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MOOCAHUSET – A Practical Experiment in E-Learning Publishing for University Libraries

Abstract
As a result of an unrelenting movement towards e-learning, the University Libraries are faced with interesting challenges to their functional profile. There are several reasons for this, among them the idea that it is of importance what you study, but even more so that you study. The modalities of learning receive more attention.
In this respect, an OECD analysis, by Burns and Köster (2016) suggests that the problem of academic digitalization is not really a question of governance structures:

- Almost all governance structures can be successful under the right conditions. The number of levels, and the power at each level, is not what makes or breaks a good system.

Rather, they write, the important parameter is

- the strength of the alignment across the system, the involvement of actors, and the processes underlying governance and reform

In our experience, this is correct. We take this to mean that alignments (or lack thereof) are tied to the existence (or lack) of a shared conceptual and imaginary visions, i.e. both deep and shared concepts. This is not something that is easily imposed from above, but requires an understanding of what digitalization is about and the ability to negotiate and develop this understanding throughout the organization. Furthermore, we need to align the individual and institutional interest. A major obstacle here is that the traditional career system honors research publication, but not – or to a very small degree – digital publishing of elearning titles.
The University Library is here uniquely positioned to play an important role.
In this respect we have found it useful to describe this conceptual challenge as the overlap and collusion of four different ways to imagine and advocate what the educational digitalization process is about. These four ideas and practices are (1) the technocratic, (2) the managerial, (3) the discursive, and (4) the documentalistic approaches. All of them overlay a yet more fundamental disjunction between a hierarchical concept of order and modern network-oriented system theories.

Four Conceptual Models
The first and technical model assumes that computational support is just a tool or just a technique as attributed to Bill Gates:

Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important.

When the first sentence has been cited out of context, and this has indeed been replicated around the Internet by numerous educators, the little word just is essential. This needs a little explanation:
The Aristotelian concept of *phronesis*, i.e. the wisdom relevant for *techne* (art and craft) and operational prowess, has been the victim of low esteem in academic circles. When we refer to digitalization as *just technology* digitalization is relegated to the domains of technicians and IT Departments rather than academics, the faculty and the higher echelons of management. It is external to the business of research, teaching and learning.

The second managerial model of digitalization links closely to the concept of *Learning Management Systems* (LMS). Originally, this phrase denoted the administrative unit of the first generalized e-learning system PLATO for *Programmed Logic for Automatic Teaching* from 1960. The system had other units for communication, cooperation and content production. Later, when more products hit the marketplace, it became common to group all these functions under the LMS moniker. This has coincided with the growth of managerialism inside the academic institution. Digitalization is then taken as a more efficient way to process educational endeavors from recruitment through the various programs and final certification before delivery of graduates to the labor market. It is common for centralized administrative units to have main responsibility for such solutions.

A third and discourse-oriented model has also received considerable attention. It is focused on interpersonal linguistic and peer-oriented relationship that transcends institutional and national borders. The most popular implementation has been the current crop of Massive Open Online Courses (MOOCs). These systems scale well, but have less impact on campus-based learning. The reason is probably that MOOCs are too heavily focused on content provision and discourse. To the extent that this is implemented, it is handled by faculty that maintain and reinforce established mores.

The fourth and final model reflects the previous point, but with a different perspective. Students *read* and teachers *lectures* (from the French word *lecture* – reading). Digitalization is then conceptualized as a *remediation* of the content of these activities. We use the term as defined by Bolter and Grusin (1998), i.e. the process of reformatting and rebuilding content taken from previous modes and genres in accordance with the requirements of digital media. Responsibility for driving this change process is located within the university libraries and publishing units. This aligns with the parallel process to secure Open Access to journals and other materials. At the same time, we have pushed for a format whereby e-learning becomes a collective endeavor that lends itself to peer review and academic merit.

Our project was designed on the fourth model with side-views to discourse, administrative, technical concerns and the career system.

**The Publishing Model of E-Learning**

The most appropriate description of our approach is thus one of (digital) publishing that incorporates concepts and practices of flipped classrooms. We have added a dynamic feature for stepwise improvement based on principles that lend from the research system, but with the addition on empirical observation of learning behaviors (*learning analytics*).

The resulting project design for MOOCAHUSET consisted of

- a (digital) publishing structure and production design model
- a network-oriented model for governance and diffusion of publications and their use
During the 2008-13 we did run bootstrap tests of this concept, mainly based on blog publication (Wordpress). After some years this was enhanced by an early MOOC-oriented plugin (LearnDash) and publishing in the ePub format. These initial efforts had the characteristics of skunk work, i.e. development by a smaller group of people, which had the required resources to do innovative work on the institutional fringe. From this peripheral point of departure, and step by step, we established collaborative links to other partners across the institution.

The new technological developments from 2012 and onwards were of importance. Harvard University and Massachusetts Institute of Technology (MIT) joined forces to launch the edX MOOC platform in that year. The edX consortium provided the Open edX fork shortly afterwards. Spearheaded by Amazon Web Services (AWS) another company (Bitnami) had success with free access to readymade stacks and batch installation procedures for a huge number of cloud applications, including Open edX.

In the fall of 2014 we could therefore harvest the benefits of an advanced architecture with open-source provisions and technical pre-packaged solutions. Open edX lends itself to blended mode, supports tinkering and integration with other systems through Learning Tools Interoperability. Consequently, we were able to launch scalable services and begin testing with little technical and bureaucratic overhead.

We ended up with a publishing structure using Open edX and consisting of:

- a sandbox server where teachers and others test and develop courseware
- a professional and global publishing service to maintain stability, security and close to 100% up-time
- a post-publishing server for revisions and improvements that is thus separated from the huge number of tests and the formally published courses

For efficient production and maintenance, we make good use of Open edX’ feature of inclusion-by-reference (see Figure 3).
Multimedia content is stored external to the Mongo database that acts as the Content Management Repository in Open edX. YouTube and a locally hosted video repository serve video content, while still images are stored in a locally maintained Learning Object Repository (LOR). The various resources keep their integrity when we move titles between the various publication servers.

Conceptually we handle the Open edX courses as digital textbooks. Each publication must have an editor-in-chief, commonly a faculty member. The editor heads an editorial group with close support from a professional media design editor. We organize the media editors, currently four professionals and a looser group of media design students, as one collaborative entity that distributes the responsibility for each project between themselves.

Media editors secure medium-to-high-quality multimedia content, i.e. studio recordings, video editing and the overall balance between different formats like video and aural presentations, still images, animation etc. To contain costs, each production requires substantial media input from the editor-in-chief and his or her collaborators. In this respect we distinguish between professional and selfie productions. The latter consists of recordings that faculty members make themselves. For this purpose, they have access to custom-designed selfie studios with automated configuration (studio light, soundproofing, document camera, automated backup etc.), Office Mix productions, traditional selfie and office recordings and other desktop solutions.

We treat the entire production outfit as a (modest) "publishing house" that is called MOOCAHUSET that resides within the Library and Learning Center. The publishing servers are variously referred to with bookish terms like The Book Cabinet (Norwegian: Bokskapet), Book Revision (Norwegian: Bokrevisjonen) and the Notebook (Norwegian: Kladdebok). In this way we try to reinforce the concepts of a reading/lecturing duality as an extension and enrichment of current practices.

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