MOOC Instructor Experiences and Pedagogical Choices: Some Instructional Design Considerations and Challenges

Meina Zhu, Curtis J. Bonk, and Annisa Sari
IST Department, Indiana University
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January 18, 2018
By The Numbers: MOOCS in 2017
Dhawal Shah, Class Central

January 22, 2018
A Product at Every Price: A Review of MOOC Stats and Trends in 2017
Dhawal Shah, Class Central

February 14, 2018
MOOCs: Fewer New Students, but More Are Paying
Doug Lederman, Inside Higher Ed

Course Distribution by Subject
Research Background

- MOOCs can be beneficial to both learners and instructors (Hew & Cheung, 2014)
- Instructional design is critical for online learning (Johnson & Aragon, 2003; Phipps & Merisotis, 1999), including MOOCs.
- Instructors are one of the five main components of MOOCs; the other four are learners, topic, material, and context (Kop, 2011)
- Few studies have examined instructional design from MOOC instructors’ perspectives (Margaryan et al., 2015; Ross, Sinclair, Knox, Bayne, & Macleod, 2014; Watson et al., 2016)

Research Purposes & Questions

Research Questions:
1. What are the design considerations of instructors when designing MOOCs?
2. What challenges do instructors perceive when designing MOOCs?
3. How do instructors address the challenges that they perceive related to MOOCs?

Research Methods - Design

- Sequential mixed methods design (Creswell & Clark, 2007)

Research Methods

- Data Collection:
  - survey, interview, and course review
- Participants:
  - 143 survey participants (10% response rate) and 12 interviewees

Research Methods

- MOOC instructors interviewed

### Data Analysis

<table>
<thead>
<tr>
<th>RQs</th>
<th>Data Sources</th>
<th>Data analysis</th>
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<tbody>
<tr>
<td>RQ1</td>
<td>Survey - multiple-choice questions</td>
<td>Descriptive statistics</td>
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<tr>
<td></td>
<td>Survey - open-ended questions</td>
<td>Content analysis (Elo &amp; Kyngäs, 2008)</td>
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<td></td>
<td>Interview</td>
<td>Content analysis</td>
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<td>MOOC review</td>
<td>Content analysis</td>
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<tr>
<td>RQ2</td>
<td>Survey - multiple-choice questions</td>
<td>Descriptive statistics</td>
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<td></td>
<td>Survey - open-ended questions</td>
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<td></td>
<td>Interview</td>
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<td>RQ3</td>
<td>Survey - multiple-choice questions</td>
<td>Descriptive statistics</td>
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<tr>
<td></td>
<td>Interview</td>
<td>Content analysis</td>
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</tbody>
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### Analytical Framework

**Alario-Hoyos, Pérez-Sanagustín, Cormier, and Kloos' (2014) MOOC design considerations**

<table>
<thead>
<tr>
<th>Design considerations</th>
<th>Example (Alario-Hoyos et al, 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>Technology resources and human resources</td>
</tr>
<tr>
<td>Pedagogy</td>
<td>Motivate students, participatory learning, and collaborative community etc.</td>
</tr>
<tr>
<td>Logistics</td>
<td>Time required while planning MOOCs and peer assessment</td>
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</tbody>
</table>

### Demographic Information

**The Number of MOOCs the Instructor has Designed**

- 5 MOOCs
- 30 MOOCs
- 65 MOOCs

**MOOC Delivery Format**

- Instructor led with teaching assistants, moderators and/or tutor support
- Self-paced
- Primarily learner/participant driven (i.e., cMOOC)
- Other
- Hybrid or blended type of MOOC

**I Have Many Prior Experiences Related to Designing Full Online or Blended Courses Prior to Designing the MOOC**

- Strongly disagree: 20
- Disagree: 45
- Neutral: 30
- Agree: 15
- Strongly agree: 20
Demographic Information

RQ #1. What are the design considerations of instructors when designing MOOCs?

- Learning objectives
- Assessment
- Time for designing MOOC
- Engaging learners

One instructor from the UK mentioned:

“When we were designing, we tried to have a hook for each week, a reason for learners to come back each week. So, we built that into our learning design. So what’s going to be the big thing that makes you want to join the course in Week One.”

Findings

RQ #1-1. How do MOOC instructors design the course to encourage interaction among learners?

- Asynchronous discussion forums
- Pair-based types of tasks
- Social media

Peer interaction encouraged in MOOC (out of 136)

- Asynchronous discussion forums
- Assigning pair-based assignments or peer reviews
- Social media connections (e.g., Facebook, Twitter)
- Offering or encouraging breakout discussion
- Assigning peer groups
- Synchronous conferencing and chat tool(s)
- Local meet-ups arranged or encouraged
- Not applicable
- System formed collaborative teams
- Virtual worlds

Strongly disagree Disagree Neutral Agree Strongly agree
Findings

RQ #1. How do MOOC instructors design the course to encourage interaction between instructor and learners?
• Online discussion forums
• Platform messages
• Social media connections

Findings

Instructor-learner interaction encouraged in your MOOC (out of 136)

Findings

Ways to monitor learners’ learning

Findings

Ways that learners get feedback

Findings

Design challenges faced by the MOOC instructors

Findings

RQ #2. What challenges do instructors perceive when designing MOOCs?
• Assessment methods
• Engaging students’ learning
• Time limitation

Findings

• Time limitation
One instructor mentioned:
“I think one of the challenges is time. It does take a lot of time to get the videos done. I did not get a course release when I was doing, and it was a side project at the same time as my regular load. I think it gets to be concentration and balance about what’s going on.”
Findings

RQ #3. How do instructors address the challenges that they perceive related to MOOCs?
• Explore other MOOC examples
• Seek help from the platform/Colleagues/institutions

Discussion and Conclusions

• The pedagogical factors were the primary design considerations and challenges in MOOC design (Watson, S. L., Loizzo, J., Watson, W. R., Mueller, C., Lim, J., & Ertmer, P. A., 2016).
• The assessment and engagement strategies are the main considerations as well as challenges (Hew & Chung, 2014).
• The time limitation of creating MOOCs was the primary logistical consideration (Hew & Chung, 2014; Watson et al., 2016).

Limitations

• Limited to MOOCs which are mainly delivered in English
• Volunteer bias
• Only review 12 MOOC Courses

Implications

• For MOOC instructors:
  o May inform them about what other instructors are most concerned with and tend to target in MOOC design as well as their efforts in addressing the possible design challenges.
• For instructional designers:
  o May help them in the consulting process.

Future Studies

• Assessment design
• Engaging activity design
• Course design that supports self-directed learning
• Further observations and analyses are needed to better understand how MOOC instructor design and deliver their MOOCs to encourage online interaction and learner success.
Thank you!

Questions and Comments...

Meina Zhu, IU, meinzhu@umail.iu.edu
Curtis J. Bonk, IU, cjbonk@indiana.edu
Annisa Sari, IU, annisa@uny.ac.id