MOOCs: A path to success or a good way to ruin your weekends?

David E. Hubbard

Texas STEM Librarians’ Conference 2015
July 23-24, 2015
University of Texas at Arlington Libraries
Overview

• MOOC Overview
  – Status and the Literature

• MOOCs for Professional Development
  – Possibilities, Opportunities, and Challenges

• Information Visualization MOOC
  – Science of Science ($\text{Sci}^2$) Tool
Background

• MOOC - Massive Open Online Course
  2008: First MOOC (CCK08)
  2012: “Year of the MOOC”

• Gartner Hype Cycle

Source: © Jeremy Kemp CC BY-SA
MOOCs in Texas*

• Rice University
  Coursera/EdX - 44 courses

• University of Houston System
  Coursera – 9 courses

• University of Texas System
  EdX – 16 courses

* Based on a search of Coursera, EdX, and Udacity.
Library Literature on MOOCs

Focus on roles and challenges:
- Content
- Copyright
- Design
- Info Literacy
- Licensing
- Reference

A few focused professional development (PD) …

MOOC Articles in the Library Literature

Source: EBSCO Library & Information Science Database. Based on keyword search of "massive open online course" and "MOOC" limited to peer reviewed, academic journals. May include editorials and news items.

* January 2015 - June 2015 with estimate based on previous 6 months.
Education Literature on MOOCs

- Increasing(?)
- Research Oriented
- More Articles on PD

MOOC Articles in the Education Literature

Source: EBSCO Education Full Text Database. Based on keyword search of "massive open online course" and "MOOC" limited to peer reviewed, academic journals. May include editorials and news items.

* January 2015 - June 2015 with estimate based on previous 6 months.
MOOCs, Librarians, and PD

• Brief Mentions of PD
  – Sampson & Street, 2014
  – Signornelli & Hovious, 2014

• Anecdotal
  – Bond, 2013
  – Ecclestone, 2013
  – Fitzgibbons & Kelly, 2013

• LIS MOOCs and PD
  – Newman, 2014
  – Stephens, 2013
  – Stephens & Jones, 2014
# MOOCs - Opportunities & Challenges

New skills, knowledge, and increased subject expertise

<table>
<thead>
<tr>
<th><strong>Pros</strong></th>
<th><strong>Cons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Barriers</td>
<td>Pace</td>
</tr>
<tr>
<td>Low Cost</td>
<td>Scheduling</td>
</tr>
<tr>
<td>Low Stakes</td>
<td>Feedback</td>
</tr>
<tr>
<td>Learn from the Best</td>
<td>Instructional Support</td>
</tr>
<tr>
<td>“Flexible Engagement”</td>
<td>Technical Issues</td>
</tr>
<tr>
<td>Participant Interaction</td>
<td></td>
</tr>
</tbody>
</table>
Information Visualization (InfoVis)

“…computer-aided process that aims to reveal insights into an abstract phenomenon by transforming abstract data into visual-spatial forms.” (Chen, 2002, p. 1)
Information Visualization MOOC

Katy Börner
Professor of Information Science
Indiana University

Information Visualization MOOC (IVMOOC)
Taught in 2013, 2014, and 2015

Topics covered:
• Data analysis algorithms to enable extraction of patterns and trends in data
• Temporal, geospatial, topical, and network visualization techniques
• Discussions of systems that drive research and development.
Science of Science (Sci²) Tool

“The Science of Science (Sci²) Tool is a modular toolset specifically designed for the study of science. It supports the temporal, geospatial, topical, and network analysis and visualization of scholarly datasets at the micro (individual), meso (local), and macro (global) levels.” (Sci² team, 2009)

- Free Client Software
- Documentation
- Open Source

IVMOOC Group Project

- *Isis* – Official Journal of the History of Science Society
- Visualization of *Isis* author locale over the last 100 years
- Group: Digital Humanists, Librarians, and a Chemist
- Temporal/Geospatial (1913-1937 and 1988-2012)
- Topical Analysis (1913-2012)
Final Thoughts

• Interest in MOOCs appears to have waned within the library literature, but has increased in the education literature based on number of publications.

• MOOCs present a host of opportunities and challenges.

• Professional development involving acquiring new skills and knowledge is one of those opportunities.
References


Questions?