Examples of MOOCs

3

Introduction

Now that we have developed an understanding of the background to this area, the scale of the MOOCs that are available, and the platforms that people are using, it is useful to analyze some specific MOOCs—the actual courses rather than the platform—to address the question:

How do different MOOCs vary from one another, and why have they been designed in a particular way?

This section provides an overview of some of the more innovative MOOCs that are being offered to students and analyzes their characteristics, in order to illustrate some of the options for the types of MOOCs that might be offered by universities that wish to create new MOOCs, beyond the standard model of video lectures, assessments, and online social spaces.

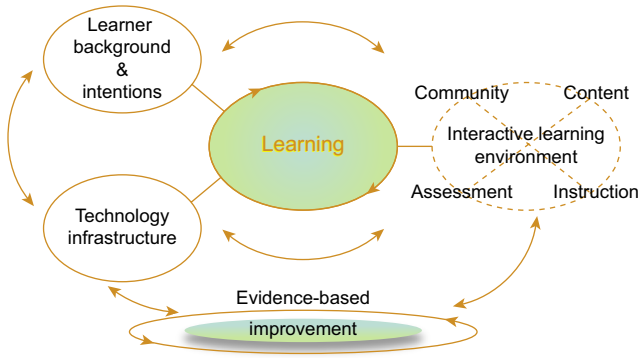
MOOCs are at such an early stage of development that there is not yet an agreed or preferred way to describe their approach. The original taxonomy of MOOCs, as noted earlier, focused upon the distinction between an xMOOC (traditional) or cMOOC (connectivist), but this distinction is of only limited use when we wish to understand the broad range of MOOC development that is underway. While some MOOCs are following a consistent and specific design approach, often those that are hosted by the larger MOOC platforms, of video lectures, online discussion, automated assignment and peer grading, others are experimenting with many different approaches to online learning. This reflects the diversity of teaching approaches that are being used when applying educational technology in a wide range of different contexts, and the lack of clear evidence at the present time of what works best to achieve good outcomes for learners (Bowen, 2013).

So we will go beyond the xMOOC and cMOOC distinction by using a framework to guide our analysis and description. This is the "Framework for the design and evaluation of MOOCs" that has been developed in the Lytics Lab at Stanford University (http://lytics.stanford.edu/wordpress/wp-content/uploads/2013/04/Framework-for-Design-Evaluation-of-MOOCs-Grover-Franz-Schneider-Pea_final.pdf).

This framework provides a model to describe the context in which the MOOC is being designed, run, and evaluated. It is useful because it gives us a sense of the range of factors that are involved in designing and running the MOOC.

It has four main components: learner background and intentions; technology infrastructure; interactive learning environment (ILE); and evidence-based improvement.

To MOOC or Not to MOOC. http://dx.doi.org/10.1016/B978-0-08-100048-9.00003-2



Framework for the design and evaluation of MOOCs (Grover et al., 2013)

"The *ILE* is made up of the core course elements—*Content*, *Instruction* (or Pedagogy), *Assessment*, and *Community*. These elements are initially shaped by the course creators as well as the technical affordances of the course platform. These design choices reflect the assumptions of designers about the ways in which people learn, and should be pushed to reflect the state of the art of knowledge in the learning sciences…

"*Learner background and intention* captures the variety of learner purposes for course engagement, which is a by-product of the open access nature of the courses and the novelty of the medium. Based on surveys we have conducted in some MOOCs, in addition to traditional students taking the course for some form of credit, a large percentage of others are enrolled with purposes as assorted as "curiosity about the topic," "to sharpen my job skills," and "fun and challenge." This pattern implies a need to serve up different courses suited to the varied purposes of MOOC learners: a customized learning approach that could be enabled by analytics on behavioral data from learners, as well as self-reported intentions for MOOC enrollment…

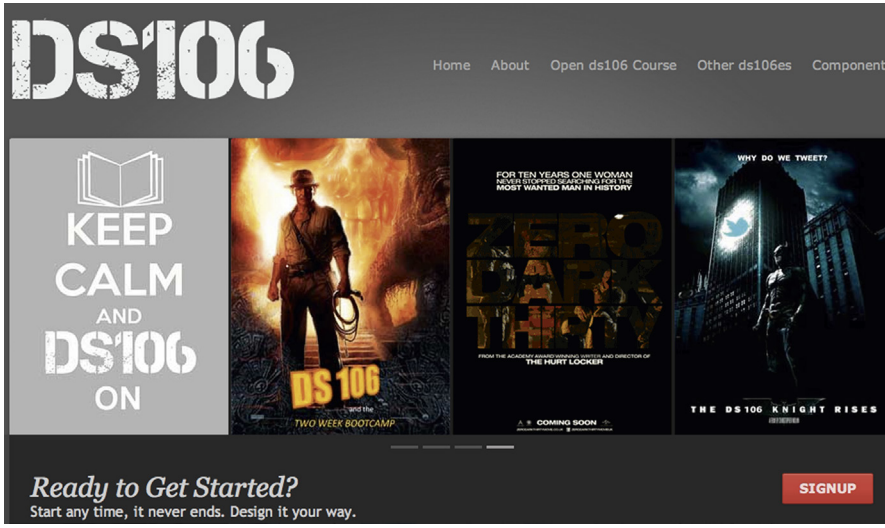
"The *technology infrastructure* comprising the MOOC platform used in conjunction with social media and other technology tools for augmenting communication and interaction powers the MOOC as a whole including its learning analytics engine, and serves to cater to diverse learner needs ranging from geography and language to issues of how the MOOC content is accessed and interacted with (e.g., downloading vs streaming video)…

"*Evidence-based improvement* is a meta-MOOC process strengthening design decisions around the ILE and technology infrastructure. Evidence-based improvement is powered by data mining and analytics designed to measure the desired course learning outcomes, and incorporates qualitative evidence from sources like forums and surveys (Grover et al., 2013)."

Below we apply the Lytics framework to four different MOOCs in order to explain how each MOOC is designed and to highlight the key characteristics of each. We look at three MOOCs that are not what may be seen as a "typical" design for traditional MOOC, and then look at more traditional xMOOC. We will see that each MOOC has been designed to meet the needs of particular learners; the chapter examines how this

has been done. We recommend that readers consider sampling these or other MOOCs in order to better inform their decisions about which MOOCs to create.

Digital storytelling, DS106, University of Mary Washington



The digital storytelling MOOC (http://ds106.us/about/) follows the principles of the first connectivist MOOCs, and is a prime example of a cMOOC. The course is focused upon "questioning" the process of digital storytelling, encouraging learners to reflect upon the process of storytelling in the digital medium, through the analysis and discussion of existing resources, and through creating their own examples.

The MOOC is unstructured. Learners are free to carry out whatever assignments they wish to; they create, and analyze digital content, and discuss it with other students through online forums. Each individual creates their own web sites and shares resources that interest them through it, and the core of the course is focused upon the discussion and debate between students, when considering these resources. The emphasis is upon sharing thoughts and ideas, rather than attainment. So the MOOC does not contain any videoed lectures or set assignments; rather, the learner may choose to create a video to share with others, and has the choice of what "assignments" they wish to undertake. Also, unlike many other MOOCs, there are no set dates when the course runs; instead learners are free to drop in and participate whenever it suits them to, and to remain a member of the course "community" for as long as they wish to.

In the spectrum of MOOC activity, it sits at the end of the spectrum that puts the emphasis upon the individual learner and their knowledge, connections and unique interaction with content, rather than the end of the spectrum that "gives" content to the student. It was inspired by some of the earliest MOOCs that follow constructivist principles.

When mapped against the Lytics framework, we see the following:

Learner background and intentions

- Learners who wish to be actively engaged in, and in control of, their own learning. Learners with an interest in experimental approaches to learning, and see the learning process as a valuable part of the MOOC, rather than the transmission and absorption of content.

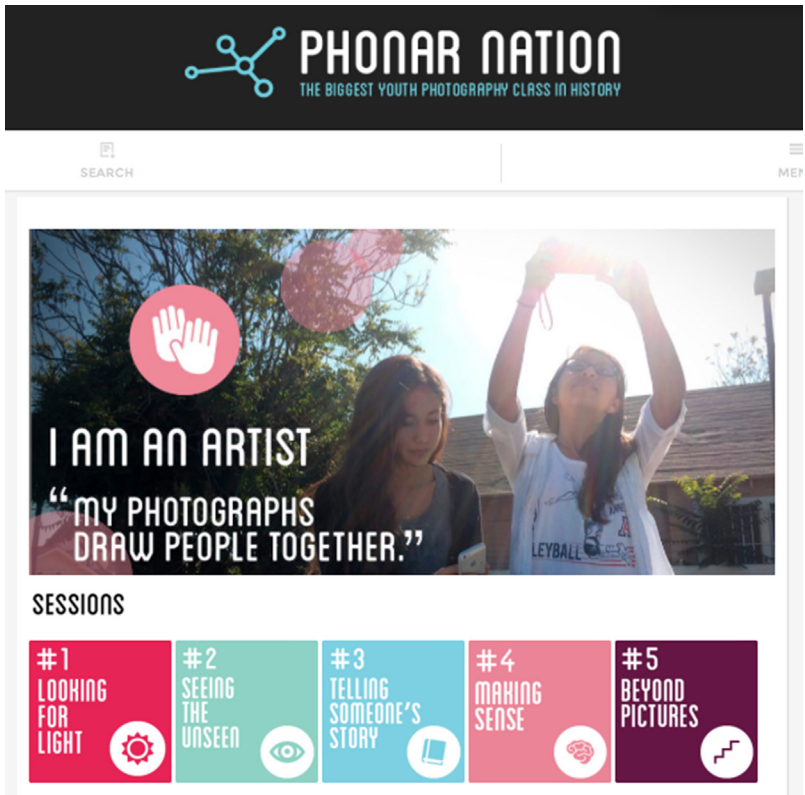
Interactive learning environment (community, content, assessment, instruction)

- An environment which supports high levels of social interaction between learners, and does not actually provide any substantial content, so no pre-recorded video lectures.

Technology infrastructure

- A distributed infrastructure rather than a single "MOOC platform"; this MOOC uses a number of existing, free technical platforms, including social media tools and free Cloud-based services such as GoogleDocs, to host content and to support discussions.

Phonar, photography MOOC



Phonar (http://phonar.covmedia.co.uk), a MOOC offered by staff at Coventry University in the UK, has been very successful indeed and has attracted over 33,000 students at one time since it was launched some years ago. It is unusual in many ways, in particular in how it was developed and how it is taught.

The course was not set up initially to "be" a MOOC, instead the objective was to offer the Photography course that is taught at the University of Coventry to a wider group of individuals than those who attend the course face-to-face, in order to bring together a much broader group of those who are passionate about photography and interested in building a career in photography or a related area of work. The intention was to help support students to achieve a greater understanding of what would be involved in this type of career and also the chance to develop their knowledge and, if possible, experience of the area, in order to improve the chance of them succeeding. So the course designer was particularly practical and sharply focused in what he set out to achieve. We will explore more about it below.

Learner background and intentions

- Brings together a group of students with a specific intention (to become a professional photographer) and strong motivation to study;
- Engages different groups of students with the same course—some attend the course face-to-face; some engage online; some meet and learn at local groups;
- Helping students to understand what is required for a professional career in photography;
- Connecting the students with professional photographers.

A student's perspective on Phonar can be read online (Daisy, 2013).

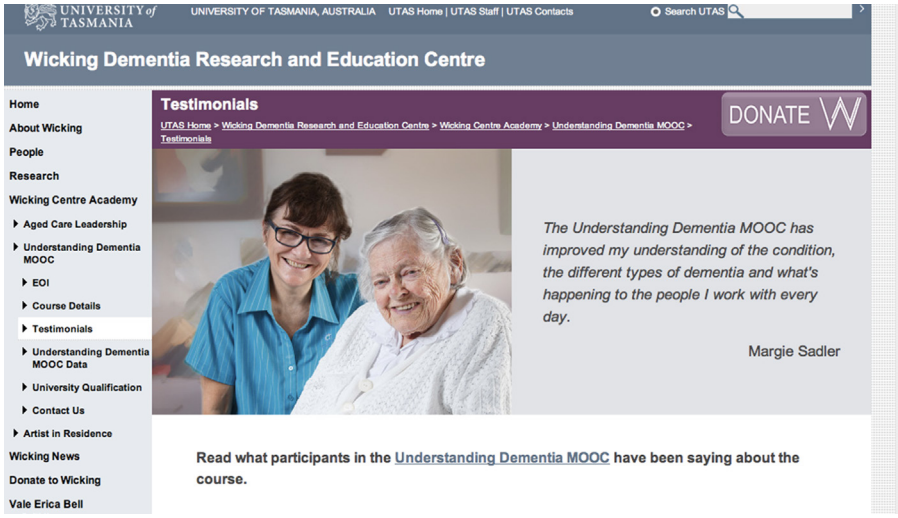
Interactive learning environment (community, content, assessment, instruction)

- Strong emphasis on social spaces and building up a connected community that continues to exist and live beyond the timescales of the formal "course";
- There is the concept of "mediated ownership" in the course, students are engaged with and own the course with the instructors, so they play a more active and constructive role than is usual;
- Also "opened up" to other experts to come and contribute (and critique).

Technical infrastructure

- Not using a specific platform, instead using a range of social media tools and "going where the students are already"—so Twitter, Facebook, Flickr, Vimeo, YouTube, etc. The choice of tools comes from the students and the tutor learns from them what they are using and why.

Understanding Dementia MOOC, University of Tasmania



The Understanding Dementia MOOC (http://www.utas.edu.au/wicking/wca/mooc/course) was created because the University of Tasmania has established expertise in this area at its Wicking Dementia Research and Education Centre, and a strong reputation for the provision of postgraduate courses on dementia, and wanted to increase its international profile and potentially attract more students, some of whom might wish to study through distance-learning programs.

Learner background and intentions

- Group of students with a specific intention and strong motivation which has led to extremely high completion rates (over 40%);
- Cohort is made up of professionals who wish to study cutting-edge research in a specific area of health, and lay people with a strong interest in the subject;
- Both groups wish to acquire specific and up-to-date knowledge and to discuss issues related to that knowledge, as it is an emerging area where the research is constantly updated;
- Some students wish to progress to a formal program of study and achieve a qualification.

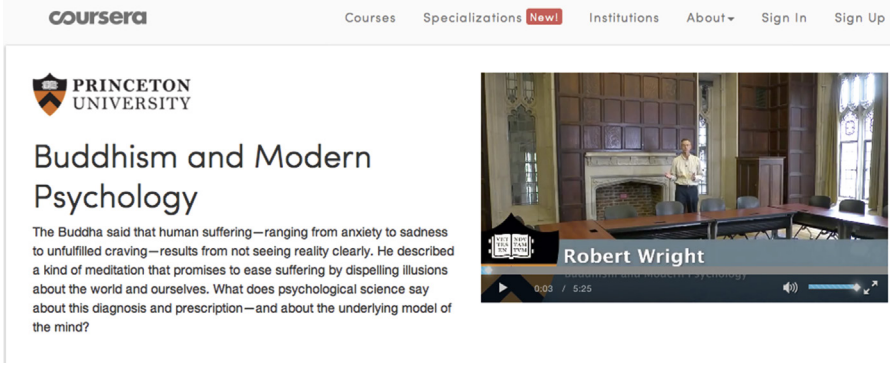
Interactive learning environment (community, content, assessment, instruction)

- Traditional model where content and instruction is provided by the institution;
- Strong community element has developed due to student engagement and motivation;
- A core framework of content supported by carefully designed learning activities.

Technical infrastructure

- Uses a single platform that is specially designed to support online learning activities ("Desire2Learn") rather than a new, MOOC platform.

Buddhism and Modern Psychology, Princeton University



The Buddhism and Psychology MOOC (http://www.coursera.org/course/psychbuddhism) is the only example included in this chapter that is offered through one of the large MOOC platforms. It is included here in order to describe not only the xMOOC type of experience that is typically offered to MOOC students, but also that even one of the standard platforms can be used in a customized way by the teacher or instructor, according to how they wish to achieve the course objectives.

When the Buddhism and Psychology MOOC is mapped against the Lytics framework, we see the following:

Learner background and intentions

- Learners with a very wide range of background and prior knowledge, who are interested in learning about cutting-edge research and engaging with others. Some are practitioners, some are people with a lay interest, and others are casually interested in the subject area. It is unlikely that many are taking the MOOC in order to achieve professional development, yet the course achieved high levels of commitment and completion. The explanation for this is perhaps that the subject matter for the MOOC attracted a cohort with a particularly strong interest in, and commitment to, understanding the material. It is also the subject matter which brings together two areas of interest that are not usually considered together, and which are relatively controversial. The opportunity to engage with this kind of course online, where within a large group of experienced and knowledgeable others, was a unique opportunity to broaden and deepen knowledge that is directly relevant to life experience. A somewhat different area of focus than for some of the more technical MOOCs, it might be argued, but which nevertheless attracted particularly strong personal commitment from participants.

Interactive learning environment (community, content, assessment, instruction)

- The MOOC runs through the Coursera platform; video is played using HTML 5 or Flash, and the text displayed in the web browser and transcripts for lectures are available as text documents. Discussions between students take place in the Coursera discussion forum. There is also a separate Googlegroup for the MOOC.

The course is given a more interactive feel because the tutor creates informal "office hours" films each week in response to issues and questions that have been raised by the current students, giving a sense of immediacy.

Technology infrastructure

- The infrastructure is provided by Coursera.

Conclusion

We can see from even this small number of examples that there is a wide range of possibilities for how MOOCs are designed, and why different approaches should be considered, beyond the traditional, xMOOC approach of video lectures and automated assessments. MOOCs may be designed to meet the needs of a particular audience, because of the specific requirements of a particular set of learning outcomes (such as gaining professional skills) or because students wish for this approach to be taken.

So we see in the Phonar MOOC, for example, that the course was carefully designed in order to support the acquisition of professional skills, and to create a community of practitioners and would-be practitioners, who could support and learn from each other. This kind of approach might be applied usefully in many different domain areas, particularly where professional skills are needed. It may also open up interesting business models, as committed would-be practitioners may be willing to pay additional fees in order to gain special access to successful professionals, through Skype tutorials, for example.

It is also useful to note that although there are many advantages to working through MOOC platforms, not least the high levels of promotion that are achieved by marketing through a successful MOOC system, this is not necessarily the only or best way to offer MOOC to an audience; in fact, three of our four examples use other platforms which they either host themselves or through a third-party, or by using a combination of existing Cloud-based platforms. This reminds us that MOOC tools are at present not complex or unique as learning environments or for delivering content, and there are many other possibilities out there that are worth exploring.

By looking at just these four examples it becomes clear that MOOCs can be hugely varied in their objectives, structure, and approach to delivery. All of the example courses have been designed deliberately in order to meet learning objectives for the course, and because of other parameters, such as a commitment to using existing social media tools and software. The most important message is that they have been designed to meet the needs of their target audience, rather than driven by just trying to "deliver" specific content. So the design has been led by the perceived needs of users rather than being "supply-driven," and informed by deep understanding of the needs of the students for whom the course was created.

It is therefore important to carry out some level of market research and user needs analysis in order to be able to make choices about what type of MOOC approach to design. Clearly, in some cases, the choice of MOOC design will be limited by

the affordances of the MOOC platform that is being used. In all cases, though, it is essential to gain a thorough understanding of the target audience of students and their preferences and priorities. The MOOC designers can then work within the limits of the MOOC platform to attempt to meet the requirements as closely as possible. This will increase both the number of students who sign up to take MOOC(s) and also improve completion rates.

It is also likely that, as MOOCs become increasingly common and online students become more knowledgeable about the potential of online learning, their tastes will become increasingly sophisticated, and they may choose between MOOCs based partly upon the design of the MOOC. Including innovative approaches, such as linking up the students with professionals in their chosen area of study, will raise the profile of the MOOC and attract more and better students.

In Chapter 16 we will discuss the issue of learner preferences, motivation, and learning design approaches in more detail.

References

Daisy. (2013). *MOOCs: A student's perspective*. topuniversities.com. Online at: http://www.topuniversities.com/blog/moocs-students-perspective.

Grover, S., Franz, P., Schneider, E., & Pea, R. (2013). *The MOOC as distributed intelligence: Dimensions of a framework & evaluation of MOOCs*. Stanford Graduate School of Education, Online at: http://lytics.stanford.edu/wordpress/wp-content/uploads/2013/04/Framework-for-Design-Evaluation-of-MOOCs-Grover-Franz-Schneider-Pea_final.pdf.

Further Reading

Levine, A. (2013). *ds106: Not a course, not like any MOOC*. Educause Review Online. Educause. Online at: http://www.educause.edu/ero/article/ds106-not-course-not-any-mooc.