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A First Briefing on MOOCs

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This memo is addressed to members of our university (and maybe others) who want to know whether they need to know about MOOCs, and what the first things they would need to know are.

MOOCs were the academic buzzword of 2012.¹ But what is a MOOC. Do we care? Should we? In this short memo we begin with a list of questions, in no particular order, that we have either asked or been asked. The discussion that follows will contain the answers to these, and other, questions, although there may not be a separate section for each question.

Some surprising facts about MOOCs

- The majority of MOOC participants already have a degree.
- Despite the fact that there is no proven business model for a MOOC, many universities are developing courses.
- It is the “elite” universities who are signing up to deliver MOOCs.

FAQs

What is a MOOC

- What does it stand for?
- Where did they come from?
- How is it taught?
- Who teaches them?
- Who signs up to study them?
- What is Glasgow doing?
- How is Glasgow involved?
- Why can't we just use Moodle?
- Should I be worried?
 - Will I be forced to teach a MOOC?
 - Will I be replaced by a MOOC?
- Isn't this really just distance education?
- Is this just another 10 minute wonder?
- What's the business model?
- How do students get credit?
- How on earth can you assess that many students?

¹ Daniel 2013, New York Times 2012

- Don't an awful lot of people drop out?
- Where can I find out what MOOCs are running?
- How do I get involved?

What is a MOOC?

What does MOOC stand for?

MOOC stands for Massive Open Online Course.² Michael Gaebel offers the following definition of MOOCs:

- they are online courses
- with no formal entry requirement
- no participation limit
- are free of charge
- and do not earn credits.³

How did they start?

MOOCs began in Canada in 2008. Dave Cormier and Bryan Alexander coined the term in 2008 to describe a course by George Siemens and Stephen Downes.⁴ MOOCs hit the headlines in 2012 when companies such as edX (a non-profit organisation formed by Harvard and MIT), Coursera (run by Andrew Ng of Stanford) and Udacity (started by Sebastian Thrun of Stanford) formed.

Historically they also have their roots in open education and online learning: movements such as the Open Educational Resources (OER) and more recently online providers such as the Khan Academy and iTunesU.

How is a MOOC structured?

Most MOOCs are very like traditional HE courses in structure, with courses lasting from between 4-10 weeks.⁵ Learners sign up for a course which begins on a given date. Lessons are made available each week, with learners working approximately 2-6 hours a week in their own time, watching "podcasts" (typically videos broken into small chunks of about 10 minutes), reading recommended materials and taking a quiz at the end of the week. Learners who complete a course may be awarded a certificate. There is discussion about extending the assessment so that students can choose to pay for a credit-bearing certificate, or sit an invigilated exam in a test centre, but details have not been established.

² This is the most common one, used for example by Liyanagunawardena 2013 though there are others. See this for some examples: http://en.wikipedia.org/wiki/File:MOOC_poster_mathplourde.jpg

³ Gaebel 2013

⁴ "The course, *Connectivism and Connective Knowledge*, was presented to 25 fee-paying students on campus and 2,300 other students from the general public who took the online class free of charge (Wikipedia, 2012a)." (Daniel 2012)

⁵ DBIS (Department for Business and Innovation Skills) 2013, p10

Categorisations of MOOC

Types of MOOC

MOOCs may be categorised as xMOOCs (MOOC 2.0) and cMOOCs (MOOC 1.0).⁶ An xMOOC is really just an online version of a traditional course, composed of lectures (often just repurposed from its original setting), recommended readings and summative quizzes. Courses will typically have discussion forums and longer assignments will be peer marked. According to commentators, Udacity, Coursera and edX deliver xMOOCs.

The “c” in cMOOC stands for “connectivist”,⁷ from the pedagogical theory of connectivism associated with George Siemens and Stephen Downes.⁸ These MOOCs emphasise the importance of collaborative learning and social networking. Futurelearn’s aim is to embed peer networking into the design of the platform and courses and thus to deliver cMOOCs. Siemens suggested that the two types can be distinguished as follows:

Our MOOC model emphasizes creation, creativity, autonomy, and social networked learning. The Coursera model emphasizes a more traditional learning approach through video presentations and short quizzes and testing. Put another way, cMOOCs focus on knowledge creation and generation whereas xMOOCs focus on knowledge duplication.⁹

The main differences between a MOOC and a traditional distance learning course are:

- a) the class size. Typically, MOOCs have no limit on the number who may enrol, or a very high limit (e.g. MOOCs which have been subscribed to a cap of 10,000 students);
- b) the method of assessment. The majority of assessments in MOOCs are peer, not tutor, assessments.

The purposes of a MOOC

Although there has been extensive writing about MOOCs in peer reviewed journals, the specialised educational press, blogs and the general media,¹⁰ there is as yet no consensus about the purpose of MOOCs. Two potential visions of the purpose of a MOOC are:

- The cynical. MOOCs are seen as a way to get virtual bums on virtual seats: the potential to make money and the privatisation of HE.

⁶ DBIS 2013 p10-11

⁷ JISC CETIS 2013

⁸ See Kop 2011, Tschofen and Markness 2012 for a definition of connectivism.

⁹ Siemens 2013

¹⁰ For example, DBIS 2013 is a literature review of over 100 items.

- The altruistic. MOOCs are seen in terms of widening access and widening participation: the democratisation of learning.

There is also no consensus about the value of a MOOC. Again, we suggest two possible visions:

- The pessimistic. MOOCs are just bad distance learning. No good can come from them.
- The optimistic. MOOCs represent a new and exciting way of teaching and learning and addressing new audiences. Vive la révolution!

However, while there is disagreement about the value and purpose of MOOCs, there is considerable agreement about how they are changing the landscape of HE.¹¹ It's too early to tell who, if anyone, is right about MOOCs.

Categories of MOOC

We've identified some broad categories of MOOC, though we're sure there are others:

- Special (niche) interest: there might only be a handful of folk in the world who share a passion, but a MOOC can connect them all together.
- AnySubject101. Introductory courses repurposed as a MOOC.
- A whistle stop tour of a subject. Not AnySubject101, but a course designed to pique students' interest in a subject.
- A first ever course on an emerging topic.

How many MOOCs are there?

Lots! There are new ones starting all the time. For an idea of the number, range and diversity, there's this site, which states that its objective is to: "provide a simple central directory of existing free Massive Open Online Courses available" <http://www.moocs.co/>

Types of Stakeholder interest

Demographics

Appendix B contains some figures and graphs taken from the Edinburgh MOOC Report (45,812 responses, 21%). The most startling (to us) finding is that the majority of MOOC learners have already successfully completed a degree at HE level:

- 70% of learners already have an undergraduate degree.
- 40% already have a postgraduate degree as well,
- 16% have college or additional training qualifications,

¹¹ DBIS 2013 p12

- Less than 13% are only educated to school level.

So while there is a small percentage who are only educated to school level, it seems that the majority of learners in MOOCs at present are highly educated people wanting to learn new things.

Learners

People sign up for MOOCs for a wide variety of reasons. Types include:

- Lifelong learning (the Edinburgh report suggests that this, rather than traditional university student, is the typical MOOC learner).
- Addicted to learning.
- Brush up on subject knowledge.
- Want to find out if a subject is right before enrolling in formal education.
- Find out if there are any useful hints for one's own teaching.
- Find out what MOOCs are like.
- Getting a certificate.
- Career enhancement/CPD.
- No local resources (the Edinburgh report identifies a small percentage of learners in this category).

Teachers

As with learners, there's going to be a wide variety of motivations for teaching a MOOC. We've identified the following reasons:

- Potential to connect with a huge audience of enthusiastic learners.
- Potential to connect with other subject specialists.
- Commitment to widening access and widening participation.
- Potential for A/B testing: finding out what *really* works so one can implement it in one's own classes.
- Cram all of one's teaching into one short, intensive burst to free up time for other more interesting work.

Institutions

Again, there are a range of reasons that an institution might decide to run a MOOC. We've identified the following:

- Build a reputation for innovation, originality, great showcase teaching: marketing (advertising and recruitment).
- Commitment to widening access and widening participation (outreach).
- What can be learnt about teaching in HE? (Lessons that can be applied elsewhere).
- Get experience of online learning and prepare materials.

- Chance to collaborate with partner institutions (potential for huge grants!).
- Possibility of monetisation.
- Not being left out.

New Perspectives

Attrition/Retention

Although large numbers of learners sign up for a MOOC, many do not complete. There has been considerable writing about how terrible this is. And, of course, in traditional HE high drop-out rates are a cause for concern. However, this is not necessarily the case with MOOCs. We suggest that there is a need to look at this a different way from traditional courses. In a MOOC, learners pick and choose what they want to learn, they are not necessarily interested in completing the whole course. We may see them as “dropping out”, while they see themselves as having finished learning what they required.¹² This was certainly the experience of learners on the Edinburgh courses, where 98% of learners who completed the exit survey said that they had got what they had wanted from the course.¹³ The suggestion is that we need new models of learner types for this new type of learning.¹⁴ The Edinburgh report also makes the important point that even with “drop out”, these courses still have much higher absolute numbers of students completing than “traditional” courses.¹⁵

Business Model

At the moment there is no clear business model for MOOCs in HE institutions. Daniel suggests that, in the event of monetisation of a MOOC, the majority of the revenue would go to the company (e.g. Futurelearn), not to the university. He lists eight possible business models from the Coursera partnership agreement:

- Certification (students pay for a badge or certificate)
- Secure assessments (students pay to have their examinations invigilated (proctored))
- Employee recruitment (companies pay for access to student performance records)
- Applicant screening (employers/universities pay for access to records to screen applicants)
- Human tutoring or assignment marking (for which students pay)
- Selling the MOOC platform to enterprises to use in their own training courses
- Sponsorships (3rd party sponsors of courses)

¹² Daniel 2012 DBIS 2013 p 6

¹³ Edinburgh Report 2013 p25

¹⁴ DBIS 2013 pp 25-27

¹⁵ See also Gaebel 2013 p8

- Tuition fees.¹⁶

At the time of writing (October 2013) another model is emerging. At the end of September Harvard announced that they will be delivering SPOCs (Small Private Online Courses).¹⁷ As the BBC article says, it's not hard to imagine that these could become fee-paying courses in the future. Other recent twists are the DOCC (Distributed Open Collaborative Course) recently announced by the New School for Public Engagement, and the SMOC (Synchronous Massive Online Course) offered by the University of Texas.¹⁸

Other considerations

Workload

A question we are often asked is how much actual work goes into designing and delivering a MOOC. Research by the Chronicle of Higher Education found that it was typically took 100 hours of academic time to design a MOOC and 8-10 hours per week while the course was running to deliver and support it.¹⁹ As the report says, this is a lot of work. However, those who have delivered MOOCs describe it as an exhilarating experience. For example Martin Weller, Professor of Education at the Open University, has this to say about his MOOC-type teaching: "I will say though that I'd do it again, and it's been one of the most engaging teaching experiences I've had for a long time, if also one of the most exhausting."²⁰

George Siemens (who delivered the first ever MOOC) has produced a set of slides which describe the workload involved in planning and running a MOOC.²¹

Will I be replaced by a MOOC?

Are MOOCs a threat to traditional HE, or should we welcome them?

Some people think they are a threat. For example Clay Christensen predicts "wholesale bankruptcies across HE" and Sebastian Thrun predicts that there will only be 10 universities left in the whole world in 10 years time.²²

We're not too concerned. Every time a new innovation is reported in the media we are told of the death of the lecture. Martin Weller makes this point particularly well in his recent blog post "Will Killer Robot Dogs Mean The End Of Universities?"²³ What does seem likely is that MOOCs will have some effect on whom and how we teach, and that we are going to need to develop new models of teaching and learning in

¹⁶ Daniel 2012

¹⁷ BBC 2013

¹⁸ Inside Higher Education 2013, University of Texas at Austin 2013

¹⁹ DBIS 2013 pp 70-71

²⁰ Weller 2013

²¹ Siemens 2012 b

²² The Economist 2012

²³ Weller 2013b, Daniel 2012

order to deliver these courses. Those of us who don't think that how we do things now is perfect want to look at MOOCs a bit more.

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If you only watch one thing watch:

Cormier, D (2010) *What is a Mooc?*
<http://www.youtube.com/watch?v=eW3gMGqcZQc#t=256> (video, 4.27 minutes)

Useful Websites

Futurelearn <https://www.futurelearn.com/about>
Moocs directory <http://www.moocs.co/>
Wikipedia article: http://en.wikipedia.org/wiki/Massive_open_online_course

Blogs/websites by practitioners involved with MOOCs

Dave Cormier: <http://davecormier.com/>
Stephen Downes' MOOCS guide <https://sites.google.com/site/themoocguide/>
Stephen Downes' MOOCS directory <http://www.mooc.ca/courses.htm>
George Siemens: <http://www.elearnspace.org/blog/>
Martin Weller: <http://nogoodreason.typepad.co.uk/>

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Appendix A: Glasgow MOOCs with Futurelearn

What is Glasgow doing?

In 2013, the University of Glasgow signed up with Futurelearn, a private company owned by the Open University.²⁴

What MOOCs do Glasgow have planned?

Glasgow has agreed to deliver two MOOCs during 2014. Genomics will begin in May 2014, International Law in June 2014. All academic staff were asked to submit a proposal if they were interested. As far as we know there was no pressure put upon individuals to do so. For further information contact Kerr Gardiner, Head of the Learning Technology Unit: Kerr.Gardiner@glasgow.ac.uk.

Why use Futurelearn when we already have Moodle?

There are a few good reasons why the University of Glasgow is partnered with Futurelearn rather than trying to host its own version:

- Resources. Our current Moodle servers were commissioned to service our traditional teaching and learning. They do not have the capacity to host MOOCs as well.
- Cost. By using Futurelearn's platform we are able to run our MOOCs without needing to invest in the necessary infrastructure. If our experiment is not successful, we are not left with surplus costly equipment.
- Risk. Nobody knows what the future of the MOOC is. By being partners with Futurelearn we allow them to take most of the risk while we can be part of the experiment.
- Software. Futurelearn are developing a new platform in order to deliver a socially networked learning environment. This is beyond the capability of Moodle.

The Futurelearn platform is still in the early stages of development, and not all of the planned features (notably the peer assessment features) are available yet. It does look interesting to us, and we are cautiously optimistic about it.

²⁴ <https://www.futurelearn.com/> Also see DBIS pp85-6 for an interview with Simon Booth, CEO of Futurelearn

Futurelearn Partners

As of 3rd October 2013: 26 Universities and 3 non-university partners:²⁵

- University of Auckland
 - University of Bath
 - University of Birmingham
 - Bristol University
 - Cardiff University
 - University of East Anglia
 - University of Edinburgh
 - University of Exeter
 - University of Glasgow
 - King's College London
 - Lancaster University
 - University of Leeds
 - University of Leicester
 - University of Leeds
 - Loughborough University
 - Monash University
 - Newcastle University
 - University of Nottingham
 - The Open University
 - Queen's University Belfast
 - University of Reading
 - University of Sheffield
 - University of Southampton
 - University of Strathclyde
 - Trinity College Dublin
 - University of Warwick
-
- The British Council
 - The British Museum
 - The British Library.

²⁵ <https://www.futurelearn.com/partners>

Appendix 2: The Edinburgh Findings

In September 2013 Edinburgh University published a report about their first six MOOCs delivered with Coursera. These courses had a total initial enrolment of just over 309,000 learners. In order to assess these course, Edinburgh University sent a pre-launch survey to 217,512 learners one week before the courses started, of whom 45,812 (21%) replied.

- Respondents were from 203 countries.
- The two top countries were USA (28%) and the UK (11%).
- One third (33%) of learners were aged between 25-34 years.
- The top occupations for learners were “Teaching and Education” (16.8%), “Student” (14.8%) and “IT and Information Services” (9.5%).
- Over 70% of learners already have an undergraduate degree.
- 40% already have a postgraduate degree as well.²⁶

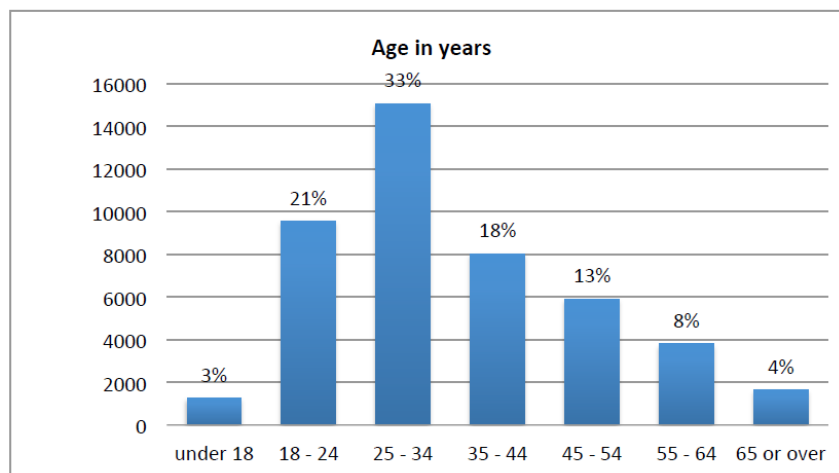


Figure 2 - The distribution of responses to Q8 'What is your age? (in years)' with percentage of total shown

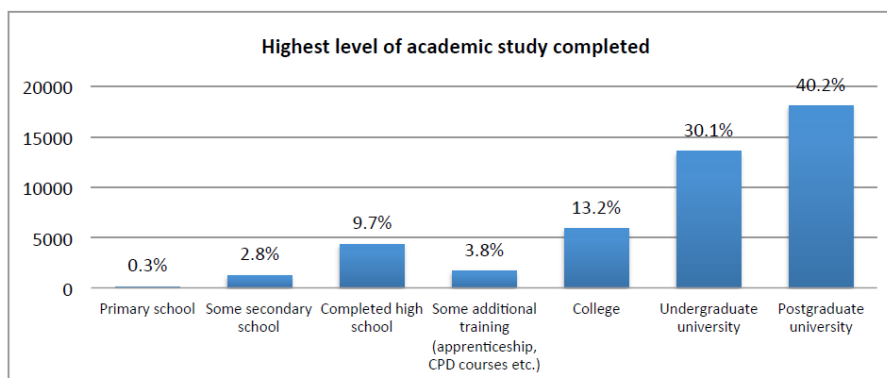


Figure 3 - The distribution of responses to Q10 'What is the highest level of academic study you have completed?' with percentage of total shown

²⁶ Edinburgh Report 2013

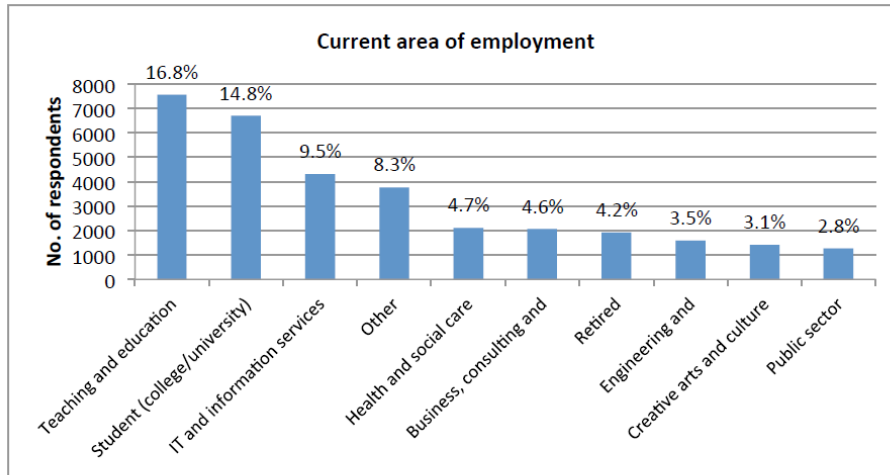


Figure 4 - The highest 10 responses to Q9 'What is your current area of employment?' with percentage of total responses shown

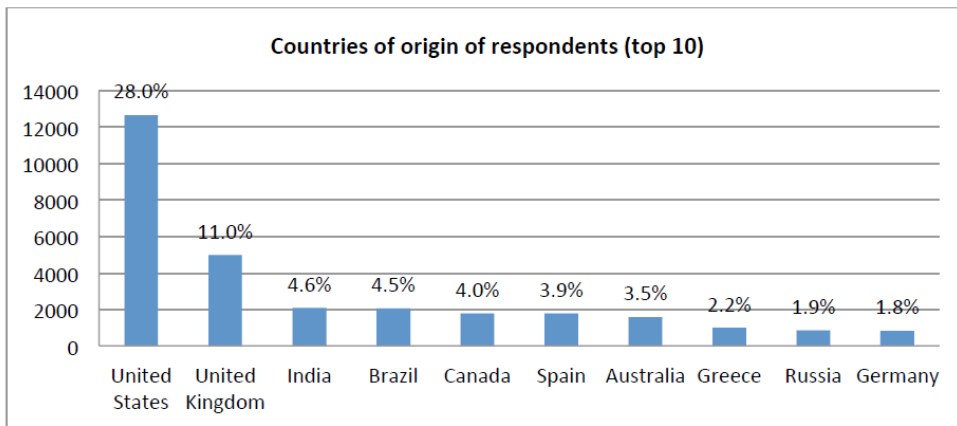


Figure 5 - The highest 10 responses to Q6 'Where do you live?' with percentage of total responses shown

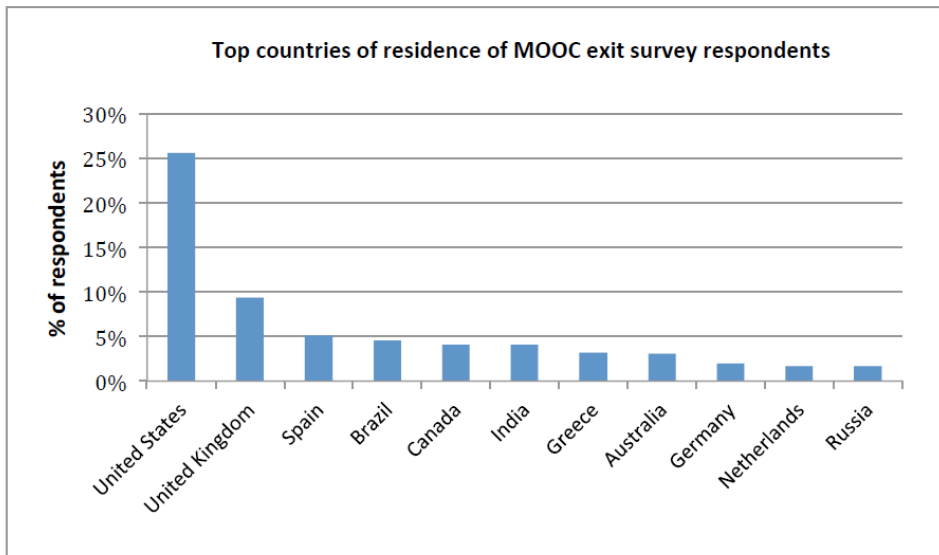


Figure 12 - Combined exit survey results to Q17 'Where do you live?' shown as a percentage of total respondents

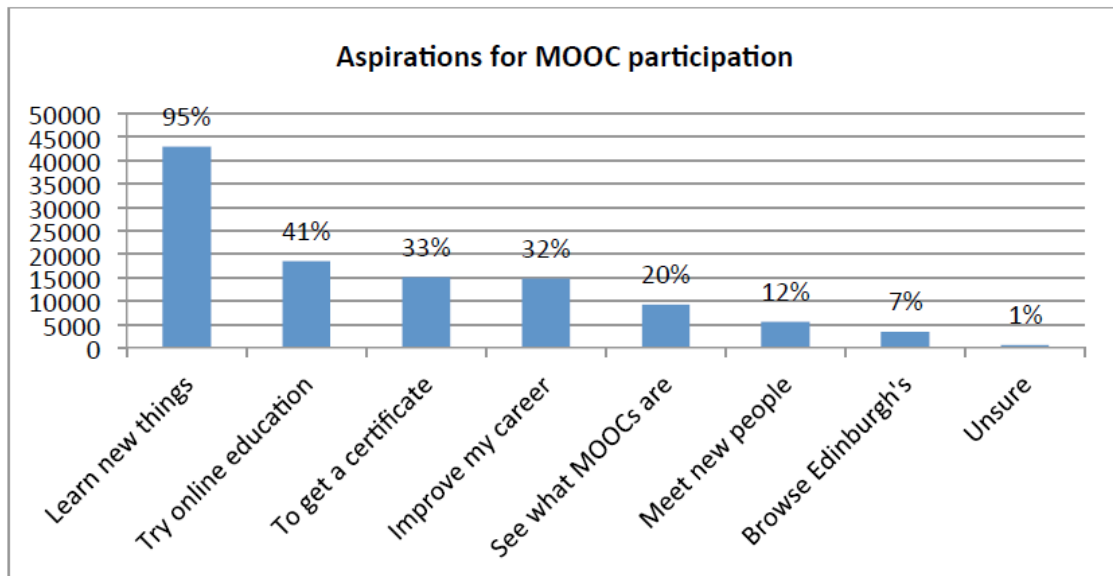


Figure 6 – The distribution of responses to Q5 'What do you hope to get out of the MOOCs you are enrolled on? (tick all that apply)', shown as a percentage of the total number of entry survey responses received

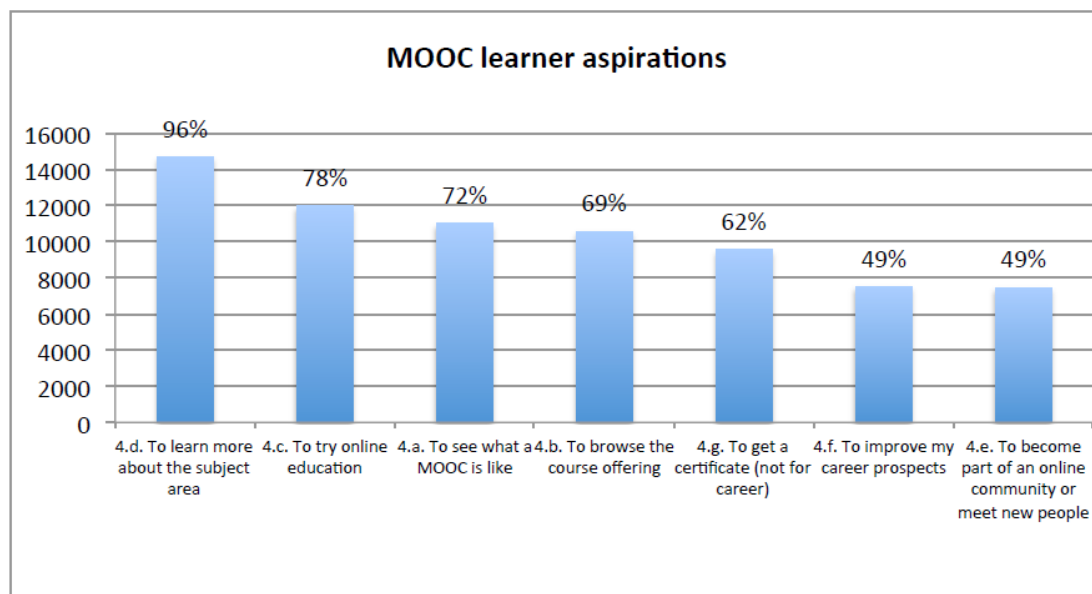


Figure 9 - Combined exit survey responses to Q4 'What did you hope to get out of the course and did it meet your expectations?' – calculated as a sum of *exceeded expectations*, *met expectations*, and *fell below expectations* responses – with percentage shown of total exit survey respondents