Building an Engaging and Inviting MOOC in Moodle

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ABSTRACT

The study of this project focuses on the development of a connectivist massive open online course (MOOC) using Moodle, an open-source software. Ten MOOCs were analyzed for information that could be used to apply best practices in my course prototype.

In addition to analyzing MOOCs, the history, learning theories, technology, and course production methods were also explored. This information was combined to help produce a prototype of a working course that displays the desired characteristics. The course was set up in Moodle with all working parts, including the second week's module that included a video lecture, suggested readings, and discussion topics. An ideal approach to the course was also included in the writeup.

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1. INTRODUCTION

In this project, I will look at what elements make up an inviting and engaging MOOC and how I can put them together to make my own course using Moodle. For this course, I will produce a mock MOOC site with a demo module of one of the week's assignments. My course will be in the style of a connectivist MOOC (cMOOC) and will be used to teach the participants about MOOCs. I have found these open courses to be an untapped resource and I think it is important to educate people about the information that is out there for them to continue pursuing their education. Moodle, an open source software, is also an untapped resource in presenting MOOCs. I believe it has the capabilities to house a rather sophisticated MOOC since it is already being used in higher education for online courses.

My project can be found at http://localhost:8888/moodle24/. Before viewing my project, Moodle must be downloaded and installed (http://download.moodle.org). The guest login for my *MOOC on MOOCs* course is herrics, and the password is sunyit.

How do cMOOCs work?

Learning how these connectivist courses work is a question that I intend to answer. There are a number of ways that participants approach these courses and I will explore some of the more common practices. From learning these approaches, it is important to use these details and incorporate them into my prototype.

These courses are often geared toward particular interests, shaping the way people participate, which includes what kinds of technology are going to be used for assignments, lectures and peer to peer communication. I will be looking at the types of technology that are used to produce these courses and also what is used in the peer-to-peer communication. It is important to incorporate these because these technologies clearly work.

What are the elements that make up a successful MOOC?

A number of components make up a MOOC. I analyzed 10 successful MOOC sites, looking for the common characteristics and picking out which elements seemed to help the courses to succeed. I considered a course successful if it fit into at least two of the following categories: 1. The number of participants (it must meet Stephen Downes' requirement to make it "massive"); 2. Who the facilitators or course producers are (Is it an established group or institution?); 3. If the course has any internet buzz (Are people blogging about it and using it as an example in their writing and research?).

How can we evaluate cMOOCs?

Our natural reaction to a new phenomenon is to evaluate it and pick it apart. By doing this, we need to figure out how to assess these phenomenons and the standards in which to compare them. I will explore the ways in which to evaluate a connectivist MOOC and what it takes to consider the course a success.

How do I make an engaging MOOC?

Upon analyzing the MOOCs for common threads that make them interesting and engaging, I will also be looking at the technology that is used to produce these courses. It is important to use the proper technology because they need to be able to handle the amount of traffic from the participants. Not being able to support the participants' needs could result in the site crashing, and ultimately the cancellation of the course. An open-source software that is becoming more popular in online learning is Moodle. After examining this software, I decided that it was an appropriate platform for the type of course that I was attempting to create.

It is also important to consider theories of learning styles when preparing to put together a MOOC. Understanding how people learn in group environments is beneficial because I was then able to apply this knowledge to my course, thus, making it more likely to be better received by participants. I applied connectivist learning, social constructivist learning, and rhizomatic learning theory when presenting the course's content.

2. Review of Literature and Research

MOOC Basics: xMOOC vs. cMOOC

Today's learners are provided with so many resources for information and so many options of where to find it, they are in search of a personal learning environment (PLE). PLE is an approach to learning based on the emergence of technologies and applications of web 2.0, giving the learner an opportunity to tailor their experience to the way they feel they will get the most out of their preferred learning style. "This new ecology of learning takes the assumption that learning is multi-directional and multi-modal and learning, idea exchanges, and inquiry all take place within a dynamic system among students, teacher, and global communities with the web 2.0 infrastructures. It provides the opportunities to immediate access to information, resources and communities and to create, mash up, comment on, edit content, and allow communicating with people globally." (Saadatmand & Kumpulainen, 2012)

There are two types of massive open online courses (MOOCs) that are considered to be the core ideas: xMOOCs and cMOOCs. Stephen Downes, one of the founders of the cMOOC movement, wrote on his blog, "While they have differing approaches, both types orf (sic) MOOC represent a permanent departure from traditional learning, online

or otherwise." (Downes) "While a lot of the mainstream press's attention to MOOCs has focused on the content, the class sizes, and the (potential) credentials, the technology that underpins these online courses is incredibly important — and something too that highlights the differences between xMOOCs and cMOOCs." (Watters) So, what exactly sets xMOOCs and cMOOCs apart?

The xMOOC is probably the more common of the two types, if for no other reason than they are more commercial. These courses are tied to those offered by Udacity, Coursera, edX, and others. These courses are structured more closely to traditional online college courses in that they emphasize lecture videos, homework and exams. They are brought to us by corporate (Udacity) and university (Coursera and edX) investments. They are taught by professors from a growing number of prestigious colleges and universities worldwide. Some of the most notable institutions to be linked to these types of courses include Stanford (Coursera), Princeton (Coursera), Columbia (Coursera), Duke (Coursera), MIT (edX), and Harvard (edX), to name a few. There is also more to the assessment side of xMOOCs compared to cMOOCs. "With their origins in the Stanford CS department, with an early emphasis on CS classes, and with the scale that many of their enrollments are reaching, it makes sense that many of these courses utilize automation to assess students' quizzes and homework assignments." (Watters) It is common to be able to receive a certificate or "badge" upon completing these courses. There are some colleges and universities that are beginning to accept certain course completions as transfer credits. An example of this recent change was Colorado State University-Global Campus' decision to give full transfer credit to students who complete

an introductory computer-science course offered by Udacity. The students need to show a "certificate of accomplishment" from Udacity to verify that they passed the free course, and then they must pass a proctored exam offered by Udacity through a secure testing center for a small fee of $89. (Mangan) Although this trend is still in its infancy, but it seems to be picking up steam.

The cMOOC, or connectivist MOOC, is a second type of course that is commonly offered. This type of course can be described as being curated rather than taught. It emphasizes knowledge creation, creativity, and social networked learning. George Siemens, a well-known and respected professor that has been involved with MOOCs from their inception, describes the differences between the two types of as follows:

> *"The Coursera/EDx MOOCs adopt a traditional view of knowledge and learning. Instead of distributed knowledge networks, their MOOCs are based on a hub and spoke model: the faculty/ knowledge at the centre and the learners are replicators or duplicators of knowledge. That statement is a bit unfair (if you took the course with Scott E. Page at Coursera, you'll recognize that the content is not always about duplication). Nor do our MOOCs rely only on generative knowledge. In all of the MOOCs I've run, readings and resources have been used that reflect the current understanding of experts in the field. We ask learners, however, to go beyond the declarations of knowledge and to reflect on how different contexts impact the structure (even relevance) of that knowledge. Broadly, however, generative vs. declarative knowledge captures the epistemological distinctions between our MOOCs and the Coursera/EDx MOOCs. Learners need to create and share stuff – blogs, articles, images, videos, artifacts, etc." (Watters)*

In 2008, George Siemens and Stephen Downes were credited with producing the very first massive open online course with Dave Cormier and Bryan Alexander coining the acronym. *Connectivism and Connective Knowledge*, an online course at the University of Manitoba, "was presented to 25 fee-paying students on campus and 2,300 other students from the general public who took the online class free of charge." (Daniel) The aim of this course was to follow Ivan Illich's fundamental ideas from *Deschooling Society*, feeling that the educational system should "provide all who want to learn with

access to available resources at any time in their lives; empower all who want to share what they know to find those who want to learn it from them; and, finally make their challenge known." (Illich, 1971) The cMOOC is a great example of this line of thought.

Downes later said that they had not intended to initially set out to create a MOOC. However, they did have two major influences on this course. The first influence was the beginning of open online courses. Two of the more recent courses that they were influenced by were Alec Couros's online graduate course and David Wiley's wiki-based course. What stood out to Siemens and Downes was that "they invoked the idea of including outsiders into university courses in some way. The course was no longer bounded by the institution." (Downes, 2012) The second influence was the emergence of massive online conferences.

The cMOOC depends more on its participants to share their knowledge and collaborate with others in the class. There still are facilitators and assignments, but the use of social networks continue the conversations between the participants throughout the assignments. The use of tags and hashtags play a large role in allowing this to work.

Learning Communities and Other Parts of the cMOOC

The people that participate in cMOOCs are a part of a learning community. Learning communities are also known as "communities of practice" (CoP), a term coined in the 1990s by Lave and Wenger. (Sobrero, 2008) These communities are made up of a group of people who share common interests and common goals. "They collaborate to

draw on individual strengths, respect a variety of perspectives, and actively promote learning opportunities." ("Building an online") Learning communities are not "place-based" and provide opportunities for informal interaction between participants from anywhere in the world. Samuel Merritt University compares this interaction to the traditional learning style by stating, "While a traditional learning approach emphasizes independent achievement and a linear teacher-to-student(s) instructing strategy, a learning community encourages collective success, and dynamic instructing strategies of teacher to student(s), student to student(s), and student to teacher." According to Patricia Sobrero at the *Journal of Extension*, "Researchers stress that the most important social outcome for the virtual team or community is to develop trust." This trust is created by "building relationships; developing identification with the mission of the community, and with the other members; creating a feeling of belonging and mutual respect; openly sharing learning while building on knowledge about the practice; continuing to develop as a community because of meaningful engagement, and; developing community norms that encourage truthfulness, openness, routine collaboration, and the ability to address difficult issues or conflict." (Sobrero, 2008)

The idea of virtual communities and collaborative learning has been around since the beginning of computer conferencing technology, according to Howard Rheingold. "Once again, we find that the new technology took the form it did because the technology's inventors believed that the tools they created should belong to citizens to help us solve problems together. There are other important parallels between the history

of many-to-many communication tools and the history of other inspired inventions that made the Net possible." (Rheingold, 1993)

To create an effective MOOC, it is vital to build a strong virtual community that is engaging and entices the participants to return. There are a great number of opinions on best practices of building and facilitating a MOOC. George Siemens and Stephen Downes look at knowledge as an activity, not "a thing to be acquired." "Good MOOCs, in their view, foreground and sustain the social dimension of learning and active practices, i.e., knowledge production rather than knowledge consumption." (Bousquet, 2012)

It is very important for the participant to understand what is expected of them, and the more it is spelled out for them, the better. I noticed that MOOC creators strive to make the learning process as simple as possible using basic features, so they will retain their participants. Once things begin to get too complicated, participants have a tendency to "drop out" of the course. Inge de Waard of *Learning Solutions Magazine* describes basic features as: "a schedule, a syllabus referring to content and possibly learning actions (assignments, self-assessments…), and there is a learning space where course participants can meet and exchange ideas on the subject of the course to enhance mutual learning and experiences." (de Waard, 2012)

Determining content and a target audience are also important when planning a MOOC. If there is no interest in a certain topic, it is going to be difficult to cultivate participants, thus making it difficult to create a learning community. If no one shows up, there will be no one to share their experiences and no one to learn from. George Siemens

wrote, “Treat content as a starting point for learning conversations, not as the exclusive intent of the course.” (Siemens, 2012)

Interaction in these courses distinguishes the course from the old computer-based training because it shows that there are people on the other end of the communication. The type of interaction that participants receive in a cMOOC is much different than an xMOOC. The connectivist course offers a more individualized approach to the subject where the conversation is fluid and dependent on the participants. The xMOOC’s instruction has more of a pre-packaged feel, where the content is already pre-determined and most likely will not change. “Interaction not only promotes human contact, it provides human content.” (Downes, 2012) The interaction that is created is something that could never be anticipated and would not likely be created in a regular course.

Usability is another important feature in the connectivist course. Simplicity and consistency are the two key components of usability. When a site is simple, it also makes it fast. Without all of the extraneous content, the page loads faster and it is also easier to browse the content. This principle also applies to the learning material.

Relevance is a third criteria for designing an effective course. It is the difference between formal and informal learning. It is an example of learning “on demand.” By “on demand,” I mean the discussion of current issues that may come up can turn into the focus of the content. The fluidity of the content will let the course become relevant to the interests of the participants. According to Downes, precision and simplicity help obtain relevance. “Making each bit of web content about one and only one thing greatly increases the chance that a reader will find the resource being sought.” (Downes, 2012)

According to Forbes.com, “A good MOOC employs many tools, including blogs, online discussion boards, Twitter, tagging, and document sharing (to say nothing of teaching assistants).” (Skorton & Altschuler, 2013) Many of the more popular courses (I am using the term “popular” in the sense that these courses are referenced in other works and had high participation rates) also included a daily or weekly e-newsletter that acknowledged all the blogs, Tweets, and other “mentions” that the MOOC had received that day/week. By planning how and when (live or asynchronously) you will interact, there will be a bit more structure. Although the courses are not based around the facilitator, it is important to still be active in some of the conversations without being dominating. (Siemens, 2012)

There are a number of platforms that are used to create MOOCs. So far, there doesn’t seem to be one in particular that stands out from the others as being the best. From the information that I have gathered, it is more about the personal preference of the facilitator and how they plan to share their information that determines which platform is used. Some examples of platforms that are commonly used are wikis, Blackboard, Moodle, Google sites, and Course Builder (new from Google). Moodle, an open source course management system (CMS), seems to be the platform of choice for educators that are not affiliated with corporate or private investors such as Udacity, edX or Coursera. “It has become very popular among educators around the world as a tool for creating online dynamic web sites for their students.” (“What is moodle?”)

Learning Theories

With the recent influx of online learning opportunities, new approaches to learning have been explored. Two of the pedagogies that make up the cMOOC are connectivist theory and social constructivist theory. "There is an assumption in both theories that the learning process should happen organically but that knowledge, or what is to be learned, is still something independently verifiable with a definitive beginning and end goal determined by curriculum." (Cormier, 2008)

Stephen Downes describes connectivism in his *Huffington Post* article by saying, "connectivism is the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks. Knowledge, therefore, is not acquired, as though it were a thing. It is not transmitted, as though it were some type of communication." (Downes, 2011) Downes considers the learning style of connectivism to be likened to networked learning. Connectivist courses are more about the experience and interaction with others than it really is about the course itself. The community that is formed among the participants is what generates the content for these courses. "We are all educators, or at least, learning to be educators, creating and promoting the (connective) practice of education by actually practicing it." (Downes, 2011) Downes hits the nail on the head when he wrote, "knowledge has many authors, knowledge has many facets, it looks different to each different person, and it changes moment to moment. A piece of knowledge isn't a *description* of something, it is a way of *relating* to something." (Downes, 2012)

In his e-book, *Connective Knowledge*, Downes explains what connectivism is and is not.

"...according to connectivism:

- *learning occurs as a distributed process in a network, based on recognizing and interpreting patterns*
- *the learning process is influenced by the diversity of the network, strength of the ties*
- *memory consists of adaptive patterns of connectivity representative of current state*
- *transfer occurs through a process of connecting*
- *best for complex learning, learning in rapidly changing domains*

But despite these clarifications, we can see pretty easily from this description what connectivism is not (and, more importantly, what it is not intended to be):

- *learning it is not structured, controlled or processed. Learning is not produced (solely or reliably) through some set of pedagogical, behavioral, or cognitive processes.*
- *learners are not managed through some sort of motivating process, and the amount of learning is not (solely or reliably) influenced by motivating behaviours (such as reward and punishment, say, or social engagement)*
- *learners do not form memories through the storage of 'facts' or other propositional entities, and learning is not (solely or reliably) composed of mechanisms of 'remembering' or storing such facts*
- *learners do not 'acquire' of 'receive' knowledge; learning is not a process of 'transfer' at all, much less a transfer than can be caused or created by a single identifiable donor*
- *learning is not the acquisition of simple and durable 'truths'; learners are expected to be able to manage complex and rapidly changing environment." (Downes, 2012)*

Connectivism is not about the transfer or building of knowledge, but more focused on the growth and development of it. Downes wrote: "This implies a pedagogy that (a) seeks to describe 'successful' networks (as identified by their properties, which I have characterized as diversity, autonomy, openness, and connectivity) and (b) seeks to describe the practices that lead to such networks, both in the individual and in society (which I have characterized as modeling and demonstration (on the part of a teacher) and practice and reflection (on the part of a learner)." (Downes, 2012)

Social constructivist learning environments "encourage thoughtful reflection on experience," "enable context- and content- dependent knowledge construction," and "support collaborative construction of knowledge through social negotiation, not competition among learners for recognition." ("Constructivism") Cognitive psychologist

Lev Vygotsky emphasized the social context of learning, placing important roles on both teachers and those more experienced in the area being learned. “A constructivist teacher creates a context for learning in which students can become engaged in interesting activities that encourages and facilitates learning... Teachers thus facilitate cognitive growth and learning as do peers and other members of the child’s [in our case, the MOOC participant] community.” (“Social constructivist theories”)

There is not a set model in how connectivist courses are supposed to be set up or “taught.” Instead of the course being “built”, it more appropriate to say that it is “grown.” (Downes, 2012) A metaphor that has recently become popular in describing the learning activity that occurs in a connectivist learning environment is that of the rhizome. “Rhizomes spread away from the main plant, and can be separated and grow their own plants.” ("Rhizomatic learning –," 2013) A common description of the learning model that takes place in these community-based courses is the rhizomatic model of education. In this model, the curriculum is made in real time by the participants who are engaged in the learning process. The subject learned is fluid and spontaneously shaped, changing with the environmental conditions, like a rhizome. “With this model, a community can construct a model of education flexible enough for the way knowledge develops and changes today by producing a map of contextual knowledge.” (Cormier, 2008)

Evaluating "Success"

Trying to evaluate the effectiveness of a MOOC is very difficult. Because these courses are so new, a standard has not been set. However, standards are currently being set for the xMOOC. The purpose for this is to be able to consistently assess the courses to begin to give college credit that will be accepted at accredited higher education institutions. These standards, so far, seem to be in line with the evaluation methods of traditional online courses.

Evaluating the connectivist MOOC is even more difficult because it is not a straight-forward, traditional-type of course. It is difficult to establish the objective of the course because each participant is taking it for a different reason—some want to learn particular things (which still vary from person to person), some are doing it to further their education, some are doing it for research purposes, etc. Each experience is unique to the individual and so is the goal.

George Siemens uses institutional goals for offering MOOCs in his analysis. However, as Downes points out, the interests of each institution varies, so each objective will have its own metric for success.

Stephen Downes asks whether the course satisfied the properties of a successful network when assessing its effectiveness. He looks at both the process perspective and the outcomes perspective. "The process perspective asks whether the MOOC satisfied the criteria for successful networks. Of these, the most important are contained in what [he] call[s] the Semantic Condition, which ensures that the MOOC remains a living system." The course is assessed against the four parts of the semantic condition (autonomy,

diversity, openness, and interactivity) and an evaluation can be made from there. “The outcomes perspective looks at the MOOC as a knowing system...The MOOC should exhibit network properties on a macro scale — in other words, that we should be able to say things about the MOOC without reference to particular individuals in the MOOC.” Essentially, according to Downes, MOOC success is not based on individual successes because everyone takes the courses for different reasons, but rather as a result of how well all of those experiences worked together. (Downes, 2013)

3. PROJECT DESIGN

In my attempt to educate people about MOOCs, I thought there would be no better way to do so than to make my own course using Moodle. Teaching about MOOCs by participating in a connectivist MOOC is an innovative way to give a person some hands-on experience with this new learning style. It is important for participants to understand what MOOCs are, what they have to offer, the different types, and how to take them. By engaging in my cMOOC, participants will learn through the planned activities and networked learning community.

Research

To determine the best way to design a MOOC, I analyzed ten successful courses to see what worked and what did not. I decided to pick ten courses because I thought it would give me a large enough sample size and wide enough variety in the cMOOC field that I would see a number of different approaches. In this case, I have defined "successful" as fulfilling at least two of the three following criteria: 1. The number of participants (it must meet Stephen Downes' requirement to make it "massive"); 2. Who the sponsors or facilitators are; 3. If the course has any internet buzz (Are people

blogging about it and using it as an example in their writing and/or research?). I chose courses that were both currently ongoing and closed. I did this on purpose because I wanted to be able to see how people were currently participating in the courses but I also wanted the option to see how the information was archived for future reference.

After deciding which types of courses I was going to look at (cMOOCs), I had to figure out how I was going to pick ten sites out of the thousands that were out there. I began by using Google to find which courses were being taught by George Siemens and Stephen Downes, the men who are credited with developing the cMOOC. From there, I chose the rest of my courses by the hashtags that were most often referenced throughout blogs and articles. If a course was successful, it was going to have internet buzz and was easily searchable by it's hashtag.

I looked at each site, one at a time, taking notes on everything that I viewed. By looking at each site individually, it gave me an opportunity to be open to all that each site had to offer. Because I was taking notes on what I was seeing rather than looking for predetermined information, I felt like I was able to evaluate each site thoroughly without getting caught up in specifics and trying to fit them into categories.

The first, and easiest, part to analyze was the overall aesthetic design of the site. What did it look like? What colors were used? Why would they choose these colors in particular? Did it seem like there was much thought put into the design, or was the person more interested in getting the information on the page? These were some of the initial questions I asked myself as I began to dissect each page. I tried to pay attention to the actual layout and placement of the information to determine if there was an unspoken

standard in presentation. I counted how many tabs and subpages they contained to get a better idea of how much information was shared and how it was divided throughout the site.

After looking at the aesthetics, I began to take note of the type of information that was exhibited and how it was presented. I wanted to see if the subject matter had any correlation on how information was presented. It was important for me to take notice of who was presenting the course. I was curious if cMOOCs were sponsored by companies and foundations like the xMOOCs. If there were sponsored cMOOCs, did the design look any different than those that were developed by individuals because there was likely more money to back the project? Along with the information, I was also curious to learn about the facilitators. I know that some people are skeptical of these types of courses anyway, so I wanted to see what presenters were doing to prove that their facilitators were qualified, if they were doing anything at all. With being qualified to start the weekly discussions and activities, it was also in my interest to find out how many of these courses were offering college credit for taking them.

Another point of interest for me was to see what types of technology were being incorporated. I wanted to know what type of site was hosting the course. Was it a Word Press site, a wiki, a Google site, or something completely different? The technology behind how the lectures, presentations, and assignments were presented was important to for me to look at as well because I planned to incorporate it into my own course. Along with what technology was being used to produce the course, I also wanted to analyze what type of technology they were utilizing for peer-to-peer interaction.

After analyzing each course as a whole, I went back and analyzed one week from each. This gave me a more focused insight into how the courses are actually being taught. I looked at how the lectures and assignments were presented to gain a better understanding of the styles of "teaching" that are used. Comparing the courses in this way gave me a better look at the amount of information that was being shared in each module and how it was being introduced into the course.

To keep all the collected information organized and easily accessible, I put together a spreadsheet. This spreadsheet allowed me to directly compare all of the components from all of the sites that were analyzed and recognize the common themes and patterns that began to appear.

Project Action

After analyzing the data collected from the other sites, I began to apply my findings to my course that I was designing, *MOOC on MOOCs*. First, I sketched out the site's basic layout structure, determining how the information will be organized and presented, and how the site was going to look. I took the time to write all of the course content at this stage because, from past experience, it is easier to plan this way.

Once the preliminary concept was decided upon, I then began to build the core site using Moodle. There was a small learning curve that went with using this software for the first time (including figuring out that you have to install the software on the computer that you plan to use for the course rather than just running it from the site), but

as an overall assessment, I thought it was fairly easy to understand and very user-friendly. With the help of tutorials that I had found on YouTube, I was able to do just about everything that I had set out to do with my design.

From the analysis of the previous courses that I had looked at, I was able to use that information to help me determine my course content. My course is made up of an "About" page, a "Course Overview" page, a "Getting Started" page, and one active module (Week 2: Choosing a MOOC for You).

4. The Ideal Approach to My Course

Because the course that I set up is just a prototype, I can only describe the ideal way I would like a participant to approach my course, MOOC on MOOCs. The follow is a detailed description of the way that I would like to see my course play out, if it were to become live and have real participants.

Course Overview

This four-week connectivist-style course has been designed to educate the participant about massive open online courses. We will discuss the differences in the types of MOOCs, choosing the right MOOC, best practices in taking MOOCs, and the benefits of a MOOC.

Each week will have a new topic. Each module will start on Sunday and will last the entire week. It will consist of a short video lecture, suggested readings, and one to two discussion topics. The weekly expectations will be spelled out in each module so there is no confusion about what should be going on.

The Facilitators

First, I would have a team of knowledgable and experienced intellectuals as my facilitators. In an ideal world, I would have George Siemens or Stephen Downes introducing what MOOCs are since they are essentially the founding fathers of this style of learning. I would also try to incorporate speakers from the xMOOC world, such as Andrew Ng, Sebastian Thrun, or Daphne Koller, as well to give the course balance in opinion. Even though this course is being taught in the collectivist style, I think it is important to show both options and educate the participants about what is out there so they can determine which style works best for them.

The Technology

Social media will play a major role in this course when it comes to the weekly activities and discussions. The main forms of social media that I would encourage for this course would be Twitter, Google Groups and the creation of a blog. Any additional appropriate media is absolutely welcome (and encouraged). A weekly Twitter chat (approximately an hour long) or Google Hangout with the facilitator would be held to give the participants a chance to interact synchronously. These options would also give those that could not make it to the discussions a chance to view it at a later time.

Week 1: Intro to MOOCs

During the first week of the course, participants will be given a general overview of the course, an introduction to what MOOCs are, and their history. The introduction lecture will be a video of five to ten minutes in length encompassing the aforementioned topics from the facilitator.

There will also be a list of suggested readings to broaden the participants' knowledge. These readings will include links to:

- The MOOC Guide
- YouTube video "What is a MOOC?" narrated by David Cormier
- *The Chronicle of Higher Education*'s article "What You Need to Know About MOOCs"
- Rolin Moe's blog "All MOOCs, All the Time"
- *The Chronicle of Higher Education*'s article "The Minds Behind the MOOCs"
- mooc.ca by Stephen Downes

My hope is that these additional resources will spark original opinions and interesting conversation, causing the participants to want to go out and find other resources to share with their peers.

The activity for this week is to simply read the suggested articles and blogs and discuss. The purpose of this activity is to get the course participants introduced to this style of learning and to let those who are new to connectivist learning test the waters. I think it is important for those who do not have experience in cMOOCs to have a chance

to figure out what they are doing and to have the opportunity to ask questions before the course gets into full swing. I wouldn't want someone to get overwhelmed and miss out on important conversation (or worse, drop out of the course) if this is their first time and they are unsure of how to approach this style. I want to make sure this course is user-friendly to all levels and experiences. This mixture is sure to cultivate great networks and learning experiences.

Week 2: Choosing a MOOC for You

In the second week of the course, the video lecture will cover the two major types of MOOCs that are popular, xMOOCs and cMOOCs. It is important to know the differences in styles because they are so different. By knowing the styles of the courses that are available, it will help the learner determine which learning style they are more comfortable with and help them succeed in their chosen course. Along with the types of MOOCs, I will also go into a brief explanation of the pedagogical theories used in each. It is important for people to have an understanding of the ways they are being taught.

The readings for this week include:

- "Good MOOCs, Bad MOOCs" by Marc Bousquet of *The Chronicle of Higher Education*
- EDUCAUSE Review's "The MOOC Model: Challenging Traditional Education"

- Hybrid Pedagogy's "Udacity and Online Pedagogy: Players, Learners, Objects" by Sean Michael Morris and Jesse Stommel
- "Describing the Stages of Weekly Participation in a cMOOC" by Dr. Lee Graham
- "Why c and x MOOCs are attracting different number of participants?" a blog post by Sui Fai John Mak

The activity for this week is a discussion of xMOOCs and cMOOCs. Some questions to consider would be: Which type are you drawn to? Why? Have you tried either of them? Would you be willing to try either of them? Why or why not? There will be a Google Hangout this week featuring two people: someone who has facilitated an xMOOC and someone who has facilitated a cMOOC. I think it will be interesting to hear from these people to get a better understanding of what goes into teaching each type of MOOC and what experienced facilitators have to add about the topic since they see the courses from a different angle than the participants.

Week 3: Best Practices in Taking MOOCs

In the third week of this course, the conversation will turn toward best practices in taking these massive open online courses. This topic will give the participants a chance to discuss what they have found to have worked for them (information gathering, sorting information, social media, etc.) and what did not work and why. The lecturer for this

week will ideally have experience in both types of MOOCs so they can speak on behalf of both sides.

The list of suggested readings for this week is pretty thin because I really want to push the participants to discuss their views on best practices. I think it is important to hear from them rather than a bunch of "talking heads" because they are the ones that are in the middle of course actually living it. This weeks readings include:

- Stephen Downes' "'Connectivism' and Connective Knowledge" from the *Huffington Post*
- "40 Useful Tips for Anyone Taking a MOOC" on edudemic

The activity this week will consist of a Twitter chat where the participants and the facilitator can interact and share their experiences. The questions to think about for this week are: What have you found that works when you take a MOOC? What are some of the tips and tricks that you use to build your network within a course? How have these networks helped you outside of the course?

Week 4: Benefits of a MOOC

In the final week of the course, we will review what we have learned. This week will be participant-based and will center around their discussion on what they find to be the benefits of MOOCs. These benefits will be unique to each participant, so I hope that this will start a lively discussion. There will be no suggested reading for this week.

A forum will be set up in Moodle so the participants can discuss ideas using threaded discussion in addition to their normal postings on their blogs and using Twitter. Participants will also be encouraged to discuss their experiences that they have had in past MOOCs or what they expect to get out of these courses. (This is why the blogs are suggested.) Ideally, I would like this discussion to show a glimpse into what the participants want in a course and show the course producers how they can achieve this.

5. CONCLUSION

The purpose of this project was to be able to successfully create a massive open online course using Moodle, making it engaging and interactive. By utilizing the information that I gathered and analyzed from other MOOCs, I was able to implement my findings and combine all of the desirable characteristics, producing a prototype of a course in Moodle, including a working module of Week 2.

Design

I had anticipated finding that the aesthetic design of the site played a role in its success. Many people, including myself, judge a book by its cover, and the same goes for judging a website by its home page. The more organized and better designed a site is, the more professional it looks, giving the viewer a sense of trust in the information that they are reading.

From my research, most of the course sites reflected a rather minimalist design. It is quite uncommon for images and graphics to be used, making the sites very text-heavy. The background was, more often than not, white and the only other colors come from a technological-looking palette: blue, gray, black, or green. I was surprised at this because I

thought that layout and design would play a greater role in a course's popularity, but apparently I was wrong.

Social Media and Technology

MOOCs are dependent on the technology that they use. Social media is the backbone for cMOOCs because it is how the participants communicate and share their knowledge and ideas. Although Facebook is an asynchronious type of social media, I had expected that all of these courses will use it because of its proven popularity. However, this was not the case. Facebook was surprisingly unpopular in these courses. I am unclear on why this is, but my guess would be that it is asynchronious and not as easy to aggregate as hashtags and tagging. Twitter and blogs were the main forms of social media used with the course providing an official hashtag.

E-mail newsletters were the way that course producers kept participants involved. They were sent out to those who have registered for the class either weekly or daily and list the blogs and tweets that mention the course. These newsletters were incorporated into almost every cMOOC that I studied. However, some of the courses that were more "high-tech" used an RSS feed aggregator or blog roll where the mentions were posted on the site in real-time.

Information and Organization

Organization played a key role in a successful course. The easier a course was to navigate, I believe made it more successful and enjoyable for the participants. The key to keeping the participants happy and engaged is making them do as little work as possible to access the information. A well-organized site is simple to navigate and is user-friendly. Along with uncomplicated navigation, the importance of thorough explanations was important. Clear, concise directions of the course's expectations of the participant were prevalent in the courses that I analyzed.

Using Moodle

Choosing to use Moodle to house a MOOC is a reasonable option. The software is open-sourced, so it is free to use. The only thing that has to be considered is the use of a network large enough to handle the traffic. The software proved easy to use. I was able to produce my own course, MOOC on MOOCs, in Moodle, with minimal instruction, when I had never seen the software prior to this project. Although the software was pretty straight forward, I was able to find any answers to questions I had on Moodle's website or YouTube. With its user-friendly set up, I would expect more people to choose Moodle as their course host.

With the way Moodle sets up its courses, it makes it possible to work for both xMOOCs and cMOOCs. There are a number of sophisticated features that allow it to be used in a more traditional way of online teaching or in a more abstract, connectivist way.

Because Moodle is open-sourced, it is constantly being updated with new features thanks their volunteer developers. Maybe if Moodle begins to take a turn toward being used more often for connectivist MOOCs, the developers will start to take a look at some of the features that cMOOCs use and start to offer them to their users. One of the attributes that Moodle is missing is an aggregator to form an RSS feed or blog roll.

The only down-side that I have noticed to using Moodle, which could potentially be a large deterrent, is that the user has to download it to their computer before being able to access its courses. A large number of users will be turned off by this feature because they are not going to want to download a program onto their devices that they are unfamiliar with. It also greatly decreases the chance of a user stumbling across the course and becoming a participant.

RESOURCES

Bosquet, M. (2012). Good moocs bad moocs. *The Chronicle of Higher Education*, Retrieved from http://chronicle.com/blogs/brainstorm/good-moocs-bad-moocs/50361

Building an online learning community. (n.d.). Retrieved from http://www.samuelmerritt.edu/academic_technology/online_community

Constructivism. (n.d.). Retrieved from http://viking.coe.uh.edu/~ichen/ebook/et-it/constr.htm

Cormier, D. (2008). Rhizomatic education: Community as curriculum. *Innovate: Journal of Online Education*, *4*(5), Retrieved from http://www.innovateonline.info/pdf/vol4_issue5/Rhizomatic_Education-__Community_as_Curriculum.pdf

Daniel, J. (n.d.). Retrieved from http://jime.open.ac.uk/2012/18

de Waard, I. (2012, April 11). Massive open online courses: Setting up (starttomooc), part 1. *Learning Solutions Magazine*, Retrieved from http://www.learningsolutionsmag.com/articles/886/

Downes, S. (2011, January 05). 'connectivism' and connective knowledge. *The Huffington Post*. Retrieved from http://www.huffingtonpost.com/stephen-downes/connectivism-and-connecti_b_804653.html

Downes, S. (2012). *Connectivism and connective knowledge*. Retrieved from http://www.downes.ca/files/books/Connective_Knowledge-19May2012.pdf

Downes, S. (2013, March 18). [Web log message]. Retrieved from http://halfanhour.blogspot.com/2013/03/evaluating-mooc.html

Downes, Stephen. "Massively Open Online Courses are 'Here to Stay." *Stephen's Web*. N.p., 20 2012. Web. Web. 5 Dec. 2012. http://www.downes.ca/post/58676.

Illich, Ivan (1971). *Deschooling Society*. Marion Boyars, London and New York

Mangan, K. (n.d.). Retrieved from http://chronicle.com/article/A-First-for-Udacity-Transfer/134162/

Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier*. HarperPerennial Paperback. Retrieved from http://www.rheingold.com/vc/book/4.html

Saadatmand, M., & Kumpulainen, K. (2012). *Emerging technologies and new learning ecologies: Learners' perceptions of learning in open and networked environments*. Paper presented at 8th international conference on networked learning.

Siemens, G. (2012, September). *Designing, developing, and running (massive) open online courses*. Retrieved from http://learni.st/users/dieGoerelebt/boards/5680-how-to-design-develop-and-run-a-mooc-massive-open-online-course

Skorton, D. & Altschuler, G. (2013, January 28). Moocs: A college education online?. *Forbes*, Retrieved from http://www.forbes.com/sites/collegeprose/2013/01/28/moocs-a-college-education-online/

Sobrero, P. (2008). Essential components for successful virtual learning communities. *Journal of Extension*, *46*(4), doi: 4FEA1

Social constructivist theories. (n.d.). Retrieved from http://viking.coe.uh.edu/~ichen/ebook/et-it/social.htm

Watters, Audrey. "Top Ed-Tech Trends of 2012: MOOCs." *Hacked Education*. N.p., 20 2012. Web. Web. 5 Dec. 2012. http://www.hackeducation.com/2012/12/03/top-ed-tech-trends-of-2012-moocs/.

[Web log message]. (2013, January 29). Retrieved from http://nauczanki.wordpress.com/2013/01/29/rhizomatic-learning-notes-from-dave-cromier-etmooc-presentation-28-jan-2013/

What is moodle?. (n.d.). Retrieved from https://moodle.org/about/

Course Name	URL	#	Topic of course	Presented by	Participants	Course Length	Credit/ Certificate/ other	How was info presented in modules?	Layout Description	Number of Tabs (# of sub pages total)	Social Media Used	Stand out features
MOOC MOOC	learn.canvas.net/courses/27/	#moocmooc	what it means to participate in, create, and even envision a MOOC (massive open online course). We'll be thinking about the nature of digital learning and where it's leading us. We'll be questioning what a MOOC is, how useful this educational format can be, and the new and innovative opportunities toward which it points.	Hybrid Pedagogy	1,000+	1 week (1 assignment ea. day)	N/A	video lecture, short essay by one of the facilitators, questions to think about, links to articles, list of tasks (assignments)	clean, minimal, Helvetica thin & bold fonts, hyperlinks in text, lays out what is expected/how it works, (shows how and who to follow), gives overview of what is going on each day (divided into separate pages), end of course survey	3 on left, additional links on right	Twitter (main), RSS feed, Scoop.it ("to suggest content for us to highlight via the #moocmooc topic")	minimalist/modern look, easy to follow/ understand responsibilities
CCK11	cck11.mooc.ca	#cck11	explores the concepts of connectivism and connective knowledge and explore their application as a framework for theories of teaching and learning.	Stephen Downes & George Siemens		12 wks (1/17-4/11/11)	credit-Univ. of Manitoba	short written overview, readings, elluminate sessions w facilitators (multiple sessions w multiple facilitators), list of "activities" (assignments)	Very plain instead of minimalist, looks cheap, lays out info simply and straight forward: pages with lists to all info needed, weekly "lessons" include overview, readings (links to external sites), seminars (times for Elluminate sessions), activities; newsletter archives, "how to"s, links down left panel	3 across top, 5 on left (34)	blogs, Second Life, RSS Readers, UStream, Elluminate, daily newsletter, Twitter	
Learning Design for a 21st Century Curriculum	www.olds.ac.uk	#OLDSMOOC	The course is structured to reflect a proposed process for design, and combines a number of design thinking methodologies	JISC (has 19 facilitators)		9w	badges (has hyperlinks to explain what badges are and why they chose to use them)	video lecture, a few paragraphs describing the week's focus and "activities" (assignments), the week's assignments	clean, colorful header, Google site, tabs across top ("about", "the course", "badges", "MOOC environment", "blog", "feedback"), discussion topic feed @ bottom (286 topics), Twitter feed, uses graphics to add color, uses hyperlinks, "Announcements" reminds me of newsletter but held on page rather than email, gives 4 ways to provide feedback (don't have to wait until end of course to do this)	6 (21)	Cloudworks, Google+, Google Sites, Google Hangouts, Google docs, Twitter, Bibsonomy, Google Calendar, YouTube, Slideshare	looked more like a regular website
Educational Technology & Media	etmooc.org	#ETMOOC	Connected Learning – Tools, Processes & Pedagogy; Digital Storytelling – Multimedia, Remixes & Mashups; Digital Literacy – Information, Memes & Attention; The Open Movement – Open Access, OERs & Future of Ed.; Digital Citizenship – Identity, Footprint, & Social Activism	Conspirators- list of "key organizers, developers, & facilitators". Names hyperlink to personal pages	700+	10 wks (welcome + 5 2-wk topics)		direct link to blackboard, also, a link to a google doc that has links to the blackboard session, slides, and links to videos, infographics, articles, etc.	WordPress site, clean, center justified, large graphic header	5 (22)	Twitter, blogs, RSS Readers (or Posterous or Tumblr), blog aggregator, BlackBoard Collaborate, a mailing list, Google + community, Google Calendar, diigo, delicious, reddit, Bonus: About.me or Flavors.me	Interesting presentation of info on facilitators
Social Media Classroom (Virtual Community/Social Media Stanford 2012 Course)	socialmediaclassroom.com/host/vircom/	*"access denied on majority of pages"*	participatory media	Howard Rheingold/ Stanford		semester	course credit - Stanford	instructions all written out in bullet points, hyperlinks used throughout text for additional resources	looks like a fairly basic wiki, utilizes colors in headings, hyperlinks & tabs (color choice, IMO, is juvenile), 2-column view with tags in right column	6 (0) (tags in right column)	forums, blogs, wikis (class & personal), social bookmarks, Twitter, mindmaps	
Google Search Education	google.com/insidesearch/searcheducation/index.html		web search using Google	Google		on-going		link to google doc, lesson written out with hyperlinks within text (bullets and tables)	clean, uses Google's color pallet. very visual, video at top, big bright icons at bottom	4 (0)	does not use social media, not collaborative	breaks assignments into user's abilities
Digital Storytelling	ds106.us	ds106	digital storytelling	prof @ U. of Mary Washington		no start & end dates. ongoing course	course credit from U. of Mary Washington & other participating colleges: KSU, U. of Michigan, York College/ CUNY	because the course is ongoing, there are tons of assignments. they are divided into categories (design, audio, video, etc.) and within ea category, there are a wide variety of assignments. you can do whatever you want. each assignment just has a brief description (if that) and an example. then, there are options to post your work and links to help others.	dark colors, black/gray/red (opposite of all the others: white background with black and blue or green as main colors), lots of images & gifs, claims to be "something completely different", lots of stuff going on, doesn't seem as organized as the others, sensory overload! (hard to take it seriously)		Twitter, flickr, Google, SoundCloud, create a Gravatar, blog, email notice	
Creativity & Multicultural Communication	www.cdlprojects.com/cmc11blog	CMC11	explores the domain of Creativity and global communication in multidisiplinary venues	SUNY/Empire State College		13 wks (15 if taken for credit)	can be taken for credit	video, readings, & recorded lecture	Adapted from CCK11/Stephen Downes, colorful header, set up like reg. Downes site (nav tabs at tops & links on left), a little more colorful than Downes' site	6 across top; 5 (31)	blogs, Second Life, RSS Readers, UStream, Google+, FB, Diigo, newsletter	
DiffiMOOC	www.diffimooc.com	diffimooc	incorporating new media in the classroom: student inventories and survey creation/testing tools; tools for managing differentiated student progress; tools for providing differentiated formative assessment; mobile tools for managing the environment; effective use of Whiteboards in the classroom; flipping the classroom with streaming video and podcasting; simulation tools for differentiation; social media for differentiation; mashups and multimedia; mobile devices for product differentiation	U of Alaska Southeast (3 faculty members teaching - all Ph.D.s)		3 5-wk modules	certificate or professional education credits	no access to modules	looks like WordPress site w/updated Downes layout, (cleaner & more modern) nav on 1/3 left, uses videos and images dominantly in layout. used social media icons at top (only one I've seen use these), but the links don't work.	18 (0)	concept mapping software, Diigo, Twitter, wiki (Wikispaces), Google Groups	use of social media icons & graphics (more visually stimulating), orientation page is very helpful
Open Course in Technology Enhanced Learning (ocTEL)	octel.alt.ac.uk	octel	an online course to help you understand better how to use technology to enhance your teaching practice	Association for Learning Technology (ALT)		11w		no access to modules	looks like a regular website, uses images to add color	6 (0)	Twitter, blog posts	providing information before class even starts, gives opportunities for people to contribute, provides legal information about how your work may be used

VITA

Stacy Herrick was born in Washington, Pennsylvania on October 11, 1983. After growing up in Washington, she decided to stay local and went to college in her hometown.

In 2006, Herrick graduated from Washington & Jefferson College with a B.S. in Art and a concentration in Graphic Design. After graduating, she was hired in the communications office where she worked as a Communications Assistant for several months before being promoted to Communications Specialist/Graphic Designer. She spent almost five years with the College before moving to Morgantown, West Virginia in 2010. Upon moving to Morgantown, she was hired as a graphic designer for one of the largest print companies in West Virginia, Morgantown Printing & Binding.