Review of the Bloomsbury Learning Environment MOOC *Get Interactive: Practical Teaching With Technology*

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EXECUTIVE SUMMARY

This review applies frameworks and models of online learning to assess *Get Interactive: Practical Teaching With Technology* in terms of effective learning over the first six months of its run. The course was designed, developed and delivered by the Bloomsbury Learning Environment (BLE) as a Massive Open Online Course (MOOC) on the Coursera platform to offer guidance to educators on creating engaging online courses. Situated within Mayes's and de Freitas's framework of three approaches to learning (associative, cognitive and collaborative), the course is assessed according to models of online learning activity (Seddon and Wenger) which help to determine the category of MOOC (Downes, Anders). The review focuses on the participants, the learning outcomes, the ownership of learning activities and level of productive, active discussions. By examining the data and evidence, the reviewer concludes that this is a successful, engaging and well-designed task-based MOOC.

SECTION ONE: INTRODUCTION

This review evaluates the Coursera MOOC, *Get Interactive: Practical Teaching With Technology* through appropriate frameworks and models of online learning to assess how well this course answers key questions about effective learning.

- Section One describes the course, its background, design and purpose.

- Section Two sets out the theoretical frameworks and models for the evaluation.

- Section Three analyses the course.

- Section Four offers conclusions and recommendations.

The Course

Get Interactive: Practical Teaching With Technology is a Massive Open Online Course (MOOC) running on the Coursera provider platform with a global reach. It was designed, developed and delivered by the Bloomsbury Learning Environment (BLE) under the auspices of the University of London International Academy.

Purpose

This MOOC provides guidance on creating engaging courses in any online learning environment, including Virtual Learning Environments (VLEs) such as Moodle. By modelling good practice in effective pedagogic design, the course showcases examples of excellence in online teaching and provides structured activities for participants to practice skills and engage in social and collaborative learning activities. It also provides participants with first-hand experience of taking part in online learning.

Vision

The guiding vision was to create a short, manageable MOOC for busy academics and teachers, with minimal funding for development and based on a pedagogically-sound model of an online course, transparent in its learning design. It was created using the same tools introduced to participants, full of varied content and activity and centred on screencast tutorials rather than 'talking head' videos. The

course is hands-on and practical, offering experiential online learning to participants and promoting self-reflexive digital pedagogy and social and collaborative learning.

Objectives

The objectives are:

- to help participants improve their skills in designing online courses

- to encourage staff and students to incorporate interactive tools into their online teaching and learning, and provide resources that participants can repurpose for their own teaching

- to raise participants' awareness of existing resources

- to foster a community of good practice among participants.

Target

The course is aimed primarily at teaching professionals working in colleges and universities, but with relevance to any teacher of older children and adults, who are keen to improve their skills in the design and creation of online courses.

Origin

Get Interactive is based on an earlier online course offered by the BLE to its partner institutions. The four-week 'BLOOC' (Bloomsbury Online Course) was designed to improve the pedagogical use of Moodle, the Virtual Learning Environment for the Bloomsbury Colleges, modelling good practice in teaching and learning with technology and showcasing innovative examples from all institutions.

Interest in the BLOOC grew beyond Bloomsbury, and e-learning professionals from other universities requested access to the course in order to consider replication at their own institutions. Further changes to the BLOOC and the rise of the open access MOOC in education in general led to the idea of redesigning the course for a global reach.

Creators

The three team members acted as 'instructors', collaborating closely on all aspects of the project. They engaged in strategic development, appeared in videos and troubleshot issues, but each also had a specific role:

Sarah Sherman (Service Manager for the BLE) project managed the course, preparing the initial proposal for the University of London International Academy (UoLIA), and this secured a small grant. Sarah chaired the filmed panel discussions and worked with the film production team to edit these videos. She led on publicity and promotion, writing press releases and newsletter articles. Sarah also contributed course content.

Eileen Kennedy (Senior Research Associate at the Centre for Global Higher Education at UCL Institute of Education and Senior Research Associate at the RELIEF Centre) was the pedagogic lead for the course. She designed and created the original BLOOC and developed the Learning Designs, with Sarah and Nancy, using the Learning Designer tool (see 'Design/Pedagogy', below). Eileen developed some of the more pedagogically-focused course content and took part in the video panel discussions.

Nancy Weitz (Digital Learning Specialist at her company Architela) engaged primarily in strategic planning and content development within the platform, writing activities and assessments and recording the screencasts. Nancy also acted as overseer and troubleshooter for the first two sessions, responding to participants and making corrections as needed.

Design / Pedagogy

The fundamental course design was established and revised in the previous versions (see 'Origin', above) and further revised to fit UoLIA's three-week model. The *Learning Designer Tool* created by a team led by Diana Laurillard at UCL IOE was used to ensure the learning design for the course created the conditions necessary for learning to take place. In particular, the Learning Designer gave feedback on the balance of the six learning types (acquisition, investigation, discussion, practice, production and collaboration) in the course, and whether the timings of the activities were appropriate. This enabled the creators to ensure that the course put in place the necessary cycles of communication identified in Conversational Framework (Laurillard, 2012).

Structure

The course is structured over three weeks, as follows:

Week 1: Enriching course content with multimedia

This week introduces a range of multimedia tools and techniques that can be incorporated into an online course to increase student interaction and engagement with learning.

Key Topics:

- Learning Design
- Creating a test course
- Creating a screenshot
- Adding an image to a course
- Embedding a Twitter feed
- Embedding a video in your course
- Podcasts
- Sharing your practice on Padlet
- Using media for teaching and learning

Week 2: Student production of content & encouraging students to collaborate

This week offers ways in which participants can encourage their own students to interact and collaborate, using simple tools accessible online.

Key Topics:

- Discussion Forums
- Blogs as collaborative tools
- Wikis as collaborative tools
- Online Community Tools
- Online presentation tools
- The value of student collaboration

Week 3: Formative Assessment and Feedback

This week is focused on assessment and feedback.

- Quiz tools
- Twitter polls
- Digital Badges in education
- Plagiarism detection tools
- Understanding peer review
- Online assessment
- The value of online formative assessment and feedback

Development

The course was developed on a tight budget that primarily financed the services of one of the team members to create content, and also supported professional video filming. Development consisted of:

- creating and editing screencasts in Screencast-o-matic and Camtasia
- producing readings, activities and assessments
- sourcing, creating and editing images
- creating activities in external sites, such as Twitter and Padlet
- structuring the course on the Coursera platform
- uploading the content to the platform

Marketing and Promotion

Prior to launch, emails embedded with the welcome video and brief information about the course and registration were sent to internal and external mailing lists. A press release was sent at the same time to all the BLE institutions and external organisations (e.g. ALT) to announce the course on websites, newsletters, and other publications. Posts were created on institutional and external blogs and Twitter.

Once launched, the course manager gave presentations at institutional and external events and made visits to external institutions to promote the course.

The University of London includes all recent MOOC launches in a variety of communications, including Teaching Institutions newsletter, various committee papers, and occasional social media blasts.

Additionally, Coursera regularly send emails with information about new courses, courses they think learners may be interested in (based on selected preferences, search terms, and the courses they are currently enrolled in) and this course appears in these kinds of messages.

SECTION TWO: THEORETICAL BACKGROUND

We will now evaluate the success of the underlying learning approach of this course's design. MOOCs may incorporate a number of learning approaches. These will now be considered, to set the scene.

Mayes and de Freitas identify three approaches to learning:

1. ***Associative/empiricist perspective (learning as activity)*** In this approach knowledge is an organised accumulation of associations and skill-components. Learning is the process of connecting units, through sequences of activity. This view encompasses a range of research traditions such as behaviourism.

The associative perspective emphasises task analysis. It provides a highly focused set of objectives, described as learning competencies. It is a bottom-up, cumulative approach, although Gagne (1985) does recognise situations (such as acquiring higher order thinking skills) where this is not appropriate.

The associative view emphasises:
- Routines of organised activity
- Clear goals and feedback
- Individualised pathways and routines, matched to the individual's prior performance

2. ***Cognitive/constructivist perspective (learning as achieving understanding)*** The underlying theme for learning is to model the processes of interpreting and constructing meaning. Current cognitive approaches to learning emphasise the idea that understanding is gained through an active process of

creating hypotheses and building new forms of understanding through activity (Piaget, 1964). Learners' search for meaning through activity is central, and the cognitive perspective emphasises conceptual development. This view also encourages 'learning how to learn'. This may encourage the development of autonomous learners.

The cognitive constructivist view emphasises:
- Interactive environments for construction of understanding
- Approaches that encourage experimentation and the discovery of broad principles
- Support for reflection.

3. ***Collaborative/situative perspective, (learning as social practice)*** Constructivist tasks are set that make the learning activity authentic to the social context in which the skills or knowledge are normally embedded. Problem-based learning and communities of practice are common. Vygotsky (1978) described how learners could progress through the help of more capable peers. They thus pass through a Zone of Proximal Development. The learner's 'identity' also derives from becoming part of a community of practice (Lave and Wenger, 1991). The situative perspective focuses on learning outcomes that are dependent upon the establishment of collaborative learning relationships with peers. This perspective also encourages the solution of realistic problems.

The situative view emphasises
- Environments of participation in social practices of enquiry and learning
- Support for development of identities as capable and confident learners
- Dialogue that facilitates the development of learning relationships

Mayes and de Freitas (2004) describe how each pedagogical perspective emphasises different aspects of achievement:

- The **associative** approach emphasises: achievement of knowledge or skill components.
- The **cognitive** approach emphasises: achievement of broad conceptual understanding leading to extended performance.
- The **collaborative** approach emphasises: conscious participation, peer assessment and collaborative problem solving.

From this, for any e-learning course, a number of aspects of participant interaction might be examined. After ascertaining who the audience is, the completion of the desired learning outcomes may be reviewed. Then participant ownership of the learning activities and the products they create to share with peers and tutors can be considered. Any collaborative discussion describing positive influence on practice can then be highlighted.

These aspects are framed and addressed as a series of key questions in Sections Three and Four of this report.

Framework

Get Interactive as a learning experience can be explored using e-learning models by Seddon (Seddon and Postlethwaite 2007) and Wenger, Traynor and de Laat (2011) for analysis.

The Seddon-NCSL's E-Learning Taxonomy Model illustrates possible learning behaviour demonstrated in contributions to online dialogue. It suggests that participant contributions may move between 'zones' in any direction: first offering information, then analysing, then offering further information. 'Movement' is therefore not hierarchical. It is important to recognise that all types of learning behaviour are necessary for the construction of community knowledge; and it is the collaborative achievement that is sought, rather than individual progression.

The Zones in the model are:

- **Sharing Zone**: Typical activity: Identifying oneself through social information and greeting others.

- **Comprehension Zone**: Typical activity: Displaying an understanding of facts by agreeing or disagreeing with others or questioning them.

- **Analysis Zone**: Typical activity: Dissecting information, comparing, noting differences, inferring.

- **Synthesis Zone**: Typical activity: Building new information summarising, integrating, drawing together information from diverse sources.

- **Transformation Zone**: Typical activity: Offering solutions to problems raised, testing and reporting back, showing an awareness of 'change through collaborative learning'.
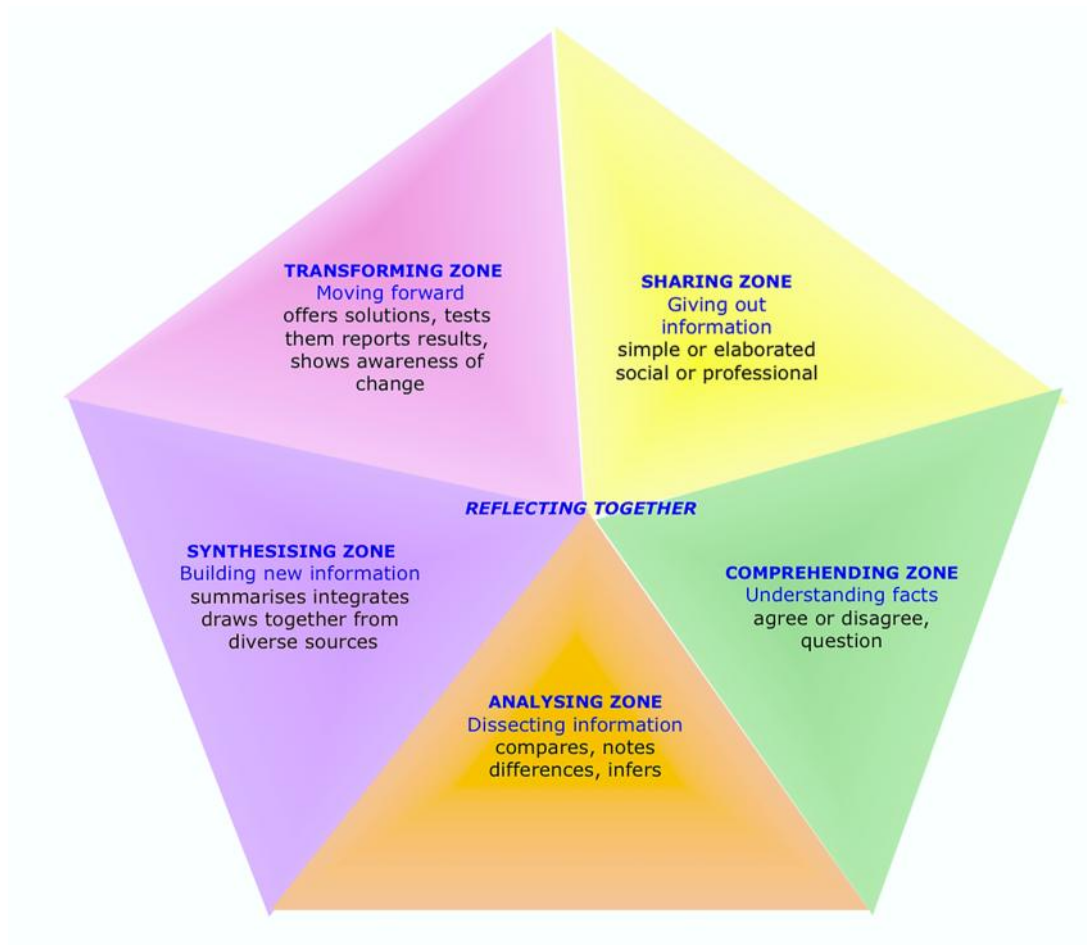
Figure 1: The Seddon-NCSL e-learning taxonomy model

Wenger et al. look at **cycles** in online activity. The Cycles suggested are:

1. **Activity**—meaningful activity, enjoyable engagement in activity – *Immediate Value*
2. **Output**—resource and knowledge production from activity – *Potential Value*
3. **Application**—use of resource in own practice and benefits from this – *Applied value*
4. **Outcome**—personal (effect on individual success), organisational (contribution to organisation success through participation) – *Realised Value*
5. **Reframing (new definition of success)**—change in understanding of what defines success– *Reframing Value*

There is a degree of congruence between the two models so they can usefully be combined to investigate online forums. The key elements of each model are shown below and the third column puts forward a suggested 'joint' framework.

E-Learning Evaluation Framework for *Get Interactive*		
Seddon-NCSL 'Learning Zones' These are not hierarchical and can be present at any point in a dialogue. Subjective analysis of online dialogue seeks to identify these types of contribution. Facilitator questioning can promote them.	**Wenger Cycles** incorporating the five types of perceived value participants gain through online interaction.	Key indicators that might result from combining the models.
Sharing Zone Typical activity: Identifying oneself through social information and greeting others.	Meaningful Activity—*Immediate value* - basic enjoyable engagement with the course through meeting people and working together. Making new connections for networking.	**Sharing** information, **networking**
Comprehension Zone Typical activity: Displaying an understanding of facts by agreeing or disagreeing with others, questioning.	Output – *Potential value* – gaining knowledge capital. Evidence of new perspectives in online activities such as discussions quizzes, assignments.	**Comprehension** Restatement of **new knowledge**. **Questioning.**
Analysis Zone Typical activity: Dissecting information, comparing and noting differences, inferring	Application – *Applied Value* – Use of resources – reports on use in participants' own practice (this may be combined with the next value).	**Dissecting** information, **comparing, noting differences, inferring.** **Analysis**
Synthesis Zone Typical activity: Building new information, summarising, integrating, drawing together from diverse sources.	Outcome – *Realised Value* – New techniques identified and used. Realisation of successes through participation.	**Building new information,** awareness of how different viewpoints can create new knowledge. **Synthesis**
Transformation Zone Typical activity: Offering solutions, testing and reporting back, showing an awareness of change through collaborative learning.	Reframing – *Reframing Value* – Rethinking practice.	**Change in their practice (perceived)** evidenced through collaboration. **Transformation**

The highlighted indicators in the last column are used in Section Three to analyse *Get Interactive* online participant contributions.

Finally, we must consider the type of MOOC being examined here.

Stephen Downes (2015) has defined two types of MOOC:

1. An xMOOC includes 'many of the MOOCs from Coursera, Udacity and EdX. These are termed "xMOOCs" and they use a knowledge transmission model. In essence, they offer` technology-enriched traditional teacher centred instruction'. Such systems offer an individualised experience, in that they allow students to take alternative routes through material and offer automated feedback. However, they do not provide a social learning experience, or a feeling of being dealt with personally. They are in line with the associative / empiricist perspective. These task-based MOOCs promote participation by enabling completion of specific goals, development of discrete skills and completion of specific projects.

In contrast 'cMOOCs' are places where learner-centred pedagogy allows students to learn from one another. They are in line with the collaborative / situative perspective. These socially-orientated MOOCs encourage participation by activities that enhance engagement and allow learners to build relationships, communities and social networks.

SECTION THREE: QUESTIONS AND ANALYSIS

The research questions that guide this analysis could be applied to any assessment of e-learning:

1. Who were the course participants?
2. Were the learning outcomes in subject-matter units completed?
3. Did learners take active ownership of their learning activities, producing task outcomes for feedback from tutors or peers?
4. Did productive, active discussion take place across groups of learners? Could the conscious development of new practice be identified in these discussions?

Data from the first six months of course iterations (May–October 2017) provide the evidence for this analysis.

1. Who were the MOOC participants?

Basic demographic data for the participants is available from Coursera as follows.

Participant data

Total enrolled learners by month (and cumulative)

May	June	July	August	September	October
768	223 (991)	230 (1221)	226 (1447)	196 (1673)	220 (1893)

Patterns of usage

Learners by Continent

Europe 42% Asia 25%   North America 18% Africa 6.4% South America 5.0% Oceania 2.8%

Countries and Regions (118 countries)

More than 5% of participants	2.0 - 5.0 % of participants	1.0 - 2.0 % participants	0.5 - 1.0 % participants
United Kingdom 22% United States 12% India 6.2%	Russian Federation 3.1% Mexico 2.8% Spain 2.4% Egypt 2.4% Brazil 2.2% Australia 2.2% China 2.2% Canada 2.1% Italy 2.0%	Germany 1.7% Hong Kong 1.6% France 1.4% Saudi Arabia 1.4% Nigeria 1.3% Philippines 1.3% Colombia 1.2% Pakistan 1.0% Singapore 1.0%	Israel 0.96% Thailand 0.90% Ukraine 0.90% Greece 0.83% United Arab Emirates 0.83% Malaysia 0.83% Netherlands 0.83% Bangladesh 0.77% South Africa 0.77% Austria 0.70% Ireland 0.70% Turkey 0.70% Taiwan 0.64% New Zealand 0.58% Indonesia 0.58% Iran, 0.51% Belgium 0.51% Japan 0.51% Korea, Republic of 0.51%

A further 78 countries are also involved, each representing less than 0.5% of total participants.

Women make up 46% of participants, men 53%.

Age range	% Female	% Male
13-17	0.0%	0.30%
18-24	6.3%	6.9%
25-34	18%	20%
35-44	11%	11%
45-54	6.9%	9.4%

| 55-64 | 3.6% | 3.9% |
| 65+ | 0.60% | 0.60% |

Student Status

Full-time students   19%
Part-time students   15%
Not a student   66%
Based on data from 191 learners.

Highest Education

Doctoral degree   17%
Professional school degree   2.8%
Master's degree   41%
Bachelor's degree   27%
Associate degree   3.2%
Some college but no degree   6.4%
High school diploma   2.4%
Some high school   0.80%

Based on data from 251 learners.

Employment Status

Employed full-time   59%
Employed part-time   14%
Self-employed full-time   3.6%
Self-employed part-time   4.6%
Unemployed and looking   10%
Unemployed and not looking   3.6%
Other   5.1%

Based on data from 197 learners.

Full course current aggregated information (from the course dashboard).

Numbers since May 2017

Total visitors	Active Learners	Course Completers
4664	1117	48

Total Learners   2,193   + 52 from previous week
Course Completers   57   + 5 from previous week
Active Learners (All Time)   1,186   + 21 from previous week

2. Were the learning outcomes in subject matter units completed?

Each week of the three-week course is structured to build skills through activity. The required outcomes for each week are in italics below. For each week the specified submission must be made and peer reviews carried out.

An overview follows:

Week 1: Enriching course content with multimedia

Participants are guided through concepts and are encouraged to partake in practical and collaborative activity.

The aim of this week is to introduce a range of multimedia tools and techniques that can be incorporated into an online course to increase student interaction and engagement with learning.

There are 10 videos, 19 readings, 1 practice quiz.

Peer-reviewed assessment: *Create an annotated screenshot illustrating the effective use of media in your test course.*

Assess three submissions by your peers, making constructive comments.

Week 2: Student production of content, and encouraging students to collaborate

Participants are guided through key tools and techniques and are encouraged to take part in practical and collaborative activity.

The aim of this week is to introduce ways in which participants can encourage their own students to interact and collaborate with each other, using simple tools accessible online.

There are 6 videos, 13 readings, 1 practice quiz.

Peer-reviewed assessment: *Create an online presentation about how to design engaging and interactive online courses.*

Assess three submissions by your peers, making constructive comments.

Week 3: Formative Assessment & Feedback

Participants are guided through key tools and techniques and are encouraged to partake in practical and collaborative activity.

This week is focused on assessment and feedback.

There are: 8 videos, 15 readings, 2 practice quizzes.

Peer reviewed assessment: *Submit a reflective screencast of what you have learned in the MOOC.*

Assess three submissions by your peers, making constructive comments

Assessments are made by peer review, in accordance with the rubric stated in the course. An example is shown below.

Points	Rationale
5	Achieves all assignment objectives to a high standard. Shows innovative use of tools for engaging learning.
4	Achieves all assignment objectives to a good standard.
3	Achieves all assignment objectives to an acceptable standard.
2	Shows an annotated test course page screenshot, but fails to achieve any other assignment objective.

1	Shows a test course page screenshot (without annotations), but fails to achieve any other assignment objective.
0	No submission; no link to a course page screenshot; broken link to screenshot; or screenshot not from the participant's test course. Fails to achieve every assignment objective.

The grades assigned by peers are monitored, and final grades adjusted if necessary.

For a participant to 'pass' and be designated a 'completer' the assignment objectives have to be met. The numbers for completion given previously thus indicate whether the learning outcomes in subject-matter units were completed (57 in total).

Data about submissions in each week of the course show the following high level of engagement by submission and by peer assessment.

Assignment week	Total submissions since May	Graded submissions since May	Average number of gradings per submission
Week one	208	161	4.5
Week two	154	118	4.1
Week three	119	82	3.4

The peer assessments were made conscientiously and are often very helpful, both in terms of suggestions made, and in terms of encouragement. Some typical examples are detailed below:

> *'Your explanation is good but perhaps could give more concrete examples of how the multimedia elements achieves learning and not just engagement.'*

> *'Very well written explanation and nicely annotated screenshots.'*

> *'Very impressive classroom activities! Well structured and lots of variety of media sources and activities. Very well written explanation. I would like to do your course!'*

Although participants were asked to make three peer reviews this number was often exceeded. Some submissions received as many as seven reviews.

3. Did learners take active ownership of the learning activities, producing task outcomes for feedback from tutors or peers?

In answer to this question we consider what participants themselves said about the course in their feedback. This is an indicator of their active ownership of the course. There are several ways in which participants can give feedback. One of these is the 'star rating activity' where an average of 4.8 out of five stars was awarded by those completing the rating.

Another way to offer feedback is through comment. A flavour of some of the comments left is shown below. Positive comments and suggestions are picked out:

Comments: positives / suggestions

- A good opportunity to review new and exciting tools to spice up your class and online courses!!!

- Fun course with enthusiastic tutors(!). The interactivity is great and a sense of community among the participants grew over the 3 weeks. I learnt a lot and saw some really practical but interesting ideas for using the apps that we met.

- This class had some great ideas. I did feel like it was more work than 4 hours a week to do a good job on the work.

- I learned a lot! A good pace and some fun activities. I am already implementing some of this stuff in my teaching.

- I already knew the tools but I needed time to use it on a LMS platform and I also needed a certification to prove my skills. I loved this MOOC!

- Hi there! Thank you very much for a great course in which I learned a lot! I am a teacher at the University of Basel and I set up my courses as blended learning environments. Unfortunately learning by doing I had to realize that this is much more complicated than I thought. Thanks to this MOOC I understood much more about the possible pitfalls and have plenty of ideas how to improve my teaching in the future. All best to you and the whole team, keep up the great work! And thanks again!

- I am very thankful to the people responsible for this course(!). The course had a lot of opportunities for learning new technologies for teaching. The syllabus of the course is a little extensive for a three-week course. I couldn't go through all discussion videos and many other suggested readings. It would be great to shorten the reading list or increasing the length of course to 6 weeks. The Quizzes were a little simple and could be made more challenging. Many thanks once again.

Participants can also give thumbs up (like) or down (dislike) to individual items to indicate their enjoyment of the content, or how helpful it was to them. The highest rated items were mostly at or near the start of the course. These included:

COURSE ITEM	+ SCORE	- SCORE
Introductory information	29	
Introductory video	24	
Week 1 Learning Design	21	1
The Conversational Framework	20	
Introduction to Week 1	18	1
Welcome to Week 1	17	
Creating a screenshot using Snipping Tool	15	2
Activity: Add a screenshot to a course	14	
Information about Virtual Learning Environments (VLEs)	13	1
Getting Creative: Images for Teaching	12	
Images and Copyright	12	

AGGREGATED LIKES 491 (98%) DISLIKES 18 (4%)

4. Did productive active discussion take place across groups of learners? Could the conscious development of new practice be identified?

In order to assess the content of the discussions in the course, in term of participant learning, we return to indicators drawn from papers by Seddon-NCSL (2007) and from Wenger et al. (2011) (set out in Section Two). The highlighted indicators from the last column of the table are shown again here.

Sharing information. **Networking**
Comprehension, Restatement of **new knowledge. Questioning**
Dissecting information**, comparing and noting differences. Inferring. Analysis.**
Building new information. Awareness of how different viewpoints can create new knowledge. **Synthesis.**
Change in practice, evidenced through collaboration. **Transformation.**

Online interactions are integrated into the course. There is no requirement to participate in *all* discussions. The interactions follow activities such as reading, watching videos and other activities. A list of discussions is shown below and average contributions are given.

WEEK	FORUM	CONTRIBUTIONS (average number)	CONTRIBUTION (some of the 'types' found in the discussions)
ONE	Introduce yourself and say hello!	49	Sharing Networking
	Using media for teaching and learning	50	Synthesis Transformation
	Materials and Activities (runs each week)	12	Comprehension Analysis
TWO	Discussion forums: Let's discuss!	25	Sharing Comprehension
	The value of student collaboration	15	Analysis Synthesis
THREE	How useful are plagiarism detection tools?	10	Analysis Synthesis
	The value of online formative assessment and feedback	8	Comprehension Analysis

Generally, the number of forum contributions decreases from weeks one to three, probably as participants drop out. There are also student created forums. These are mostly set up where help is being sought, or a tool is being tested. These have a very low (<2) response rates. Using the key indicators from the 'joint model framework' framework, discussion content is reviewed in the table below.

INDICATOR	FORUM	CONTRIBUTION (e.g. from discussion forum)
Sharing Meaningful activity Immediate value	Introduce yourself and say hello!	I'm from Shanghai. I graduated from University last year and now I'm working in a marketing research company. I attend this course as I want to know more about what interactive design is and how it works. Hope I can find the answers in the course and create something new and useful.
Networking Meaningful activity Immediate value	Introduce yourself and say hello!	Hi how are you, how long have you been using STEM/STEAM do you think there is a benefit?
Comprehension Restating knowledge Agreeing/Disagreeing Output Potential value	Materials and activities Discussion Forums – let's discuss	I saw this course on your Nuzzle newsletter this morning and decided to take a look. Interestingly I have also recently signed up for test Canvas account that I need to test out so I might follow your lead and use this course to provide a framework for testing it. Hello! I also agree with you! Feedback is very important part of teacher`s work.
Comprehension Questioning Output Potential value	Materials and activities	I see technology being used in ways which looks great and clever, but which actual contribution to students' learning and skills is negligible. I would tend to include Padlet or Scoop.it in this sort of bracket, though I am very willing to have my mind changed by seeing other people's practise.
Analysis Dissecting information Application Applied value	Discussion Forums – lets discuss	I think Discussion forums are an excellent tool to know others´ opinion since you are able to lean on it just to improve your way of thinking and also to give and receive feedback from other people.
Analysis Comparing (similar /different) Application Applied value	Materials and activities	I had the same issue when I followed a hashtag. I used the handle instead and this worked. Kahoot has proved to be a very effective way to get immediate feedback, along with active participation.

	The value of online formative assessment	At times, I got students to provide questions, so creating a collaborative quiz resulting in a stronger response from students. Too competitive at times. Socrative, on the contrary, is more relaxed.
Analysis Reporting Inferring Application Applied value	Materials and activities	I guess one way might be if there were a question generator which allowed ranking of the answers from 'most probably wrong' to 'most probably right'.
	The value of online formative assessment	Twitter polls create lot of interest among students. Once they learn how to poll, they enjoy casting votes and spreads quickly among other students. But the onus of creating awareness among students lies with the teacher.
Synthesis Building new information Outcome Realized value	Plagiarism detection tools	These tools are useful in avoiding copyright issues. We can also inculcate among students the art of writing originally by discouraging plagiarized submissions.
Synthesis Awareness of creating new knowledge from different viewpoints Outcome Realized value	Using media for teaching and learning	The panel discussion was useful and a push to critical thinking.
Transformation Change of practice evidenced through collaboration Reframing	Using media for teaching and learning	At the end of this week, I was able to use various media, tools, web pages, etc. that I didn't really know. I think they are excellent and very good to be able to communicate in a group, inform us about what is happening, make forums

Summary points from contribution analysis – using the key indictors from theory.

WEEK ONE: The posts in the 'introduce yourself' forums all demonstrate sharing. Responses might be 'up-vote' or 'text'. There are also examples of networking in these forums, usually after a comment that 'reaches out' rather than just 'describes themselves'. Perception of a similarity (country) also leads to a networking response. Photographs of their location also elicit responses. The guidance for this forum is very helpful and promotes networking (commenting back to others) rather than just sharing. It states:

- Introduce yourself and say hello to other participants

- Tell us where you are located

- You might tell us what kind of teaching you do

- You might tell us what you hope to get from this course

The posts in *'using media for teaching and learning'* sometimes show elements of metacognition: an awareness of learning that has brought about change.

WEEK TWO: The posts in *'discussion forums – lets discuss* invite a range of responses from sharing to comprehension by asking participants to agree/disagree and to analyse. This is again promoted by the choices offered in the contribution guidelines.

The posts in '*The value of student collaboration'* are made in response to the questions posed in the introduction to the forum. This asks participants to make value judgments. They are also asked to comment on contributions made by others, increasing the likelihood of analysis and synthesis.

WEEK THREE: The posts in '*How useful are plagiarism detection tools?*' were sometimes transformative as participants became aware of a significant building of new knowledge.

The posts in '*The value of online formative assessment and feedback*' reported usage and commented on this and demonstrated a range of types of response.

EVERY WEEK. The posts in '*materials and activities'* range from restating knowledge to analysis of various types. This further analytical step is helped by the clear guidance to:

- talk generally about what you've been viewing, reading, exploring, doing in the course throughout the week;

- ask each other for help, if needed.

TWITTER: Contributions to the #GetInMOOC hashtag are a requirement of the course and extend across all weeks. This Section looks at contributions that go beyond the basic requirement.

Initially participants have to create a Twitter account, if they do not already have one. The course components include teaching about how to embed Twitter feeds and showing how to set up a Twitter poll and how to create a topic (with a hashtag).

Participants must engage in a Twitter discussion. The course Twitter feed is therefore well supported. Unlike the discussion forums there is only a small element of purely social interaction. The 'character limit' means that contributions probably aim for maximum communication.

The table below confirms that most contributors only make a limited number of posts. Some, however, make as many as twelve posts.

NUMBER OF TWITTER CONTRIBUTIONS	NUMBER OF PARTICIPANTS
1	48
2	16
3	9
4	4
5	1
6	1
7	0
8	0
9	1

10	0
11	0
12	1

Reviewing the content of Twitter posts, using the same Seddon- NCSL / Wenger et al. models, confirms that contributions often demonstrate a high level of learning activity. The table below details this review.

ZONE	CONTRIBUTION
Sharing	*Hi welcome to the twitter feed*
Sharing	*Here's a screenshot of a simple wiki I created on Blackboard for my test course, with a photo I took*
Sharing	*Useful #accessibility checklist for people loading content to VLEs*
Sharing	*I have been working really hard this weekend to get our MOOC ready for the review panel next week*
Networking	*Take my poll about holiday choices*
Networking	*Please look at my beautiful embedded wiki*
Networking	*Recommend this course enjoyed the debate and dialogue*
Networking	*Great to work with you guys, today! Looking forward to #GetInMOOC*
Comprehend	*Now I'm learning the importance of using hashtags on the MOOC I'm enrolled on*
Comprehend	*What do you think of closed forums until students post to unlock and see others' contributions?*
Comprehend	*Are Twitter polls an effective teaching tool?*
Comprehend	*Calling all teachers looking to improve learner engagement with online courses!*
Comprehend	*#GetInMOOC, a 3-week romp through educational technology that makes learning engaging, interactive and dynamic*
Analyse	*Which course presentation provides best learning experience? Blended learning I think*
Analyse	*Bloom's Taxonomy makes the education world go round*
Analyse	*Recognition of equine lameness improves following use of a specifically designed CAL. Should we develop one for cat lameness?*
Analyse	*Happy to welcome participants from all over the world: so far UK, Ireland, US, Canada, NZ, Chile, HK, France, Spain.*
Analyse	*Love this map like how you can add photos and text to a complex pin-trying as an online icebreaker/introduce yourself activity*
Analyse	*as just going to have a quick look at #GetInMOOC before bed and now am engrossed in my pretend Moodle course*
Analyse	*I'm very happy to use new teaching tools in this MOOC, some of them are really cutting edge!!!*

Analyse	*Peter Senge argues successful organizations continually upgrade their skills. So should teachers.*
Synthesise	*Community Collaboration activity = http://ow.ly/som630bBu9S on Scoopit and screenshot from VLE attached as requested*
Synthesise	*Favourite poem she tells her love while half asleep in the dark hours with half-words whispered low Robert Graves*
Synthesise	*Here's a screen shot of the news critical reading exercise i uploaded on to my moodle shell*
Synthesise	*A Zeemap shows where in the world our participants are from (China Korea Tanzania UAE Greece Pakistan Nigeria SA Thailand)*
Synthesise	*Getting students engaged in Twitter during revision time has been excellent*
Synthesise	*I think to include in my new courses some field activities and broadcasting them with Periscope*
Transform	*I created a wiki in Moodle - a bit fiddly, might be better using a more intuitive external wiki platform and linking to Moodle*
Transform	*Sway is a fantastic tool that i used to produce an interesting presentation*
Transform	*Pleased I encouraged students to add sticky notes about use of technology to a board embedded in a moodle course page*
Transform	*Nick Elizabeth and Leo report use multimedia tools and techniques in their teaching*
Transform	*An Image of the New Padlet used in collaboration with my Students in the Marketing Course*

In conclusion, the interaction in Twitter demonstrates examples of each of the learning approaches from Section Two of this report. Social collaborative learning is much in evidence.
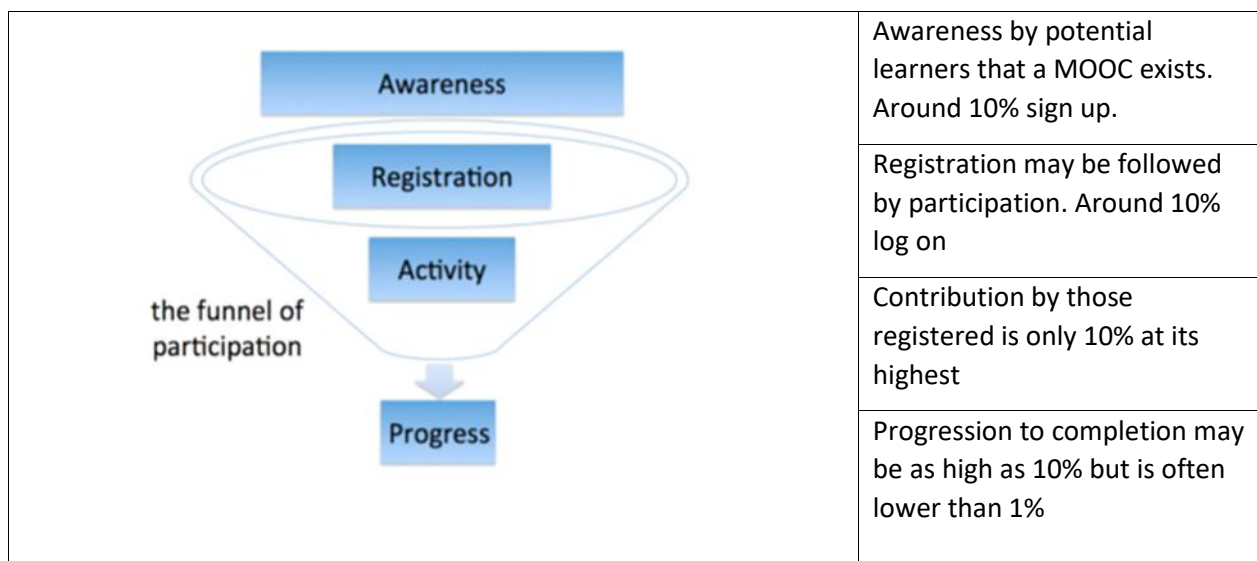

SECTION FOUR: CONCLUSIONS AND RECOMMENDATIONS

The questions posed in Section Three will now be revisited in light of the data put forward and analysed to form conclusions.

1. Who were the MOOC participants?

Registration: In this course, the steady growth in participant numbers since May 2017 is impressive. The data is of aggregate numbers but even from course to course there is a steady increase.

Participation: Clow (2013) puts forward a model showing the 'funnel of participation' that characterises online participation with its steep drop-off in activity. This pattern of participation is suggested to be characteristic of MOOCs and similar learning environments. The model is illustrated in the diagram below. Multiple studies have indicated that observers, drop-ins, and passive participants outnumber active participants across all types of MOOC.

	Awareness by potential learners that a MOOC exists. Around 10% sign up.
	Registration may be followed by participation. Around 10% log on
	Contribution by those registered is only 10% at its highest
	Progression to completion may be as high as 10% but is often lower than 1%

The percentages for completion in Clow's review represent a series of courses with different content and cohorts. The most recent figures for *Get Interactive* indicates a 2.3% aggregate completion that compares very favourably.

Location: Most MOOCs have audiences from 100 + countries over a period of months. With 196 aggregated countries since May 2017 Get Interactive matches this pattern.

Demographics: Coursera states that 85% of its MOOC participants have one or more degrees. Rodriguez's Harvard/MIT study found that 39% of participants had college and postgraduate degrees. Since May aggregated participants on these *Get Interactive* courses have been above the Coursera average, at around 90% with first degrees or higher. Trends for MOOCs show increasing populations of older and female participants. *Get Interactive* data shows that (of those who gave their age) 75% of participants are less than 45 years old and that the male / female split from respondents is approximately even.

The lower age bracket in *Get Interactive* might reflect the course content and its usefulness in the workplace, since it is aimed at working teachers. This might also explain the participants' academic qualifications.

2. Were the learning outcomes in subject-matter units completed?

The course aggregate completion figures measure-up favourably with other MOOCs.

Looking at each week of the course, the submitted assignments for Week One of the course are higher than Week Two. This is in line with Clow's drop-off values. In the same way, submitted Week Three assignments are lower in number than for earlier weeks.

That said, the quality of submissions is high as indicated by the peer reviews. Reviewing is part of the requirement for completion and it is good to note that many participants were interested enough in each other's work to review more than the required three.

Recommendation: Useful peer review could be acknowledged and encouraged.

3. Did learners take active ownership of their learning activities - producing task outcomes for feedback from tutors or peers?

Feedback from participants is both positive (4.8/5.0 stars) and constructive. The most highly rated course components were at, or near, the start of the course. One key message from participant feedback to the course designers is that the course is more time-consuming than expected.

Recommendation: Participants suggest reducing the reading list - or lengthening the time for course completion.

4. Did productive active discussion take place across groups of learners? Could the conscious development of new practice be identified?

There is a decrease in number of contributions from Week One to Week Three. This follows the pattern of participant drop-out that would have to be tackled.

The 'summary points from contribution analysis', given in Section Three, draws out the excellence of the forum contributions and the level of interactivity that helps metacognition. Clear guidance is given in each forum, and this promotes the interactivity that can build into high-level learning. A good example of a forum that has excellent contributions, in terms of learning demonstrated, is the Week One forum '*using media for teaching and learning*'. This discussion also has the largest number of contributions. This figure is just slightly higher than the initial 'introduce yourself forum'; this is a popular and undemanding component in many online courses.

Recommendation: The beneficial effect of interaction with course mentors might be noted and encouraged.

The way the platform embeds forums, it can be difficult for participants to view a whole discussion: at the end of an activity the comment box is seen in isolation from the thread. Workarounds such as prompts mitigate this, but the learner sometimes sees a large number of discussions from earlier courses. This can be confusing in terms of where to post. It is worth noting that some participants also begin their own discussions. These are largely ignored.

Recommendation: There needs to be a clearer route to accessing forums, and a 'view' that shows only the current threads would be helpful. Perhaps a change in the instructions might indicate that participant- created discussions can be a distraction.

A discussion that is very worthwhile, though with low numbers of contributions, takes place in Week Three: *'The value of online formative assessment and feedback'.* While drop-off rates contribute to this, one way of encouraging contributions might be if a 'pupil voice' element were required. Teachers enjoy hearing about others' practice and students.

Recommendation: Contribution guidance for this forum might offer examples of student comment on their feedback.

The use of Twitter, above and beyond course requirements, is to be applauded. There were many examples of transformative learning in the posts. The increased character limit in Twitter (from September 2017) should allow more substantial evidence to emerge.

Recommendation: Questioning could more specifically encourage examples of successful change through course participation.

In order to consider engagement and retention in more detail the theoretical basis of *Get Interactive* will be examined - returning to the theory set out in Section Two. It is clear that the course is true to the underlying pedagogy described by Laurillard as 'guided discovery learning' with students engaged

in controlling their acquisition of knowledge. Scaffolding is built into the course to assist this. This underlying pedagogy guides the resources that participants access and the assignments that they are asked to complete. Peer assessment comments, helpful interaction through the forums (including Twitter) and online mentoring can all be viewed as providing scaffolding for learning.

The key components of Laurillard's framework can be seen as elements in the course:

- Teacher's concepts —content decisions made have resulted in an exciting course

- Teacher's constructed learning environment—activities build knowledge and skills

- Student's concepts—these are available through the contributions and feedback given

- Student's specific actions—access resources, forum contributions, completing assignments

Some of the 'activities' that Laurillard's framework puts forward can easily be built into a MOOC. 'Adaptation' of concepts by the learner does take place. The resources provided are reflected upon. The online forums and twitter feed demonstrate this, in the learner contributions. 'Interaction' is clearly present. This is usually between peers and occasionally with mentors. Some of Laurillard's 'activities' are more difficult to incorporate. Large participant numbers and distance learning can militate against agile 'negotiation' and 'adaptation of learning objectives'. This has however taken place in the pilot stage and feedback such as course length will be borne in mind for the next iteration.

Recommendation: Consider the potential of increased participant feedback and response in the course.

Returning to Stephen Downes's definition of xMOOCs and cMOOCs, *Get Interactive* has elements of an xMOOC in that materials are provided for participant access and instruction. It also contains elements of a cMOOC in the online interaction and peer reviews.

A recent paper by Anders (2015) suggests that an intermediate type of MOOC should be recognised. These are termed hybrid or hMOOCs. They lie on a spectrum in terms of design and may be nearer xMOOCs or cMOOOCs. *Get Interactive* would seem to be a hybrid and its position on the spectrum should be considered.

MOOC Applications			
xMOOCs	hMOOCs (hybrids)		cMOOCs
Content-based	*Community and Task-based*		*Network-based*
One-to-many model; expert-driven learning at scale	Community; guided, social learning activities ←----------------------------→		Peer-to-peer; self-organised, networked learning
Goals Skills Projects	High quality instructional materials with some social learning experiences	Growth of self-organized social networks development of emergent knowledge to address situated problems	Relationships Communities Networks

Anders suggests that hybrids based on xMOOCs will ideally offer a balanced mixture of high-quality instructional materials with some social learning experiences. They could encourage professional learners to take ownership of their learning by asking them to set personal goals, or at least personalise course goals that link theory to their own practice.

Anders feels that cMOOC based hybrids facilitate the growth of self-organized social networks and the development of emergent knowledge that addresses situated problems. These network-based hybrids can connect distributed interest groups allowing professional development, and lifelong learning. They could also exploit the existing knowledge of its professional learners as a core course resource.

He believes that hybrid MOOC design may support the greatest diversity of learners and scaffold engagement. The balance and positioning of the MOOC needs careful thought in order to maximise this.

Recommendation: The elements of this hMOOC could be reviewed to maximise its appeal and retention.

In conclusion, this is a very successful, engaging and well-designed MOOC. This report's recommendations seek to add value to what is clearly already an excellent course that participants enjoy.

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References

Anders, A. (2015) 'Theories and Applications of Massive Online Open Courses (MOOCs): The Case for Hybrid Design.' *International Review of Research in Open and Distributed Learning* Volume 16, Number 6.

Clow, Doug (2013). 'MOOCs and the funnel of participation'. In: *Third Conference on Learning Analytics and Knowledge* (LAK 2013), 8-12 April 2013, Leuven, Belgium, pp. 185–189.

Downes S. (2015). Becoming MOOC. http://halfanhour.blogspot.ca/2015/02/becoming-mooc.html

Gagne, R. (1985). *The Conditions of Learning* (4th.). New York: Holt, Rinehart & Winston

Lave, J and Wenger, E (1991) *Situated Learning. Legitimate peripheral participatio*n, Cambridge: University of Cambridge Press

Laurillard, D. (2002). *Rethinking University Teaching. A conversational framework for the effective use of learning technologies*. London: Routledge

Mayes, T. and De Freitas, S. (2004). *Review of e-learning theories, frameworks and models. JISC e-learning models study report*. London. The Joint Information Systems Committee. http://www.jisc.ac.uk/elp_outcomes.html

Piaget, J. (1964). 'Cognitive Development in Children Development and Learning'. *Journal of Research in Science Teaching*, 2, 176-186

Rodriguez, C. O. (2012). 'MOOCs and the AI-Stanford like courses: Two successful and distinct course formats for massive open online courses'. *The European Journal of Open, Distance and E-Learning.*

Seddon, K. and Postlethwaite, K. (2007). 'Creating and testing a model for tutors and participants to support the collaborative construction of knowledge online'. *Technology, Pedagogy and Education*, 16(2): 177–198.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* Cambridge, Mass.: Harvard University Press.

Wenger, E., Trayner, B., de Laat, M. (2011). *Promoting and assessing value creation in communities and networks: A conceptual framework.* Amsterdam: Ruud de Moor Centrum