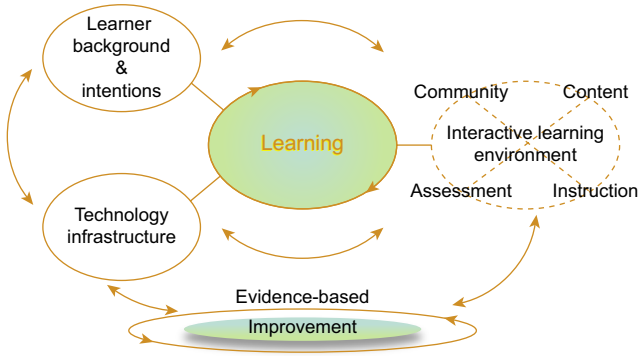
Appendix C

Framework for the design and evaluation of MOOCs, Lytics Lab, Stanford University



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.

"The *Interactive Learning Environment (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 undergirding 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).