

MOOCs: The consequences for learning and teaching in credit bearing programmes

Introduction

This paper reports on work undertaken in 2017 and 2018 for the Centre for Distance Education (CDE) of the University of London. We explored the impact on practice in learning and teaching for academic practitioners and other professionals in the University of London network who have been involved with Massive Open Online Courses (MOOCs). Our findings indicate that there is an additional, ‘unintended’ gain of transferring good practice gained from participation in MOOCs to other aspects of one’s practice, career or professional role. This is not normally an explicit objective when MOOCs are designed and developed. The outcomes of our investigation throw light on the nature of innovation in institutions of Higher Education, and support the strategy of institutional investment in MOOCs in order to reform the broader practice of learning and teaching on and off campus.

MOOCs and the University of London

The University of London initiated its support for MOOCs in 2012, engaging with a range of universities in the University of London network in the production and presentation of MOOCs through the Coursera platform, predominantly using the xMOOCs’, i.e. transmission or broadcast model. The advantage of xMOOCs is that they significantly broaden the number of students who can be exposed to university-level courses (‘ExtensionEngine’ n.d.).

At the University of London, 35 MOOCs have been produced and since launching the Coursera partnership in 2012, the University has seen 1,486,946 (July 2018) enrolments across its MOOC portfolio. This includes enrolments across all sessions prior to the move to the current ‘On Demand’ format.

This support for the MOOC mode of provision over the last 7 years can be seen in the broader framework of innovation in opening up post-secondary Higher Education at the University of London for more than 150 years (Tait 2018). In 1858 the University of London created its External Studies Programme, breaking the link between study and place in what was a revolutionary move. This permitted new cohorts of people to enter Higher Education from, many countries around the world as well as town and country in the UK when no university existed, extending access on the basis of geography, religious affiliation, social class, and later gender. Initially serving British people living around the world in the former British Empire, this opportunity was later taken up by the indigenous peoples of these countries and provided a major route for opportunity for colonised peoples. The system demanded the student follow a University of London curriculum and sit University of London examinations in a registered and invigilated centre. They could study on an independent basis or receive tuition and support from one of the many colleges that came into existence for this specific purpose, pioneering many of the methods of correspondence and later distance education along the way. At least 7 Nobel Prize winners are found amongst the University of London External Studies graduates. As significant as any action in the spirit of openness is the fact that the University of London was the first university in the UK in 1869 to permit women to

take examinations, and 10 or so years later to admit women to degrees. The University of London's external student body stands at present at approximately 52,000.

MOOCs and critical debates

It is in this context of outreach and open education that the University of London's move into the provision of MOOCs can be framed. On a global basis by the end of 2018, MOOCs had registered some 101 million learners on 11400 courses, produced by more than 900 universities (Shah, 2018). This extraordinary phenomenon some 12 years since the first development of MOOCs has seen an online learning experiment evolve to a mass learning opportunity. It has not been without critical debates and indeed sharp criticism. The focus of discussion has included:

1. understanding student motivation for enrolling in MOOCs: a significant factor that frequently stemmed from the desire of educational providers to benefit from any motivation the students had in terms of recruitment to credit bearing and fee paying programmes;
2. the reasons for student non-completion: attrition rates are particularly high in MOOCs and significantly higher than rates in the distance learning sector;
3. the inadequacy of the MOOC model for Higher Education learners who had not already been successful at that level, thus diminishing the claims of significant worldwide expansion of educational opportunity through MOOCs;
4. instructors' reasons for offering MOOCs: pedagogical and learning design motivations were an intense focus of discussion;
5. the challenges involved for institutions and staff: frequently this refers to the logistics of support; setting assessment, and providing feedback to big numbers of students;
6. student behaviour in MOOC communication hubs, for instance the realities of conversation in discussion fora as against the ambitions of online peer learning;
7. the challenges of peer assessment: still contested by many in the educational community, peer assessment came across as a key element of the MOOC model;
8. predicting student performance or dropout using statistical methods and learning analytics: the MOOC expansion took place in parallel with a renewed interest of using online environment data to analyse and predict student behaviour.

On the other hand, Zawacki et al (2018) summarised the main points of criticism discussed in the academic community around the perceived disadvantages of MOOCs. These included: questionable course quality; high dropout rates; unavailable course credits and accreditation of prior experiential learning; ineffective assessments; complex copyright issues; difficulty in evaluating students' work; a sense of speaking into a vacuum due to absence of immediate feedback from students; heavy demands of time and money and a lack of student participation in interactive functions.

What marks a MOOC out from 'conventional' online learning is that while there is a wide range of experimentation limited professional academic time (sometimes virtually none) is allocated to guiding or

supporting individual learners. Critics argue that xMOOCs are inferior to the university courses they mimic because in pursuit of low cost and large scale courses they eliminate support in terms of teacher-student interactions and involve limited student-student interactions (ExtensionEngine, n.d.). This is probably the biggest difference between other forms of online learning and learner support in MOOCs. However, an interesting side effect is that the premise that guides several debates on how MOOCs work is: should we be spending more time when we design MOOCs to enhance those features that support the self-regulated learner? (Hatzipanagos, 2015), self-regulated learning being the ‘holy grail’ of online education.

Rationale for this research

While the institutional motivation to engage with MOOCs was in many cases unclear, our understanding is that it included the explicit and progressive intention to offer lifelong learning opportunities at no or low cost; to boost institutional profile; to recruit students onto formal programmes; to make money, and to keep up with the field in a major area of innovation. In most cases there was little more than aspiration in terms of business case, following common practice in many California Technology companies where the core aim is first to build something new at scale and think of how to monetise the project at a subsequent stage. From a pedagogy point of view, our previous research outcomes indicated that MOOCs offer a potential for innovative instructional designs to support self-regulated learning, unlike approaches in ‘traditional’ online courses (Hatzipanagos & Tait, 2014).

However, this time in our research we proposed to explore a theme which is as yet, as far as we know, unexamined, namely the unintended impact on campus based teaching for those who had been involved in MOOC production and presentation. While Daniel had concluded some years ago (Daniel 2012) that the desire for innovation in teaching on-campus, particularly to test the potential of some of the new technologies, had provided a significant stream of motivation for very well known research focused universities, there had not to our knowledge been any investigation of if and how that innovation had actually happened.

Our hypothesis was that involvement in online teaching through MOOCs would, for many academics, provide the first opportunity for online teaching, and that the modalities of multimedia and other MOOC learning design features might result in changes in attitude towards online pedagogies and learner support. Our intention was to uncover in detail the impact of involvement in MOOC production and presentation on broader academic practice, and to reveal how, if at all, MOOCs had been an unwitting change agent for the academic community.

Methodology

To this end with the support of the Centre for Distance Education we interviewed nine academics from six universities and organisations who were involved either in the production or delivery of MOOCs (as MOOC directors of production or academic leads or in learner support) through the University of London supported partnership with Coursera. Our semi-structured interviews were based around the following core lines of enquiry:

Has your involvement with MOOCs had any impact on:

- I. Your mainstream teaching? If so, in what ways?
- II. Your professional priorities in teaching and research

We transcribed and coded the collected data to identify dominant themes within these two broad categories.

Findings

Institutional attitudes to MOOCs

The participants of this study referred to the intellectual challenge of finding solutions when enhancing learning and teaching in open and distance learning environments. There was an overall feeling that despite the fact that institutions were willing to engage with innovation in open learning, they were unprepared for the disruption that MOOCs were imposing. Participants thought there was a geographical challenge: colleagues ‘over here’ were less keen, whereas target audiences overseas appreciated what MOOCs had to offer. In addition, university staff that had direct involvement with MOOCs were very positive, whereas the broader university appeared to be more sceptical; though it was felt that ‘attitudes would change gradually’.

In certain disciplines, the need for engaging learners was a key driver for their development, e.g. two participants thought that MOOCs could redress the imbalance in medical education. Medical education inequity meant that medical education was ‘out of reach’ for many of the learners in the target audience.

Impact on mainstream teaching

The impact of MOOCs can be direct when MOOCs are embedded in the curriculum, either as foundation courses or as learning materials that engage learners in formal study. However, this impact can be indirect and unintended, e.g. when learning design features of MOOCs challenge and enrich ‘traditional’ and more established teaching practices. In blended learning, the influence is on campus practices, e.g. introducing MOOC attributes into campus classes and associated online activities.

MOOCs seemed to influence attitudes of the participants of this study towards ‘on campus’ teaching and their approaches to blended and online teaching, either in postgraduate or undergraduate teaching, though MOOCs seemed to be most influential in postgraduate education. All the participants of this study believed that their engagement with MOOCs had an impact on their practice. A dominant attitude was that involvement in part changed classroom teaching, and helped them to embrace new developments in faculty. Responses referred to acquisition of digital skills; embracing innovations; reviewing key pedagogical practices in learning design on campus (including the use of multimedia); adopting automated assessment and assessment by peers. Five participants referred directly to embedding MOOCs into more ‘traditional’ online learning approaches; leading to

a transformation of the curriculum e.g. encouraging learners to engage with flipped classroom activities. The following statements from participants illustrate these attitudes:

‘MOOCs made me reflect on role of teacher... made me think about being personally the conduit of information’

‘MOOC work reinforced interests in learning and teaching’.

‘(MOOCs) have increased (my) commitment to pedagogy and (they are) of value to Teaching Excellence Framework’.

‘(I) combined (MOOCs) with flipped classroom to change on-campus practice’.

‘Demystified online learning’.

‘Introduced multimedia into campus classes.’

‘Used informal (formative) assessment on campus as a result of MOOCs’.

‘have begun to normalise online learning’.

All participants referred to embracing the use of multimedia (particularly video - being the dominant multimedia technology in MOOCs). Adopting assessment techniques and reinstating automated assessment as a ‘valid’ assessment format was commented on by six of the participants. Changing attitudes towards use and acceptance of peer learning as an alternative assessment format and also reinstating it as summative as well formative tool for evaluating learner progression and achievements was key theme in comments by four of the participants. However, not all participants were positive about the adoption of peer learning on campus. As someone commented:

‘(I) experimented with peer feedback on campus...not a very big success. On campus students are a bit ‘jumpy’ having peers giving grade...good for work in progress feedback and formative assessment...but final mark is given by me not a peer.’

Impact on professional priorities in teaching and research

In this part of our research we looked for evidence that MOOCs overall played a role in influencing professional priorities for the participants of this study. In this respect it seems that a significant related factor was embracing change as career progression, and how this could impact on distance learning professionals’ career advancement. Four participants referred to direct professional gain from their involvement with MOOCs.

Other comments on professional priorities referred to the adoption of teaching resources and engaging with a broader target population of learners:

‘Made me aware of a wide range of resources for students’

‘I have developed capacity to engage with wider range of students, e.g. refugees’

In two cases it was volunteered that the focus on pedagogy in MOOC development had led to publications, and to exploring a new research area in addition to the core subject based focus:

‘Have published for first time on learning and teaching’.

Participants also referred to the impact that their involvement had on their colleagues’ attitudes towards MOOCs and their attitudes to evaluation, including the evaluation of their own practice. It seems that involvement with MOOCs was a catalytic factor there. The ones who were involved were happy to transfer some of the successful engagement with MOOCs to mainstream campus-based and blended learning practices. It must be said that according to our data, this was not always done successfully and there were cases where they did not achieve what they expected. An example of a limiting factor was given as the lack of digital skills and integrating MOOC content without sufficient knowledge of how good practice in MOOCs could be transferred to mainstream teaching. However, a motivating factor was the reduction of teaching workloads that could result from accumulated experience in MOOCs involvement. As an interviewee commented:

‘We are getting better at this. We have a good grip now about managing the impact on people’s workload.’

Conclusion

While our investigation was small scale it suggests involvement with MOOCs has indeed had indirect and unintended outcomes on mainstream teaching practice. There is evidence to suggest that MOOC involvement has challenged and enriched traditional teaching practices for the participants of this study in both established distance education programmes and on campus teaching activities. It has achieved this by:

- Supporting engagement with a wider range of learners
- Stimulating reflection on learning, teaching and assessment practice
- Reviewing professional priorities in learning and teaching

In addition to the range of motivations for institutional commitment to MOOCs, it may be added that MOOCs seem to play a change agent role by accelerating innovation with digital practices in both distance and campus based programmes. We might expect in the light of innovation theory to see accelerating adoption of a wide range of technology supported practices in on-campus and blended teaching modes as the experience gained in MOOCs is diffused beyond the original MOOC pioneers into the broader academic community. We can consider the institutional investment in MOOCs, much criticized on occasions in the absence of any real business model, as intelligent investment in innovation. Within an overall portfolio of institutional spend, and spend on innovation more specifically, this can be defended as proportionate, rational, and legitimate, rather than the contrary which have been charges levelled so often at the MOOC phenomenon.

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Appendix 1: Questionnaire

1. What has been your involvement with MOOCs? E.g.
 - a. MOOC director of production
 - b. Learner support
 - c. Another role
2. How many MOOCs have you been involved with?
3. What were your aims in getting involved with MOOCs?
4. Have you followed any MOOCs as a learner? How many? How many did you complete?
5. Has your involvement with MOOCs had any impact on your mainstream teaching? If so, in what ways?
 - Use of multi media
 - Flipped classroom
 - MOOC in campus based or eLearning course
 - Learner support
 - Assessment
6. Has your involvement with MOOCs had any other impact on your professional priorities in teaching or research?
7. Has your institution or your colleagues been aware of any impact of involvement with MOOCs on your teaching? If so what is their attitude?
8. Has your involvement with MOOCs been positive overall? In what ways?

Appendix 2: Interviewees

Interviewee Number	Role	Affiliation
1	Senior Lecturer	Goldsmiths
2	Lecturer	Goldsmiths
3	Senior Lecturer	SOAS
4	Lecturer	KCL
5	Head of Department	UCL
6	Senior Research Associate	UCL
7	Associate Dean	London Business School
8	Lecturer	SOAS
9	E-learning Director	LSHTM