MOOC Instructor Motivations, Innovations, and Designs: Surveys, Interviews, and Course Reviews

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MOOC Trends and Recent Data

December 25, 2016
A Review of MOOCs Stats and Trends in 2016, Dhawal Shah, Class Central

By the Numbers: MOOCs in 2016

58M Students 700+ Universities 6850 Courses

January 22, 2018
A Review of MOOCs Stats and Trends in 2017, Dhawal Shah, Class Central

January 22, 2018
A Review of MOOCs Stats and Trends in 2017, Dhawal Shah, Class Central

Growth of MOOCs

Number of users

2012 2013 2014 2015 2016 2017 2018

Here is a list of the top five MOOC providers by registered users:

1. Coursera — 30 million users.
2. edX — 14 million users.
3. XuetangX — 9.3 million users.
4. FutureLearn — 7.1 million users.
5. Udacity — 5 million users.
Research Background

- MOOCs can be beneficial to both learners and instructors (Hew & Cheung, 2014)
- 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)
Systematic Review of Research Methods in MOOCs (2014-2016)  

<table>
<thead>
<tr>
<th>Method Type</th>
<th>Quantitative</th>
<th>Qualitative</th>
<th>Mixed methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-focused</td>
<td>39</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>Design-focused</td>
<td>19</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Context and impact</td>
<td>9</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Instructor-focused</td>
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<td>3</td>
<td>2</td>
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</tbody>
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Quotes: Veletsianos et al. (2015-2016)

“To gain a deeper and more diverse understanding of the MOOC phenomenon, researchers need to use multiple research approaches (e.g., ethnography, phenomenology, discourse analysis) and add content to them.” (p. 583.)


“Dependence on Particular Research Methods May Restrict our Understanding of MOOCs.”


Research Purpose

This study explores instructor motivations for offering MOOCs and the design innovations in MOOCs to better understand MOOC design practices and to provide suggestions for future MOOC instructors.

Research Questions

1. What motivates instructors to offer MOOCs?
2. What instructional innovations do MOOC instructors perceive?
3. What do instructors perceive as the strengths of their MOOCs?
4. How would they redesign the MOOC?
Research Methods-Design

Sequential mixed methods design (Creswell & Clark, 2007)

Sequential Exploratory Design (a)

Data Collection → Data Analysis → Data Collection → Data Analysis → Interpretation of Entire Analysis

Research Methods-Data collection

Data Collection:
1. surveys, 2. interviews, and 3. course reviews.

Participants:
- 143 survey participants (10% response rate)
- 12 interviewees

Research Methods-Data collection

MOOC instructors interviewed

<table>
<thead>
<tr>
<th>No.</th>
<th>Countries</th>
<th>Subject areas</th>
<th>Platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The U.S.</td>
<td>Language and Literacy</td>
<td>Coursera</td>
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<td>2.</td>
<td>The U.S.</td>
<td>Education</td>
<td>Coursera</td>
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<tr>
<td>3.</td>
<td>The U.S.</td>
<td>Education</td>
<td>Canvas</td>
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<td>4.</td>
<td>The U.S.</td>
<td>Chemistry</td>
<td>Coursera</td>
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<tr>
<td>5.</td>
<td>UK</td>
<td>Public health</td>
<td>FutureLearn</td>
</tr>
<tr>
<td>6.</td>
<td>UK</td>
<td>Language and Literacy</td>
<td>FutureLearn</td>
</tr>
<tr>
<td>7.</td>
<td>Hong Kong</td>
<td>Math</td>
<td>Coursera</td>
</tr>
<tr>
<td>8.</td>
<td>Mainland China</td>
<td>Math</td>
<td>Coursera</td>
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<td>Canada</td>
<td>Psychology</td>
<td>Coursera</td>
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<tr>
<td>10.</td>
<td>Australia</td>
<td>Public Health</td>
<td>Open2Study</td>
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Research Methods-Data analysis

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<tr>
<th>RQs</th>
<th>Data Sources</th>
<th>Data analysis</th>
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<tr>
<td>RQ1</td>
<td>Survey</td>
<td>Descriptive statistics</td>
</tr>
<tr>
<td>RQ2</td>
<td>Interview</td>
<td>Content analysis (Elo &amp; Kyngäs, 2008)</td>
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<tr>
<td>RQ3</td>
<td>Interview</td>
<td>Content analysis</td>
</tr>
<tr>
<td>RQ4</td>
<td>Interview</td>
<td>Content analysis</td>
</tr>
</tbody>
</table>

Research Methods-Data analysis

Prior Online or Blended Experience

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

![Graph showing distribution of responses to the statement](image)
Prior MOOC Experience

The Number of MOOCs the Instructor has Designed

Subject Area of MOOC Taught

MOOC Enrollments

The Number of Learners Enrolled in Recent MOOC

MOOC Delivery Format

Involvement in Course Design

I was Fully Involved in Designing the Course Content for the MOOC

Enjoyment in Designing MOOCs

I enjoyed very much designing the MOOC
1. Motivational Findings

RQ1: What motivated instructors to offer MOOCs?

Many of them wanted to experience instructional innovation with MOOCs.

As one instructor from Canada mentioned:

"I'm always interested in how you can provide a deep learning experience in untraditional ways. So when MOOCs came over, I didn't always understand it really well...I thought the best way to understand what was going on was to jump in. So more curiosity and wanting to learn about the world of MOOC."

2. Innovation Findings

RQ2: What instructional innovations do MOOC instructors perceive?

- Cutting videos into small chunks.
- Integrating interactive media.
- Peer review.
- Problem-based learning.
- Service learning.
3. MOOC Strengths Findings
RQ3: What do instructors perceive as the strengths of their MOOCs?
- The topic of the MOOC itself.
- The pedagogical methods employed.
- The impact on participants.

One interviewee from Canada claimed the strengths of his course is making it informal. “...it is like we are sitting in the same room, having a chat...This is nothing I try to do but I have some comfortable, smile that makes it feel like we’re having an informal discussion... A lot of the people that I get emails from say: ‘I love the way you teach. I love the comfortable level, feels like we've been friends. You’re welcome to my kitchen anytime.’”

4. MOOC Design Findings
RQ4: How would they redesign the MOOC?
- Adjusting the difficulty of quizzes.
- Adding lab experiences.
- Adding international perspectives.
- Cancelling peer-grading.
- Increasing instructor-student and peer-to-peer interaction.
- Inviting guest speakers.
- Making the length of the MOOC shorter.
- Using learning analytics before redesigning MOOC.

Data from the platform
As one computer science instructor from Sweden explained:
"When I do the revision, I will for sure look at the detailed statistics...For example, you can get statistics [on] how much they rewatch. That would be a sign that there is something that is not clearly explained. They have to listen [to] it again and again and then they get there."

Data from the platform
He further added:
“I probably am a much better teacher than I was before...To think about that [i.e., less interaction with students when using prerecorded video] made me a different teacher. I’m sure I’m a different teacher after that. If you want to become a better teacher, you develop a MOOC.”
Discussion, Significance, and Conclusion

1. Growth and relatedness needs were the primary instructor motivations for offering MOOCs. Growth needs included curiosity about MOOCs and the exploration of new ways of teaching; such findings align well with the research from Hew and Cheung (2014).

2. Various pedagogical innovations were mentioned by the interviewees (e.g., guests, PBL, service learning, peer review, interactive media, etc.).

3. MOOC instructors interviewed were satisfied with the designs of their MOOCs, but did want to make major changes to their course. (Lacking time? And overly rely on positive student feedback.)

Significance & Conclusion

1. This study provides a window into the decision making of more than 100 MOOC instructors. Few studies have tapped into such a database.

2. This study provides key insights into instructors’ motivations for offering MOOCs as well as instructional innovations in MOOC design.

3. The results may inform MOOC stakeholders (i.e., institutions) of how to foster instructor motivation and instructional innovation in MOOCs.

4. This study can be used to train instructional designers on the design of MOOCs as well as the expectations of MOOC instructors that they may be working with.

Future Research Might Explore...

1. The relationship between instructor motivation and the types of instructional innovations in MOOC design.

2. Changes in MOOC instructor motivation across several MOOCs.

3. MOOC instructor motivation by discipline. MOOC instructor motivation by country or region of the world.

4. MOOC instructional professional development and instructor teaching skill changes from designing MOOCs.

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Slides and Paper: http://www.trainingshare.com