



**UNIVERSITY
OF LONDON**
INTERNATIONAL
PROGRAMMES

Massive Open Online Course (MOOC) Report 2013



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Executive summary

Overall

The University of London International Programmes launched four massive open online courses (MOOCs) on the Coursera platform in June 2013. Each of the MOOCs lasted six weeks and was designed to offer a short introduction to subjects we offer as full degrees.

In relation to the objectives for the University of London International Programmes, which are outlined in this report, the following measures of success can be highlighted:

- ❖ The University of London International Programmes' initial offering of four MOOCs attracted over 210,000 initial registrations, over 90,000 active students in their first week, from over 160 countries and led to 8,843 Statements of Accomplishment being attained.
- ❖ The University of London International Programmes' initial four MOOC offerings achieved an aggregate student satisfaction rating of 91% (ranging from good to excellent).
- ❖ While it is still too early to evaluate the conversion of students completing a MOOC to enrolment on a University of London International Programmes degree, over 30 students who applied to one of our 2013/14 fee-paying programmes have indicated that they took one of our MOOCs beforehand.

Project Planning a MOOC

The course teams involved with our MOOCs included experienced academics with familiarity in developing materials on a learning platform. Nonetheless, for each of them it was their first experience of MOOCs, as it was for the project planning team. Key points for consideration in future developments include:

- ❖ Ensure all MOOC content is uploaded on the learning platform as early as possible before the commencement of the MOOC. This will facilitate understanding of the platform, and allow thorough review and testing of all aspects to take place before the MOOC has started.
- ❖ Design and scheduling of the video content production is critical to achieving the development timescales. Discipline is essential to ensuring course teams have adequate time to complete editing work with the video production team.
- ❖ Establish a good understanding amongst course teams about the methods of engagement with their learners; agree how and when correspondence will be sent, how the forums will be managed, and ensure clear rules for escalating issues as and when they occur. In this respect Coursera have a number of useful tools and also guidance for Instructors, which was successfully adopted on occasions during the delivery of the University of London International Programmes' MOOCs.

Learning Resource Development

Key points for consideration in the development of resources for future MOOCs include:

- ❖ Ensure that MOOC users are stimulated by designing engaging learning resources and allowing learners to interact with the material as well as with other students and the course team. In particular, the use of video needs to be carefully planned to dovetail with the learning activities, resources, discussion threads and assessment. Short videos, (e.g. 10 minutes length), at discrete intervals during the week to stimulate students can be more effective than long one hour monologues.
- ❖ Open source online learning resources and free digital extracts for MOOC users are being made increasingly available by a number of publishers both through Coursera and more widely.
- ❖ Referring students to content available on the web has many advantages but it also presents challenges: country-based content restrictions, software conflicts, timezone access issues, and server crashes were all issues encountered and overcome during our MOOC experience.

Delivering a MOOC

A range of styles and learning methods were adopted by the four MOOCs, appropriate to the subject matter covered. A MOOC structure of six weeks and 5-10 student effort hours per week of study appeared to be just right for the majority of students (55%). Some considerations for future delivery include:

- ❖ Well designed announcements at the beginning and end of each week that articulate with the topic coverage, learning activities and assessment methods can be effective at maintaining student interest and motivation.
- ❖ Management of forum threads and posts is a critical factor in dealing with massive scale short courses to ensure the majority of students are not affected negatively by the behaviour of a small number of the community, while preserving the openness of the discussion areas.
- ❖ The Coursera platform tools are significant and comprehensive in terms of plotting overall student activity, allowing evaluation of assessment data, as well as usage statistics on video resources and other learning activities; however, further refinement of these tools to enable both students and teaching staff to understand their progression at an individual level is necessary (and underway).

MOOC Assessment

Each of the four MOOCs delivered a mix of the assessment methods available through the Coursera platform. Key areas to consider for future MOOC assessment models include:

- ❖ The University of London International Programmes saw a range of completion rates for its MOOCs of between 6% – 18%. More research is needed to understand the reasons behind this, but it should be stressed that learner engagement with MOOCs does not appear to fit the traditional model, meaning completion may not be a useful measure of success.¹ The majority of MOOC users appear content accessing the materials at a time and in a method that suits them, with only a committed minority intending to earn a completion certificate.
- ❖ All four MOOCs offered students the option of signing up for Signature Track (an identity verification process administered by Coursera) for a fee of USD \$49 and this was taken up by a minority of students. The University of London International Programmes views this route as a potential form of income to help maintain and therefore sustain our MOOC offerings in the future. At present uptake levels remain relatively modest, as Coursera undertake to deliver the service and a small percentage is remitted to the MOOC provider.

¹ See <http://www.eurodl.org/?article=583>
and <http://www.economist.com/blogs/economist-explains/2013/10/economist-explains>

Acknowledgements

Academic teams

The Camera Never Lies – Dr Emmett Sullivan, Nicole Bester, James Denny, Emma Doyle, Akanksha Mehta, Georgia Newmarch, Kim Zinngrebe

Creative Programming for Digital Media & Mobile Apps – Dr Mick Grierson, Dr Marco Gillies, Dr Matthew Yee-King, Ana, Joseph Boston, Matthew Dale, Will Gallia, Andrew Hales, Pedro Kirk, Lahcen Ouarbya, Tom Rushmore, Vlad Voina, Sebastian Zimmer

English Common Law: Structure & Principles – Prof. Adam Geary, Prof. Dame Hazel Genn, Patricia McKellar, Pat Lockley

Malicious Software & its Underground Economy: Two Sides to Every Story – Lorenzo Cavallaro, Aristide Fattori

Project management & statistical analysis

Mike Kerrison, Judith Collier, Julia Leong Son, Tanya Voloshina

Coursera

Prof. Daphne Koller, Eli Bildner, Connor Diemand-Yauman, Pang Wei Koh, Emma Webb, Tom Do, Mark Pan, Yin Lu, Kate Johnson, Ryan George

Production

Niko Van Poortvliet and Filmbright Productions
Antonia Bailey

1. Introduction

1.1 Background

The University of London International Programmes (the International Programmes) is a collaboration between the University of London International Academy (a Central Academic Body of the University of London) and twelve federal Colleges of the University of London.² This collaborative venture has been delivering high quality University of London awards at a distance since 1858 and is the oldest distance and flexible learning provider in the world.

As of 2013, the International Programmes has over 54,000 registered students studying for awards of the University of London in 180 countries. A particular feature is the breadth of over 100 programmes provided at undergraduate, postgraduate, diploma and certificate levels, with subject coverage ranging from law, economics and business through to tropical medicine, veterinary and creative computing.

Coursera was established in April 2012 by two Stanford academics from the Department of Computer Science, Professor Daphne Koller and Professor Andrew Ng. Coursera works with a selection of respected global university partners to provide massive open online courses (MOOCs), short online courses that have the following distinguishing features:

1. Open access – anyone can participate, for free; and
2. Massive – the learning platform is scalable and courses are designed to support an indefinite number of participants.

Within a few months of launch, Coursera had attracted over 1 million global users, and at the time of writing (September 2013) the platform caters to over 5 million learners offering 400+ MOOCs with academic content from over 90 university partners.

In July 2012, the International Programmes invited Professor Koller to make a presentation to personnel from across the University of London and its federal Colleges on the recent launch of the Coursera MOOC platform. The intention of this invitation was to understand more about massive open online courses, the Coursera platform and to establish whether the International Programmes and Coursera had compatibility in terms of vision, aims and provision.

Following Professor Koller's visit, in September 2012 a partnership agreement was signed, which involved the International Programmes agreeing to launch, in a first phase, up to five MOOCs on Coursera. This agreement was part of the second wave of Coursera partnership announcements, and made the University of London International Programmes the first English higher education provider to launch a suite of MOOCs. Details of the MOOCs in the first phase of development are contained within this report.

² The twelve collaborative Colleges (also known as 'Lead Colleges') are: Birkbeck, Goldsmiths, Heythrop, Institute of Education, King's College London, London School of Economics and Political Science (LSE), London School of Hygiene & Tropical Medicine, Queen Mary, Royal Holloway, Royal Veterinary College, SOAS and UCL.

1.2 Objectives of initiative

The International Programmes identified three main objectives in engaging with the MOOC initiative:

1. Mission and profile: the International Programmes saw this initiative as a positive method of continuing to widen student participation, communicating our expertise at distance and flexible learning to a wide audience, and raising the profile of the University of London and its collaborative partners in markets which may not have been aware of our full degree programmes.
2. Recruitment: being a distance and flexible learning provider, the International Programmes was in a potentially strong position to convert MOOC students into University of London students.
3. Innovation and investment: the Coursera platform presented an opportunity to trial new pedagogical models and delivery techniques which could impact positively on our full degree programmes. Similarly, investment in the Coursera MOOC subjects equated to investment into the 'parent' degree programmes, as we intended to repurpose as much of the MOOC material as possible.

1.3 Subject choice for first phase MOOCs

Following the announcement that the International Programmes would be offering a suite of MOOCs through Coursera, academics from University of London Lead Colleges were invited to submit expressions of interest in offering a MOOC. The criteria for selection were broad in order to attract as much interest as possible and to encourage innovative subjects. The principal selection objectives were to offer short courses that had a clear link to subjects offered through the International Programmes, and to assess the enthusiasm, expectations and experience of the submission team.

After some deliberation, the International Programmes agreed to offer the following five MOOC subjects on Coursera:

❖ **Creative Programming for Digital Media & Mobile Apps**

❖ **English Common Law: Structure and Principles**

❖ **Malicious Software and its Underground Economy: Two Sides to Every Story**

❖ **The Camera Never Lies**

The four MOOCs fitted well with existing International Programmes full degrees, and provided a good opportunity for the course teams to showcase subject content in innovative and exciting ways. The four MOOCs were viewed as subject introductions and potential recruitment drivers to the following International Programmes:

1. **BSc Creative Computing**

<http://www.londoninternational.ac.uk/courses/undergraduate/goldsmiths/bsc-creative-computing-bsc-diploma-work-entry-route>

2. **Bachelor of Laws (LLB)**

<http://www.londoninternational.ac.uk/llb>

3. **MSc Information Security**

<http://www.londoninternational.ac.uk/infosec>

4. **BA History**

<http://www.londoninternational.ac.uk/courses/undergraduate/royal-holloway/ba-history>



2. University of London International Programmes MOOC development and design

2.1 Project aim and scope

The International Programmes' primary aims in offering MOOCs through Coursera were to provide increased market visibility for the University of London's distance and flexible learning provision, to investigate new forms of content delivery and design, and to assess the viability of MOOCs to increase recruitment for our full degree programmes or short courses. The MOOC subjects were selected for this pilot project to be reflective of the spread of subject content across the International Programmes' portfolio.

As part of the MOOC invitation round, the following roles and responsibilities were identified:

Commitment required from the University of London International Academy:

1. To deliver four short online courses through the Coursera platform, utilising video lectures, a range of assessment tools and discussion forums.
2. To deliver the four short courses for students worldwide to access openly and free of charge by June 2013.
3. To provide guidance, coordination, and support to the University of London Colleges involved in delivering the short course content before, during and after launch in June 2013.

Commitment required from the University of London Lead College participants:

1. To deliver a 6 week (5-10 learning hours per week) online course on an academic subject contained within their existing International Programmes provision.
2. To deliver the online course following an agreed template and format to ensure compatibility with the Coursera platform and appropriate to short course format.
3. To complete delivery of the course content ready for students to commence by June 2013.

Role of the Lead College:

1. To provide the academic content for the online course to the agreed template.
2. Designate an 'academic leader' ('Instructor') for the online course who will take overall responsibility for the integrity of the course and the completion of all content within agreed timescales.

Role of the International Academy:

1. To project manage the delivery of the online course within the timescale and to the Coursera specification.
2. To provide access to the publishing, portal, learning technologist expertise to deliver the online course content.
3. To provide management liaison on behalf of the collaborative venture with Coursera.

2.2 Project structure

The delivery of the four University of London International Programmes' MOOCs was overseen by the Academic Development directorate within the University of London International Academy. Each MOOC subject group decided the structure, membership and responsibilities of their team.

Following discussion with Coursera and each of the MOOC teams, it was agreed that the launch of the four MOOCs be staggered throughout June 2013 to ensure that each MOOC team had appropriate support and to reduce the chance of multiple issues occurring at the same time.

Project Sponsor

Andrew Bollington, Chief Operating Officer (International Academy)

Responsible for initiating the MOOC initiative with Coursera, acted as University representative and signatory for partnership discussions and legal agreements.

Project Director

Mike Kerrison, Director: Academic Development (International Academy)

Responsible for defining the scope and structure of the MOOC initiative, overseeing progress, budget sign off, advising on and/or resolving strategic issues, senior Coursera contact.

Project Managers

Barney Grainger, Lead Project Manager (International Academy)

Responsible for MOOC delivery, defining and monitoring MOOC development process, advising on MOOC design, video production coordination, budgeting, copyright clearance, identifying and resolving issues, primary Coursera contact.

Judith Collier, Project Manager (International Academy)

Julia Leong Son, Project Manager (International Academy)

Responsible for MOOC oversight, support and issue resolution once the MOOCs had launched. Provided platform and technical guidance to the course teams, student communications and acted as Coursera liaison.

The Camera Never Lies

Dr Emmett Sullivan, Senior Lecturer, History Department (Royal Holloway, University of London)

Responsible for syllabus content, structure and design, assessment content, structure and design, video lecture structure, content, scripting and presentation, student communication, forum management, teaching assistant identification and role designator.

Teaching Assistants x5 (Royal Holloway, University of London and SOAS students)

Responsible for forum moderation and flagging issues to the instructor.

Creative Programming for Digital Media & Mobile Apps

Dr Mick Grierson, Senior Lecturer, Computing Department (Goldsmiths, University of London)

Dr Marco Gillies, Senior Lecturer, Computing Department (Goldsmiths, University of London)

Dr Matthew Yee-King, Lecturer, Computing Department (Goldsmiths, University of London)

Responsible for syllabus design, content, and structure, assessment design, content, and structure, video lecture structure, content, scripting and presentation, student communications, forum management, teaching assistant identification and role designator.

Teaching Assistants x10 (Goldsmiths, University of London students)

Responsible for forum moderation and flagging issues to the academic team.

English Common Law: Structure & Principles

Professor Adam Gearey, Director: LLM & Social Justice (Birkbeck College, University of London)

Professor Dame Hazel Genn, Dean of Laws (UCL)

Patricia McKellar, Associate Director: Undergraduate Laws Programme (Laws Consortium, University of London)

Pat Lockley, Learning Systems Developer (Laws Consortium, University of London)

Responsible for syllabus content, structure and design, assessment content, structure and design, video lecture structure, content, scripting and presentation, copyright, student communication, forum management.

Malicious Software & its Underground Economy: Two Sides to Every Story

Dr Lorenzo Cavallaro, Lecturer, Information Security Group (Royal Holloway, University of London)

Responsible for syllabus content, structure and design, assessment content, structure and design, video lecture structure, content, scripting and presentation, student communication, forum management, teaching assistant identification and role designator.

Teaching Assistant x1 (PhD student)

Responsible for forum moderation and flagging issues to the instructor.

2.3 Project management process

The process of selecting the initial MOOCs was a collaborative decision between Colleges and the University of London International Academy. Major developments in International Programmes follow a process of academic project management which was adopted for the MOOC development. The lead project manager was complemented by two other project managers to support the academic teams. The project managers provided an important interface with the Coursera Operations and Engineering teams, the video production company and learning technologists.

The nature of the collaborative venture between the International Academy and Colleges meant that some of the course teams utilised their own learning technology expertise as part of their resource planning. As part of the selection process a budget was negotiated with each course team, which mirrored the business and financial planning process of a full programme, albeit on a much smaller scale. This process involved agreeing a budget for the resources required and an assessment of the benefits and/or revenues.

For the first phase MOOCs the 'Signature Track' option in Coursera had not been developed at the planning stage, (whereby students can opt for a service that provides a validated certificate of achievement for a modest administration fee of USD \$49). The key revenue for International Programmes relates to the conversion of students completing a MOOC to enrolment on the full 'parent' degree programme. At the planning stage it was very difficult to quantify as Coursera itself had only been in operation for six months.

Key milestones and timelines were agreed at the start with each course team along with a target launch date. A key part of the planning for learning content involved the sourcing of as much 'open' materials for each MOOC to ensure that learners would not need to acquire additional materials. Subsequent to the planning phase of the MOOCs, Coursera provided some assistance with sourcing free to access digital materials (through their partnership with Chegg) and the International Programmes' links with major publishers also provided some leverage for agreeing digital extracts of selected materials to be used as learning resources for selected MOOCs.

The project manager role involved remaining in touch with the course teams, Coursera and monitoring the learning platform for student feedback during the delivery of the four MOOCs. The role facilitated the escalation of issues from the course teams, as required and the monitoring of the key student data across each MOOC. International Programmes appointed a person to liaise with the Coursera Operations team to ensure that all data relating to student activity is captured for later analysis.

2.4 MOOC structure

MOOC format and design

The Coursera MOOC format is based on three areas of student engagement (as it is with nearly all of the large MOOC platforms):

1. Video lectures

These are, at their most basic, recorded asynchronous sessions of the lead academic discussing topics related to their MOOC subject. Their format is not prescribed by Coursera and as such, a wide array of presentation styles can be used, from talking heads to interviews to picture in picture (for example, when slides are being used). Subtitles (primarily English, but other languages are being introduced) are provided by Coursera.

2. Assessment

Assessment can be based on automatically-graded multiple choice questions, either as part of the video lectures (in-video quizzes) or taken separately. In addition to multiple choice questions (MCQs), course teams could also choose to use auto-graded programming assignments (for computer science-based MOOCs) or peer review assessment.

Peer review can be used for more open-ended assessment formats and requires students to mark one another's work based on a defined rubric set by the instructor.

3. Forums

MOOC forums are the main method of student interaction with the content, each other, and the course teams. Forums are typically split into a number of threads, including (but not restricted to): general discussion, subject-specific discussion, course feedback and technical feedback. Instructors can actively participate in these forums or choose to use teaching assistants to respond to students, escalating queries when needed.

Using this format as a foundation, the academic teams were encouraged to decide the most appropriate pedagogical model within which their subject would be presented, while at the same time establishing a standard structure across all International Programmes' MOOCs. The structural aspect is considered important in terms of managing learner expectations, while providing a taste of the commitment required to study a single course of one of our full degree programmes.

Each course team was asked to develop a six week MOOC with between 5-10 learning hours per week, planning a range of student engagements and engaging content. We asked that teams aim to present no more than 2 hours of lecture material per week, split into 10-20 minute 'chunks'. Pass marks for all MOOCs were set at 40% for a pass and 70% for a distinction, with the exception of the English Common Law MOOC which set pass and distinction marks of 50% and 70% respectively.

As a result of this design decision, our MOOCs used a range of different platform features and learning and teaching styles. As the English Common Law team included a dedicated learning technologist, working exclusively with the law team, it is perhaps unsurprising that this MOOC used the widest range of tools and services in comparison to the others.

Examples of the additional learning resources used by the English Common Law academic team are detailed below:

1. Live video sessions

In addition to the weekly lectures, a live video session with the lead instructor was scheduled at the end of weeks 2 and 4. Students were invited to ask, and vote for, questions on the MOOC forum and the instructor responded to those questions with the most votes. Transcripts of the session responses were posted on the forums at the beginning of each week.

2. Reading materials

Students were offered excerpts from legal textbooks covering the areas of law relevant to that week's topic of study. Copyright clearance was simplified by using texts authored by the instructors.

3. Activities

A range of formative activities were offered, with the aim of allowing students to further test their knowledge of each topic. These activities were not be part of the MOOC's formal assessment but attempted to help provide a deeper understanding of the concepts. Video feedback for some of these activities was provided.

4. Additional video resources

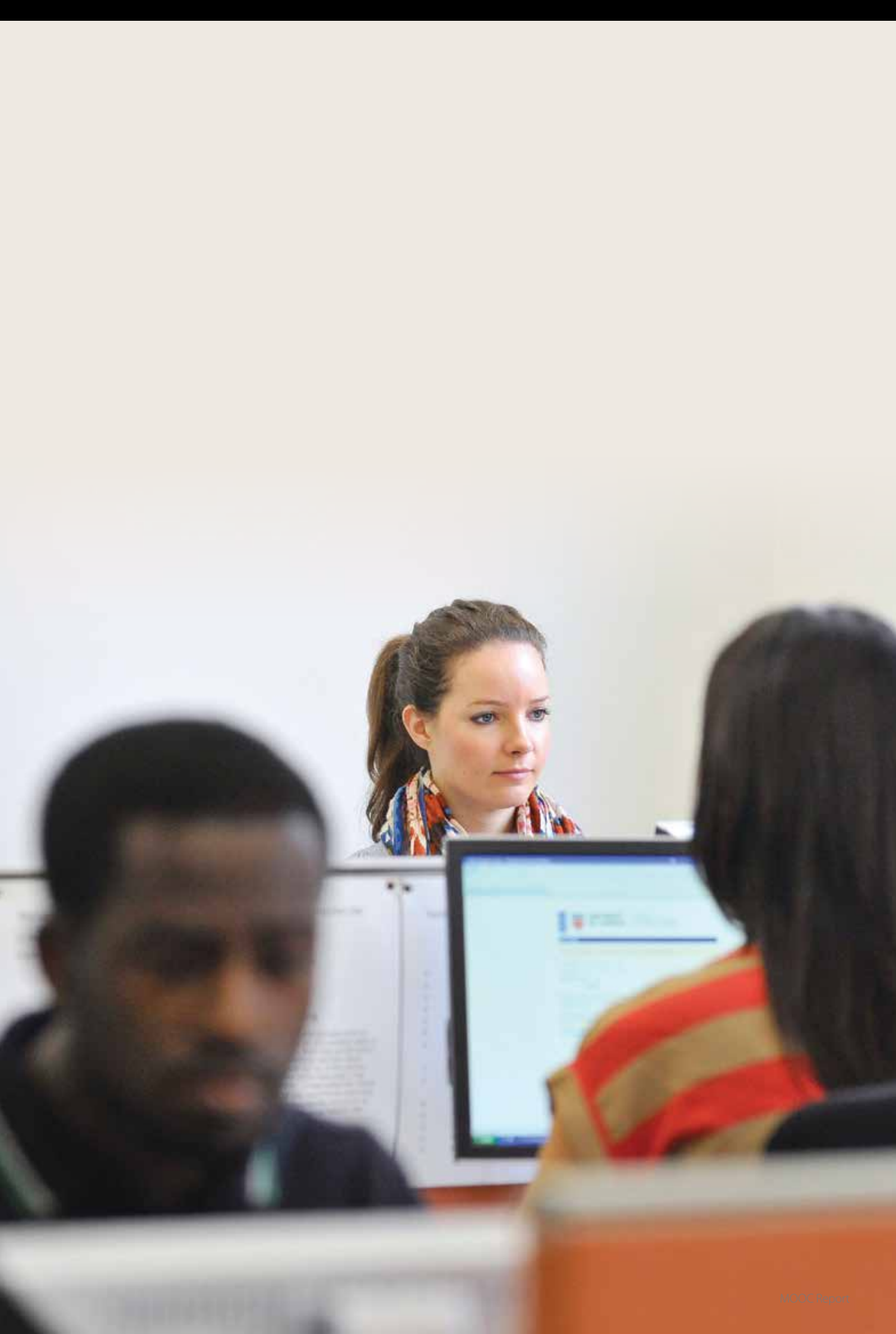
These were scripted student discussions, or role-played scenes illustrating various principles or ideas, after each video lecture. These additional video resources were associated with the weekly themes and intended to help recap some of the ideas presented in the lecture.

5. Social media

Twitterchats were held for one hour on a number of Saturdays (in order to allow as much student participation as possible) while the MOOC was running. Questions relating to the previous week's study were discussed in the session, which was not academically moderated but monitored by the course team. For those students unable to access the session, or for those who did not use Twitter, the session questions and answers were posted on the MOOC forums.

Students were also encouraged to continue their discussions on dedicated pages on other social media platforms, such as Facebook and Google+. These discussions were not actively monitored or moderated.

Use of teaching assistants (TAs) varied between International Programmes MOOCs. Funding was offered to each team to utilise in employing students, graduates or researchers of their choosing. The roles and responsibilities of these TAs were discussed with each MOOC team, with the decision whether to employ and what role they would play left with the respective academics. Utilisation of TAs and their method of deployment across the four MOOCs can be found in the following tables 1-4.



MOOC title	Creative Programming for Digital Media & Mobile Apps
Start date	10 June 2013
Length of MOOC (weeks)	6
Learning hours/week	5-10
Teaching staff (including lecturers)	3
Video lecturers	3
Teaching assistants	10
MOOC format	Video lectures divided into weekly topics, with in video and multiple choice quizzes and peer assessment based on lecture content and additional resources at the end of each week, culminating in the creation a mobile app project. Additional programming induction lectures provided. Students encouraged to discuss topics in the forums, with guidance provided by TAs. 40% pass mark, 70% distinction.
Total number of videos	53
Total length of videos (hrs:mins)	8:21
Avg. weekly length of videos (hrs:mins)	1:23
Avg. video length (mins:secs)	9:44
Assessment type(s) used	In-video quizzes, multiple choice quizzes, peer assessment. The final project involved a student uploading their app working on a mobile device via Youtube for other students to peer assess.
Forum moderation	Teaching assistants
Social media platforms used	None

Table 1. MOOC structure of Creative Programming for Digital Media & Mobile Apps

MOOC title	Malicious Software & its Underground Economy: Two Sides to Every Story
Start date	17 June 2013
Length of MOOC (weeks)	6
Learning hours/week	5-10
Teaching staff (including lecturers)	1
Video lecturers	1
Teaching assistants	1
MOOC format	Video lectures divided into weekly topics, with multiple choice quizzes and programming assignments based on lecture content and additional resources at the end of each week. Additional reading topics and a bonus programming assignment offered. Internet Relay Chat (IRC) channel discussions. Students encouraged to discuss topics in the forums with guidance provided by teaching staff and teaching assistant. 40% pass mark, 70% distinction.
Total number of videos	27
Total length of videos (hrs:mins)	7:26
Avg. weekly length of videos (hrs:mins)	1:14
Avg. video length (mins:secs)	16:18
Assessment type(s) used	Multiple choice quizzes, optional programming assignment
Forum moderation	Teaching staff and teaching assistant
Social media platforms used	None

Table 2. MOOC structure of Malicious Software & its Underground Economy: Two Sides to Every Story

MOOC title	The Camera Never Lies
Start date	24 June 2013
Length of MOOC (weeks)	6
Learning hours/week	5-10
Teaching staff (including lecturers)	1
Video lecturers	1
Teaching assistants	5
MOOC format	Video lectures divided into weekly topics, with multiple choice quizzes based on lecture content and additional resources at the end of each week. Students encouraged to reflect on topics within the forums, with some guidance provided by the academic and TAs. 40% pass mark, 70% distinction.
Total number of videos	65
Total length of videos (hrs:mins)	8:17
Avg. weekly length of videos (hrs:mins)	1:22
Avg. video length (mins:secs)	8:12
Assessment type(s) used	Multiple choice quizzes
Forum moderation	Teaching staff and teaching assistants
Social media platforms used	None

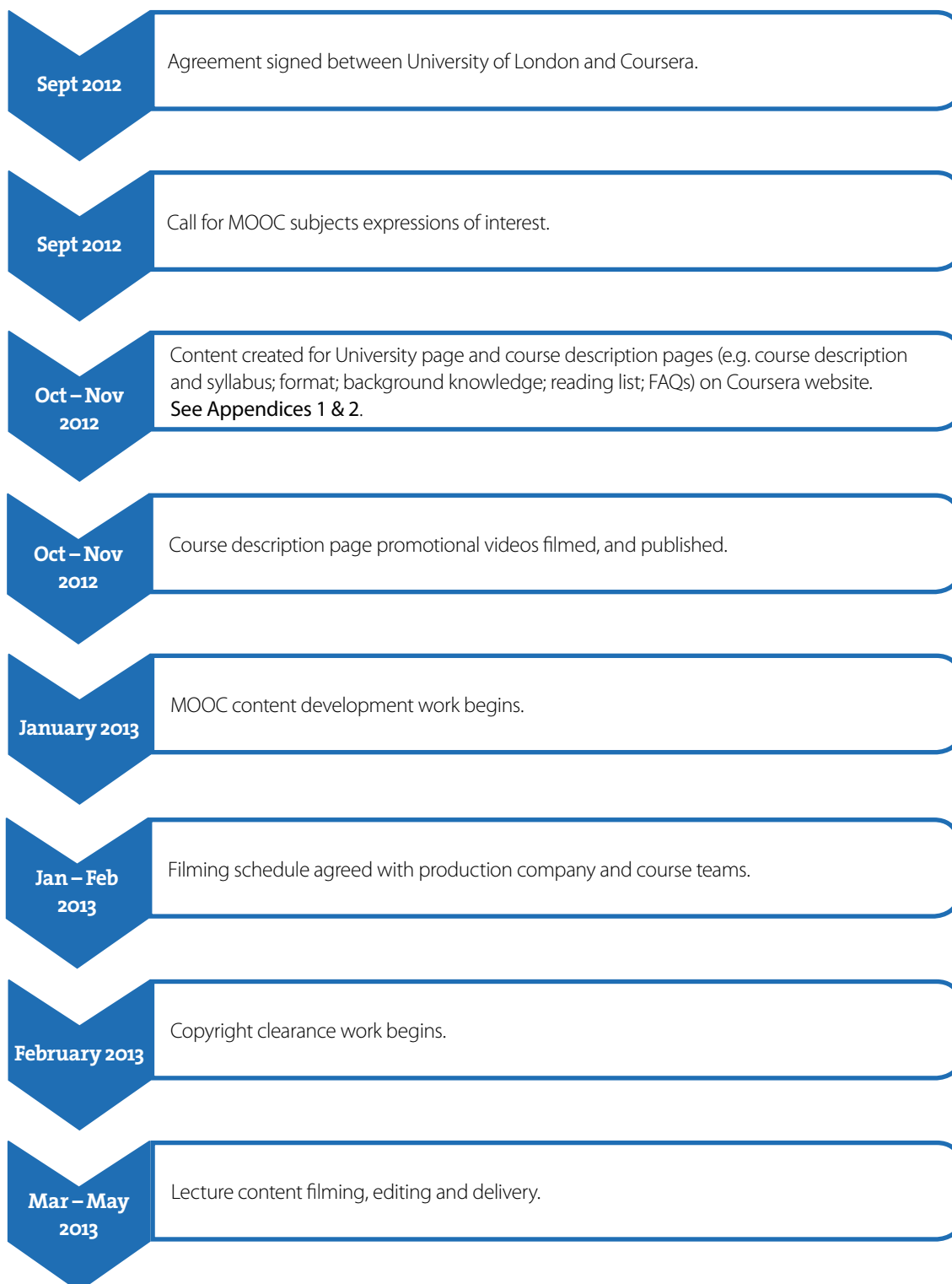
Table 3. MOOC structure of The Camera Never Lies

MOOC title	English Common Law: Structure & Principles
Start date	24 June 2013
Length of MOOC (weeks)	6
Learning hours/week	5-10
Teaching staff (including lecturers)	4
Video lecturers	2
Teaching assistants	0
MOOC format	Video lectures divided into weekly topics, with multiple choice quizzes and peer assessment based on lecture content and additional resources at the end of each week. Additional videoed topic introductions, live Q&A sessions, scripted student discussions, and student feedback session offered. Twitter chats provided. Students encouraged to discuss lecturer-led topics in the forums with guidance provided by teaching staff; un-moderated social media discussions. 50% pass mark, 70% distinction.
Total number of videos	76
Total length of videos (hrs:mins)	9:38
Avg. weekly length of videos (hrs:mins)	1:36
Avg. video length (mins:secs)	9:44
Assessment type(s) used	Multiple choice quizzes, peer assessment, formative assessment
Forum moderation	Teaching staff
Social media platforms used	Twitter, Facebook, Google+

Table 4. MOOC structure of English Common Law: Structure & Principles

MOOC development and approval timeline

The timeline and associated milestones are illustrated in figure 1:



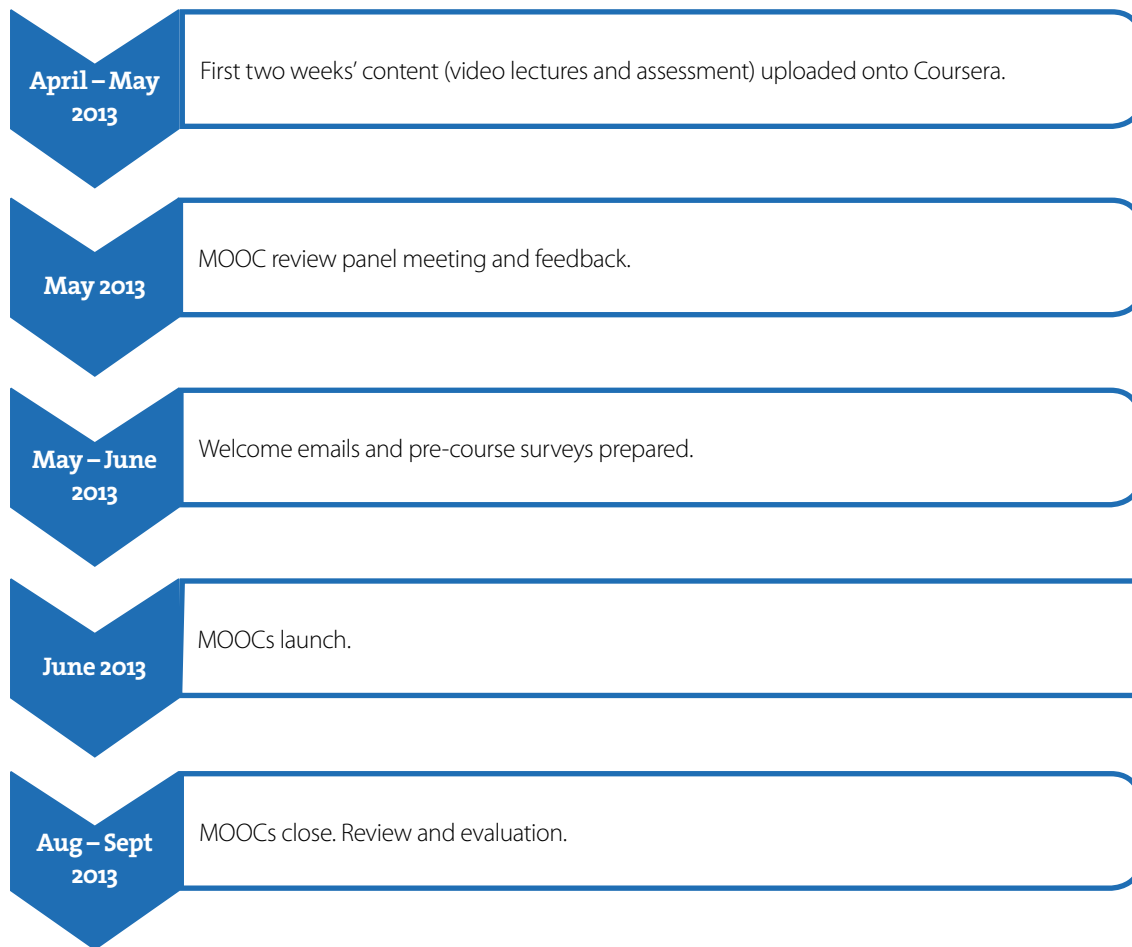


Figure 1. MOOC development timeline

2.5 MOOC costs and workload

The key staff time required for the Instructors of each MOOC, in preparation and delivery, was resourced from the re-allocation of duties through College management. The feedback from the course teams on the time allocated is contained in section 6. The International Programmes budgeted a direct spend of £20,000 for the additional resources to Instructor time and included design, development and launch of each Coursera MOOC. By far the largest proportion of expenditure was video production, which came out at approximately £10,000 per MOOC. Our intention with this cost was to ensure a good learning experience for students when watching the videos, and to allow the videos to be re-purposed and integrated into the full degree 'parent' programmes.

It was also agreed that for those MOOCs wishing to utilise teaching assistants, an hourly wage would be offered to motivate the TAs in their roles to be as active and responsible as possible. Roles and responsibilities of the TAs were discussed with the academic teams as part of this process and disseminated to the TAs via the instructors.

As general rule, teaching staff spent approximately 200 hours during the six months of MOOC development (as an example: 10 minutes of video content generally equated to 20-30 minutes of real-time recording), and spent between 10-20 hours per week managing their MOOC once it had launched.

It was found that staff workload hit a peak in the two weeks before and two weeks after MOOC launch, but that this workload lessened somewhat from week 3 after launch. Anecdotal evidence suggests that this ease in workload occurred because student numbers had stabilised (leaving the more motivated students), the MOOC teams had settled into effective working patterns, and both parties had established a more comfortable relationship with the MOOC format.

2.6 MOOC quality assurance

International Programmes QA process

The quality assurance process was created to ensure coherency of the curriculum, teaching, learning and assessment activities of each MOOC and to consider the overall student experience. The process was also designed to complement the development of further MOOCs and the internal quality assurance procedures of Coursera. The International Programmes' Corporate Performance & Quality team were engaged to manage the process and set up an initial policy to apply to the development of all MOOCs offered by the University without associated credit.

Given that the International Programmes' MOOCs neither confer credit or contribute to a University of London award, it was our intention to keep the approval process fit for purpose to encourage innovation, while still maintaining oversight of the pedagogy and student experience. The policy was also given appropriate oversight through the International Programmes' governance structure. If any MOOC subject content had been drawn from non-current International Programmes, it was agreed that external peer review would have taken place to confirm the appropriateness of the subject matter.

In the month before launch, a panel of the International Programmes' Learning, Teaching and Assessment Sub-committee was convened in order to review the first two weeks' worth of MOOC material, with a remit to ensure the MOOCs were fit for purpose. The panel included two fellows of the University of London's Centre for Distance Education (one of whom chaired the panel), an International Programmes student, the International Programmes' Head of Learning Technology, an academic with experience of distance education pedagogy, the lead project manager and a member of the International Programmes' Corporate Performance & Quality team. The panel report, incorporating the individual reviewers' comments, was distributed to the MOOC teams for consideration and subsequently forwarded to the Learning, Teaching and Assessment Sub-committee. Based on the panel's positive findings the four MOOCs were approved.

Coursera QA process

Detailed below is an overview of the Coursera quality assurance process, which has been incorporated into the International Programmes' process.

A. Course Preparation:

1. Before a class is publicly announced, the instructor will fill up a course description page that is used for prospective Coursera students to learn more about the course. This page containing contains brief descriptions of the course content / syllabus, the course format, recommended background, and so on.
2. University staff (including administrators, instructional designers, platform experts, etc., depending on the exact composition of the university team) will review the course description page together with the instructors, looking out for unsupported features, potentially risky technology, copy-paste mistakes from existing class syllabi, etc., and making sure the class as described conforms with university standards.
3. University staff will inform Coursera staff once the course description page is ready to go live. Coursera staff will then review the course description page and publish it on www.coursera.org. After this point, students can view the course description page and sign up for courses that are open for enrolment; university staff will also be able to make edits to the page without going through Coursera staff.

B. Course Overview:

4. At least two months before the scheduled start date of the class, the instructor will outline an overview of how they expect their course to run. The purpose of this is to ensure that instructors understand the limitations and capabilities of the Coursera platform, and that they feel comfortable with the features available to them. This overview includes:
 - a. Detailed descriptions of class content, assessments and grading policies.
 - b. Information on whether the material for the class is being repurposed from an existing source, and if so, what changes are being planned to the existing material to make it suitable for a MOOC.
 - c. A full list of any external software (e.g., Google docs, 3rd-party assessment tools) that instructor intends to use.
 - d. A commitment to prepare a specified amount of course material in advance (see C6-8).
5. Instructors, university staff, and Coursera will jointly review this document. Delayed agreement on course overviews can delay the start of the course.

C. Preparation and Publishing of Course Material:

6. Approximately one month before the scheduled start of the course, instructors and university staff will jointly upload a minimum amount of course content. Adding course content a month before the course opens allows instructors, university staff, and Coursera staff time to review the course, correct any inconsistencies, and make any tweaks and improvements to pedagogy. Course content to be uploaded a month before the start of the course includes:
 - a. First week's lecture videos
 - b. Descriptions of course syllabus / grading policy / course logistics within the class
 - c. Welcome announcement / email, scheduled to be sent on the first day of class
 - d. First quiz, first programming assignment, and first peer assessment, if applicable
 - e. A list of any unusual needs, including, most especially, any external software that will be used in the class, including access to the relevant integration code for our engineering team to review.
 - f. Instructor and university staff will jointly upload two weeks' worth of course content at least two weeks before the scheduled start date of the class. In addition to the above (C6), this content includes:
 - g. Second week's lecture videos
 - h. Any assessments used in the second week.

3. University of London International Programmes MOOC demographic profile

3.1 Pre-course survey data

In advance of each of the International Programmes MOOC launches, Coursera distributed a pre-course demographic survey to all registered students. All students received the same set of questions in order to allow comparison, but course teams were free to add questions of their own or send out separate surveys. The graphs below illustrate the top-line data collected across the four MOOCs and includes the average data for all Coursera MOOC students for comparison.

The surveys were sent out to all registered students on 21 May 2013 and were closed on 27 June 2013. During this period we received a total of 25,543 responses (27% of first week active users) divided amongst the four MOOCs as follows: Camera Never Lies: 6,634; Creative Programming: 9,133; English Common Law: 4,594; Malicious Software: 5,182.³

Students were asked a total of eighteen questions, with the six most pertinent being shown here. The text of the six questions asked is shown below (the corresponding results graphs are in parentheses):

1. What is your gender? (Figure 2)
2. In what year were you born? (Figure 3)
3. In which country do you currently live? (Figure 4)
4. Are you currently enrolled as a student on an educational programme? (Figure 5)
5. What is the highest level of school you have completed or the highest degree you have received? (Figure 6)
6. Which of the following best describes your current employment industry? (Figure 7)

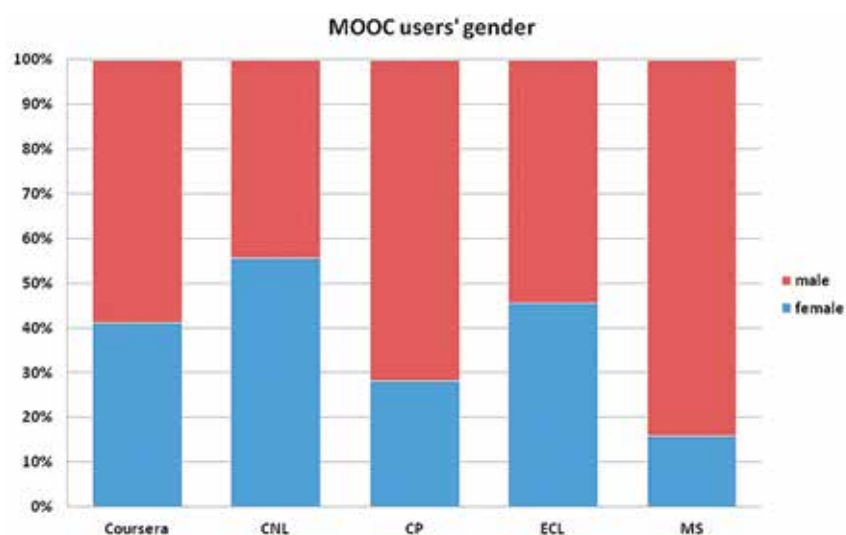


Figure 2. Gender split for International Programmes' MOOC students

Demographic data collected from this survey was largely in line with both the Coursera mean and the data collected and published by other MOOC partners (e.g. Edinburgh, Duke):

- ❖ The overall gender split for our MOOCs revealed a preponderance of male to female students (64:36). This was seen most prominently in the *Creative Programming* and *Malicious Software* MOOCs; however, the *Camera Never Lies* bucked this trend with a 55% female student body.

³ The key used in graphs is as follows: CNL (*The Camera Never Lies*); CP (*Creative Programming for Digital Media & Mobile Apps*); ECL (*English Common Law: Structure & Principles*); MS (*Malicious Software & its Underground Economy*).

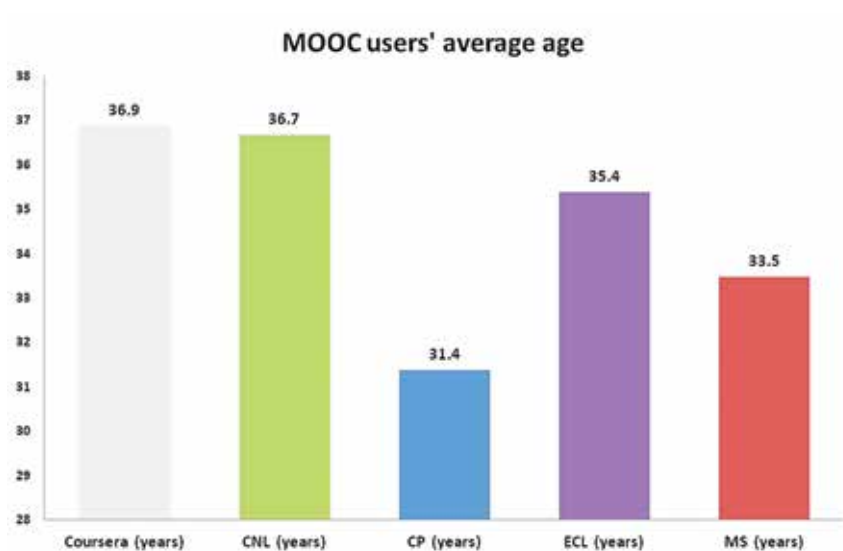


Figure 3. Average age of the International Programmes' MOOC students

- ❖ The average age of our MOOC users was 34. This is younger than the Coursera average age of nearly 37, and fits with the current research revealing that most MOOC users are not school leavers/pre-undergraduates.

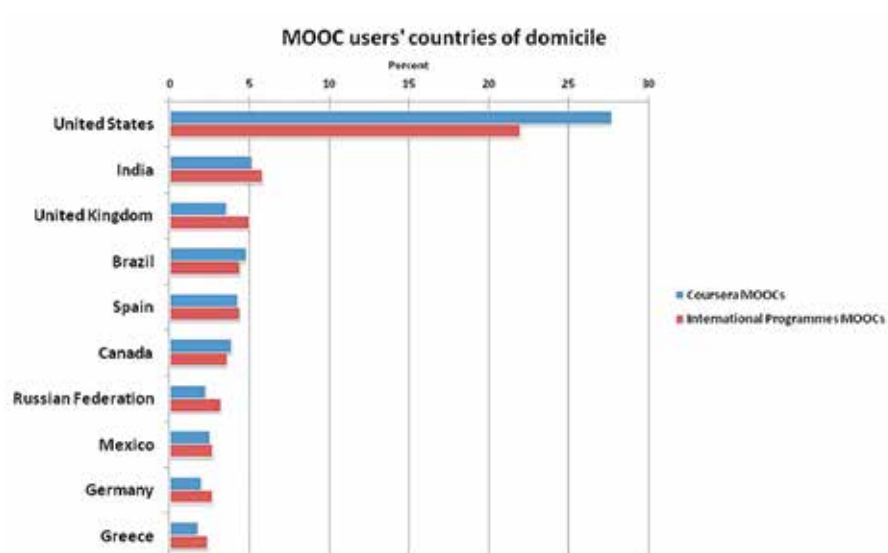


Figure 4. Top ten countries of domicile for International Programmes' MOOC students

- ❖ The majority of our MOOC students (22%) live in the United States, with India (6%), UK (5%), Brazil (4%), and Spain (4%) as the subsequent top four countries across the MOOCs.

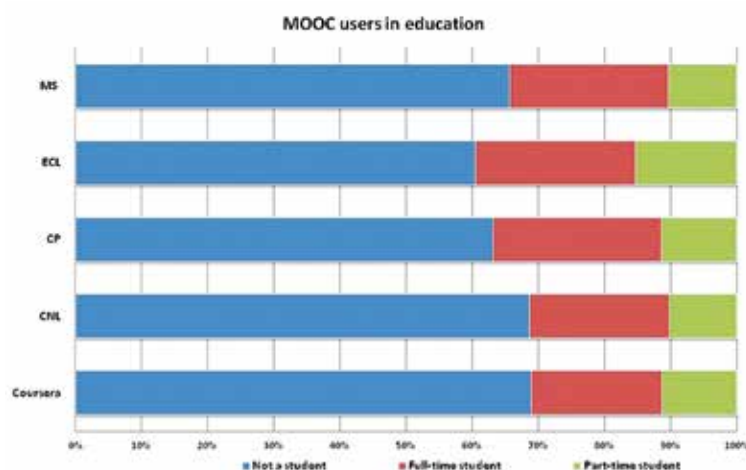


Figure 5. Percentage of International Programmes' MOOC users enrolled as a student

- ❖ A little over 35% of our MOOC users were enrolled on an education programme, while almost 70% already held some form of higher education qualification (Bachelors, Masters or PhD).

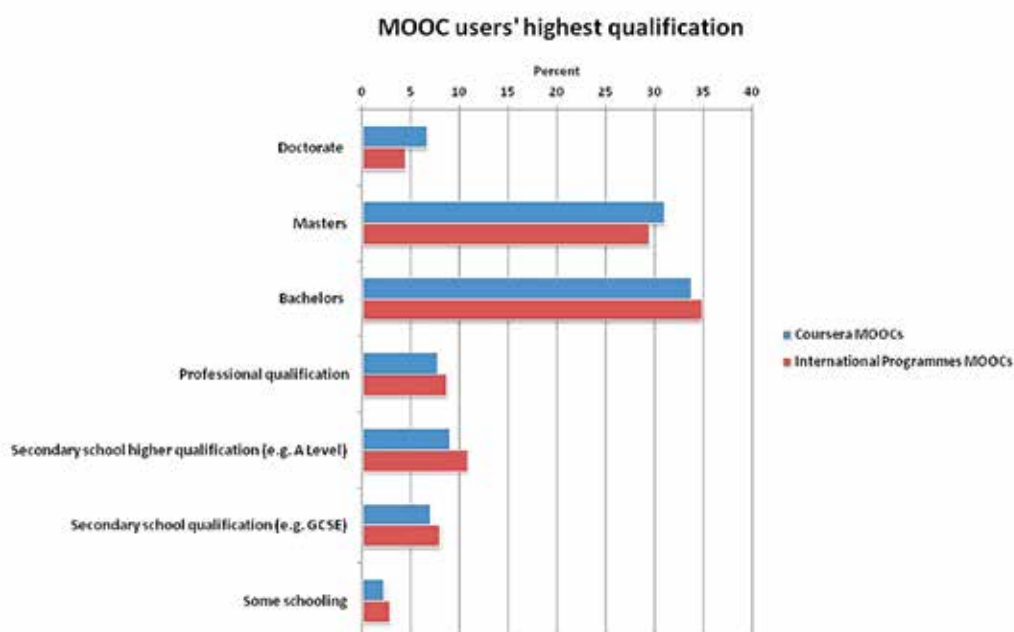


Figure 6. Highest qualification of International Programmes' MOOC students

- ❖ The top five industries in which our MOOC users were employed included: IT (33%), Legal services (15%), Education (13%), Design/Media (10%), and Business/Finance (8%). This spread is perhaps unsurprising given the subjects of study offered.

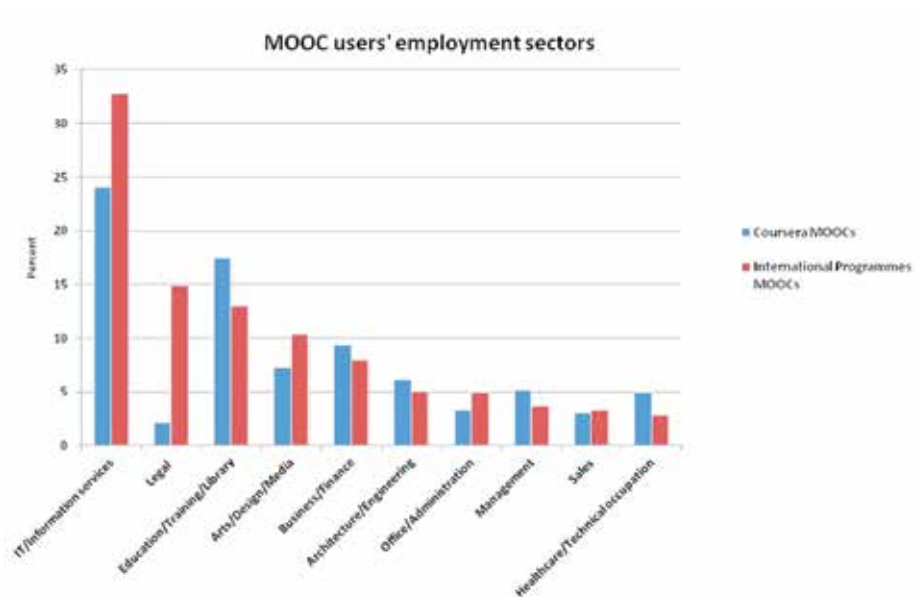


Figure 7. Employment industries of International Programmes' MOOC students

From this data, the general profile of one of our MOOC students was a mid-thirties, well educated male living and working in a developed or BRIC (Brazil, Russia, India, China) economy.

This profile closely resembles those found in demographic surveys run by other Coursera MOOC partners⁴ and suggests that the majority of MOOC users are employed professionals using the short courses in order to develop or broaden their skills base. Given that this profile runs counter to what might be expected (e.g. a secondary school leaver looking for either a subject introduction before further study, or interested in finding out more about an institution's programmes of study), this audience should be a consideration in the development of future MOOCs.

⁴ See Duke University's MOOC report:

http://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/6216/Duke_Bioelectricity_MOOC_Fall2012.pdf
and the University of Edinburgh's MOOC report:

<https://www.era.lib.ed.ac.uk/bitstream/1842/6683/1/Edinburgh%20MOOCs%20Report%202013%20%231.pdf>

4. University of London International Programmes MOOC usage

4.1 Registrations – weekly and total

The International Programmes' MOOCs started registering students in October 2012, and in the first three weeks that registrations opened all four courses saw application numbers of 2,000 to 3,000 per week. These figures dropped to a steady state of 500 – 1,000 registrations per week for the intervening period until starting to rise again significantly six weeks before the respective MOOC start dates. This is likely due to the increased visibility Coursera gives to MOOCs on their website in the weeks preceding launch.

Figure 8 tracks the weekly registration figures for the four MOOCs in the six week period running up to launch, and includes registrations after launch. All four MOOCs chose to keep registrations open for the whole of their six week duration in order to allow students to access content and interact with other students, even if the assessment deadlines had passed.

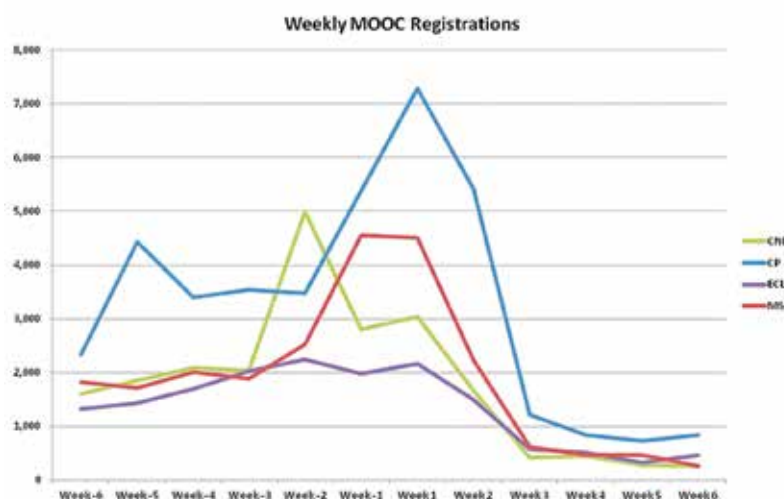


Figure 8. Weekly registrations in the six weeks before and after the International Programmes MOOC launch

At launch, registrations across the International Programmes' MOOCs totalled 212,110. Figure 9 details the total registrations of each of the MOOC subjects, and also shows the peak registrations (defined as week 3 for the purposes of this report, as from this point onward weekly registrations declined sharply). At peak, total registrations for the four MOOCs stood at 241,075.



Figure 9. Total registrations at the respective launch of each MOOC against peak registrations after launch

4.2 Active users

There has been much commentary surrounding high drop-out rates for MOOCs. Published raw data indicating total enrolments against the completion rates of students receiving a certificate of achievement may on the face of it seem alarming. In reality, a more meaningful measure is 'active' students who have demonstrated that they have 'turned up for class' and participated in some way. Many students (see table 5) enrolling up to six months before a MOOC commences do not engage with the MOOC content at all. There is no financial commitment and therefore no cost to registering an interest and therefore entirely reasonable that a good intent to study and learn new skills, when the MOOC begins registering, is replaced by other life events, work and other study priorities.

A challenge faced in evaluating the data collected across the four MOOCs is, therefore, establishing the definition of an 'active' student. Coursera defines an active student as any learner who clicks through from registration onto the MOOC session site; however, as we had a range of detailed learner usage statistics at our disposal, it was agreed to refine this definition.

For the purposes of this report, active students are classified as unique users who viewed or downloaded a lecture, attempted a quiz, registered after the MOOC start date and/or posted on the MOOC forums. Using the combined data definition of an active student reveals the following activity pattern during the 'live' six weeks:

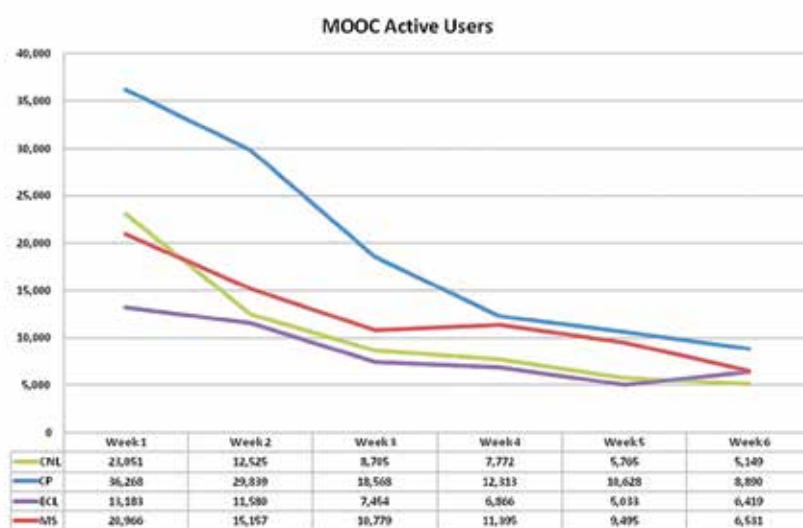


Figure 10. Unique active users throughout the six week MOOCs

Research⁵ into MOOC engagement by learners reveals that most MOOCs shed roughly 50% of their registered students by the time the course starts⁶, and this statistic was borne out in our experience, as illustrated in Table 5.

	CNL	CP	ECL	MS	Total
Total registrations (at launch)	48,648	80,127	41,715	41,620	212,110
Active students (first week)	23,051	36,268	14,207	20,966	93,468
Conversion rate	47%	45%	32%	50%	44%

Table 5. Conversion rate between registered students and first week active students

⁵ See Vanderbilt's lessons learned blog as an example:

<http://cft.vanderbilt.edu/2013/08/lessons-learned-from-vanderbilts-first-moocs/>

⁶ This could be due to a number of reasons, including change of circumstance between registration and MOOC start date, lack of motivation, change in interests, lack of - or missed - communication from the course team, or simply forgetfulness.

4.3 MOOC progression and completion

Active student engagement with the course content in the first week was surprisingly consistent across the four MOOCs, with the largest proportion of learners engaging with video lectures (an average of 79% of active learners), followed by assessment (20%) and finally forum posting (5%). The only slight anomaly was the Malicious Software MOOC, which revealed more forum than quiz activity; however, this was due to the decision by the course instructor not to require submission of a quiz in the first week. The MOOC where the course team had a more proactive strategy to encourage student engagement, English Common Law, had the highest proportion of active forum 'posters'.

	CNL	CP	ECL	MS
Active students	23,051	36,268	14,207	20,966
Watched a video	17,424 (76%)	28,181 (78%)	10,524 (74%)	18,325 (87%)
Took a quiz	6,080 (26%)	12,259 (34%)	2,319 (16%)	516 (2%)
Posted in forums	1,290 (5%)	1,696 (5%)	1,024 (7%)	776 (4%)

Table 6. User activity in the first week of the International Programmes' MOOCs

As seen in Figure 10 on the previous page, active student numbers dropped consistently week on week as the MOOCs progressed, however, engagement with the materials as a percentage of these active learners remained relatively consistent with a similar percentage of students watching videos, taking assessment and posting in the forums. It is noticeable that for each MOOC the level of engagement with the video and assessment materials dominates the proportion of students posting in the forum.

	CNL	CP	ECL	MS
Active students	5,149	8,890	6,419	6,531
Watched a video	3,368 (65%)	5,794 (65%)	3,544 (55%)	3,934 (60%)
Took a quiz	1,376 (27%)	5,387 (61%)	2,959 (46%)	2,238 (34%)
Posted in forums	153 (3%)	259 (3%)	147 (2%)	100 (2%)

Table 7. User activity in the sixth week of the International Programmes' MOOCs

Certificates (Statements of Accomplishment) issued by the four MOOCs at both Pass and Distinction level can be found under Figure 11. The pass and distinction marks across all International Programmes' MOOCs were set at 40% and 70% respectively (with the exception of the *English Common Law* which had a pass mark of 50%), in line with our full degree programmes:

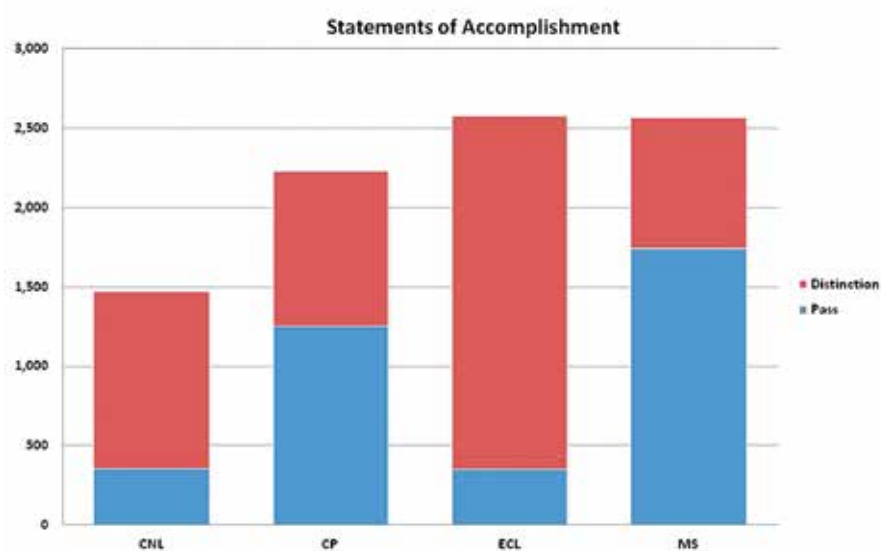


Figure 11. 'Pass' and 'Distinction' Statements of Accomplishment issued for the four International Programmes' MOOCs

Table 8 details the Statement of Accomplishment split between the four MOOCs, the overall completion rate against first week active users, as well as the overall completion rate against the active learners in the sixth and final week of the course (these figures have been included as the active students in the sixth week are likely to be the most committed learners, working through the material with the intention of receiving a Statement of Accomplishment).

	CNL	CP	ECL	MS	Total
Earned a 'Pass' SoA	358	1,255	349	1,741	3,703
Earned a 'Distinction' SoA	1,113	976	2,228	823	5,104
Total SoAs issued	1,471	2,231	2,577	2,564	8,843
Completion rate against 1st week active users	6%	6%	18%	12%	9%
Completion rate against 6th week active users	29%	25%	40%	39%	33%

Table 8. Completion statistics for the four International Programmes' MOOCs, with total figures for reference

5. Measures of success

Our main measure of success for the four MOOCs was student feedback: this section summarises the results of the post-course survey we sent to all students registered for our MOOCs.

A second measure was to test one of the objectives set out at the commencement of our partnership with Coursera: whether our MOOC students would have a positive enough experience to apply for one of our fee-paying degree programmes.

5.1 Post-course survey data

Before the end of our four MOOCs, Coursera provided us with a post-course survey template, consisting of thirty questions covering the quality of the learning experience (e.g. videos, assessment, instructor delivery) and the potential benefit of the MOOC to the student. All students received the same set of questions in order to allow comparison, but course teams were free to add questions of their own or send out separate surveys. The graphs below summarise the top-line data collected from the four post-course surveys.

The surveys were sent out to all registered students in the week following the distribution of each MOOC's Statements of Accomplishment (this date varied for each MOOC due to their staggered start dates) and the response data for this report collected on 13 September 2013. At the point of collection, we had received a total of 3,483 responses (13% of sixth week active users) divided amongst the four MOOCs as follows: Camera Never Lies: 819; Creative Programming: 1,172; English Common Law: 607; Malicious Software: 885.

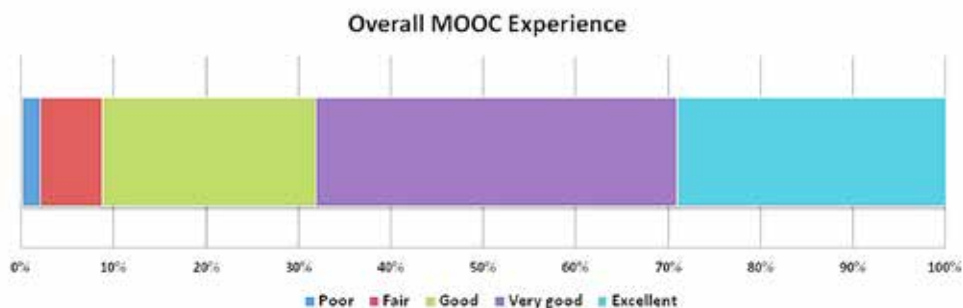


Figure 12. Combined responses to the survey question: rate your overall course experience

As a combined average, 91% of respondents rated their experience of taking a University of London International Programmes MOOC as 'Good', 'Very Good' or 'Excellent'. An average of 2% of learners rated their experience as 'Poor' with 29% rating their experience as 'Excellent'.

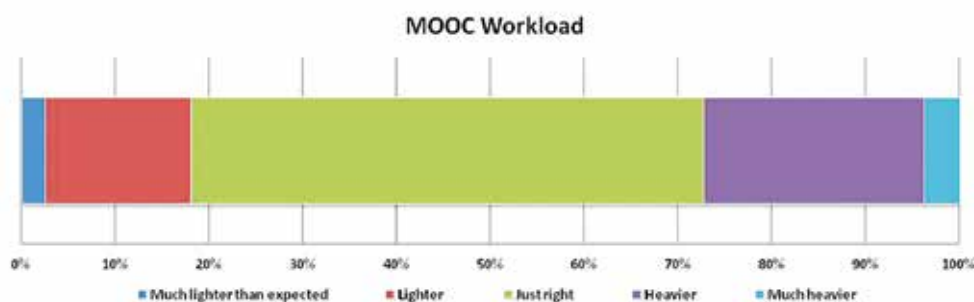


Figure 13. Combined responses to the survey question: rate the course workload

When asked to rate the workload of their MOOC (n.b. each course team had been asked to develop a MOOC offering 5-10 learning hours per week), the majority of learner respondents (55%) identified it as 'Just right'. A combined average of 28% rated the workload as 'Heavier' or 'Much heavier' than expected and 19% thought the workload as 'Lighter' or 'Much lighter' than expected.

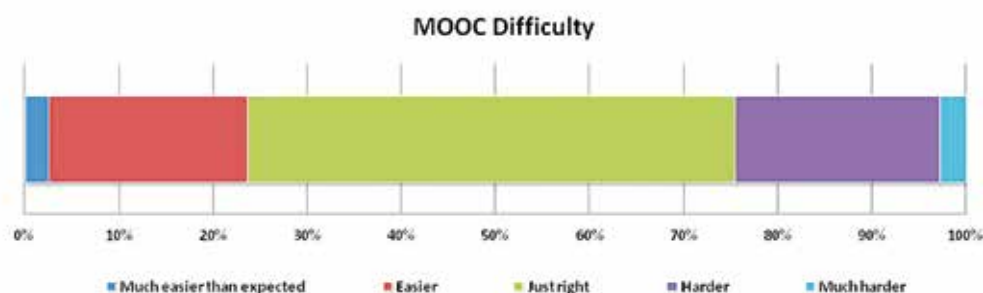


Figure 14. Combined responses to the survey question: rate the course difficulty

Learners generally found the difficulty of our MOOCs to be 'Just right', with a combined average of 52% choosing this response. A similar number of learners found the MOOCs either 'Easier' or 'Harder' than expected (21% and 22% respectively). All four MOOCs were created as subject introductions at roughly UK FHEQ Level 4, which is the equivalent to the first year of an undergraduate degree.

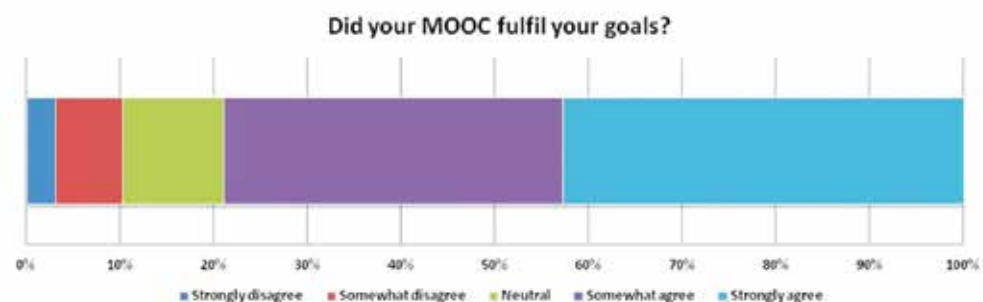


Figure 15. Combined responses to the survey question: did your MOOC fulfil your goals?

It was pleasing to note that 79% of survey respondents either 'Somewhat agreed' or 'Strongly Agreed' that their goals were fulfilled in taking our MOOCs.

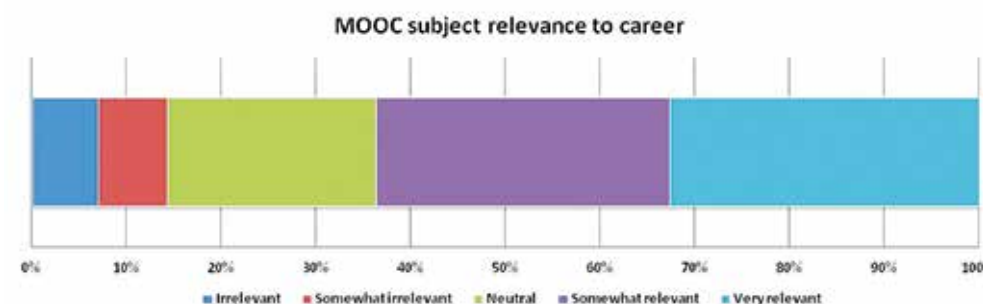


Figure 16. Combined responses to the survey question: is the topic of the MOOC applicable to your current or potential career?

As can be seen in the pre-course survey results above, a significant majority of the learners taking our MOOCs were both degree-educated and in employment; this suggests our MOOCs were perceived as a CPD (continuing professional development) activity by the majority of our registered learners. This evidence is further borne out in the post-course survey results, with over 60% of learners choosing their MOOC as it was either 'Somewhat relevant' or 'Very relevant' to their career.

We were also interested in collecting data on how effective each of our MOOCs had been in improving students' subject understanding. Figures 17 – 20 illustrate the feedback we received from learners on the four MOOCs:

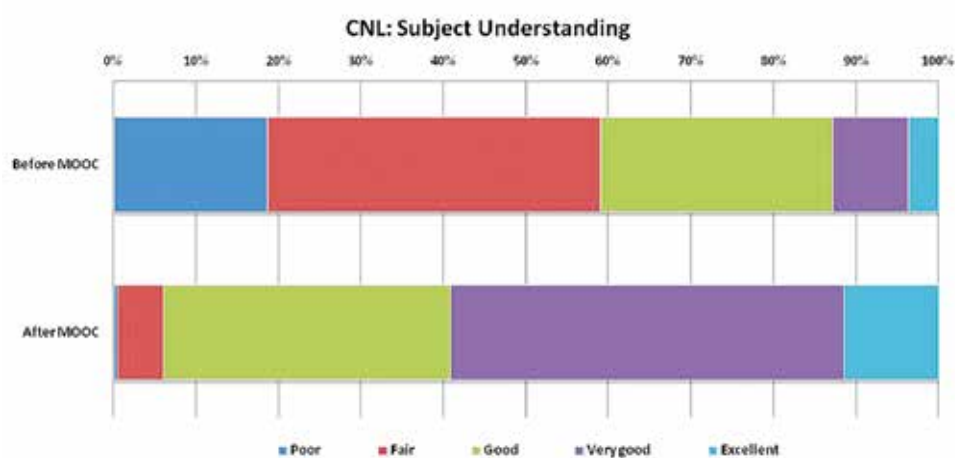


Figure 17. Response to *The Camera Never Lies* survey question: how would you rate your understanding of the subject matter before and after taking this course?

For *The Camera Never Lies*, the majority of students (59%) rated their subject understanding before taking the MOOC as either 'Poor' or 'Fair'. Once the MOOC had finished, 6% of students rated their subject understanding as 'Poor' or 'Fair' and the vast majority (94%) rated their subject understanding as 'Good', 'Very Good' or 'Excellent'.

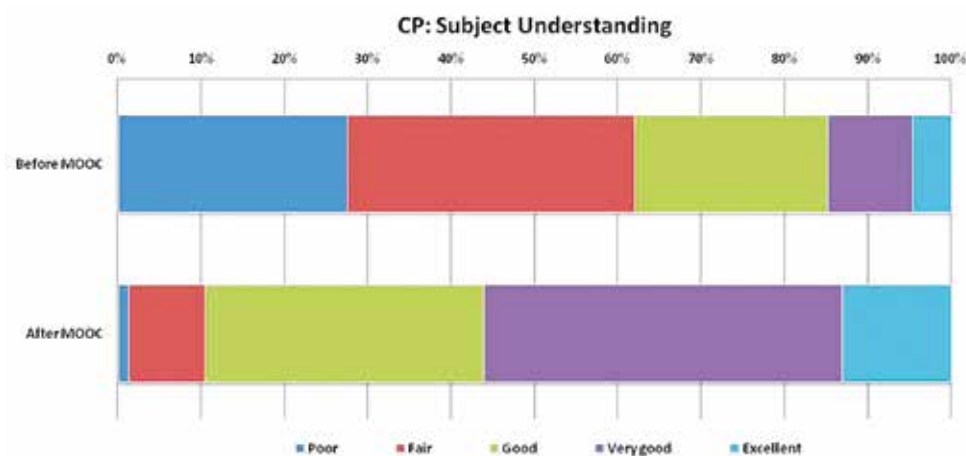


Figure 18. Response to *The Camera Never Lies* survey question: how would you rate your understanding of the subject matter before and after taking this course?

For *Creative Programming for Digital Media & Mobile Apps*, before taking the MOOC 62% of students rated their subject understanding as either 'Poor' or 'Fair'. Once the MOOC had finished, only 1% of learners rated their subject their subject understanding as 'Poor' while 90% of learners rated their understanding as 'Good', 'Very good' or 'Excellent'.

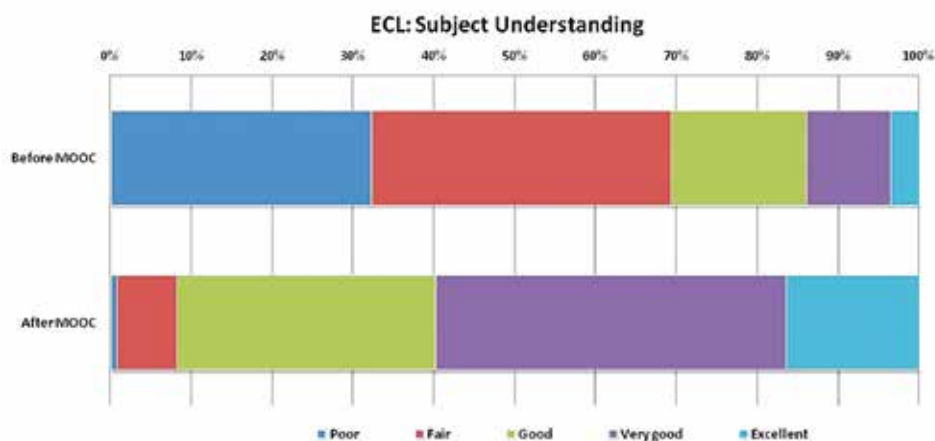


Figure 19. Responses to the *English Common Law* survey question: how would you rate your understanding of the subject matter before and after taking this course?

For *English Common Law*, 69% of students rated their subject understanding as either 'Poor' or 'Fair' before taking the MOOC. Once the MOOC had finished, 8% of students rated their subject understanding as 'Poor' or 'Fair' while 92% rated their subject understanding as 'Good', 'Very Good' or 'Excellent'.

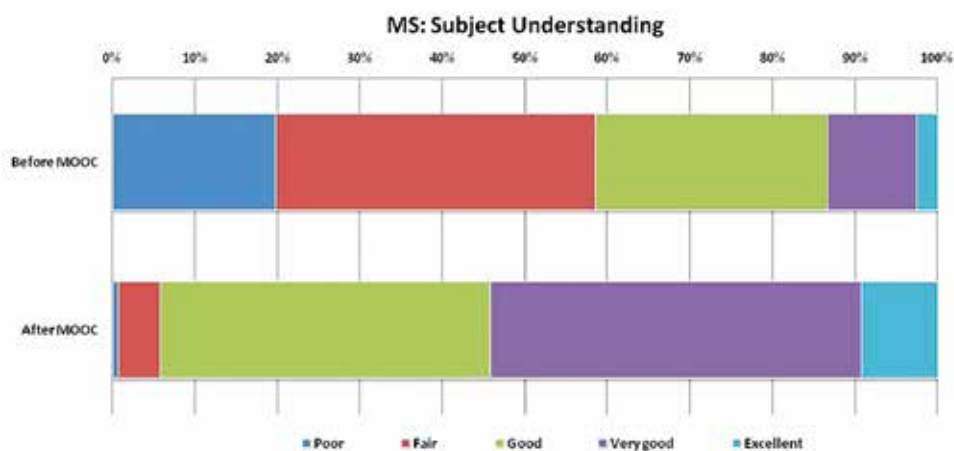


Figure 20. Responses to the *Malicious Software* survey question: how would you rate your understanding of the subject matter before and after taking this course?

For *Malicious Software and its Underground Economy*, 59% of students rated their subject understanding as either 'Poor' or 'Fair' before the MOOC. Once the MOOC had finished, that figure had dropped to 6%, and 94% of learners rated their subject understanding as 'Good', 'Very good' or 'Excellent'.

5.2 MOOC to Degree conversions

One of the objectives of partnering with Coursera was to test the hypothesis that the International Programmes, as a distance and flexible learning provider, would be in a position to convert MOOC students into University of London students.

At the time of writing (September 2013), just under 35 students have indicated on their University of London International Programmes application form that they took one of our four MOOCs before applying for a full degree programme.

6. Lessons learned

6.1 MOOC teams feedback

Once the four International Programmes' MOOCs had formally finished (i.e. all students had been graded and Statements of Accomplishment distributed), we invited each of the teams to complete a short survey in order to gather feedback on their experiences of planning, developing and running their respective MOOCs. The responses to this survey are summarised below.

- ❖ When asked to rate their overall experience of planning, preparing and running a MOOC as either 'Poor', 'Fair', 'Good', 'Very good' or 'Excellent', the majority of respondents (66%) rated their experience as 'Good', while the remaining 44% rated their experience as 'Fair'.
- ❖ When asked to estimate the amount of time spent preparing their MOOC before it began (excluding filming), 83% of respondents spent at least 10 hours a week in preparation, with the remainder working 5-10 hours each week on preparation.
- ❖ Once their MOOC started, the majority of the course teams (66%) spent at least 10 hours a week managing their MOOC (in particular: resolving technical issues and managing student queries)

The survey also invited free text responses in order to provide further context to the course teams' answers. The key themes coming out of these responses were the sheer workload involved in planning and developing the content, and the resources required for video production on top of the individuals' 'regular' jobs. Creating effective strategies to manage the large number of participants in the MOOC forums was also reported as a challenge.

6.2 MOOC development considerations

Listed below are some key lessons we collated in the planning, development and running of a MOOC on Coursera.

Planning a MOOC

- ❖ Have a clear and justifiable reason, whether at an academic or institutional level, for developing a MOOC. It is not something that should be considered lightly due to the resource involved.
- ❖ The development of a MOOC is resource intensive both in terms of staff working hours and (potential) video production costs. Academic teams of a single individual should not be encouraged unless there is additional support available for planning, guidance, filming and platform management.
- ❖ Clear roles and responsibilities should be defined from the beginning between the academic team, project/ institutional team and production company (if applicable).
- ❖ Unless planning and publicising a MOOC which is explicitly aimed at a target audience, be aware of the general demographic of MOOC users: employed, well-qualified professionals in their 20s-30s who may be more interested in browsing the subject content rather than completing the course.
- ❖ Due to the demographic profile of the majority of our students, time pressure was reported as a limiting factor in progression and completion. As such, if it is intended to encourage progression, MOOC planners should consider structuring their MOOC to offer up to 5 hours of learning per week.

Producing a MOOC

- ❖ Copyright remains a complex issue for MOOCs, due to their audience, delivery, and the length of time it can take to receive permission. The following prioritised options are suggested for content: (i) create original content; (ii) utilise content from a public domain website that allows use of images for any purpose (iii) link, rather than include, the source content (iv) seek clearance from the original material's publisher(s).
- ❖ Careful consideration should be given to the video presentation format. Students reacted well to seeing the lecturer (even if shown in the corner of the screen, alongside slides).
- ❖ Upload and review all material as early as possible, ideally at least 2-4 weeks before MOOC launch.
- ❖ Test the assessment methods and marking criteria on the actual Coursera platform as much as possible beforehand.
- ❖ Once the video content has been finalised and uploaded, allow good time for subtitle requests to be submitted, checked and added to the videos.

Running a MOOC

- ❖ The forums can be the strongest or weakest point of a MOOC, as this is the most free-flowing area of the MOOC and will be where learners provide feedback (both useful and less so), identify issues and support one another. Creating an effective strategy for managing the forums, ideally in conjunction with well-briefed teaching assistants, would appear to be a sensible approach.
- ❖ Communicate regularly, but not too regularly e.g. once or twice a week. We saw marked spikes in engagement with materials (particularly assessment) following emails sent by course teams on these topics. Students appeared to respond to emails more readily than static announcements on the MOOC session site.
- ❖ Be responsive to student feedback, within reason. If a single learner raises an issue in the forums, it is worth noting; if 20 or 30 students raise the same issue in the forums, it is wise to act quickly by confirming that the issue has been noted and action taken where possible.
- ❖ The majority of MOOC users do not appear to engage with MOOCs in a traditional manner. Many are 'tourists': interested in trying a MOOC for the first time, assessing whether the MOOC is for them, and/or accessing particular subject material and then moving on. Only a small minority (10-20%) of the active learners will progress through the MOOC and achieve a Statement of Accomplishment.

7. Conclusion

As a measure of success the first four MOOCs from the University of London International Programmes were delivered to schedule with over 93,000 active students in the first week and a completion rate, in terms of students attaining a Statement of Accomplishment, of over 9% of students active in the first week. Student feedback returned a 91% satisfaction rating and there are positive signals that students completing a MOOC have begun to enrol on University of London International Programmes' flexible and distance learning degree pathways. All measures provide reassurance against the key objectives of this initiative and the sustainability of further MOOC development.

What did we learn in planning, developing and running our four MOOCs, and what could we improve? The most significant lesson is the huge amount of input, resource and time required to set up a MOOC. However, this resource requirement is almost entirely front-loaded: once a single MOOC session concludes successfully, we believe multiple subsequent sessions could be run which would require less intensive oversight from the academic team, via teaching assistants managing the day to day running of the forums and escalating issues as and when required. The academic team could interact at advertised predefined points during the MOOC, without the same onerous intensity of the MOOC's first iteration.

MOOC registrations do not necessarily bear a relation to the number of active participants. As a rough rule, MOOC teams should prepare for around 50% of registered learners to actually participate once a MOOC starts. Having said this, in the context of on campus or 'traditional' distance learning tuition the number of active participants is still considerable.

Each of the MOOCs were run over six weeks with between 5-10 learning hours per week, and the majority of our learners felt that this structure was appropriate. Nonetheless, lack of time was a recurrent theme in feedback on why students were unable to undertake as much study as they hoped. It is important to note that part of the rationale for content being up to ten hours of student effort was to provide a signal and indication to students who were trialling the MOOC before considering taking a flexible and distance learning in a related degree programme. It is acknowledged that the majority of active users were enrolled on the MOOCs for professional development and/or as leisure or general interest. On balance the feedback on the workload suggested the design and the course teams' content was broadly well received.

The majority of MOOC users appear to be in their 20-30s, university educated, based in a developed or rapidly developing economy (with the bulk in the United States) and not necessarily interested in receiving formal certification. In light of this demographic, completion rates may not be a useful metric of MOOC success. Instead, there are potentially significant numbers of active users who gain value from accessing the materials, undertaking activities and using the opportunity to dialogue with other students, without feeling the need to attain a Statement of Accomplishment. It will require further investigation on how we might measure this 'value added'; badges or skills markers may provide some potential in this area.

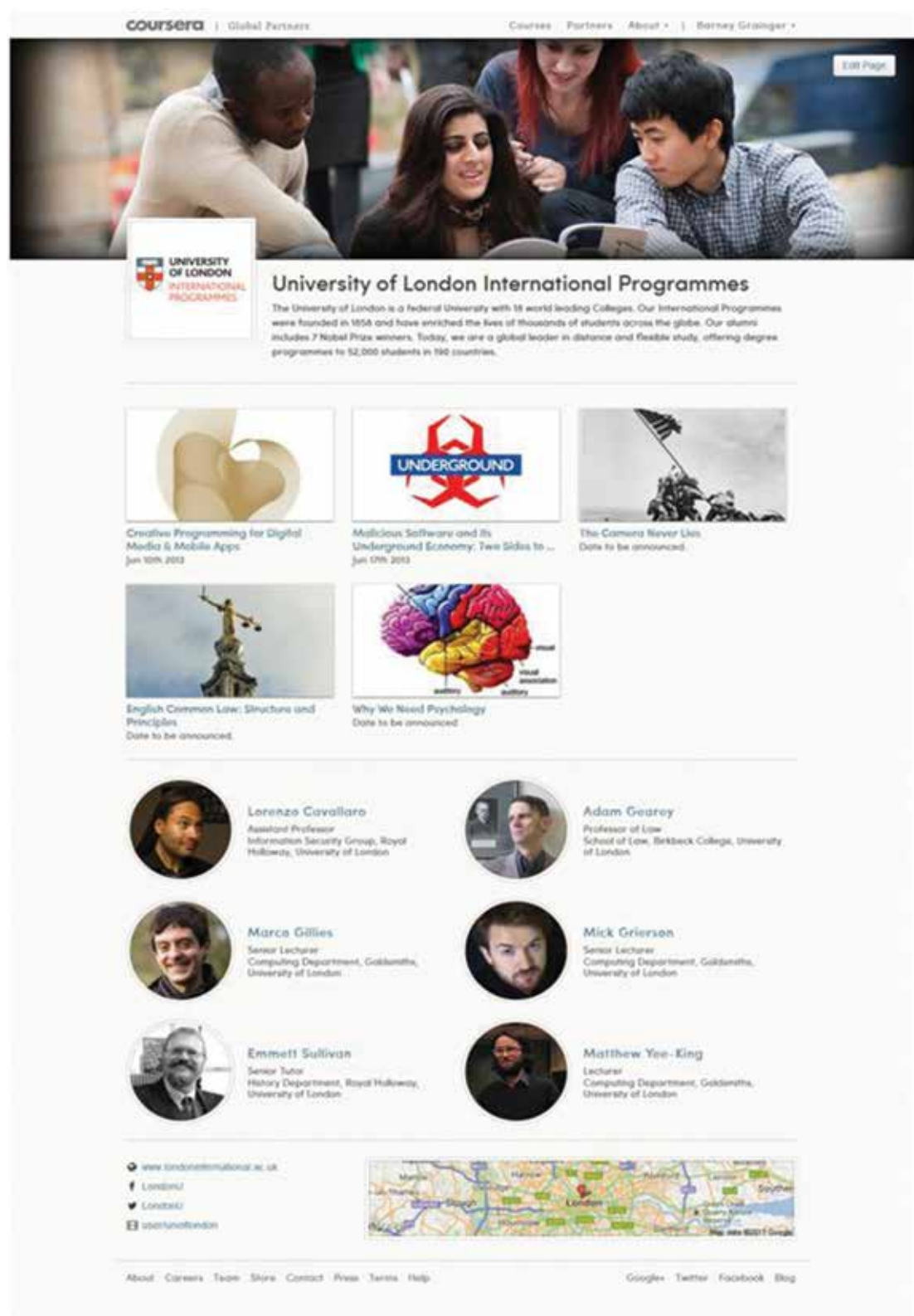
MOOC usage is based primarily on watching and downloading videos (60-80% of active learners), with other learning and assessment methods utilised by between 30-60% of active students and a relatively small minority (approximately 4%) of students participating in the forums. This figure should not diminish the importance of the forums though, as they are vital conduits for student feedback, allow interaction between the academic team and the student body, provide additional opportunities to contextualise the learning (e.g. through local study groups), and can exhibit some of the best behaviours amongst learners in terms of support, moderation and guidance. Conversely, the forums are also a freely accessible public space, and can therefore include some highly negative behaviour, as with most open online networks. In summary, forum management is a key planning consideration and should be carefully thought through before MOOC launch in terms of instructor, teaching assistant and student engagement points and interventions.

Learner responses to both the pre-course and post-course surveys was encouragingly high, with students keen to provide constructive feedback on what went well and what we could have done better in our MOOC offerings. We were surprised to see that a large number of learners provided feedback to the post-course survey even if they had not finished the MOOC, which gave us useful information on the reasons why students did not complete.

Ultimately, our experience in offering four University of London International Programmes' MOOCs through Coursera proved to be a collaborative, exciting and positive experience for nearly all involved. Our objectives in terms of attracting fee-paying students to our full programmes, raising awareness of the University of London brand amongst millions of students world-wide, and encouraging innovation in pedagogy and delivery amongst our academic teams appear to have been met, and as such we look forward to continuing to deliver more high quality online courses to an even larger global audience of learners in the future. Plans are in place to complement the existing MOOC offering and for further iterations of the first four MOOCs referred to in this report.

APPENDIX 1: University of London International Programmes page on Coursera

Note: The date for the launch of the Psychology MOOC has not yet been set.



APPENDIX 2: University of London International Programmes MOOC description page on Coursera

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Creative Programming for Digital Media & Mobile Apps

Dr Marco Güller, Dr Matthew Yee-King and Dr Mick Grierson

For anyone who would like to apply their technical skills to creative work ranging from video games to art installations to electronic music, and also for artists who would like to use programming in their artistic practice.

Workload: 5-10 hours/week

Sessions:
Jan 10th 2015 (5 weeks long) [View class schedule](#)

Future sessions: [Add to feed-back](#)

RTE **LIS**

Free **Self-paced**

About the Course

This course will teach you how to develop and apply programming skills to creative work. This is an equivalent skill set to the development of creative mobile applications, digital music, and video games. It will teach technical skills needed to write software that make use of images, audio and graphics, and will concentrate on the application of those skills to creative projects. Additional resources will be provided for students with no programming background.

Course Syllabus

- Week 1: Introduction: what's going on?
- Week 2: Introductory GUI app
- Week 3: Sound, position and vector (unlimited equilateral)
- Week 4: Game with physical modelling and synthesis
- Week 5: API: accessing and processing local media data
- Week 6: Final machine

Recommended Background

Ideal students are expected to have some background in programming (either computer science, and some experience of producing fully functional creative work). The course is also suitable for students new to computer programming but with a strong arts background, and a desire to develop skills in creative applications development.

Suggested Readings

There is no required reading.

You might find it useful: this book is an excellent introduction to Processing, the programming environment we are using.

<http://www.amazon.co.uk/bookdp/B001YBQZD2/>

Course Format

The course will consist of 2 elements: the development of technical skills for software design using a range of tools, and the development of creative work that applies those skills. As part of the course, students will undertake a substantial creative technology project. Each week will consist of:

- A lecture or a tutorial topic (e.g. writing image or audio processing software)
- A series of creative tasks related to the technical topic (e.g. how to create better images through photography / editing or how to create more effective audio and its application on project development)
- A set of exercises to practice the technical and creative skills covered in the lecture
- Work to write guidance for working on your creative projects
- An additional lecture for students with no programming background

FAQ

- What is Creative Computing?**
Creative Computing is the creative use of computing technologies, particularly the application of programming skills to creative areas such as music, visual arts and games.
- What programming language will be used?**
Processing, which is a subset of Java but is one of the most popular programming languages among creative programmers.
- I don't have enough programming experience. But want to learn how to make Creative Software. Is this course for me?**
Yes. The course is designed with additional materials for creatives who intend to do programming despite not wanting to develop their skills in creative software development.
- Where can I find out about more information regarding this subject and the University of London programmes?**
This subject is the central element of the interactive world movement portfolio of flexible study programmes offered through the University of London International Programmes. These programmes result from a collaboration between the University of London International Academy and 12 Colleges of the University of London, established in 1956. Its international programmes are the world's oldest provider of flexible learning. Today there are 52,000 students in 180 countries studying through the University of London International Programmes, for more than 100 qualifications at degree, higher education diploma and certificate levels. The university also works with a network of independent teaching centres worldwide, all of which provide leading, leading and postgraduate level. For more information please visit <http://www.londoninternational.ac.uk/en/academic>.

Categories:
Information, Tech & Design
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INTERNATIONAL PROGRAMMES

All programmes offered through the University of London International Programmes are developed by academics at the University of London's constituent Colleges. Assessment is the responsibility of academics at these Colleges. Currently these include: Birkbeck, Goldsmiths, Heythrop College, Institute of Education, King's College London, The London School of Economics and Political Science (LSE), London School of Hygiene & Tropical Medicine, Queen Mary, Royal Holloway, Royal Veterinary College, SOAS, and UCL.

For further information on the range of programmes we offer, please visit our website or contact us at:

Student Advice Centre, University of London, Stewart House,
32 Russell Square, London WC1B 5DN United Kingdom

Tel: +44 (0)20 7862 8360

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