

An Exploration of the Enhancing Student’s Cross–Cultural Competence in Ubiquitous MOOC Instructional Design Model

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Abstract

This study used the qualitative research methods to explore the enhancing higher education student’s cross–cultural competence in ubiquitous MOOC instructional design model. The participants were undergraduate students who have experienced in a ubiquitous MOOC instructional model. The researcher used a reliability technique in an interview procedure by having multiple coder in the step of intercoder agreement. The findings divided into three codes: ubiquitous MOOC learning, cognitive dissonance, and recommendations for ubiquitous MOOC.

Introduction

MOOCs, the massive online learning course, usually allow open enrollment learners to access the worldwide communities with a diversity of cultural background and communication. MOOCs have remaining increased articles discussed empirical evidence from case studies especially in higher education (Liyanagunawardena, Adams, & Williams, 2013). In Thailand, e-learning was promoted by Thailand Cyber University (TCU) which start over ten years, more than 800 courses, 185,000 registered, and participated by 45 institution members (Na-songkhla, Thammetar, & Chen, 2015). OECD/UNESCO (2016) suggested that Thailand should train instructors how to use ICT and arouse them to integrate it into curriculum. In 2016, the first Thai MOOC Platform called Thai MOOC was established by TCU, then almost 2 million students registered (Thai MOOC, 2016). Likewise, some Thai universities also have created their own MOOC with no cost for anyone interested. For example, Chulalongkorn University had more than twelve courses created by seven faculties (Chula MOOC, 2017). Mahidol University also had MOOC called “Mux” and there were thirty-eight courses about the medicine contents (Mux, 2017). Not only Thai language MOOC but also English MOOC, there was more than thirty-five course for international students as AsianUx Academy of Asian University (AsianUx, 2017).

The number of international students additionally increased for higher education institutions (HEIs) in Thailand (Bureau of International Cooperation Strategy, 2010; Chunpen, 2013). Since 2014, there were more than 10,000 international undergraduate students in Thailand (The International Trade Administration, 2017). The Office of the National Education Council (2005) in Thailand has stated that Thai people should understand, accept, and appreciate the cultures different both their own and others. Moreover, previous studies (Bennett, 1993; Nieto & Bode, 2008; Rasmussen, 2013), cross-cultural competencies help educators develop mutual understanding, human relationships, and broaden their worldview. Furthermore, the cross-culture confliction occurred would occur while the cultural difference students was learning together even the MOOC in Thailand. Instructional designers and developers

should make use of cultural sensitivity to reducing cultural barriers so as to design international online learning (Alabdullaziz, 2015). A crucial factor cross-culture competent is attitude (Abbe, Gulick, & Herman, 2007; Gabrenya Jr, Griffith, Moukarzel, Pomerance, & Reid, 2012) could develop by changing the attitude change through Cognitive Dissonance Theory (Huffman, 2012).

In order to enhance cross-cultural competency and undergraduate students' opinions about ubiquitous MOOC for enhancing cross-cultural competence (Plangson, Na-Songkhla, & Luetkehans, 2016), the researchers developed the ubiquitous MOOC model (U-MOOC) based on cognitive dissonance theory as instructional design model for creating the MOOC in everyday life that learner can enhance knowledge everywhere every time and the contents are available view on PC, tablet, or smartphone. The evaluation of e-learning should investigate how course design and how learner learn by learner viewpoint (Khan, 2005). Although the U-MOOC could improve the undergraduate students' higher cross-cultural competence, it would be necessary to remain developing the model. An Exploration of the Enhancing Student's Cross-Cultural Competence in U-MOOC would be reflect the students' feedback to improve the MOOC instructional model.

Research Objectives

The purpose of this study was to explore the enhancing higher education student's cross-cultural competence in ubiquitous MOOC instructional model.

Research Methods

Qualitative research approach was employed to an exploration of the enhancing student's cross-cultural competence in ubiquitous MOOC instructional model. The researcher conducted an informal unstructured interview and collected data from six participants. The participants were undergraduate students who had experienced learning in the MOOC designed by a ubiquitous MOOC instructional model. This number of participants was relevant to Polkinghorne (1989), who recommended that the interviewees should range from 5-25 individuals and have related experience with the phenomenon. The unstructured interview began with an open-ended question and built interviewees next questions based on what they said (Savenye, 2014).

The researcher developed the interview protocol by focusing on the cognitive dissonance for enhancing higher education student's cross-cultural competence in ubiquitous MOOC instructional model. The interview protocol was developed based on the instruction of ubiquitous MOOC following Creswell and Plano Clark (2011) who stated that the interview protocol compose with four parts of interview questions; (1) introduction question, (2) ice-breaking question, (3) sub-question, and (4) closing question.

Interviews occurred at the end of the course which design by U-MOOC instructional model. The researcher contacted potential participants and asked them if they would be interested in participating. Each interview was 20-30 minutes in length, and all the interviews were audio recorded and transcribed verbatim by the researcher.

The researcher used a reliability technique in an interview procedure by having multiple coder in the step of intercoder agreement (American Psychological Association, 2010). All interview transcripts from the individual interviews were imported into MAXQDA 12 software. An inductive coding procedure was implemented as an analytical method in order to explore the enhancing student's cross-cultural competence in ubiquitous MOOC instructional model.

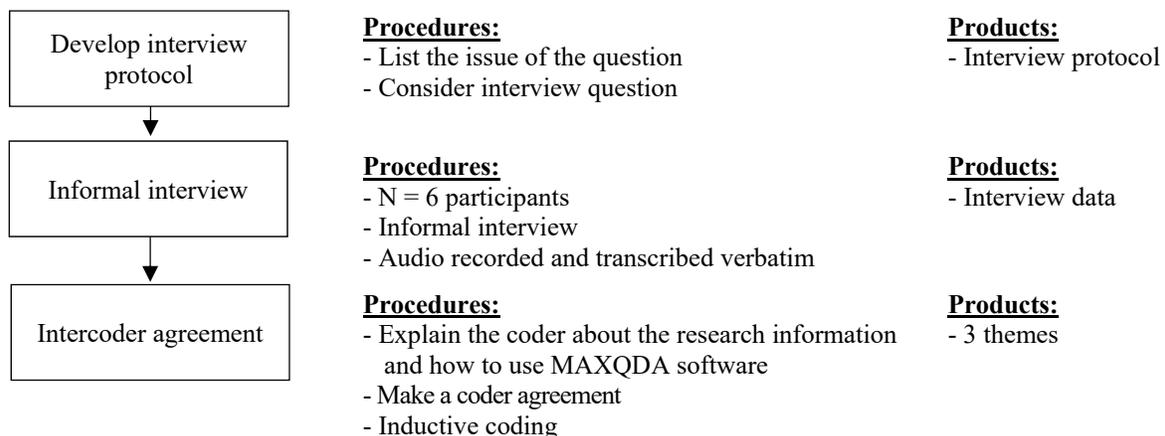


Figure 1 Research procedures

Research Results

The results were divided into three themes: (1) U-MOOC learning, (2) cognitive dissonance, and (3) recommendations for U-MOOC, as follows.

Theme 1: U-MOOC learning, this theme was explored how the respondents' behavior in the MOOC that design by U-MOOC instructional design. The opinions on U-MOOC learning could be divided into eight dimensions: (1) learning device, (2) learning motivation, (3) learning tools, (4) e-learning experience, (5) learning outcome, (6) communication skill, (7) learning place, and (8) learning time, for example:

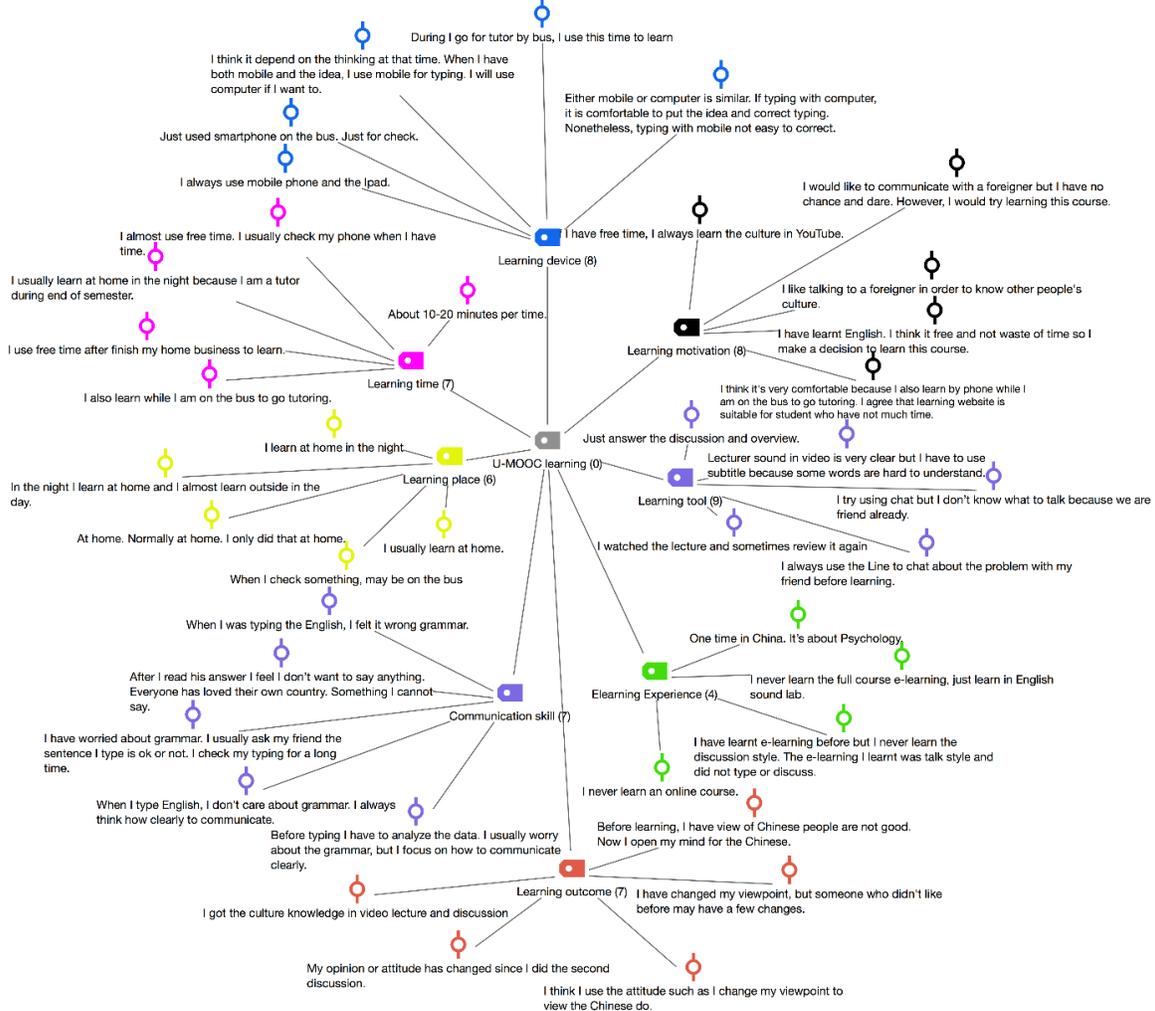


Figure 2 Exploration of U-MOOC learning

(1) Learning device

"I think it depend on the thinking at that time. When I have both mobile and the idea, I use mobile for typing. I will use computer if I want to"

Participant 1

(2) Learning motivation

"I would like to communicate with a foreigner but I have no chance and dare to. However, I would try learning this course"

Participant 5

(3) Learning tools

"Lecturer sound in video is very clear but I have to use subtitle because some words are hard to understand"

Participant 2

(4) E-learning experience

	<i>"I never learn the full course e-learning, just learn in English sound lab"</i>	Participant 3
	<i>"One time in China. It is about Psychology"</i>	Participant 6
(5) Learning outcome	<i>"Before learning, I have view of Chinese people are not good. Now I open my mind for the Chinese"</i>	Participant 3
(6) Communication skill	<i>"I have worried about grammar. I usually ask my friend the sentence I type is ok or not. I check my typing for a long time"</i>	Participant 2
(7) Learning place	<i>"In the night, I learn at home and I almost learn outside in the day"</i>	Participant 1
(8) Learning time	<i>"I also learn while I am on the bus to go tutoring"</i>	Participant 4

Theme 2: Cognitive dissonance, this theme was explored the dissonances that occurred while the respondent was learning in the MOOC, for example:

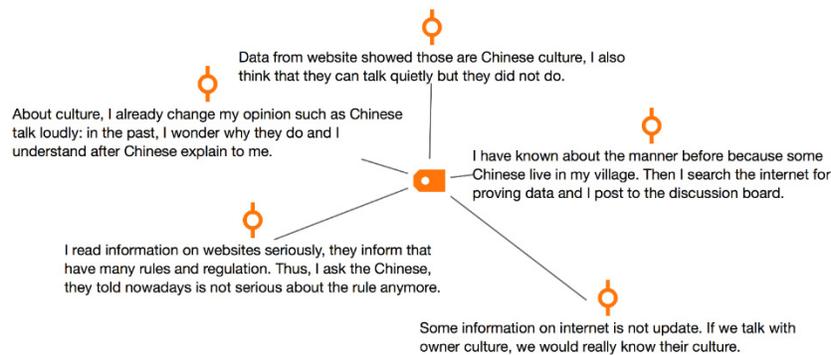


Figure 3 Exploration of cognitive dissonance

"About culture, I already change my opinion such as Chinese talk loudly: in the past, I wonder why they do and I understand after Chinese explain to me"

Participant 5

"I have known about the manner before because some Chinese live in my village. Then I search the internet for proving data and I post to the discussion board"

Participant 4

Theme 3: Recommendations for ubiquitous MOOC, this theme was explored the recommendation about the U-MOOC that consist of two dimensions: (1) learning system and (2) learning strategies, for example:

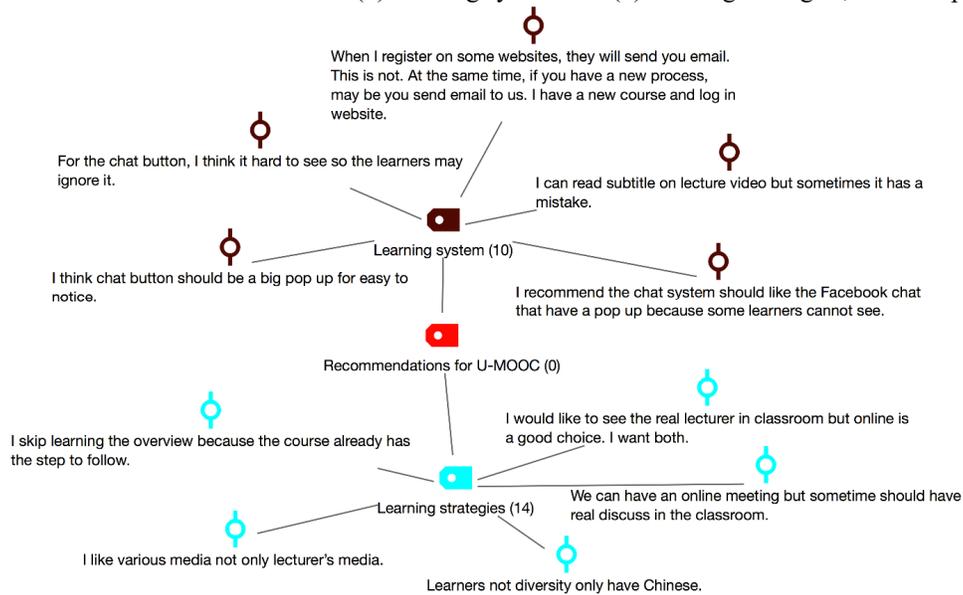


Figure 4 Exploration of recommendations for U-MOOC

(1) Learning system

“I can read subtitle on lecture video but sometimes it has a mistake”
Participant 2

“I recommend the chat system should like the Facebook chat that have a pop up because some learners cannot see”
Participant 1

(2) Learning strategies

“I would like to see the real lecturer in classroom but online is a good choice. I want both”
Participant 3

“We can have an online meeting but sometime should have real discuss in the classroom”
Participant 4

Discussion

U-MOOC Learning

Recognizing U-MOOC learning is important. The U-MOOC learner can enhance knowledge everywhere every time as a result of the U-MOOC instructional model’s flexible learning. The results show that, some students learned in free time and the others learned at night. The findings were supported by a key-informant who stated that *“I also learn while I am on the bus to go tutoring”* and *“In the night, I learn at home and I almost learn outside in the day”*. The finding was congruent with Jansen and Schuwer (2015) who stated that all features of MOOCs were available online, therefore participants could access the Internet anywhere. In other words, time was not a barrier to learn in this course.

The results showed that the contents could be viewed on a PC, tablet, or smartphone. Some students used a personal computer (PC) when they were home because it was required typing for the course. Sometime they used a tablet or mobile phone when they were not at home. The findings were supported by a key-informant who stated that *“Either mobile or computer is similar. If typing with computer, it is comfortable to put the idea and correct typing. Nonetheless, typing with mobile not easy to correct”*. The finding was supportive of Mehlenbacher (2010) who stated

that MOOCs would require distributed technologies (e.g., laptops, mobile phones, and production handhelds) and wireless, connected technology (e.g., networks, Internet-enabled interaction systems). In the same way, the ubiquitous system in U-MOOC could support students who were uncomfortable moving to another place (McKay & Lenarcic, 2015).

In recognizing learning outcomes, the U-MOOC learning activities were observably and could help students change their cultural attitude. This outcome was supported by a key-informant who stated that “*Before learning, I have view of Chinese people are not good. Now I open my mind for the Chinese*”. The finding was congruent with Watson et al. (2016) who found that the MOOC used dissonance to make the attitude change.

Cognitive dissonance

Dissonance could be defined as a confliction between the three attitudinal components: cognitive, affective, and behavioral (Watson et al., 2016). The cognitive dissonance which is found in ubiquitous MOOC instructional design model could divided into two types. One was the dissonant that occurs during the course, and another dissonant was what the students already have before learning in this course.

Cognitive dissonance concerned the strategies in U-MOOC to resolve the cultural conflict. This evidence was supported by two key-informants who stated that “*About culture, I already change my opinion such as Chinese talk loudly: in the past, I wonder why they do and I understand after Chinese explain to me*” and “*I have known about the manner before because some Chinese live in my village. Then I search the internet for proving data and I post to the discussion board*” The finding was consistent with Schunk (2012) who stated that dissonance should increase as the discrepancy between cognitions increases. The finding was also similar to Jonassen, Spector, Driscoll, Merrill, and van Merriënboer (2008) who reported that dissonant situations must be carefully selected experiences that are real to the learner so that the learner cannot easily dismiss the situation as untrue. The former learning dissonant occurred because they did not have a chance to communicate with foreign student to reduce any dissonance. Some learners changed their thought by new added information. Also, Cooper (2007) indicated that learners could cope with dissonance by changing their beliefs to eliminate the dissonance. Moreover, Schunk (2012) stated that cognitive dissonance can be reduced by changing a discrepant cognition.

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References

- Abbe, A., Gulick, L. M., & Herman, J. L. (2007). *Cross-cultural competence in Army leaders: A conceptual and empirical foundation*: US Army Research Institute for the Behavioral and Social Sciences.
- Alabdullaziz, F. (2015). *Cultural Diversity In Massive Open Online Courses: The Correlation Between Cultural Indicators And Students' Attrition*. (Doctor of Philosophy), University of Northern Colorado, Colorado.
- American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: American Psychological Association.
- AsianUx. (2017). *AsianUx*. Retrieved from <https://asianux.hylib.org/>
- Bennett, J. (1993). *Cultural marginality: Identity issues in training*. Lanham, MD: University Press of America.
- Chula MOOC. (2017). *Chula MOOC*. Retrieved from mooc.chula.ac.th
- Chunpen, N. (2013). *Development of indicators and a scale for measuring teachers' cross-cultural competence: testing measurement invariance by teachers' background*. (Master of Education), Chulalongkorn University,
- Cooper, J. (2007). *Cognitive dissonance : fifty years of a classic theory*. Los Angeles: SAGE.
- Gabrenya Jr, W. K., Griffith, R. L., Moukarzel, R. G., Pomerance, M. H., & Reid, P. (2012). *Theoretical and practical advances in the assessment of cross-cultural competence*. Retrieved from
- Huffman, K. (2012). *Psychology in action* (10th ed.). Hoboken, N.J.: J. Wiley.
- Jansen, D., & Schuwer, R. (2015). *Institutional MOOC strategies in Europe* Retrieved from eadtu.eu
- Jonassen, D., Spector, M. J., Driscoll, M., Merrill, M. D., & van Merriënboer, J. (2008). *Handbook of Research on Educational Communications and Technology: A Project of the Association for Educational Communications and Technology*: Taylor & Francis.

- Khan, B. H. (2005). *Managing e-learning: design, delivery, implementation, and evaluation*. Hershey, PA: Information Science Pub.
- Liyanagunawardena, T. R., Adams, A. A., & Williams, S. A. (2013). MOOCs: A systematic study of the published literature 2008-2012. *The International Review of Research in Open and Distributed Learning*, 14(3), 26. doi:10.19173/irrodl.v14i3.1455
- McKay, E., & Lenarcic, J. (2015). *Macro-Level Learning through Massive Open Online Courses (MOOCs): Strategies and Predictions for the Future: Strategies and Predictions for the Future*. PA: IGI Global.
- Mehlenbacher, B. (2010). *Instruction and technology : designs for everyday learning*. Cambridge, Mass.: MIT Press.
- MUX. (2017). *Mahidol University Extension: MUX!* Retrieved from <https://mux.mahidol.ac.th/>
- Na-songkhla, J., Thammetar, T., & Chen, S.-H. (2015). Thailand OERs and MOOCs country report. *MOOCs and Educational Challenges around Asia and Europe*, 121.
- Nieto, S., & Bode, P. (2008). *Affirming diversity : the sociopolitical context of multicultural education*. Boston, MA: Pearson Education.
- OECD/UNESCO. (2016). *Education in Thailand: An OECD-UNESCO Perspective, Reviews of National Policies for Education*. Paris: OECD Publishing.
- Office of the National Education Council. (2005). *National Education Standards*. Bangkok: VTC communication Ltd Partnership.
- Plangson, B., Na-Songkhla, J., & Luetkehans, L. M. (2016). Undergraduate students' opinions with regard to ubiquitous MOOC for enhancing cross-cultural competence. *World Journal on Educational Technology*, 8(3), 210-217.
- Polkinghorne, D. E. (1989). Phenomenological Research Methods. In R. S. Valle & S. Halling (Eds.), *Existential Phenomenology Perspectives in Psychology* (pp. 41-60). New York: Plenum Press.
- Rasmussen, L. J. (2013, AUG 2, 2016). *Cross-Cultural Competence: Engage People from any Culture*. Retrieved from <https://www.globalcognition.org/cross-cultural-competence/>
- Savenye, W. C. (2014). Perspectives on Assessment of Educational Technologies for Informal Learning. In J. M. Spector, M. D. Merrill, J. Elen, & M. J. Bishop (Eds.), *Handbook of Research on Educational Communications and Technology* (pp. 257-267). New York, NY: Springer New York.
- Schunk, D. H. (2012). *Learning theories : an educational perspective* (6th ed.). Boston: Pearson.
- Thai MOOC. (2016). *Thai MOOC structure*. Retrieved from <http://mooc.thaicyberu.go.th>
- The International Trade Administration. (2017, February 3, 2017). *Thailand - Education Services*. Retrieved from www.export.gov
- The Office of the Higher Education Commission. (2010). *Preparation for the ASEAN Community in 2015*. Bangkok: Bangkok Blog.
- Watson, S. L., Loizzo, J., Watson, W. R., Mueller, C., Lim, J., & Ertmer, P. A. (2016). Instructional design, facilitation, and perceived learning outcomes: an exploratory case study of a human trafficking MOOC for attitudinal change. *Educational Technology Research and Development*, 64(6), 1273-1300.