We hope this is a “Magical” talk.

Teaching in Costume Today? Win Chocolate!

By Scott Jacob 2 October 2019

Are you teaching in costume today? Administering a quiz? If so, tweet a photo with the hashtag #EdTechOctober and self-insert a bar of Godsiva chocolate for the most creative online. Bonus points for costumes with academic themes. The winner will be announced next week.

Happy Halloween to all of our readers.

Outline

1. Quick trend data
2. Research Background
3. Research Purpose and Questions
4. Research Design
5. Results and Recap
6. Discussion and Conclusion

September 10, 2019
The Future of Learning, Transforming Access
Simon Nelson, CEO, FutureLearn, PCF9 Conference, Edinburgh, Scotland

And the threat of AI and automation is very real. A 2017 report by McKinsey found that full of all current work activities could be automated, using technology that already exists. and that by 2030 anywhere from 75 million to 375 million workers worldwide will be displaced from their old jobs and require retraining.

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Jobs landscape: 2022

13.9 million new students per year until 2030
700 new universities needed EACH YEAR to meet demand
March 13, 2019
The Career Curriculum Continuum
Andrew Hermelyn, Inside Higher Ed

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Open Education
Includes OpenCourseWare

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The Future of Learning, Transforming Access
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Research Background

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MOOC Projects:

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OCW Projects:

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One of the earliest OER, the Massachusetts Institute of Technology (MIT) OpenCourseWare (OCW), shared MIT course materials and classroom recording videos with the public for free and open access. The latest MIT OCW report indicated that more than 2,400 courses were published. Among them, approximately 100 are full video courses (MIT OCW report, 2018).
For the last two decades, MIT OCW are accessible for self-directed learners around the world to explore, learn, download, and share (Bonk, Lee, Kou, Xu, & Sheu, 2015). By December 2018, approximately 160 million users visited their website as well as YouTube videos (MIT OCW report, 2018).

OCW is accessed by a broadly international population of educators and learners. MIT OpenCourseWare hosts millions of course units each year. These units come from all over the world, with over half coming from outside of North America. OCW's mission is to share knowledge and教育资源.

Research Background

- Communities of Inquiry (CoI) (Garrison et al., 2000) research has shown that the framework provides an important conceptual perspective for examining communication and interaction (e.g., Akyol et al., 2009; Garrison et al., 2000) and learners' perceived learning and satisfaction (Arbaugh, 2008) in online learning environments.

- The most popular MIT OCW YouTube videos are related to STEM subjects such as computer science and algebra.

- However, few studies have examined MIT OCW self-directed learners' perceptions, learning experiences, and challenges.

CoI framework includes three interdependent dimensions, namely:
(a) social presence,
(b) cognitive presence, and
(c) teaching presence (Garrison et al., 2000).

### Research Background

**Elements**

<table>
<thead>
<tr>
<th>Elements</th>
<th>Categories</th>
<th>Indicators (examples only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Presence</td>
<td>Open Communication</td>
<td>Risk-free expression</td>
</tr>
<tr>
<td></td>
<td>Group Coherence</td>
<td>Encourage collaboration</td>
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<tr>
<td></td>
<td>Affective Expression</td>
<td>Emotions</td>
</tr>
<tr>
<td>Cognitive Presence</td>
<td>Triggering Event</td>
<td>Sense of purposement</td>
</tr>
<tr>
<td></td>
<td>Exploration</td>
<td>Information exchange</td>
</tr>
<tr>
<td></td>
<td>Integration</td>
<td>Connecting ideas</td>
</tr>
<tr>
<td></td>
<td>Resolution</td>
<td>Apply new ideas</td>
</tr>
<tr>
<td>Teaching Presence</td>
<td>Design &amp; Organization</td>
<td>Setting curriculum &amp; content</td>
</tr>
<tr>
<td></td>
<td>Facilitating Discourse</td>
<td>Sharing personal meaning</td>
</tr>
<tr>
<td></td>
<td>Direct Instruction</td>
<td>Focus discussion</td>
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</tbody>
</table>

### Community of Inquiry

**Social Presence**

- Encouraging collaboration
- Risk-free expression

**Cognitive Presence**

- Sense of purposement
- Information exchange
- Connecting ideas
- Applying new ideas

**Teaching Presence**

- Setting curriculum & content
- Facilitating discourses
- Sharing personal meanings
- Focusing discussion
Research Purpose and Questions

11/3/2019

Research Purpose

- The purpose of this study was to inform OER designers and developers of the aspects to consider by uncovering learners' perceptions, learning experiences, and challenges while learning STEM courses through MIT OCW YouTube videos using CoI framework.

Research Questions

1. What were learners' perceptions of the MIT OCW YouTube videos?
2. How was social presence manifested in MIT OCW YouTube comments?
3. How was cognitive presence manifested in MIT OCW YouTube comments?
4. What are the challenges while learning in MIT OCW YouTube videos?

Research Design

1. MIT 6.00 Introduction to Computer Science and Programming with 23 videos
2. MIT 18.06 Linear Algebra with 34 videos.

Data Collections and Analysis

- Researchers collected all the comments of each video through NCapture for NVivo. The total number of comments for each course was around 3,000.

- Thematic analysis (Braun, Clarke, & Rance, 2014) and computer mediated discourse analysis (CMDA) (Herring, 2004) were used to analyze the data.

- For research questions (RQ) 1 and 4, researchers conducted thematic analysis. For RQs 2 and 3, both thematic analysis and CMDA were used.

- This study used case study approach to empirically analyze persons, events, decisions, and projects in a real-life context (Thomas, 2011; Yin, 1994).
Results

RQ1 Learners' Perceptions of the MIT OCW YouTube videos
• In addition, learners also appreciate the high quality courses below:
  I have been seeing many introduction to programming videos and this is by far the best one out there. Not only did it make me want to program more, it also wanted to make me want to stick to the skills. I'll hopefully learn. : ) Good Job

RQ2 Social Presence
• Through thematic analysis, we found that OCW learners seldom expressed their personal emotions during learning. There were social interaction at the beginning of the course; however, the social interaction between learners decreased at the end of the course.

RQ3 Cognitive Presence
• Learners cognitive presence was highly manifested in the comments

Table 1. MIT 6.0 Introduction to Computer Science and Programming Word frequency counts (values normalized per 100 words) / Note: Lec refers to lecture video.

<table>
<thead>
<tr>
<th></th>
<th>Lec1</th>
<th>Lec2</th>
<th>Lec3</th>
<th>Lec4</th>
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<tr>
<td>Social</td>
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<td>4.57</td>
<td>6.97</td>
<td>7.02</td>
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<tr>
<td>First person sg. pronouns</td>
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<td>6.87</td>
<td>8.30</td>
<td>8.37</td>
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<tr>
<td>Social words</td>
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<td>54.76</td>
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<tr>
<td>Negative emotion</td>
<td>2.1</td>
<td>10.77</td>
<td>55.92</td>
<td>55.45</td>
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MIT OCW learners from appreciated that MIT shared the free and high quality learning materials with the public

MIT OCW saved a large amount of money for the learners reported in the comments. One participant stated that: I'm 16 and going to finish high school in a few months or so and God, I wish I could have gone to MIT. If only I had the money, ugh. But I am SO grateful that I get to see a glimpse of it at OpenCourseWare, at least. Thank so much for this, MIT.
Learners mainly discussed learning content and knowledge in the comments. They tried to seek help for cognitive learning. For example, one learner asked questions about the difficulties he/she encountered, “When trying to write the code at 32 mins. I get a syntax error on line 2. Why will this not work on my version of Python? x=15.” Similarly, another learner’s query was “When he is defining values, under numbers, under the number 3, is that a comma or a period? Is it float 3,14 or 3.14? Thanks.”

Two general challenges were identified: (1) technology challenges and (2) social learning. For technology challenges, learners had trouble recognizing the words on the screen due to the blurry video. One learner stated: “I appreciated these videos but why they are so blurry. I am not able to figure out the things. Is there any alternative to these videos.”

Social learning
Learners wanted to create a small team to learn specific topics. For instance, one learner said: “Looking for someone to study Computer Science with, anyone wanna team up? (Real responses please.)” Other learners replied to the post by saying, “Send me a PM” or “Everyone here wanting to Skype about CS, add me. I would like to hang out with people who want to learn coding too.”

Positive perceptions of free and high quality courses.
Relatively low social presence comparing to that in general social media.
Relatively high cognitive presence comparing to that in general social media.
Technology challenges and social learning.
Can apply CoI framework to informal environment.
OCW has a positive impact for self-directed learners (SDL) around the world.
Even SDL learners seek community support.
Limitations

- Two courses from MIT OCW.
- STEM-related courses.
- One data source--YouTube comments.
- No direct observations or interviews.

Thank you!
Questions and Comments?

Meina Zhu | meinazhu@wayne.edu
Curtis J. Bonk | cjbonk@indiana.edu
Free Book: tec-variety.com/
Slides: http://www.trainingshare.com/
http://moocsbook.com/