What's with the MOOCs?

* * * On the Internet * * *

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Abstract

The world of higher education is abuzz with this MOOC thing. The success of the connectivist MOOC model has been proof of concept that courses can be run for thousands of students at a time, and universities are jumping on the bandwagon in droves. On the other hand, whereas tools to implement MOOCs are proliferating, and universities are experimenting with them in a big way, they are being mounted on a loss-leader basis at present, and many respond, when asked what they think of MOOCs, that they have never heard of them. In this article, we'll explain what's a MOOC, examine some precursors of MOOCs, and track how the MOOC hydra has evolved at least two heads since 2008. Finally, we'll come to some understanding of the significance of MOOCs with respect to language learning and teacher training.

So, what's a MOOC?

Dave Cormier and Brian Alexander are acknowledged co-coiners of the term MOOC to describe the first course to be labeled as such (Herman, 2012). That seminal course was on Connectivism and Connectivist Knowledge, or CCK08, as conceived by George Siemens and Stephen Downes in 2008 (see https://sites.google.com/site/themoocguide/3-cck08—the-distributed-course). Webcasting, podcasting, and widespread notions of PLN were at the time emerging as means of focusing a wide spectrum of wired educators on conversations around latest developments in their field, with Siemens and Downes's theory of connectivism underpinning the movement (Siemens, 2004). If you were following this conversation at the time you couldn't have avoided being drawn to CCK08, and toward many of the MOOCs to follow.

Since then there have been countless MOOCs (see Appendix for sources of listings). A MOOC is a massive open online course. Cormier articulated a serviceable short

definition of the concept in a Hangout with Jay Cross, George Siemens, Stephen Downes, and others, entitled "Business and MOOCs" (Figure 1) <http://youtu.be/DGaUfWkJdi4>, elaborating on each part of the acronym:

- Massive – about scale
  - Relies on increased chance of interactions from a critical mass of participants
  - Massive allows knowledge to derive more from participants; less from top down
- Open – not just free, but
  - Open access
  - Open syllabus, flexibly allows participants to drive their own learning
- Online – this is essential
  - Internet introduces abundance
  - Completely different playing field from one based on scarcity
- Course –
  - Has structure
  - Cohesion based in experience of facilitators

Figure 1. Business and MOOCS

So as not to get bogged in semantics, a MOOC is a MOOC if it has lots of participants, if it's open to anyone (which means for free; otherwise it wouldn't be open), if it's online, and if it's a course with some plan of action, even if the syllabus is meant to be broken, as suggested in http://etmooc.org. All of the sites mentioned in this post are MOOCs in that broad definition, including those in the next section.

Were there MOOCs before MOOCs?

In the Bb Collaborate / Elluminate recording of "A true history of the MOOC" (Downes, 2012; Hargadon, 2012), Cormier points out that there have been many MOOC-like configurations for learning since the Internet came online. It can indeed be argued that the emergence of the Internet as a force in education spawned what now might be called MOOCs late last century, one example being http://study.com, a site established and managed by David Winet, which offered language courses for free to all comers. Many of the courses were conducted by email, a closed course system, but mine became open access when I put up a web page for my Study.com course called Writing for Webheads <http://prosites-vstevens.homestead.com/files/efi/webheads.htm>, which started leaving artifacts online in 1998. Insofar as 100 participants could have been considered fairly massive in 1998, we could argue that we were engaged in a MOOC when we were experimenting with platforms for teaching courses in writing for free online last century.

Another opportunity for MOOC in the ESOL world began in 2001 when the CALL-IS in TESOL conducted its first EVO, or Electronic Village Online <http://evosessions.pbworks.com>. EVO is a set of courses running as "sessions" exhibiting varying degrees of openness. Writing for Webheads morphed via EVO into Webheads in Action, or WiA <http://webheads.info> and has sustained an open community since its inception as an EVO session in 2002. That transition has been documented elsewhere (Stevens, 2013). The WiA community has since grown to over a 1000 members today in just the Yahoo Group alone, and EVO attracts thousands in its most recent annual renditions. Again, this is simply to suggest that if EVO (and WiA in 2002) were considered to be courses, and if hundreds of participants is massive, then they are both definitely open and online, and had we not started them so long ago we might have called them MOOCs. At the time we called them variously groups, communities, and networks (Stevens, 2009).

Another community whose webinars helped call attention to CCK08 in 2008 (by hosting webinars on how Siemens, Downes, and Cormier were developing the course) was Worldbridges (Lebow, 2006). This community mounted an effort that might qualify as a MOOC in the Webcast Academy it spawned and hosted from 2008 to 2010. The members of this community taught themselves webcasting under the tutelage of Jeff Lebow, and the members created their own handbook, The Book of Webcasting (the Step-by-Step Guide at http://www.webcastacademy.net/). Participants formed partnerships of webcasters who acted as audiences for one another on their way to

webcasting for even wider audiences. Many graduates still webcast through various niches in the Worldbridges network (e.g. http://edtechtalk.com).

When is a MOOC not a MOOC?

As we have seen, the first MOOCs were connectivist, but crucially, there have evolved different kinds of MOOCs. Lane (2012) has isolated at least three strains in the wild, as shown in this graphic from her blog post in Figure 2: http://lisahistory.net/wordpress/2012/08/three-kinds-of-moocs/.
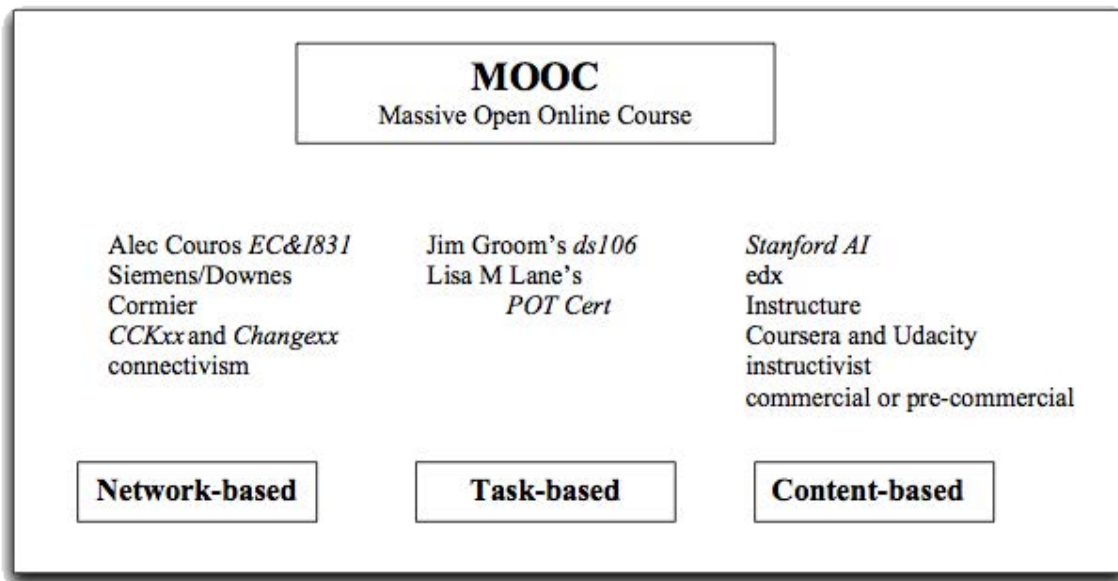

Figure 2. Types of MOOCs

Stephen Downes has reduced this distinction to cMOOCs (connectivist, or network-based in Lane's diagram) and xMOOCs (a play on Ed-X, shown on the right in the diagram; see Rodriguez, 2013). An xMOOC is a course designed to be taken by thousands of people who are interested in pursuing learning along the lines of what they might expect when they enroll in a university course. Students in such a course plow through a pre-arranged set of material and might do so in connection with others (because there are thousands of others in the same course) or in isolation, as might happen in a real university. An xMOOC is designed primarily with specific training goals in mind, and secondarily (if at all) on the network of participants.

Stephen Downes elaborated on the distinction in "Business and MOOCs" <http://youtu.be/DgaUfWkJdi4>. While taking pains to explain that feedback on xMOOCs suggested they were effective in achieving their purposes, he went on to explain:

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

cMOOCs

A cMOOC, or connectivist one, is designed overtly to utilize those thousands of others (see http://www.connectivistmoocs.org). Here the course facilitator lays out a cohesive structure for what is to be learned but, in Siemens's words, does not walk the path for the participants, expecting them to follow in well-worn footsteps <http://youtu.be/VmfipxhT_Co>. The facilitator instead encourages the participants to confront chaos and then find their own pathways through the material. What George actually says is transcribed in part here (from http://goodbyegutenberg.pbworks.com/w/page/48177073/GettingStarted2012evo).

I'm not aware of any research actually that says linear structure produces better outcomes than more chaotic meandering structure. Our intent, based on our theories of learning is to argue that the experience of learning, making sense of that chaos, is actually the heart of the learning experience, but if an instructor makes sense of that chaos for you and gives you all the readings and sets the full path in place for you then to a degree you are eviscerating the learner's experience because now you've made sense of them and all you've told them is walk the path that I've formed. When it comes to complexity I'm a great fan of letting learner's hack their way through that path and getting the value of that learning experience and that sense-making process.

If the facilitator for whatever reason (e.g., too many participants, or thinks it's better if s/he stands aside) gives the responsibility for sense-making to participants in a MOOC, then the participants might negotiate how to make sense of their syllabus with one another. This is where the massive part of a cMOOC kicks in. If the critical mass of participants is correct, then nuclear fission serves as an analogy for the chance of productive interaction, and participants will be more likely to blog and tag and comment on each other's posts, and leave artifacts documenting the experience on the web. If the MOOC is run by Stephen Downes then it aggregates these posts through a script called gRSShopper <http://grsshopper.downes.ca/description.htm> and publishes them each day in a daily 'newsletter' generated from that aggregated content. If the MOOC is run by me then I would use something simpler based on tagged tweets and blog posts, and aggregate content in an aggregator such as http://Paper.li, though http://tweetedtimes.com/ preserves past items better, as in this example for a project using 'writingmatrix' as its tag: http://tweetedtimes.com/#!/search/writingmatrix/en.

Why would anyone want to run such a course? The Internet is full of sites already where language teachers are competing with one another to share their knowledge with students in the most clever way possible, for free. Stephen Downes was asked in 2008 why he would flog himself across the back with a course open to thousands (of

course, they didn't know at the time it would attract so many ☺ when he could have left it at just the two dozen enrolled in the course at the college, and he replied simply, because he would learn from it. This is a prime motivator for setting up a cMOOC.

XMOOCs

Sebastian Thrun and Peter Norvig established proof of concept for xMOOC when they demonstrated in 2011 that the MOOC concept could be used to teach Artificial Intelligence scaled to thousands of enrolled students, and assess and evaluate those participants through algorithms developed by Amazon <https://www.ai-class.com/>. As a result Thrun resigned his tenured position at Stanford to work for Google and ended up launching Udacity, a platform for xMOOC delivery (Cadwalladr, 2012).

Thrun might be recognized as a visionary for taking such risks, but the impetus for this kind of effort is on the flip side of education from that of cMOOC. Whereas one obvious limitation of cMOOC is that participants need to be self-starters highly motivated to learn about a particular topic, xMOOC is geared towards the hoards of students for whom expensive Ivy League education (or increasingly, even community college education) is less and less an option. In a podcast interview for Inside Higher Ed (Kolowich, 2012), Candace Thille, director of the OLI at Carnegie Mellon University, worries that this development might lead to a "bifurcation" in educational opportunities in the not-that-distant future.

John Hibbs has argued (Hibbs, 2012) that xMOOCs, Coursera being an example of such a MOOC, might damage hard-earned university branding. After experiencing frustration with Coursera, John's contention is that in their rush to sign on with mechanical courseware generators, universities might be weakening the perceived quality of their offerings until the purveyors of such courses can improve their quality to the standard of instruction expected from those institutions. This finally happened on a massive scale when Fatimah Wirth's Coursera course (Fundamentals of Online Education: Planning and Application) overloaded, creating black-eye embarrassment for Georgia Tech, the accrediting institution (Jaschik, 2013). Wirth's course is still pending after a return to the drawing boards, but the lesson should be seriously heeded: massive as in MOOC can fail massively.

Hibbs's is not a voice in the wilderness. Mike James in an article in *I Programmer* says that "the methods used by the hugely successful courses are little changed from the dark ages" (James, 2012a). James refers to Sebastian Thrun's co-professor in the Stanford AI course, Peter Norvig, who made reference to the dark ages in his TED Talk on the AI MOOC, http://www.i-programmer.info/news/150-training-a-education/4398-peter-norvig-on-the-100000-student-classroom.html. In addition, Jim Groom points out in an interview with Steve Hargadon that xMOOCs purporting to be on the cutting edge with their reliance on video instruction and robo-grading are perpetuating some of the same methods for education that we should be leaving behind from last century, a juxtaposition he sees as worse than just ironic

<http://www.stevehargadon.com/2012/11/interview-tonight-jim-groom-on-domain.html>.

Given the downward spiral in the world's economies and shortage of resources, abundance is a word more and more applied to knowledge resources than to natural and manufactured ones, which are approaching scarcity. Where the ascendancy of knowledge abundance intersects with the increasing lack of natural and economic resources, xMOOCs may well be the most viable path of quality education for learners of the future. The points made above have to do with the present state of the quality of that instruction, and how that might impact branding of universities associated with the current xMOOC players.

MOOCs in the future: A return to center?

According to a summary of a recent Sloan Consortium 2012 Survey of Online Learning, "Only 2.6 percent of higher education institutions currently have a MOOC (Massive Open Online Course), another 9.4 percent report MOOCs are in the planning stages" <http://sloanconsortium.org/publications/survey/changing_course_2012>. If nearly 10% of colleges surveyed have MOOCs on the drawing boards, this seems to be a significant inroad for this model of learning.

Stephen Downes thinks that MOOCs must evolve to return to their roots. He illustrates this for us in a sketch (Figure 3) in the Bb Collaborate / Elluminate version of "A true history of the MOOC" (shown in this screen shot from https://sas.elluminate.com/p.jnlp?psid=2012-09-26.0742.M.9E9FE58134BE68C3B413F24B3586CF.vcr&sid=2008350).
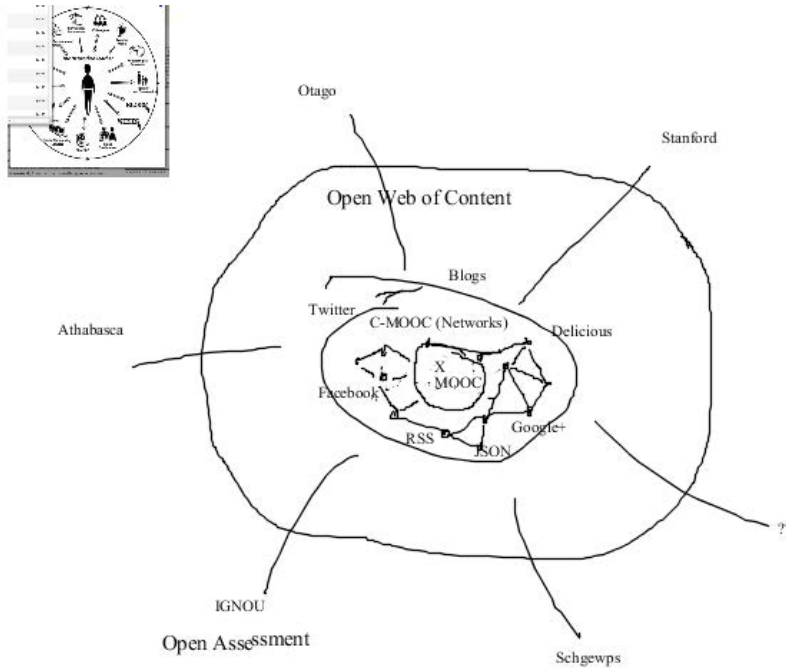
Figure 3. History of the MOOC

The sketch began with MOOCs in the middle and with the entities at the end of each line setting up free open online courses but monetizing some aspect in the form of accreditation, help facilities, etc. The circle around MOOC indicates that MOOCs utilize OER (open education resources) and the "open web of content" as illustrated in the diagram Stephen relegated to the top left corner. Then Steve Hargadon asked in the discussion if these entities (the new xMOOCs) were paying tribute to their roots in

Figure 4. MOOC Organization

cMOOC. Stephen said off the top of his head, "no" but did note that in something he had come across lately, it was found that the biggest predictor of success at Harvard (apart from getting into Harvard) was participation in study groups. As others commented, Stephen proceeded to wipe the MOOC from the center of his diagram and put in xMOOC with study groups forming around any given xMOOC.

Stephen then explained, for xMOOC to be truly viable, it will inevitably have to move in the direction of cMOOC. In his words, "The connectivism model will become the primary model ... [xMOOCs] have to grow to become
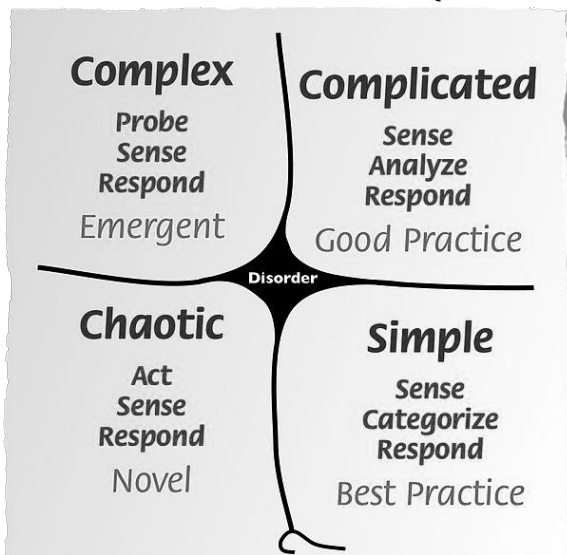
cMOOCS … They will do that over time."

MOOCs and language learning

Two upcoming audiences for MOOCs might be practitioners of language teaching and language learners in general. Though I have pointed out that there have been language-related precursors to MOOCs, this is indeed an avenue not particularly explored or developed as MOOC. However, Instreamia founders Ryan and Scott Rapp have just proposed a free course to be run on the MOOC model from April 15 to May 27, 2013 called Blended Teaching of World Languages <http://ltmooc.com/>.

Regarding the appropriateness of MOOCs to teaching ESOL and other languages, I would argue that the type of MOOC best suited to a communicative and socially-driven endeavor such as language-learning is cMOOC, based on the concept as initiated by Siemens, Downes, and Cormier in their first MOOC, CCK08. In a recent interview <http://learning2gether.posterous.com/dave-cormier-discusses-cmooc-and-multimooc-co>, Cormier points out why MOOCs might work particularly well for language learning (though he doesn't mention language learning specifically). Cormier refers to David Snowden's Cynefin model that divides knowledge management and organizational strategies into five domains (the last being disorder). Leaving aside the last, the other four are represented in this diagram, from the Wikipedia article on <http://en.wikipedia.org/wiki/Cynefin>.

Cormier argues that MOOCs are especially suited to complex and chaotic subjects, which language learning tends to be.

In the "Business and MOOCs" recording there is some discussion of why a company might be interested in the MOOC model, with agreement that this would not be an appropriate model for training staff in something they all must know how to do (simple and complicated tasks). In a more appropriate application (for a business) a MOOC would not be internal to the company but would put knowledge workers in the company in touch with wider world perspectives and foster greater understanding of the knowledge around that topic (complex and chaotic).

Accordingly, for language learning, a MOOC would not be a good means of teaching grammatical structures, unless the students were tasked with learning grammar inferentially and from one another. In some theories of language learning, they would learn through being motivated to communicate with one another and through providing one another with linguistic data that they would be constantly processing. For that matter, the topic of the MOOC would not necessarily have to be related to, or labeled, language. It could be a topical MOOC populated by language learners and teachers. But if it plunged learners into the deep end of communication with others then it would tend toward the complex and chaotic quadrants of learning, which MOOCs might address most successfully.

What's in it for teachers?

MOOCS enable learners to discover and apply underlying structure to their perspective on a course according to their own experience and notions of learning, not necessarily on a path pre-ordained by a prescriptive facilitator. Successful participants utilize networks to find pathways leading to collaboration around shared learning goals. MOOCs help teachers keep in mind the larger picture, what learning should feel like in a world characterized by abundance of information and always-on connectivity.

MOOCs deal with learning why, applying critical thinking, engaging with the material and applying one's own schemata, reaching the higher echelons of Bloom's digital taxonomy, not with training how to do particular things, but in working through approaches that would enable learners to learn heuristics that might be appropriate to their future contexts. Experience with MOOCs can help teachers see more clearly what these heuristics are.

MOOCs enable participants to articulate and explore individual learning strategies. This differentiates master learners (Warlick, 2010) from those they are employed to teach. When learners must adapt to jobs that haven't been invented yet, teachers must help learners become master learners; otherwise their 'training' only applies to known jobs.

MOOCs have to be experienced. Wesley Fryer says in this podcast http://www.speedofcreativity.org/2012/12/01/podcast397-takeaways-from-and-reflections-on-the-2012-educause-conference/ that teachers should take MOOCs in order to understand how they work. It is through this experience that MOOCs can start to have an impact on one's teaching.

This article therefore suggests that teachers trained in MOOC techniques become more open to applying what they have learned with their students, thus introducing their students to networked learning methods that will leverage them in their future endeavors. This article does not suggest that language courses be run as MOOCs, but that those with experience in MOOC training are better able to utilize the appropriate affordances of MOOCs to their teaching situations, and widen the learning horizons of their students. However, I have pointed out that many online efforts at teaching languages and training teachers had MOOC-like qualities even before the term was coined in 2008, and I predict that it won't be long before MOOCs become more mainstream for language learning and teacher training.

References

Cadwalladr, C. (2012). Do online courses spell the end for the traditional university? *The Observer*, Sunday 11 November 2012. Available: http://www.guardian.co.uk/education/2012/nov/11/online-free-learning-end-of-university.

Downes, S. (2012). A true history of the MOOC. *Stephen's Web*. Available: http://www.downes.ca/presentation/300.

Hargadon, S. (2012). Tonight – A true history of the MOOC. *Education, technology, social media, and you!* Available: http://www.stevehargadon.com/2012/09/tonight-true-history-of-mooc.html.

Herman, R. (2012). The MOOCs are coming. *The Journal of Effective Teaching, 12*(2), 1-3. Available: http://www.uncw.edu/cte/ET/articles/Vol12_2/Editor.pdf.

Hibbs, J. (2012). Crown jewels, 21st century diploma mills, MOOCs on the moon. *Ben Franklin*. Available: http://oregonhibbs.com/2012/11/13/crown-jewels-21st-century-diploma-mills/.

James, M. (2012a). MOOCs fail students with Dark Age methods. *I Programmer*. Available: http://www.i-programmer.info/professional-programmer/i-programmer/4494-massive-open-online-courses-fail-students-with-dark-age-methods.html.

James, M. (2012b). Peter Norvig on the 100,000-student classroom. *I Programmer*. Available: http://www.i-programmer.info/news/150-training-a-education/4398-peter-norvig-on-the-100000-student-classroom.html.

Jaschic, S. (2013). MOOC mess. *Inside Higher ED*. Available: http://www.insidehighered.com/news/2013/02/04/coursera-forced-call-mooc-amid-complaints-about-course.

Kolowich, S. (2012). MOOCs and machines. *Inside Higher Ed*. Available: http://www.insidehighered.com/news/2012/05/10/candace-thille-talks-moocs-and-machine-learning.

Lane, L. (2012). *Lisa's (online) teaching blog*. Available: http://lisahistory.net/wordpress/2012/08/three-kinds-of-moocs/.

Lebow, J. (2006). Worldbridges: The potential of live, interactive webcasting. *TESL-EJ*, Volume 10, Number 1. Available: http://www.tesl-ej.org/ej37/int.pdf.

Rodriguez, O. (2013). The concept of openness behind c and x-MOOCs (Massive Open Online Courses). *Open Praxis*, vol. 5 issue 1, pp. 67–73. Available: http://www.openpraxis.org/index.php/OpenPraxis/article/view/42.

Siemens, G. (2004). Connectivism: A learning theory for the digital age. *Elearnspace*. Available: http://www.elearnspace.org/Articles/connectivism.htm.

Stevens, V. (2009). Modeling social media in groups, communities, and networks. *TESL-EJ*, Volume 13, Number 3. Available: http://www.tesl-ej.org/wordpress/past-issues/volume13/ej51/ej51int/.

Stevens, V. (2013). Learning2gether: Wiki-based worldwide teacher professional development. In Davidson, P., Al-Hamly, M., Coombe, C., Troudi, S., and Gunn, C. (Eds.). *Achieving Excellence through Life Skills Education*. Dubai: TESOL Arabia. pp.342-351. Version available online: http://tinyurl.com/tacon2012L2g.

Warlick, D. (2010) Are they students or are they learners? *2 Cents Worth of Seeking the Shakabuku*. Available: http://davidwarlick.com/2cents/?p=2762.

Appendix: MOOC listings

Stephen Downes's definitive archive of knowledge on MOOCs (approaching 500 annotated references): http://www.downes.ca/mooc_posts.htm.

MOOC-List.com
A complete list of Massive Open Online Courses (free online courses) offered by the best universities and entities http://www.mooc-list.com/.
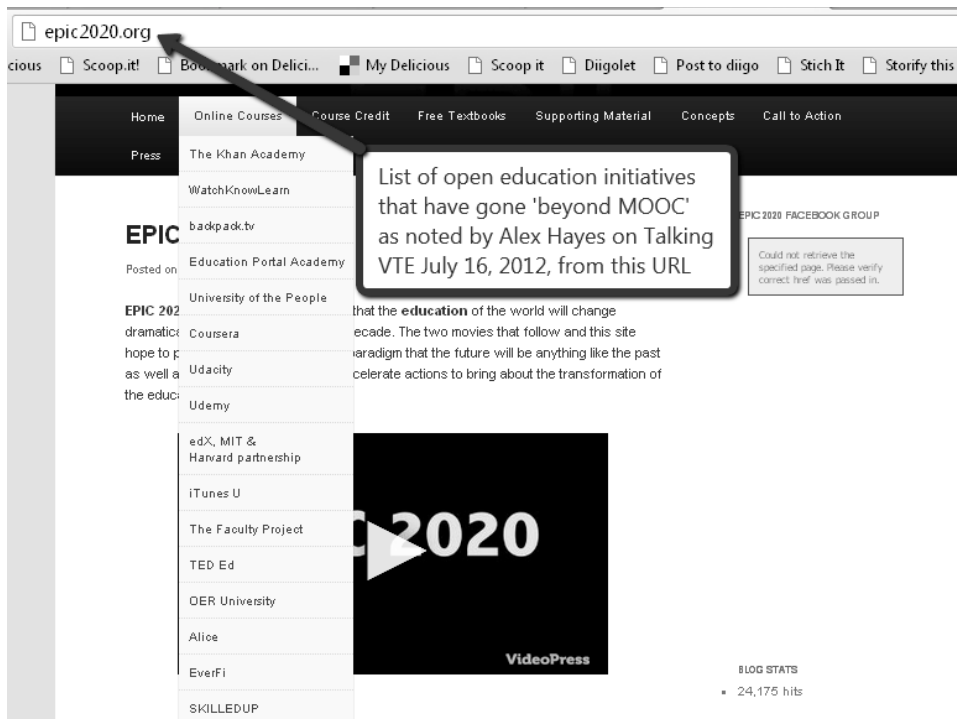
In March 2013 listing MOOCs from these "initiatives"

- edX
- openHPI
- Venture Lab
- UniMOOC – Tec
- Udacity
- Saylor.org
- Coursera
- Class2Go
- Canvas.net
- MRUniversity
- Other Initiatives
- OpenLearning
- 10genEducation

EPIC2020.org
From http://screencast.com/t/qHvuKVNaj
and http://talkingvte.blogspot.com/2012/07/talking-vte-episode-34.html

Openculture.com
300 MOOCs from great universities
http://www.openculture.com/free_certificate_courses

Openlearning.com
http://www.openlearning.com out of NSW