Category

- ❏ Data-Driven Course Design
- ❏ MOOC Success Stories
- ✓ Blended/Hybrid Learning
- ❏ Applications of the Science of Learning (in Online and Blended/Hybrid Learning)
- ✓ Innovative Use of Digital Learning Environments (such as interesting uses of MOOCs, etc.)

Title

Toward a MOOC Sharing Economy for Blended Teaching and Learning

Author(s)

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Daniel Seaton is the former Product Owner for the DART project at Harvard University and is currently a Sr. Learning Systems Designer at MIT. His work has been at the interface between research, technology, and product development, and he has been fortunate to work on digital-learning projects at MIT, Harvard, and Davidson College. Daniel is eager to see more cross-institutional collaboration around digital learning.

Michael Goudzwaard is the lead developer and project lead for DartmouthX, the MOOC initiative at Dartmouth College (USA). In that role Michael helped established conferences for edX partners and multi-institutional professional certificate programs. He also leads the Dartmouth's participation in DART and works with faculty and learning designers to better understand the challenges and benefits of reusing MOOC content in courses.

University or Organization

MIT
Dartmouth College

Abstract

As the amount of MOOC content grows, there is an opportunity to make use of videos, problems, pages, and sequences of these resources in blended instruction. In this talk, we will introduce Harvard DART, a tool that allows discovery and reuse of digital-learning content from edX (and other sources) to the Canvas LMS (and others supporting Learning Technology Interoperability). We will highlight Fall 2018 use cases and summarize potential future directions, seeking audience input on the broader applicability of such tools. Finally, we will make the case for a broader sharing economy where edX institutions share their content for residential use among their institutions.

Introduction

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.

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 based reuse, where any instructor can seamlessly discover

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[1] https://vpal.harvard.edu/blog/five-years-content-creation-edx-consortium

[2] https://www.insidehighered.com/digital-learning/views/2018/12/05/how-mooc-collaboration-could-aid-campus-teaching-and-learning

[3] https://dart.harvard.edu/about

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).

As the project evolves, we are interested in optimizing the reuse of MOOC content across institutions and their teaching and learning platforms. We will review the key features of DART and address critical issues related to reuse and content sharing:

- 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.

Results

Harvard DART has been in development for over a year, but with varying availability to instructors and students at Harvard. Fall 2018 was the first semester with significant usage from a wide variety of users. We will share insights and usage data from the following use cases:
- Instructors that have previously created MOOC content and want to reuse it in their residential courses.
- A group of instructors that want to repurpose sections of a MOOC for pre-class work in their residential courses, adopting entire sequences covering introductory statistics.
- Instructors that have discovered others' materials with which they can supplement their residential courses, e.g., video sequences that allow the instructor to reclaim class time.

In addition, we will discuss recent experiments allowing other institutions to share and reuse content through DART. Dartmouth University has not imported an edX course into DART and is reusing content within their residential Canvas LMS. This use case will be described alongside the results from Harvard's Fall 2018 usage. Lastly, we will discuss opportunities and challenges related to a broader sharing economy for edX institutions.