LEVERAGING MOOC DATA TO IMPROVE FACULTY-BUILT COURSES
Who We Are

Teaching and Learning Services (TLS), a unit of the Innovative Learning Institute (ILI) at RIT

• Partners with RIT faculty to improve and expand their students’ learning experience with on-campus, online, MOOCs, and blended courses.
• Supports faculty in designing courses, applying appropriate academic technologies, developing media, and using classroom technology resources.
• Fosters experimentation with and adoption of emerging modes and models of teaching and learning.
Background and History

• TLS evolved from what was once the Office of Distance Learnings that had its beginnings in the late 70s.

• TLS is a central support unit for online course offerings but the programs and faculty reside within the colleges.

• TLS provides many services to help improve online teaching for all faculty at RIT.

• Working on increased faculty engagement and improving online course quality.
## A Dichotomy Exists

### Traditional Online
- Consultation Available
- Faculty Produced
- Department Driven
- Process Outlined
- Deadline Flexible
- Current Student Exposure
- Internal Oversight
- Driven by Best Practice

### edX MOOC
- Mandatory Interaction
- Produced by TLS Team
- Provost Driven
- Process Followed
- Deadline Driven
- External Exposure
- Some 3rd Party Oversight
- Driven by Data
Design, Build, and Delivery Phases of a MOOC

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Conceptualization</th>
<th>Design</th>
<th>Build</th>
<th>Delivery</th>
<th>Post-Mortem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Designer</td>
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<td>Academic Technologist</td>
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<td>Media Development</td>
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<tr>
<td>Delivery Coordinator</td>
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Post-mortem Process

- Data analysis is conducted from student surveys and student data available in the MOOC platform
- Look at the general stats of the course – see if there is anything that stands out
- Talk about general group concerns one by one
- Talk about things that worked well one by one
- Determine what actions to take and assign them
  - Long-term actions
  - Short-term actions
Three Approaches to Improvement

- **Student Feedback (qualitative)**
  - Surveys at the end of the course geared toward quality improvement
  - Not available in traditional RIT Online courses
- **Data (quantitative)**
  - Data sources available as part of the edX data package/platform
  - Not used extensively in traditional RIT Online courses
- **Process (reflection)**
  - The process of thinking critically about how we work
  - In the process of porting this to RIT Online Courses
Student Feedback

• Caption Process
  • “correct [inaudible] words from lecture texts.”
  • “The transcription is sometimes not correct.”
  • “The transcripts need to be edited sometimes the results weren't close to what was actually said.”

• Video Length
  • “less lengthy videos, make them more concise”
  • “Videos should be shorter like the first course”
Data

• **Video Length**

<table>
<thead>
<tr>
<th>Order</th>
<th>Section Name</th>
<th>Videos</th>
<th>Completion Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unit 0: Getting Started</td>
<td>1</td>
<td>70.2%</td>
</tr>
<tr>
<td>2</td>
<td>Unit 1: Computing Security Concepts and Problems 1</td>
<td>6</td>
<td>90.0%</td>
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<tr>
<td>3</td>
<td>Unit 2: Computing Security Concepts and Problems 2</td>
<td>6</td>
<td>94.4%</td>
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<tr>
<td>4</td>
<td>Unit 3: Cryptography</td>
<td>8</td>
<td>93.2%</td>
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<tr>
<td>5</td>
<td>Unit 4: Networking 1</td>
<td>8</td>
<td>95.6%</td>
</tr>
<tr>
<td>6</td>
<td>Unit 5: Networking 2</td>
<td>5</td>
<td>94.6%</td>
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<tr>
<td>7</td>
<td>Unit 6: Systems Administration</td>
<td>4</td>
<td>92.7%</td>
</tr>
<tr>
<td>8</td>
<td>Unit 7: Detection and Prevention</td>
<td>6</td>
<td>94.5%</td>
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</table>

• **Video Player**
  • Several indications that the edX video player was great so we adopted a similar feature set for our LMS
Process

- Significant enhancement in video production capability
Process

• Accessibility
  • Significant improvement in our ability to do accessible development

• Faculty Interaction
  • Staff are more comfortable prescribing a starting point

• Student Support
  • Infrastructure developed to streamline edX support process, possible port to campus support
Process Continued

• Formative Assessment
  • New emphasis on low stakes quizzing
  • Supplement discussion or other traditionally recommended formative methods

• Focus of the Academic Technology staff
  • One Academic Technologist focused on Web Development
  • One Academic Technologist focused on Accessibility
The Transition
Impacts of edX on Traditional Online Courses

• Brightspace Shell Template
Impacts of edX on Traditional Online Courses

• Short Interactive Experiences and Formative Assessment
Things to Address

• Boundaries of Service for traditional online courses
• Sustainability of edX process for traditional online
• Continuous improvement in areas where MOOCs don’t excel
  • Discussions
  • Rigorous Assessment
Questions?