Fostering Self-Directed Learning in MOOCs: One Modest Little Study to Help Save the Planet

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Feb 26, 2019

Talk Outline
1. MOOC Weird Stuff
2. MOOC Systematic Literature Review
3. MOOC ID Considerations and Challenges
4. MOOC ID for Self-directed Learning
5. Others

Polls
Poll #1: Who in here has taken a MOOC?
Poll #2: Are you happy or frustrated when you take a MOOC?

Some Weird Things Going On...

Weirdness #1...We’re Teaching the World
October, 2018
Sarah Fister Gale, CLO

Weirdness #2: Your Friends are doing MOOCs
June 15, 2017
Massive List of MOOC Providers Around The World, Class Central
JMOOC, K-MOOC, and T-MOOC?
https://www.class-central.com/reports/mooc-providers-list/
Weirdness #3: Summer MOOC Discounts
Email inbox: June 10, 2018
https://www.edx.org/course

Weirdness #4: Cyber Monday Discounts
Email inbox: November 26, 2018
edX (Summer discounts)
https://www.edx.org/course

Weirdness #5...The MOOC Wave
May 21, 2018
The Second ave of MOOC Hype Is Here, and It's Online Degrees
Dhawal Shah, Class Central

September 12, 2018
Coursera's CEO on the Evolving Meaning of 'MOOC'
Dian Schaffhauser, Campus Technology

Jeff Maggioncalda, Coursera CEO

Weirdness #6...Degrees Via the MOOC
EdX: From MicroMasters to Online Master's Degrees
Lindsey McKenzie, Inside Higher Ed

Weirdness #7...MOOCs in Wedding Announcements
September 26, 2018
The Future of Professional Credentialing ... in an Engagement Announcement
Joshua Kim, Inside Higher Ed

The future bride graduated from the University of Vermont with a bachelor’s degree in anthropology and is currently pursuing a master’s degree in public health. She is employed as a care navigator with Apple.

The future groom graduated from Worcester Polytechnic Institute with a bachelor’s degree in mechanical engineering and is currently pursuing a master’s degree in mechanical engineering. He has been accepted into the Harvard Business School CORe program and plans to start in November. He is currently working as a technical program manager at Apple.

They are planning on a summer wedding in 2020.
Weirdness #8...Master’s of Accountancy MOOCs?
Email inbox: June 11, 2018 Coursera

Weirdness #9...Discounted MOOC-based MBAs
August 7, 2017
FutureLearn and Coventry University to Roll Out 50 Online Degrees (Last year Deakin University announced a similar partnership with FutureLearn)
Class Central, Dhawal Shah

<table>
<thead>
<tr>
<th>Degree</th>
<th>Provider</th>
<th>University</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Computer Science</td>
<td>Udacity</td>
<td>Virginia Tech</td>
<td>$36,000</td>
</tr>
<tr>
<td>MS Analytics</td>
<td>eDX</td>
<td>Georgia Tech</td>
<td>$18k</td>
</tr>
<tr>
<td>MBA</td>
<td>Coursera</td>
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<td>$27k</td>
</tr>
<tr>
<td>Masters in Innovation and Entrepreneurship</td>
<td>Coursera</td>
<td>HEC Paris</td>
<td>€20k</td>
</tr>
<tr>
<td>Cyber Security (Master)</td>
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<td>Deakin University</td>
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<tr>
<td>Professional Practice: Information Technology (Master)</td>
<td>FutureLearn</td>
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</table>

Weirdness #10...MOOC-based Pricing Charts
December 30, 2018
MOOC-Based Degrees, Pricing Chart
IBL News

MOOCs are not dead
August 19, 2018
Cumulative Growth in Number of MOOCs, 2011-18
Almanac 2018, Chronicle of Higher Education

MOOCs Trends
MOOCs Stats


101M Students
900+ Universities
11.4k Courses

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) add content to them." (p. 583)


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


Khe Foon (Timothy) Hew (2018)


Three Studies

Study #1
- MOOC Literature Review

Study #2
- MOOC Design Considerations and Challenges

Study #3
- MOOC Design for SDL

Research Purposes & Questions

The purpose was to gain a deeper and more diverse understanding of the current MOOC phenomenon and identify the gap in MOOC empirical studies.

1. What are the research methods researchers employed in empirical MOOC studies?
2. What are the research topics or focuses in MOOC studies?
3. How are researchers of empirical MOOC studies geographically distributed?
4. In terms of the delivery of the MOOC, what are the countries which are attracting the most research?

Study #1
MOOCs Literature Review (2014-2016)

Journals of the Articles

<table>
<thead>
<tr>
<th>No.</th>
<th>Journal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>International Review of Research in Open and Distance Learning (IRRODL)</td>
<td>31</td>
</tr>
<tr>
<td>2</td>
<td>Computers &amp; Education</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>British Journal of Educational Technology</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Online Learning</td>
<td>7</td>
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<tr>
<td>5</td>
<td>Distance Education</td>
<td>6</td>
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<td>6</td>
<td>Educational Media International</td>
<td>6</td>
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<tr>
<td>7</td>
<td>Internet and Higher Education</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>Journal of Computer Assisted Learning</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Computers in Human Behavior</td>
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<tr>
<td>10</td>
<td>Open Learning</td>
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</tr>
<tr>
<td>11</td>
<td>Journal of Digital Learning and Teaching</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Journal of Asynchronous Learning Networks</td>
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</tr>
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</table>

RQ1 & RQ2

MOOC research focuses and methods

<table>
<thead>
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<th></th>
<th>Quantitative</th>
<th>Qualitative</th>
<th>Mixed methods</th>
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</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>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

RQ2

Specific Focus of MOOC Research (2014-2016)

- SELF-REGULATED LEARNING
- CHEATING
- SOCIAL LEARNING
- MOTIVATION
- ENGAGEMENT
- ASSESSMENT/MEASUREMENT/EVALUATION
- SENSATION
- COMMUNICATION/INTERACTION
- PROFESSIONAL DEVELOPMENT
- QUALITY OF MOOC
- LEARNERS' EXPERIENCE
- RETENTION AND COMPLETION/DROPOUT
- INSTRUCTIONAL/MOOC DESIGN
- K-12/PRE-COLLEGE
- PERFORMANCE/OUTCOME

Implications

- A continuous expansion of methodological approaches in MOOCs research is needed.
- More empirical MOOC research focusing on instructors' perspective might provide more comprehensive picture of MOOC phenomenon.

(Note: Data collection is continuing...)

The study expanded!
Total Number of Empirical MOOC Studies Published in Different Journals from 2013-2018

Table 1 (Note: the table only includes the top nine journals in terms of the number of empirical MOOC studies)

<table>
<thead>
<tr>
<th>Journals</th>
<th>Number of empirical studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Review of Research in Open and Distributed Learning</td>
<td>51</td>
</tr>
<tr>
<td>Computers &amp; Education</td>
<td>22</td>
</tr>
<tr>
<td>British Journal of Educational Technology</td>
<td>13</td>
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<tr>
<td>Online Learning</td>
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<tr>
<td>Distance Education</td>
<td>11</td>
</tr>
<tr>
<td>Journal of Online Learning and Teaching</td>
<td>11</td>
</tr>
<tr>
<td>The Internet and Higher Education</td>
<td>10</td>
</tr>
<tr>
<td>Computers in Human Behavior</td>
<td>8</td>
</tr>
</tbody>
</table>

Research Methods

![Graph showing research methods used in empirical MOOCs studies from 2013-2018 (N=321 studies)](image)

Study #2 MOOCs Design Considerations and Challenges


Research Background

- MOOCs can be beneficial to both learners and instructors (Hew & Cheung, 2014).
- Instructional design is critical for online learning (Johnson & Aragon, 2005; Phipps & Maniatis, 1999).
- Instructors are one of the five main components of MOOCs (Kop, 2011).
- Few studies have examined instructional design from MOOC instructors' perspectives (Margaryan et al., 2015; Watson et al., 2016).

Research Purpose

The purpose of this study is to provide suggestions for future MOOC instructors and instructional designers in higher education through exploring MOOC design considerations and challenges from the instructor's perspective.
**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 Design**

- Sequential mixed methods design (Creswell & Clark, 2017)

**Data Collection**

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

**12 Interviewees**

<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>
</tr>
<tr>
<td>2</td>
<td>The U.S.</td>
<td>Education</td>
<td>Coursera</td>
</tr>
<tr>
<td>3</td>
<td>The U.S.</td>
<td>Education</td>
<td>Canvas</td>
</tr>
<tr>
<td>4</td>
<td>The U.S.</td>
<td>Chemistry</td>
<td>Coursera</td>
</tr>
<tr>
<td>5</td>
<td>UK</td>
<td>Medicine and 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 (China)</td>
<td>Math</td>
<td>Coursera</td>
</tr>
<tr>
<td>8</td>
<td>Mainland China</td>
<td>Math</td>
<td>Coursera</td>
</tr>
<tr>
<td>9</td>
<td>Canada</td>
<td>Psychology</td>
<td>Coursera</td>
</tr>
<tr>
<td>10</td>
<td>Australia</td>
<td>Medicine and Health</td>
<td>Open2Study</td>
</tr>
<tr>
<td>11</td>
<td>Sweden</td>
<td>Computer Science</td>
<td>edX</td>
</tr>
<tr>
<td>12</td>
<td>India</td>
<td>Management</td>
<td>edX</td>
</tr>
</tbody>
</table>

**Data Analysis**

<table>
<thead>
<tr>
<th>RQs</th>
<th>Data Sources</th>
<th>Data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1</td>
<td>Survey-multiple-choice questions</td>
<td>Descriptive statistics</td>
</tr>
<tr>
<td></td>
<td>Survey-open-ended questions</td>
<td>Content analysis</td>
</tr>
<tr>
<td></td>
<td>Interview</td>
<td>Content analysis</td>
</tr>
<tr>
<td></td>
<td>MOOC review</td>
<td>Content analysis</td>
</tr>
<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>
<td>Content analysis</td>
</tr>
<tr>
<td></td>
<td>Interview</td>
<td>Content analysis</td>
</tr>
<tr>
<td>RQ3</td>
<td>Survey-multiple-choice questions</td>
<td>Descriptive statistics</td>
</tr>
<tr>
<td></td>
<td>Interview</td>
<td>Content analysis</td>
</tr>
</tbody>
</table>
Research Context

MOOC Subject Areas
- Medicine and Health: 20
- Computer Science: 5
- Education: 15
- Languages and Literacy: 11
- Business: 8
- Engineering and Technology: 7
- Communication: 6
- History: 5
- Physics: 4
- Sociology: 4
- Psychology: 3
- Law: 2
- Philosophy: 2
- Biology: 2
- Political Science: 2
- Political Science: 2
- Performing Arts: 1
- Chemistry: 1
- Economics: 1
- Geography: 1
- Visual arts: 1
- Agriculture: 1

Findings RQ1

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

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

An example of learning objectives:

- **Learning Objectives**
  - Describe the scope for sampling in scientific investigations
  - Review various study methodologies in research
  - Identify the type of error that can arise in sampling
  - Demonstrate the use of statistics to evaluate the quality of survey results
  - Discuss the consequences of randomization such as comparing quantities that provide samples of the ratios of variables that are sampled.

MOOC Design Considerations

- Objectives of the course
- Assessment activities (e.g., peer review, quiz)
- Duration of the course
- Time for designing the MOOC
- Platform of offering the MOOC
- Pedagogical approaches
- Learning contexts that will be defined
- Instructor’s role
- Support from institution
- Flexibility
- Support from the platform
- Collaborative learning support
- Available existing intellectual resources (e.g., OERs, videos)
- Hardware resources (e.g., recording studios, cameras)
- Target learners’ self-directed learning ability
- Cultural sensitivity
- Learning theory
- Software resources (e.g., video editing software)
- Source of motivation
- Tools for communication (e.g., Facebook, Twitter, blog)

Findings RQ2

RQ #2. What challenges do instructors perceive when designing MOOCs?

- Assessment methods
- Engaging students’ learning
- Time limitation

(Note: Above is an example of peer-assessment.)
RQ2 Survey Results

Design challenges faced by the MOOC instructors

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment methods</td>
<td>95</td>
</tr>
<tr>
<td>Engaging students’ learning</td>
<td>70</td>
</tr>
<tr>
<td>Strategies to engage students’ active participation</td>
<td>66</td>
</tr>
<tr>
<td>Time limitation of designing MOOCs</td>
<td>65</td>
</tr>
<tr>
<td>Strategies to engage students’ interaction</td>
<td>58</td>
</tr>
<tr>
<td>Compressing the content into short videos</td>
<td>50</td>
</tr>
<tr>
<td>Personalizing students’ learning</td>
<td>34</td>
</tr>
<tr>
<td>Recording videos</td>
<td>33</td>
</tr>
<tr>
<td>Tracking students’ learning progress</td>
<td>33</td>
</tr>
<tr>
<td>Technology support</td>
<td>23</td>
</tr>
<tr>
<td>Strategies to encourage students’ team collaboration</td>
<td>0</td>
</tr>
</tbody>
</table>

RQ2 Interview Results

Time limitation

One instructor from education subject 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.”

Findings RQ3

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

RQ3 Survey Results

Ways to Address Challenges

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browsing other MOOCs for ideas, examples, and benchmarks</td>
<td>89</td>
</tr>
<tr>
<td>Seeking help from the platform</td>
<td>81</td>
</tr>
<tr>
<td>Seeking help from colleagues</td>
<td>71</td>
</tr>
<tr>
<td>Seeking help from institution (e.g., administrator)</td>
<td>67</td>
</tr>
<tr>
<td>Seeking help from other MOOC instructors</td>
<td>51</td>
</tr>
<tr>
<td>Reading books or articles related to MOOCs</td>
<td>49</td>
</tr>
<tr>
<td>Seeking help through online searching</td>
<td>43</td>
</tr>
<tr>
<td>Attending training sessions or workshops</td>
<td>41</td>
</tr>
<tr>
<td>Reading news related to MOOCs</td>
<td>34</td>
</tr>
<tr>
<td>Attending conferences or other professional events on MOOCs</td>
<td>28</td>
</tr>
</tbody>
</table>

RQ3 Interview Results

Explore other MOOC examples

One MOOC instructor from the US mentioned:

“When I started making the MOOC, I could see MOOCs that other people had made. So I could see what other people did in terms of having videos with questions embedded in the videos, which I really liked.”

Discussion

• The time limitation of creating MOOCs was the primary logistical consideration (Hew & Chung, 2014; Watson et al., 2016) and challenges.
• The pedagogical factors were the primary design considerations (Watson et al., 2016) and challenges in MOOC design.
• The assessment and engagement strategies are the main considerations as well as challenges.
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 Guide attention to ID in the areas that MOOC instructors might need them to help in consultation.

Key Terms

Self-directed learning (SDL) (Garrison, 1997)
(1) self-management
(2) self-monitoring
(3) motivation

Study #3
MOOCs Instructional Design to Facilitate Participants’ Self-directed Learning
(Dissertation)

Implications

Study #3
MOOCs Instructional Design to Facilitate Participants’ Self-directed Learning
(Dissertation)

Research Background

• Learners need self-directed learning skills and strategies to be successful in MOOCs (Halawa, Greene, & Mitchell, 2014; Littlejohn & Milligan, 2016), as there is a lack of personalized interaction with teachers.

• Self-directness of a learner might vary in different learning environments which means that the learners could be more self-directed in one learning environment than another (Hiemstra, 1994).

Research Purpose

• The purpose is to inform instructors or instructional designers and MOOC providers of the current practices of designing MOOCs to facilitate learners’ SDL.

Research Background

• Instructional design can greatly influence students’ interaction and engagement (Garrison & Cleveland-Innes, 2005) and success in online learning (Song, Singleton, Hill, & Koh, 2004; Swan, 2001).

• However, few studies have examined instructional design and the delivery of instruction using MOOCs from instructor perspectives (Margaryan et al., 2015; Watson et al., 2016); especially lacking is research on instructors’ perception of SDL and how they design MOOCs to facilitate students’ SDL.
Research Questions

1. How do MOOC instructors perceive participant SDL skills?
2. How do MOOC instructors perceive their facilitation of participant SDL skills?
3. How do instructors design and deliver MOOCs to facilitate participant SDL skills?
   a. How is technology being used by MOOC instructors to support the development of participant SDL skills?
   b. What technology features or functions do MOOC instructors want to have to improve their facilitation of MOOC participant SDL skills?

Research Design

Explanatory sequential mixed methods design
(Creswell & Clark, 2017)

Data Collections

Survey:
• Volunteer sampling (Creswell & Clark, 2017)
• 198 instructors responded to the survey (10% response rate)

Interview:
• Homogeneous purposeful sampling (Creswell & Clark, 2017; Patton, 2002)
• Maximal variation sampling (Creswell & Clark, 2017)
• 22 interviewees

MOOC review:
• Reviewed 22 interviewees’ MOOCs

Data Analysis

<table>
<thead>
<tr>
<th>RDs</th>
<th>Data Sources</th>
<th>Data analysis</th>
<th>Tools</th>
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</thead>
<tbody>
<tr>
<td>RQ1</td>
<td>Survey</td>
<td>Descriptive statistics</td>
<td>SPSS</td>
</tr>
<tr>
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<td>Interview</td>
<td>Content analysis</td>
<td>NVivo</td>
</tr>
<tr>
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<td>NVivo</td>
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<tr>
<td>RQ3</td>
<td>Interview</td>
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</tr>
<tr>
<td></td>
<td>Course review</td>
<td>Content analysis</td>
<td>NVivo</td>
</tr>
</tbody>
</table>

Trustworthiness

1. Validity survey: Experts review, think-aloud interview, and pilot test (EFA)
2. Reliability survey: Pilot test and internal consistency reliability (Cronbach alpha)
3. Triangulation: Data sources, researchers, and methods
4. Member checks: Interview transcriptions
5. Peer debriefing: Committee and colleagues
6. Researcher reflexivity: Constant reflection and be forthright with our positions
7. Thick description: Report the context, data sources, and analyses in detail
8. Prolonged engagement: Immerse in instructors’ MOOCs before the interview and continue reviewing the MOOCs after the interview
Research Context

MOOC Subject Areas

- Social Science: 27
- Medicine and Health: 24
- Language and Literacy: 22
- Business and Management: 14
- Art and Humanity: 13
- Physical Science: 12
- Data Science: 12
- Computer Science: 10
- Biology: 9
- Math: 5
- Engineering: 5
- N/A: 5

RQ1 Perceptions of SDL

- A majority of the MOOC instructors thought that these skills or attributes are not static, and that SDL as a set of skills can be educated or students' personal attributes that can be changed.

MOOC Instructors’ Perceptions of SDL

- SDL is a set of skills that can be educated: 112
- SDL is related to students' personal attributes that can be changed: 64
- Other (please describe): 20
- SDL is related to students' learning personal attributes that can never be changed: 12

RQ1 Interview Results

- Emma’s understanding of SDL is more related to self-management and motivation. She said:
  
  When I think about self-directed learning, I think about students managing their time and managing the coursework on their own, and how it fits into their schedules and their lives, how they interact with materials, what's going to keep them engaged.

RQ2 Perceptions of Facilitation of SDL

- Most of MOOC instructors thought that they can intentionally or unintentionally facilitate students’ SDL.

Participants’ Perceptions of Their Role in Facilitating Students’ SDL

- Instructors can intentionally create a learning environment to help...: 171
- Other (please describe): 14
- Instructors can unintentionally create a learning environment that...: 13
- Instructors can do nothing for students' SDL skills: 0

RQ2 Interview Results

- Ashely emphasized the importance of both instructors’ facilitation and students’ SDL skills. She said:
  
  The participant has a lot of flexibility on how they approach the content. I mean, obviously, we have things like assignments. We have things like online forums. And there're ways that we scaffold the learning experience. But there still is a lot of choice for the learner.

RQ3 Strategies to Facilitate SDL

- Students’ intrinsic motivation plays an important role. However, extrinsic motivation provided by the MOOCs might help transfer extrinsic motivation to intrinsic motivation.

<table>
<thead>
<tr>
<th>Motivations</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entering motivation</td>
<td>MOOC instructors helped students identify the needs and goals of learning and sense of achievement.</td>
</tr>
<tr>
<td>Task motivation</td>
<td>MOOC instructors motivated students through instruction, learning materials, feedback, and learning community.</td>
</tr>
</tbody>
</table>
RQ3 Learning Community

MOOC instructors provided quizzes for self-assessment, tutorial on technology use, learning advice, navigation of the course, progress indicators, resources, and instructional modeling, etc.

MOOC instructors encouraged students to reflect and think critically by providing reflection questions and building learning community.

MOOC instructors, teaching assistants, and peers were involved in providing external feedback.

Both internal feedback and external feedback were provided to help students’ self-monitoring.

- Self-monitoring Strategies
  - Internal feedback
    - Cognition: MOOC instructors provided quizzes for self-assessment, tutorial on technology use, learning advice, navigation of the course, progress indicators, resources, and instructional modeling, etc.
    - Meta-cogn: MOOC instructors encouraged students to reflect and think critically by providing reflection questions and building learning community.
  - External feedback
    - MOOC instructors, teaching assistants, and peers were involved in providing external feedback.

RQ3 Self-assessment

Try again once you are ready. Prepared in less than 50% orHigher.
You can retry the test as many times as you like.

1. What is the typical student in the Grammar Translation approach?
   - Reality young men
   - Middle class men and women
   - Poor young men

2. Who is the typical student in the Grammar Translation approach?
   - Reality young men
   - Middle class men and women
   - Poor young men

RQ3 Progress Indicators

- Progress Indicators
  - Course Progress for Student
  - Course Progress for Student

RQ3 Strategies to Facilitate SDL

- They helped students’ self-management concerning setting learning goals, time management, resources and support management although among the three elements of SDL, MOOC instructors had less control over students’ management.

- Self-management Strategies
  - Enactment of learning goals: Providing discussion questions, reflections, survey, and appraising students’ learning goals.
  - Time management: Providing time frame, progress indicator, short learning units, and flexible timeline.
  - Management of resources and support: Providing flexible learning resources, peer-assessment, accessibilities, clear expectations, and short learning units.
RQ3 Time Management

Synchronous communication technologies
- Google Hangouts
- YouTube Live

Asynchronous communication technologies
- Discussion forum
- Blog
- Slackbot
- Flickr

Multimedia (e.g., video and graphics)

Feedback technologies

RQ3-a Tech Use for SDL

- Synchronous communication technologies
  - Google Hangouts
  - YouTube Live

- Asynchronous communication technologies
  - Discussion forum
  - Blog
  - Slackbot
  - Flickr

- Multimedia (e.g., video and graphics)

- Feedback technologies

RQ3-b Tech Expectations for SDL

- Adaptive learning systems
- Artificial intelligent systems
- Learning analytics
- Interactive technologies
  - Interaction between learners and content
  - Interaction among learners and other participants
- Tools embedded in platforms

Discussion

- SDL can be Changed
- MOOC Instructors can Facilitate SDL
- Strategies to Facilitate SDL: A variety of strategies can be used to facilitate student SDL skills in terms of motivation, self-monitor, and self-management.
- Tech for SDL: Tech plays an important role in facilitating SDL skills.
- Tech expectations: Adaptive learning systems, artificial intelligent systems, and learning analytics were expected to have to support SDL.

Implications

- For MOOC instructors and Instructional Designers
  - Build learning community
  - Inspire intrinsic motivation
  - Personalize learning
- For MOOC providers
  - Create a personalized learning environment
  - Provide learning analytics to support learning and teaching

Top 10 Strategies to Facilitate SDL in MOOCs

1. Helping students set their own learning goals;
2. Building learning community;
3. Offering immediate feedback;
4. Embedding quizzes for self-assessment;
5. Providing progress indicators;
6. Providing reflection questions;
7. Designing short learning units;
8. Providing flexible timelines;
9. Highlighting estimated time frames;
Other Related MOOC Studies


Other Related MOOC Studies

Tired of MOOCs...?

Do we have time for another study?

Figure 1. MOOC instructor departmental or primary discipline affiliations (n=150)

Figure 3 and 4. Effort placed on meeting unique learner needs when designing and delivering most recent MOOC (Note: on a scale of 1 (low) to 10 (high) (n=144)
Figure 6. Number of MOOCs that offer different types of learning system automation and adaptation (n=127)

Table 1. Instructional Practices of MOOC Instructors to Address the Variety of Student Competencies and Needs (n=142)

Discussion, Significance, and Conclusion

Any Questions?
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