

Emerging patterns in MOOCs: Learners, course designs and directions

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Abstract

Engagement with Massive Open Online Courses (MOOCs) at the University of Edinburgh has emerged from its strategic priorities to explore and innovate in the area of online and technologically supported approaches to teaching and learning. This paper provides an account of analysis aimed at understanding who Edinburgh MOOC learners are, who elects to participate and the aspirations of that population, and the place that the MOOC will occupy in the University's online learning ecology. The analysis addresses a number of predictions that have been made about MOOCs since 2012, including their use for providing educational opportunities to the disadvantaged; global uptake of online learning; growth of an 'educational imperialism'; and the claim that 'MOOCs are for male geeks', and concludes with some observations about the University of Edinburgh's future plans in this space.

Keywords: digital education, higher education, MOOCs, widening access

Introduction

Technology in education has been high on our agenda at the University of Edinburgh for more than twenty years. We have been early adopters; beginning in the early 90's with email-for-all; university-wide VLEs in the late 90's; online distance education in the mid 2000's, and most recently MOOCs in 2012 (MacLeod, Haywood, Haywood & Anderson, 2002; MOOC data report #1). Working with others, including our graduate students, we have extended our

scope to comparative studies (Haywood, Haywood, MacLeod & Tenhonen, 2003; Hu, 2007; Alkhatnai, 2013). In this article, we shall present some of our most recent findings from our Massive Open Online Courses (MOOCs), and reflect on the insights that they offer into this rapidly changing area of digital higher education. We shall close with some predictions for the next few years.

Our reasons for offering MOOCs are described in detail in our recent MOOC Report #1 (MOOCs @ Edinburgh Group, 2013) and they will not be re-stated in full here, but briefly they include: outreach; research for our on-campus blended courses and our expanding range of taught online degree programmes; and injecting fun into teaching with a sandpit for faculty to try out and debate new ideas in online learning.

In 2012, when the hype about MOOCs was most intense, many assumptions and predictions were offered about them and what they might achieve. Alongside the bold '*end of higher education as we know it*' predictions (Kolowich, 2013), were some more testable statements, including outreach of digital education to the disadvantaged (Coughlan, 2014); global uptake of online learning (Martin & Walter, 2013); growth of an 'educational imperialism' (MacGregor, 2013); 'MOOCs are for male geeks' (Straumsheim, 2013), and 'a transformation of traditional ways of teaching and learning' (Ebben & Murphy, 2014). We, and a small number of other education researchers, began to gather data to test these predictions.

At the outset it was clear to us that designing a MOOC is quite different to designing a

standard university course; it is a case of 'designing for the unknown learner' (MacLeod, Haywood, Woodgate & Sinclair, 2014). Clearly, however, when one designs any course, one has to have some learner cohort in mind, and so five of our first six MOOCs were designed at entry to university Bachelor level and one was at Master level. When we created our first MOOCs in 2012, little was known about those enrolling, and so a first question we asked ourselves as we offered our first MOOCs was: who are the tens of thousands of individuals who sign up to learn on short, free, online courses that offer no qualification or credits, and what are they hoping to achieve? An immediate second question was: as these are the first MOOCs to exist, are they attracting an 'unusual audience', and if so, will a stable audience arise and if so, when? To answer these questions we have surveyed our MOOC participants at the start and end of every MOOC with a standardised set of questions. To date we have at least two offerings of each of our first 6 MOOCs, and some patterns are emerging from the approximately 150k responses we have gathered from the 600k people who have enrolled. The data and analysis from the first offerings of these six MOOCs can be found at <https://www.era.lib.ed.ac.uk/handle/1842/6683>.

MOOC learners are worldwide

Our learners are indeed global, and are very widely distributed across the world, in c200 countries, and although the US is the largest recruitment source on average (originally 26%, although declining and now 20%), it isn't the majority source, even though Coursera, the MOOC platform, is a US company; and nor is the UK, even though Edinburgh is a UK university. The geographical pattern of

enrolments has been broadly stable between the two iterations of the six MOOCs (around 12 months apart) but some interesting 'spikes' are visible that may indicate a trend (Figure 1). Enrolments from People's Republic of China (PRC) rose sharply, most likely due to the release of a Coursera server behind the PRC firewall, as did those from India, where we know publicity for MOOCs has been strong, especially amongst Indian students. We might expect these changes to accelerate, particularly as crowd-sourced translation of particular MOOCs into local languages continues, and non-English platforms emerge. This will result in an even more international MOOC learner population than at present. The data that we will present here are drawn from anonymous surveys of our MOOC participants (response rates approx. 20% on average). The international distribution of learners has however been independently verified by an analysis of data gathered from the Coursera MOOC platform, showing essentially the same pattern of international participation based on the IP addresses from which the participants come. This would seem to suggest that our survey respondents are representative of the wider population of MOOC participants.

MOOCs and widening access to education

Despite the initial rhetoric that MOOCs would offer universal access to higher education courses for the disadvantaged, this has not been evident in the data. The great majority of learners are well-educated (c70% with a first or second degree) and in employment. This has changed little between offerings of our

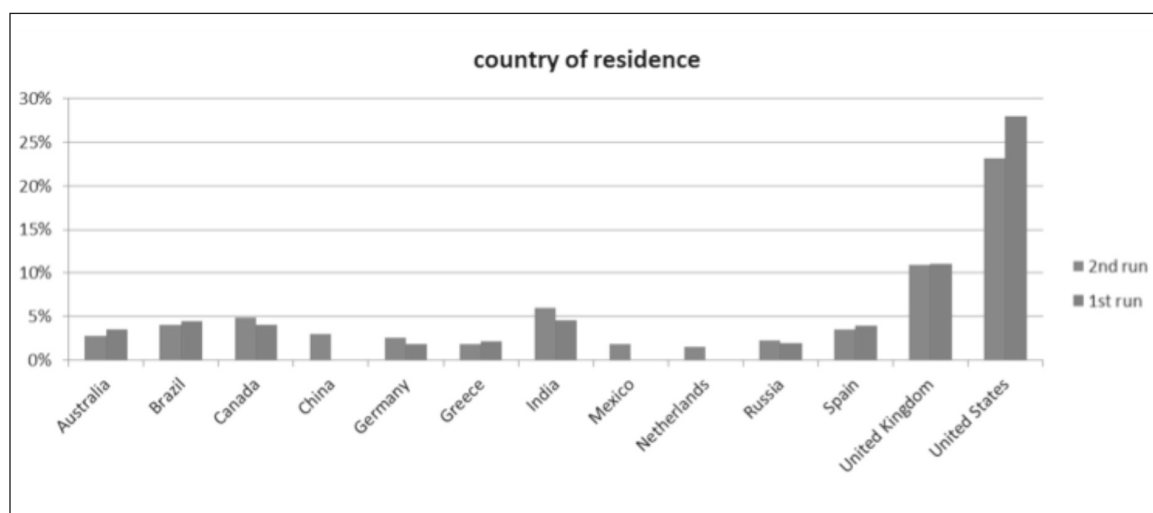


Figure 1. Main countries of residence of MOOC learners on 6 Edinburgh MOOCs in the 1st and 2nd iterations