither author had been directly responsible for writing or teaching the course so this was not a potential source of bias. SPSS was used to analyse data

from the closed-response questions. Response rates for the fee-paying students was excellent: 59 (84%) of the 70 students studying H817 responded to the pre-course survey and 33 (47%) responded to the post-course survey. There was also a good response from no-fee learners: 69 responded to the pre-course survey and 32 to the post-course survey. Responses from no-fee learners represented a range of engagement levels in the MOOC and, based on the estimate that around 250 no-fee learners participated for the duration of the course, the no-fee learner response rate can be estimated at 28% for the pre-course survey and of 13% for the post-course survey. However, uncertainty in respect to the true size and heterogeneity of the no-fee group mean that it is harder to determine the response rate and how representative these responses are of the no-fee group.

Results

Differences in prior experience, anticipated effort and expectations within and between fee-paying students and no-fee learners

This section reports findings from the pre-course survey relating to the first research question and contrasts fee-paying and no-fee learners' prior experience, anticipated study effort, and expectation. The subsequent section extends the analysis by reporting findings from the post-course survey relating to the nature and quality of online interaction.

The survey shows that 22% of fee-paying students and 49% of no-fee learners had studied a MOOC before. A comparative lack of previous MOOC experience within the fee-paying group was also evident in how learners rated their knowledge and understanding of MOOC platforms (see Table 1). Almost twice as many fee-paying students than no-fee learners rated their knowledge of MOOC platforms as 'novice.' This difference between the groups is statistically significant ($X^2(3, N=122)=11.6$, $p=.009$) and shows that before beginning the MOOC, the fee-paying student group indicated to have less knowledge and understanding of MOOC platforms than free-learners.

Table 1 also shows how each learner group rated their knowledge and understanding of OERs and Web 2.0 tools. There is a statistically significant difference between the two groups in respect to prior knowledge and understanding of OERs - the central course theme; $X^2(3, N=123)=12.4$, $p=.006$. Fee-paying students rated their knowledge higher than no-fee learners. There was no difference in knowledge and understanding of Web 2.0 tools between the two groups; $X^2(4, N=121)=3.7$, $p=.45$.

Table 1. Self-rating of knowledge and understanding prior to course start.

	1 (Novice)	2	3	4	5 (Expert)	Total
<i>Q. How would you rate your knowledge and understanding of MOOCs?</i>						
Fee-paying Students	23 (42%)	14 (26%)	16 (30%)	1 (2%)	0	54
Free Students	16 (24%)	21 (31%)	18 (26%)	10 (15%)	3 (4%)	68
<i>Q. How would you rate your knowledge and understanding of OER?</i>						
Fee-paying Students	9 (17%)	13 (24%)	28 (52%)	4 (7%)	0	54
Free Students	11 (16%)	32 (46%)	16 (23%)	9 (13%)	1 (1%)	69
<i>Q. How would you rate your knowledge and understanding of Web 2 tools?</i>						
Fee-paying Students	6 (12%)	17 (33%)	12 (23%)	14 (27%)	3 (6%)	52
Free Students	10 (15%)	14 (20%)	15 (22%)	21 (30%)	9 (13%)	69

Table 2 shows the amount of how much time per week that fee-paying and no-fee learners said they planned to spend on the MOOC. There is a statistically significant difference in the anticipated time commitment by fee-paying students and no-fee learners; $t(105)=8.33$, $p<.000$. Most fee-paying students (87%) were expecting to spend 12 hours or more learning each week yet by contrast the majority (53%) of no-fee learners appeared to be planning on spending less than 8 hours.

Table 2. Time commitment of fee-paying and non-fee-paying students.

	Less than 4 hours	4-7.9 hours	8—11.9 hours	12-15.9 hours	16 hours or more
Expected study time (pre-course survey)					
Fee-paying students	0	3 (6%)	14 (27%)	29 (56%)	16 (31%)
No-fee learners	14 (24%)	17 (29%)	29 (49%)	6 (10%)	3 (5%)

Prior to starting the Open Education course, learners were asked what interested or excited them about the prospect of studying the MOOC. Responses from fee-paying students show a strong interest in the experiential learning opportunities that the MOOC offered: in their open-text responses students talked about ‘having a go,’ experiencing something ‘new’ and seeing the MOOC ‘in action.’ Certainly many of this group were involved in education and this is evident in their declared interest in teaching and learning issues associated with MOOC such as: how group collaboration and large scale interaction would work; what would happen with a reduced role of tutor; how evaluation and accreditation was managed; if there were benefits from greater contact with module author’; and how the course would implement social connectivism. Several students mentioned an interest in contrasting their experience with press reports about the problems (and benefits) of MOOCs with one noting ‘given the recent press, I am interested to explore what it’s like to be a learner in this situation and how it differs from a closed community and what the structure of the course is like.’ Other students were interested in the opportunity to hear different perspectives by involving open learners and to learn more about the technology that supported social learning such as blogs and twitter. The opportunity for a freer and more flexible learning experience was mentioned by a couple of students.

In contrast, responses from no-fee learners show a greater interest in gaining concrete ideas and exemplars of best practice for application in their own teaching. Over a dozen no-fee learners said they were specifically interested in learning about or developing their thinking on open or online and more claimed to be interested in the design of the module (mentioned by 9 respondents) and the application of a MOOC as a form of teaching approach (8 respondents). Several respondents also admitted to looking for exemplars of how best to use resources (4 respondents) and technologies (3 respondents) whilst there was less interest in other aspects of MOOCs such as student cooperation (2 respondents) and assessment (1 respondent).

The reputation of the organising institution was also important in attracting the interest of several no-fee learners. These participants felt that because the MOOC had been developed by the Open University which has a strong reputation for online and distance learning then the course would prove a case study in best practice and effective design. One student, for example, was ‘excited that it is OUs first MOOC and trying to be part of the experience’ and another was interested in comparing this with other MOOC formats: ‘I have completed a number of MOOCs with Coursera, and am interested in studying one with a different provider.’ Some no-fee participants (26%) were also excited at the prospect of learning with others and hearing views of other participating educators.

Other motivations for studying a MOOC were conspicuous by their relative absence. Few respondents mentioned having personal strategic motivations with only two saying they were using the MOOC as a way to widen their professional network and another two admitting to be wanting to be ‘part’ of the MOOC experiment. No one explicitly stated that a reason for joining the MOOC was to share their knowledge or help others learn. Similarly, only a few spoke of how they expected to engage with the MOOC on a more emotional level. One participant wanted ‘[to] experience a pleasant, interactive, fulfilling learning process. I have completed [other MOOCs] and found the environment noisy and overwhelming. I have a feeling that this will be a more relaxed and enjoyable

experience' whilst another mused 'I wonder if I'll be more comfortable with this MOOC than I was in the 2 previous ones (I guess yes, as I see this MOOC is more structured than the 2 connectivist ones I followed).' Such comments demonstrate that learners may already be forming preferences to, and be beginning to discern between, the character and feel of MOOCs.

Differences in participant interactions during the MOOC

The post-course survey sought to provide further data in respect to the first research question by asking participants what their interaction was like with other learners. Thirty-four fee-paying students and thirty-two no-fee learners answered the question. Responses showed that the majority of interaction did not take place on the MOOCs OpenLearn forum but instead took place using Google+ (which was open to all) and the closed tutor group forums (only available to fee-paying students). Learners said they preferred Google+ because it was more usable, especially in respect to learning activities that required participants to post blog entries and comment on others. Indeed, the posting and reading of blogs, along with use of Google Hangouts, videos by the course author and other 'big names', and Google+ were most often mentioned by participants as having helped in their learning. Student comments about the level of interaction varied considerably between participants so, to investigate this further, each respondent was placed in to one of five categories based on the level of interaction they reported. The categories of interaction used were: None, Limited, Good/Acceptable, Very Good, and Excellent.

There were some very good examples of participants who benefited from social interaction and where exchanges and conversations developed, however, overall 67% of fee-paying learners and 61% of no-fee learners reported having had no or limited interaction. The most common reasons given for no or limited interaction were fourfold: firstly some learners reported feeling disillusioned after receiving no feedback from their posts, no reciprocity from their comments on others' posts, or failing in their attempts to join forum conversations (conversely, those who reported having had a good experience often mentioned how much they valued getting feedback or comments from others); secondly, some learners felt they had nothing to contribute – as one said 'I am the person that likes to sit in the back of the classroom until I feel confident and very often reading different contributions I felt that anything I said would not add to the conversation'; thirdly, several learners failed to realise that Google+ rather than the default course forum was where much interaction was taking place; and fourthly, some fee-paying students reported withdrawing from the public space and using only their tutor group course forum because they wanted to make interactions manageable or because the closed tutor forum represented a safer, private environment to learn. Another learner reported being put off by the overt self-promotion by others of their postings and another attributed their reticence to interact as 'mostly, I think [because] I'm not yet used to social networks and media. I'm a member of the H817 community on Google+ but I never thought to go and see what happens in there. I had a look on the blog aggregator several times but I didn't find something interesting to comment in others blogs. It's definitely something I have to improve...'

This latter issue was investigated further by comparing the self-reported level of interaction of twenty-five fee-paying students with how well they rated their understanding of Web 2.0 tools. Figure 1 shows that students with low or no knowledge

of Web 2.0 tools experienced no or limited interaction with other learners. This could indicate that low prior experience was limiting the ability of this group to interact. Meanwhile, the experience by those with good knowledge of Web 2.0 tools varied from none to excellent; indicating that good knowledge of tools can often, but not always, translate to greater levels of interaction.

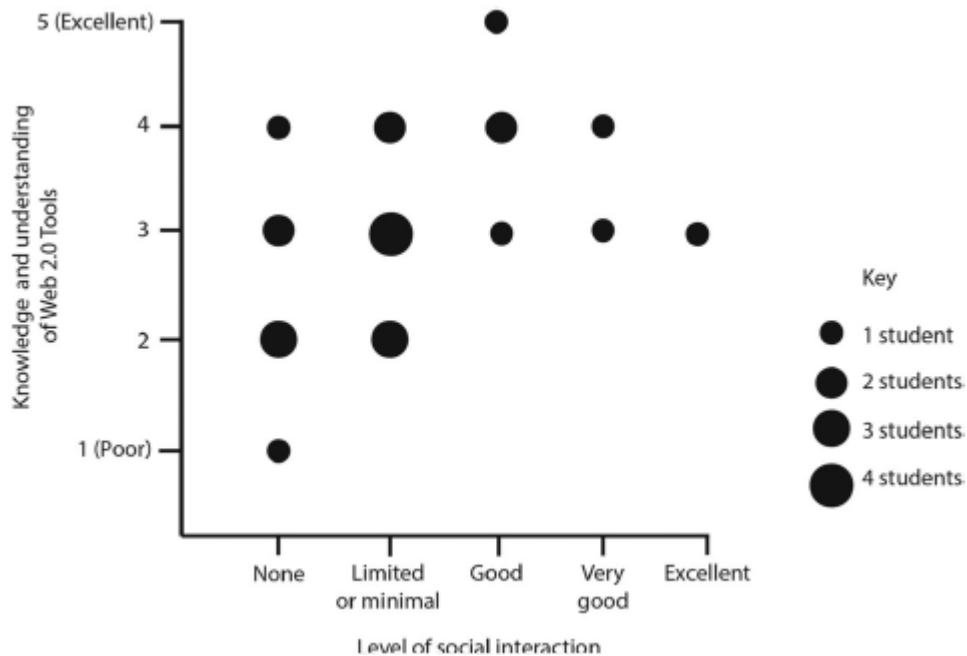


Figure 1. Graph to show student rated knowledge of Web 2.0 tools (y-axis) and the quality of interaction with other participants in the MOOC (x-axis).

Support for using MOOCs in formal learning

To address the second research question, the post-course survey asked learners if they felt the university should make more use of the MOOC pedagogy within modules. Table 3 shows that almost twice as many no-fee learners (70%) supported the inclusion of MOOCs in paid-for courses compared to fee-paying students (39%).

A supplementary question in the survey asked students to explain their answer. The responses from fee-paying students can be considered to provide insight into what they think are ‘appropriate’ uses of a mandated MOOC within a formal course. Four key aspects were revealed by a thematic analysis of the thirty-three open-comment responses.

Table 3. Preference for more MOOCs in paid-for courses.

Q. Should more OU modules include a study block that takes places in an open MOOC environment?		
	H817 student learners	Non-H817 open learners

	(33 responses)	(30 responses)
Strongly agree or agree	13 (39%)	21 (70%)
Neither agree nor disagree	12 (36%)	5 (17%)
Disagree or strongly disagree	8 (24%)	4 (13%)

Firstly, many students felt that an appropriate use of a MOOC would be if there was a specific subject need. One student commented that ‘it completely depends on the module subject – for something creative, yes, it would be great’ whilst another believed there was a role ‘only if the subject or process would benefit from the open but slightly chaotic environment.’ Others acknowledged that the MOOC they had just studied was a case in point: one student said ‘I think it was relevant in this case [a module actually about MOOCs but] I don’t know if it would be beneficial in other OU modules’ and another wrote ‘[I] agree [but] only if directly related to unit such as this time with the topics of open education and MOOC.’

Secondly, some students saw a role MOOC if it helped achieve module learning outcomes such as learning the skills of interacting and working in an open online space. As one student acknowledged, ‘[the] experience of open learning builds valuable digital literacy skills’ and another that ‘[it] is a skill that is more and more needed within lifelong learning pathways, but also simply as a mechanism to be able to manage vast amounts of [the] information that is now available and accessible.’ However, within the responses there are indications students would prefer the MOOC to be optional adjunct rather than mandatory part of the taught module.

A third issue mentioned by fee-paying students was the inequality in financial contributions by participants. For example, one student commented that ‘... I am sure some of us felt we were paying for this MOOC to be set up and run.’ Comments on this theme indicate that students would expect a reduction in the cost of course proportional to the amount provided to others for free and if a charge was to be made ‘by all means charge a nominal fee for the TMA ... but [not] for the full block.’

The final theme identified in student comments was that of user dissatisfaction with how well current technologies that comprise a MOOC learning environment supported their learning. Moreover, for five students this was significant enough to provide reason for the university to not (yet) use MOOCs more widely. Particular issues mentioned included: MOOCs can impart a sense of abandonment; MOOCs break (even fail to provide sufficient alternative to) the familiar continuity of the course content, social and support structures; the sheer number of posts becomes unwieldy and can hinder effective social learning; and MOOCs force learners away from a safe study space where mistakes can be made and trust more easily conveyed.

These comments indicate that many students feel there can be a role for MOOCs as a mandatory component of module if used judiciously, however, even after participating in the MOOC, the majority of fee-paying students could not yet agree that more modules should include compulsory study in an open online learning environment.

Discussion

The analysis of the Open Education MOOC discussed in this paper contrasts the experience of two different groups of learners that were brought together in one online learning space: fee-paying students of the H817 postgraduate module – for whom the course was a compulsory part of their taught module – and no-fee ‘free’ learners who made no payment to the university. The insight that this analysis provides is important given that most MOOCs tend not to differentiate between learner groups (Margaryan, Bianco & Littlejohn, 2015). In the case of the Open Education MOOC 70 fee-paying students participated alongside approximately 250 no-fee learners participated in the course (i.e. participated for the duration of the MOOC and demonstrated levels of activity consistent with Masters level study). The characteristics of the no-fee learner group in respect to prior knowledge of MOOCs and web 2.0 tools was similar to that of the Open Learning Design MOOC (Cross, 2013). This would be expected as both MOOCs would have appealed to teacher-educators interested in open online learning. These data demonstrates the MOOC succeeded in creating an authentic experience of fee-paying learners and involved a mix of fee-paying and free learners.

Of particular interest to this study was the experience of fee-paying students for whom learning in an open online learning environment was a mandatory component of their taught course. Pre-course (n=128) and post-course (n=65) surveys revealed differences between the two groups of participants. The fee-paying students had a greater knowledge of OER but less knowledge of MOOCs, fewer had taken a MOOC before, and as a group they had a greater interest in participating in the MOOC as a form of experiential learning. Learning about the subject of the MOOC rather than the skills associated with MOOC learning appears to have been of more interest to many no-fee learners and this broadly confirms survey results from elsewhere (University of Edinburgh, 2013). In contrast, however, for the fee-paying group learning how to learn in a MOOC (Milligan, Margaryan & Littlejohn, 2013) emerged as a comparatively more important motivation. Additional analysis showed that fee-paying students who rated their understanding of Web 2.0 tools as 1 or 2 (out of 5) appear to have had no or limited online interaction with other learners whilst those with who self-rated their understanding as 3 or above had more positive experiences. This would suggest that those without certain digital competencies may have been at a disadvantage in respect to participating in aspects of the MOOC. Also, whilst broadly supporting the contention that a prerequisite to participation may be to first learn how to learn in a MOOC (Milligan, Margaryan & Littlejohn, 2013), the data shows that even learners with the required skills may choose not to participate as the course designer intended. Understanding more about the digital competencies and prior expertise of learners and how they interact with MOOC activities, tools and the community is important, especially if forum participant is desire and if such participation can be positively correlated to achievement (Driver & Martinez, 2015). Also important is how MOOC learning activities align with those being considered for delivering feedback at scale such as peer- and self-assessment (e.g. Kulkarni et al., 2013) or feedback generators (Whitelock, Gilbert & Wills, 2013).

Differences were also found between the amount of time fee-paying and no-fee students were planning to spend on the MOOC. This will likely have impacted how and what participants studied. Furthermore, some fee-paying students appear to have preferred to

use the closed tutor group forums as safer spaces for interaction rather than use the open public MOOC space. This supports the findings of research undertaken elsewhere which finds students of hybrid courses demonstrate greater engagement (Firmin et al., 2014) and prefer to interact with their local learning community rather than contributing as actively with online discussion forums provided by MOOCs and preferred instead to (Israel, 2015).

At the culmination of the MOOC almost twice as many no-fee learners (70%) than fee-paying students (39%) supported the idea that more university modules should include free MOOCs. Whilst encouraging, this suggests that even on a course about online and distance education most students, like most universities (Allen & Seaman, 2014), continue to have reservations about when and how MOOC can be effectively used in their learning. Feedback from fee-paying students indicates four possible conditions when they felt it would be appropriate to use a MOOC as a core pedagogic or structural component of a taught module. The four conditions are: when there was specific subject need to learn about MOOCs; when there are learning outcomes such as subject knowledge, developing skills, or gaining deeper understandings that could be effectively learned using MOOCs; when there is some acknowledgement of the financial disparity created by fee-paying students paying for content others get for free – such as a discount on the course fee; and/or when the MOOC platform and learning design adequately supports the transition from closed to open learning space and the learning interactions that take place.

This paper has highlighted how the needs and learning of fee-paying and no-fee learners can differ and this presents a challenge to those involved in designing learning. The conclusion of this paper is that if a MOOC is used, then it is essential to consider how it satisfies fee-paying learner motivations and expectations, how it will impact on student perceptions of cost, value, equitability and privacy, and how students will respond to and use the range of open and, often, closed learning environments involved. Some practical steps can be taken from the analysis such as managing the transition from closed to open learning spaces and back again, ensuring all fee-paying students have similar opportunities to participate and learn, and keeping participants informed as to ‘where’ the social hub of the course is currently based (especially if it re-locates or straddles several sites). Effective design, usability and configuration of the learning environment is essentially to support this. The findings of this paper are, therefore, of particular interest to researchers and educators looking to use MOOCs and their associated learning environments in taught university accredited courses and the methodological approach used could provide a useful model for other evaluations.

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Keywords

MOOCs, Massive Open Online Courses, Pedagogy, Learning Design, Learner Expectations, Workload

References

- Aczel, J., Cross, S., Meiszner, A., Hardy, P., McAndrew, P. and Clow, D. (2011, June). *Some issues affecting the sustainability of open learning courses*. Paper presented at EDEN 2011 Annual Conference: Learning and Sustainability: The New Ecosystem of Innovation and Knowledge, Dublin, Ireland.
- Allen, E. and Seaman, J. (2014). *Grade Change; Tracking Online Education in the United States*. Babson Survey Research Group and Quahog Research Group, LLC.
- Anderson, T. & McGreal, R. (2012). Disruptive Pedagogies and Technologies in Universities. *Education, Technology and Society*, 15(4), 380-389.
- Bali, M. (2014). MOOC Pedagogy: Gleaning Good Practice from Existing MOOCs. *Journal of Online Learning and Teaching*, 10(1), 44-56.
- Belanger, Y. and Thronton, J. (2012). Bioelectricity: A Quantitative Approach, Duke University's First MOOC. Durham: Duke University. Retrieved from: <http://hdl.handle.net/10161/6216>
- Breslow, L., Pritchard, D.E., DeBoer, J., Stump. G.S., Ho, A.D. and Seaton, D.T. (2013). Studying Learning in the Worldwide Classroom: Research into edX's First MOOC. *Research and Practice in Assessment*, 8.
- Bruff, D.O., Fisher, D.H., McEwen, K.E, and Smith, B.E. (2013). Wrapping a MOOC: Student Perceptions of an Experiment in Blended Learning. *Journal of Online Learning and Teaching*, 9(2), 187-199.
- Caulfield, M., Collier, A., & Halawa, S. (2013). Rethinking online community in MOOCs used for blended learning. Blog post, 7 October 2013. Retrieved from <http://www.educause.edu/ero/article/rethinking-online-community-moocs-used-blended-learning>
- Charmaz, L. (2006). *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. London: Sage.
- Conole, G., Culver, J., Williams, P., Cross, S., Clark, P. & Brasher, A. (2008) Cloudworks: social networking for learning design. *ASCILITE 2008 conference: Hello! Where are you in the landscape of educational technology?* 30 November -3 December 2008, Melbourne, Australia.
- Cross, S. (2013). *Evaluation of the OLDS MOOCs curriculum design course: participant perspectives, expectations and experiences*. Milton Keynes: Open University. Retrieved from: <http://oro.open.ac.uk/37836/>
- Cross, S., Whitelock, D. and Galley, R. (2014). The use, role and reception of open badges as a method for formative and summative reward in two Massive Open Online Courses. *International Journal of e-Assessment*, 4(1). Retrieved from: <http://oro.open.ac.uk/40593/>

Daniel, J. (2012). Making Sense of MOOCs: Musings in a Maze of Myth, Paradox and Possibility. *Journal of Interactive Media in Education*, 2012(3):18. DOI: <http://dx.doi.org/10.5334/2012-18>

Department for Business, Innovation & Skills (2013). The Maturing of the MOOC: Literature review of Massive Open Online Courses and other forms of online distance learning. BIS Research Paper No. 130, September 2013. Department for Business, Innovation & Skills, London.

Driver, P. & Martinez, I. (2015) MOOCs as a massive research laboratory: opportunities and challenges. *Distance Education*, 36(1), 5-25. DOI: 10.1080/01587919.2015.1019968

Ebben, M. and Murphy, J.S. (2014). Unpacking MOOC scholarly discourse: a review of nascent MOOC scholarship, *Learning, Media and Technology*, 39(3), 328-345. DOI: 10.1080/17439884.2013.878352

Finkel, E. (2013) Is there a business model for MOOCs? *University Business*, December 2013. Retrieved from: <http://www.universitybusiness.com/article/there-business-model-moocs>

Firmin, R., Schiorring, E., Whitmer, J., Willett, T., Collins, E.D. and Sujitparapitaya, S. (2014). Case Study: using MOOCs for conventional college coursework. *Distance Education*, 35(2), 178-201.

Fischer, G. (2014). Beyond the hype and underestimation: identifying research challenges for the future of MOOCs. *Distance Education*, 35(2), 149-158.

Greener, S. (2012). Interactive learning environments?. *Interactive Learning Environments*, 20(2), 101-102. DOI: 10.1080/10494820.2012.675739

Griffiths, R., Chingos, M., Mulhern, C., and Spies, R. (2014). *Interactive online learning on campus: Testing MOOCs and other platforms in hybrid formats in the University System of Maryland*, ITHAKA S+R Report.

Haggard, S. (2013). The maturing of the MOOC: Literature Review of Massive Open Online Courses and Other forms of Online Distance Learning. *BIS Research Paper Number 130*, BIS/13/1173.

Ho, A. D., J. Reich, S. Nesterko, D. T. Seaton, T. Mullaney, J. Waldo, and I. Chuang. (2014). HarvardX and MITx: The first year of open online courses, *HarvardX and MITx Working Paper*, 1. DOI: <http://dx.doi.org/10.2139/ssrn.2381263>

Israel, M.J. (2015). Effectiveness of Integrating MOOCs in Traditional Classrooms for Undergraduate Students. *International Review of Research in Open and Distributed Learning*, 16(5), 102-118.

Knox, J. (2014). Digital culture class: “massive” education in the E-learning and Digital Cultures MOOC. *Distance Education*, 35(2), 164-177.

- Koller, D. (2012). How online courses can form a basis for on-campus teaching. *Forbes*, 7 November 2012. Retrieved from: <http://www.forbes.com/sites/coursera/2012/11/07/how-online-courses-can-form-a-basis-for-on-campus-teaching/>
- Kolowich, S. (2013). The MOOC 'Revolution' may not be as disruptive as some had imagined. *The Chronicle of Higher Education*, 8 August 2013.
- Kop, R. and Fournier, H. (2010). New dimensions to self-directed learning in an open networked learning environment. *International Journal of Self-Directed Learning*, 7 (2), 1–19.
- Kulkarni, C., Pang Wei, K., Le, H., Chia, D., Papadopoulos, K., Cheng, J., Koller, D. & Klemmer, S.R. (2013). Peer and Self Assessment in Massive Online Classes. *ACM Transactions on Computer-Human Interaction*, 20(6). DOI: <http://dx.doi.org/10.1145/2505057>
- Liu, M., Kang, J., Cao, M., Lim, M., Ko, Y., Myers, R. and Schmitz Weiss, A. (2014). Understanding MOOCs as an Emerging Online Learning Tool: Perspectives from the Students, *American Journal of Distance Education*, 28(3), 147-159.
- Liyanagunawardena. T.R., Adams, A.A. and Williams, S.A. (2013). MOOCs: A systematic study of the published literature 2008-2012. *The International Review of Research in Open and Distance Learning*, 14(3), 202-227.
- MacIntosh, W., McGreal, R. and Taylor, J. (2011). *Open Education Resources (OER) for assessment and credit for students project: Towards a logic model and plan for action*. Retrieved from: <http://hdl.handle.net/2149/3039>
- Margaryan, A., Bianco, M. and Littlejohn, A. (2015). Instructional quality of Massive Open Online Courses (MOOCs). *Computers & Education*, 80, 77-83.
- Milligan, C.A., Littlejohn, A and Margaryan, A. (2013). Patterns of Engagement in Connectivist MOOCs. *Journal of Online Learning and Teaching*, 9(2), 149-159.
- Open University (2013) *Open Education*. Course website. Retrieved from: <http://www.open.edu/openlearn/education/open-education/content-section-0>
- Rodriguez, C.O. (2012). MOOCs and the AI-Stanford like courses: Two successful and distinct course formats for massive open online courses. *European Journal of Open, Distance and E-learning*, (2), 1–13.
- Saadatmand, M. and Kumpulainen, K. (2014). Participants' Perceptions of Learning and Networking in Connectivist MOOCs. *Journal of Online Learning and Teaching*, 10(1), 16-30.
- Scanlon, E., McAndrew, P. and O'Shea, T. (2015). Designing for educational technology to enhance the experience of learners in Distance Education: How Open Education Resources, Learning Design and Moocs are influencing learning. *Journal of Interactive Media in Education*, 2015(1): 6, 1-9.

Selwyn, N. and Bulfin, S. (2014). *The discursive construction of MOOCs as educational opportunity and educational threat; MOOC Research Initiative Final Report*. Retrieved from: http://www.moocresearch.com/wp-content/uploads/2014/06/C9130_Selwyn-Bulfin-MRI-final-report-publication-report.pdf

Siemens, G. (2012). *MOOCs are really a platform*. Retrieved from: <http://www.elearnspace.org/blog/2012/07/25/moocs-are-really-a-platform/>

Toven-Lindsey, B., Rhoads, R.A. and Lozano, J.B. (2015). Virtually unlimited classrooms: Pedagogical practices in massive open online courses. *Internet and Higher Education*, 24, 1-12.

University of Edinburgh (2013). *MOOCs @ Edinburgh 2013: Report #1*. Retrieved from: <http://hdl.handle.net/1842/6683>

Weller, M. (2015). MOOCs and the Silicon Valley Narrative. *Journal of Interactive Media in Education*, 2015(1): 5, 1–7.

Whitelock, D., Gilbert, L. & Wills, G. (2013, July). *Feedback generators: providing feedback in MOOCs*. Paper presented at the International Computer Assisted Assessment (CAA) Conference, Southampton, UK.

Yuan, L., Powell, S. and Olivier, B. (2014) *Beyond MOOCs: Sustainable Online Learning in Institutions*. Centre for Educational Technology, Interoperability and Standards, UK. Available at: <http://publications.cetis.ac.uk/2014/898>

Zutshi, S., O'Hare, S. and Rodafinos, A. (2013). Experiences in MOOCs: The perspective of students. *The American Journal of Distance Education*, 27(4), 218–227.