Teaching and Learning Technologies
Overview for ABCD

April 1, 2016  |  Friday  |  Sometime in the 12 – 2 window  |  William James Hall
Harvard IT “Big 5” Strategic Objective

\[ \Sigma Hx, SIS, TLT, IAM, Sec \]
Harvard’s Platform Strategy for Teaching and Learning

Offer a single platform for all teaching and learning needs—(residential and online)

Provide **multiple platforms** – with the ability to re-use content and tools, enable integration with other Harvard systems, and provide access to data across platforms.
The Big Picture
About the Program

The Vision

*Provide a continually evolving set of faculty-friendly, student-focused technologies that support teaching and learning across all Harvard schools, facilitate pedagogical innovation, and contribute to educational research.*

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<th>Guiding Principles</th>
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### Strategic Objectives

- Provide core teaching and learning technologies to all Schools
- Support pedagogical innovation and research on learning
- Establish strong Harvard community based on actual partnerships with faculty and with academic support professionals
- Cultivate open source community around component development that complements core technologies
- Deliver high-quality program on time, on budget, in scope

### Guiding Principles

- Communicate and socialize program across the University
- Build strong community
- Establish strong Harvard partnerships
- Support faculty input
- Establish partnership with component providers
- Embrace fluidity
- Full-time staff focus is the rule; divided time is the exception

### Key Performance Indicators

- University migration from previous platform(s) to core technologies
- Usable data from teaching and learning activities available for research
- Meaningful engagement with faculty / teaching teams and with academic support professionals around needs
- Harvard-specific technology enhancements and applications generated by open source community
- Program delivered on time and on budget

- Running Canvas (>99% migrated!).
- Exploring platform needs for executive / extended ed.
- Engaging in work related to iSites sunset.
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• Continuing development work.
• Engaging with IPS on Core Canvas backlog items.
• Working on spring HarvardX Hybrid pilot.
• With VPAL, validating Canvas data in support of research.
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<td>• Engaging with Schools at multiple levels.</td>
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- Seek early and continuous faculty input from across the Schools
- Transition program to ongoing services with sustained community and sustained vision
- Embrace fluidity
- Full-time staff focus is the rule; divided time is the exception
- Hosting academic developer meetings.
- Consulting with Schools on LTI development.
- Working with student developers on projects.

### Key Performance Indicators

- University migration from previous platform(s) to core technologies
- Usable data from teaching and learning activities available for research
- Meaningful engagement with faculty/teaching teams and with academic support professionals around needs
- Harvard-specific technology enhancements and applications generated by open source community
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<td>• Progressing with guidance from TLT executive committee.</td>
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A Little More Detail
Migrating to Canvas
Extending Canvas via LTI
Bringing HarvardX into Canvas
Extracting Canvas Data for Research
Cultivating Communities of Practice
Sunsetting iSites
A Lot More Detail (about LTI)
What is LTI?

• Stands for “Learning Tools Interoperability”

• A standard way to connect an LMS with an external service or tool

• All major LMS’s support the LTI standard, including Canvas and edX
Why is LTI useful?

• Defines a standard way to extend functionality of the LMS:
  – Enables course, discipline, or University-specific functionality to be added
  – Enables LMS to have a lean set of core features

• Single log-in for the user, feels seamless

• Can exchange data between LMS and tool

• Straightforward to build, increasingly available to license

• Same tool can be used to extend functionality in Canvas and edX
All major LMS products support the LTI standard (e.g., Canvas, edX, Moodle, Bb).

User clicks link. The web browser sends the request to the LMS (e.g. Canvas).

The LMS looks up information about user and course and signs with secret signature.

LMS server sends user, course, and signature to browser.

Browser automatically submits data received from LMS server to the LTI tool.

LTI tool verifies signature and now knows about the user and course.

LTI tool server sends content back to the browser for viewing.

LTI tools can be written in virtually any programming language. TLT primarily uses Python/Django running in AWS.

Additional interactions between browser and LTI tool – just like any other web application.
Where does LTI fit with Harvard’s platform strategy?

Offer a single platform for all teaching and learning needs—(residential and online)

Provide multiple platforms — with the ability to re-use content and tools, enable integration with other Harvard systems, and provide access to data across platforms.
Where can LTI tools be added within Canvas?

1. Course navigation

2. Account navigation

3. User profile

4. Rich content editor

5. Modules
Who creates LTI tools?

- Vendors
- HUIT (e.g., TLT, AcTS, LTS)
- Schools (e.g., DCE, FAS, HKS, SPH)
- HarvardX
- Student developers
- Instructure Professional Services
- Other institutions
What are examples of LTI tools in use at Harvard?

Chat for communication

Mirador for image viewing

Transfer tool for HarvardX content

Course Emailer for emailing class list

Big Blue Button for web conferencing

VoiceThread and Critiquelt for annotation

NBC Learn for videos from NBC news programs

and more ...
Chat for Communication

<table>
<thead>
<tr>
<th>Time</th>
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<th>Message</th>
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<tr>
<td>12:24 pm</td>
<td>Emily Boone</td>
<td>Will we be able to take the quiz again?</td>
</tr>
<tr>
<td>12:26 pm</td>
<td>Doug Roberts</td>
<td>Yes. You will be able to take it again if you would like.</td>
</tr>
<tr>
<td>12:26 pm</td>
<td>Jessica Doe</td>
<td>What is the deadline for retaking the quiz?</td>
</tr>
<tr>
<td>12:26 pm</td>
<td>Doug Roberts</td>
<td>The deadline is this Friday.</td>
</tr>
<tr>
<td>12:27 pm</td>
<td>Jessica Doe</td>
<td>Okay. Thank you!</td>
</tr>
<tr>
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<td>Emily Boone</td>
<td>Thanks!</td>
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Mirador for Image Viewing
Transfer Tool for HarvardX Content
Course Emailer for Emailing the Class List

Course Emailer

Mailing Lists for AESTHINT 63: East Asian Cinema

This tool provides mailing lists that allow you to contact members of your course using an email client (e.g. Outlook, Gmail, etc.) as an alternative to the Canvas Inbox. You must send your message from the email address that is set as your default in Canvas or your message will not be delivered.

Email Entire Course

Email all students, teaching staff, and guests enrolled in this course.

Course Mailing List
(104 members)

Course Access: all members of this course can email each other; students and guests can send and reply to this mailing list.

Email Specific Sections

These sections are created in one of two ways:
- using the Manage Sections tool (if installed in your course)
- using your student information system (e.g. my.harvard)

Any changes you make to those sections will be reflected within these lists.
Any email sent to a section will be delivered to members of that section and to all staff in the course.

COLGSAS AESTHINT 63 008D
(14 members)

Section Access: all members of this section and all staff can email each other; students and guests can send and reply to this mailing list.
Big Blue Button for Web Conferencing
VoiceThread and CritiqueIt for Annotation
NBCLearn for Videos from NBC News Programs
Questions? Comments?
Thank you!

TLT.harvard.edu