

MOOCs for Blended Learning: Shared Tools and The Sharing Economy

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Abstract. Massive Open Online Courses (MOOC) have led to the creation of a broad set of instructional materials, which if unlocked from strict course models, would provide instructors thousands of videos, problems, and pages to incorporate in blended-learning experiences. A group of MOOC creating institutions are experimenting with pooling and sharing their MOOC learning content using Harvard DART; a tool that allows discovery and reuse of MOOC content in any residential Learning Management System (LMS). The experimenting institutions are particularly interested in benefits to instructors and how institutions can co-create a sharing economy around digital-learning content.

Keywords: MOOC · Digital Learning · Blended · edX · Repository · Open Educational Resources.

1 Opportunities to Share Content for Blended Learning

Since the meteoric rise of Massive Open Online Courses in 2012, hundreds of thousands of videos, problems, and pages have been created as part of openly available courses. In the edX consortium alone, there are over 2400 courses that we estimate account for over 500,000 individual videos, problems, and pages.[1] Opportunities exist to make these resources individually accessible by instructors for use in blended learning settings, regardless of LMS.

The content growth around edX and MOOCs is representative of a budding sharing economy [2]– an economic system based on sharing underutilized assets or services directly among peers or organizations. The underutilized assets in this framing are videos, problems and pages (plus their sequencing context) created by instructors for single-course modalities. The peers in this framework can take on numerous relationships: instructor to instructor, institution to institution and/or even instructor-student.

Sharing digital-learning content among higher education institutions would create numerous benefits for blended instruction: Residential instruction gains a large pool of resources that can be used to more seamlessly blend and/or flip instruction; Institutions can more easily cross-list courses or materials; Students can supplement their residential experience through direct access of materials. Much of these benefits rely on the availability of technology to enable sharing.

2 Introducing DART and Guiding Questions for Collaboration

DART: Digital Assets for Reuse in Teaching [3]– a project at Harvard exploring discovery and reuse of digital-learning content – unbundles content in the edX platform and is experimenting with sharing instructional resources between with partnering institutions. Features include search, recommendation, and LTI (Learning Tools Interoperability) based reuse, where any instructor can seamlessly discover and reuse MOOC resources in their residential courses. The addition of LTI features means DART can now be utilized in any LMS that supports LTI (although we have only implemented full features in Canvas).

Along with edX content, the DART architecture allows other content sources, such as Harvard operated YouTube and SoundCloud channels. The architecture also supports other institutions, where content from MIT OCW and DartmouthX have recently been added to the system.

As the project evolves, we are interested in optimizing the reuse of MOOC content across institutions and their teaching and learning platforms. In this session, we will review the key features of DART and work with the audience to address critical questions related to content reuse and cross-institutional sharing. Specifically, we will address:

- Blended learning with MOOC content; best practices, novel applications, and general features of a system optimized to support instructors.
- Content sharing across institutions; policies and guidelines, architectures that support these models, what tools should be in place to support cross-institutional sharing, etc
- Future use cases for ecosystems capable of sharing content; for example, adaptivity and/or content recommendation for on-campus courses.
- Discussing governance guidelines and policies that will lead to optimal sharing across higher education networks and beyond.

In concluding this workshop, we will discuss the highest impact opportunities for making content more easily available for reuse.

3 Re-energizing the MOOC community around sharing content

When edX was established, partner institutions joined to use a common platform to provide learning experiences to global learners and to learn from other partners in the process. While knowledge sharing has happened through individual relationships, conferences, and some electronic message board, content sharing has been difficult in the course by course model of the platform. Sharing content, goes beyond the MOOC programs of partner institutions, but, the ability to share content across learning platforms and institutions will be imperative in realizing next generation digital learning environments. [4]

To motivate attendees on content sharing opportunities, the figure below illustrates course description similarity across the edX consortium (see Fig. 1). Roughly 900 courses currently listed on edx.org are displayed as points and the proximity of two points represents the similarity of their course descriptions. We are motivated by both the diversity of topics and their similarity as potential for MOOC catalogs like edX to provide rich content sources for blended learning. There is a tremendous opportunity to unbundle this content such that it can be mixed and matched for on-campus purposes.

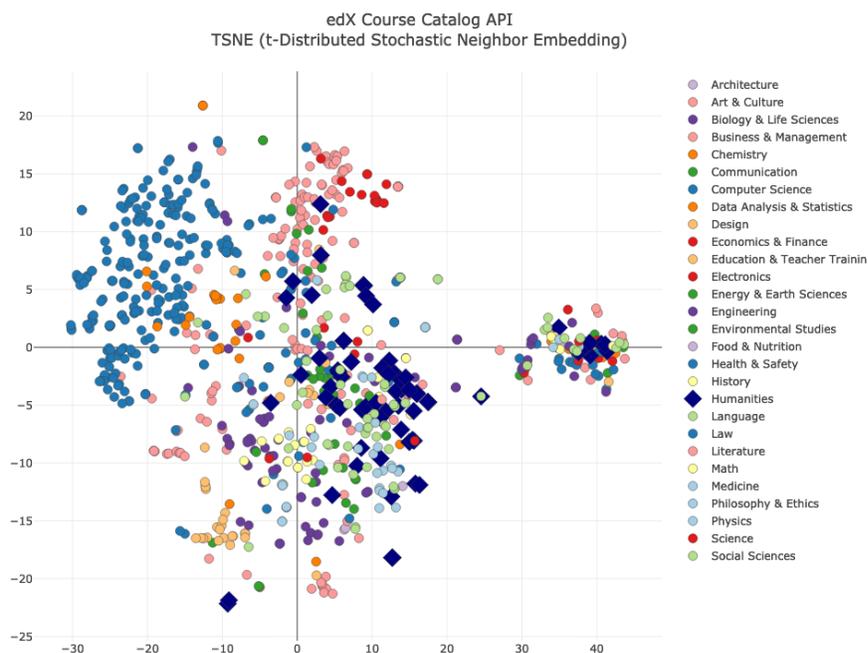


Fig. 1. edX course descriptions found in the edX Catalog API. Each point is a course and the proximity of two points represents their similarity. [1]

References

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