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MOOCs Readiness: The Scenario in Malaysiaⁱ

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Abstract

This study seeks to investigate the readiness levels of adult students studying in Malaysian higher education institutions. The online questionnaire used in this study consists of 18 demographic variables and 43 items based on six constructs: technical competencies, communication competencies, social competencies, self-efficacy, self-directedness, and readiness. With a sample of 413 respondents, the constructs were evaluated using measures based on students' self-identification with each item. Descriptive statistics depict competency, demographic profile of students, and level of readiness. The statistical analyses used for this study were Pearson correlation, multivariate analysis of variance, and structural equation modelling. All six constructs were reliable with Cronbach's alpha (α) above 0.7. Findings indicate that self-efficacy was significant for massive open online course readiness, and additional factors that could influence this readiness are explored. The findings from this study provide important input towards designing effective massive open online courses.

Keywords: massive open online course, readiness, competency, self-efficacy, self-directedness, MOOC

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Paragraphs are indented.

Text is 12-point Times New Roman, double spaced.

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The Malaysian Ministry of Education (MOE) in its 2015 education blueprint stated its support for the inclusion of massive open online courses (MOOCs) in tertiary education as a strategy to improve the quality of teaching and learning in the country. In addition to the introduction of a new mode of learning, Malaysian MOOCs would foster healthy competition in teaching and learning among the country's academics and create opportunities for global online learning (MOE, 2015). The most recent development in the use of MOOCs in Malaysia is the publication of the Guideline on Credit Transfer for MOOC by the Malaysian Qualifications Agency (MQA) (MQA, 2016). The establishment of such an environment which supports the use of MOOCs by the government offers a great advantage to the building of the nation's education infrastructure.

The history of MOOCs has its origin in a number of initiatives. At present, there are various forms of MOOCs including the widely known cMOOC and xMOOC. The former is based on the connectivism learning theory: a learning theory drawn from the digital age which was incidentally developed by Downes and Siemens who created the first cMOOC (Sokolik, 2014). The term MOOC has many definitions in literature due to its historical development as independent open access course and widened interest. The European Association of Distance Teaching Universities define MOOCs as "online courses designed for a large number of participants, that can be accessed by anyone, anywhere as long as they have an Internet connection, are open to everyone without entry qualifications, and offer a full/complete course experience online for free" (Jansen & Schuwer, 2015, p. 4). A shorter description of the term MOOC is provided by

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Sokolik (2014), who describes the MOOC as a: massive (large enrolment in thousands), open (free and not dependent on location, age etc.), online (entirely digital), course (not just depository of materials but structured syllabi with a schedule and the guidance of an instructor). A MOOC can exist as a purely online course involving a community of learners or as a blended mode which brings forth the role of an educator such as in the xMOOC (Sokolik, 2014). A MOOC can also include a certification process that may or may not incur charges. There are also claims of MOOCs with a number of features that may not necessarily represent the aforementioned definition (see [chart](#) for more information on this).

According to Eynon (2014), students choose to enrol in MOOCs for a myriad number of reasons, including: intellectual challenge, professional development, and curiosity (as cited in Christensen et al., 2013; Milligan et al., 2016; Skrypnyk et al., 2015). For institutions of higher learning, benefits of offering MOOCs include the way in which MOOCs: support institutional visibility by enabling institutions to reach out to new students (Porter & Beale, 2015), provide opportunities for academics to be involved in online pedagogy (Jenner & Strawbridge, 2015), and provide course developers the opportunity to collaborate to enhance programme quality (Pscheida et al., 2015). Involvement in MOOCs may also mean heavy investment on new online platforms for many countries (Roland et al., 2015).

A report by the Department for Business Innovation and Skills, UK, suggests that amidst the benefits of online learning, are huge challenges for existing higher education institutions, especially in the context MOOCs (Haggard, 2013). Some studies suggest that only a small number of students actually complete courses (Koller et al.,

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2013; Lee & Choi, 2011; Seaton et al., 2015) and that the impersonality of MOOCs leads to students feeling isolated, lonely, and not connected (Kilgore & Lowenthal, 2015). The need for students to be responsible for their own learning is naturally much greater in MOOCs. The importance of support for successful online learning experiences is emphasised in a 2004 study by Zawacki-Richter, who found that the form and extent of support varies from one student to another. In his research, Tinto (1998) found that enriched student-faculty and student-student interactions could enhance students' sense of belonging and lessen feelings of isolation. Factors such as computer skills or accessibility to the Internet can also determine successful online learning (Selim, 2007). The diversity of MOOC students makes it necessary to not only enhance technical competencies, but also enhance the social and communication competencies to ensure better learning experiences (Roca et al., 2018)

Conceptual Framework of Study

The conceptual framework of this study was adapted from the SOLR Model proposed by Yu and Richardson (2015). As articulated by Yu and Richardson (2015), the SOLR model was created based on the theories of Tinto (1998) and his Student Integration Model (SIM). Tinto (1998) argues that social and academic integration are the most significant factors for student retention in their course. Social integration occurs when a student experience quality of relationship with the course instructor and classmates, while academic integration occurs when a student is able to improve academic performance and level of intellectual development (Tinto, 1998). According to Tinto, students who achieve higher levels of social and academic integration tend to have strong goal and institutional commitments and as a result, tend not to drop out.

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Therefore, social competency which influences interactions with both instructors and classmates is deemed significant. The SOLR Model proposed by Yu and Richardson (2015) suggests that communication competency enhances students' interactions with instructors and classmates. Yu and Richardson's (2015) SOLR Model also asserts technical competency as a substantial component that would influence student retention in online learning.

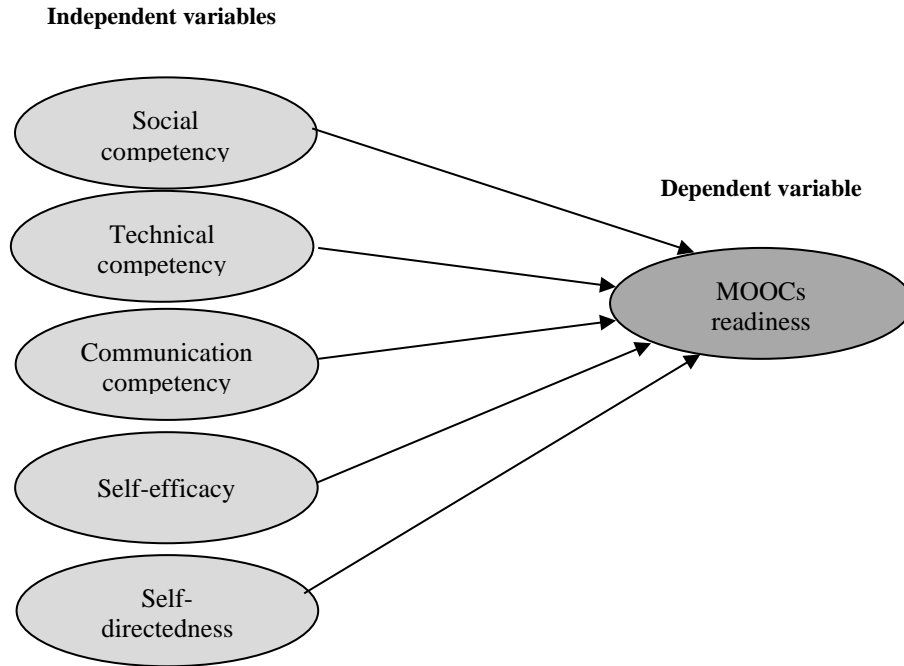
The social, communication, and technical competencies proposed in Yu and Richardson's (2015) SOLR Model for online learning are also applicable to a MOOC as it is essentially an online course with additional features (massive and open). The conceptual framework depicted in Figure 1 incorporates the aforementioned competencies, with two additional independent variables: self-efficacy and self-directedness. Author (2006) having studied the relationship between self-efficacy and self-directedness, suggested that interventions to improve these dimensions can lead to vital developmental transitions. This could help to improve the level of readiness of students to learn through MOOCs successfully.

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Figure 1

The Conceptual Framework



Tables and figures must be mentioned in the text prior to use.

Each figure is numbered and titled with a clear description of the contents.

Bold the word Figure and number. Figure title must be title case and italicized with any notes placed below the figure.

Figures must adhere to APA7 guidelines.

Note. Adapted from “An exploratory factor analysis and reliability analysis of the student online leaning readiness (SOLR) instrument,” by T. Yu and J.C. Richardson, 2015, *Online Learning*, 19(5). Copyright 2015 by the Online Learning Consortium. (<https://files.eric.ed.gov/fulltext/EJ1085767.pdf>)

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Many respondents (71.4%) reported that their motivation to enrol in a MOOC is derived from a desire to widen their knowledge. Students’ interest in pursuing knowledge suggests that students are self-motivated and have a high level of intrinsic motivation. Half of the respondents (51.1%) wished to enrol in MOOCs as a self-initiative towards

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“continuous professional development.” About 50% respondents indicated “exposure to online learning” as their motivation to enrol in MOOCs. Close to 40% of the respondents were motivated by “personal interest,” “networking purposes,” and “adding value to their resumes.” Some respondents (27%) indicated that enrolling in a MOOC was “part of a compulsory course.” Around 22% reported “socialising” as their motivation. Lastly, 18% of respondents were motivated by the need to “gain credit for university entrance.”

Respondents’ motivations to enrol in MOOCs in order of priority are shown in Table 3.

Table 3

Motivation for Enrolling in a MOOC

Enrol in a MOOC course	n	%
To widen knowledge	295	71.4
Continuous professional development	211	51.1
Exposure to online learning	209	50.6
Networking	162	39.2
Personal interest	162	39.2
Added value to resume	141	34.1
Compulsory university course	110	26.6
Socialising	92	22.3
Credit for university course	76	18.4

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Methodology

Sample and Procedure

This study focuses on students in Malaysian higher education institutions, involving students from Open University Malaysia, Malaysian private universities, and other Malaysian public universities such as Universiti Teknologi Malaysia, Universiti Putra Malaysia, and Universiti Malaya, polytechnics and community colleges. A questionnaire was distributed online through Survey Monkey for three months from

April to July 2016 using convenience sampling. This resulted in 801 responses, of which 413 were usable. The remaining 388 responses were incomplete with most (more than 90%) questions left unanswered.



What advantages did students identify when using only OER in an undergraduate introductory course? Data analysis indicated that 39 out of 46 (84.7%) students who took the reflective survey and 25 out of 29 (86.2%) students who participated in the focus groups reported that they appreciated that there was not a required textbook in this course. Several themes concerning the advantages of using only OER emerged from the two data sources. These themes are discussed in detail below.

H3 → *Cost Saving*

First and foremost, students knew from their senior counterparts or past instructors that a \$60 textbook, with a new edition every year, had been traditionally required in this course. For this reason, 84% of the 46 students who took the reflective survey, and 88% of the 29 in the focus groups expressed overwhelming satisfaction with using OER in place of a traditional textbook. One student's comment was representative of many students' perceptions:

One of the best things in this course is that there was no a required textbook.

This is an introductory course, and I know a newer version is out every year.

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Thank you for not asking us to buy another expensive textbook when all we need is online.

Another participant added: “Technology is the way of the future. Textbooks are overpriced and soon to be outdated. The Internet and a printer are far better than a textbook because of the open resources available online.” Clearly, the students were concerned about the upsurge in textbook costs. They appreciated that only OER were used in the course. As one student summarized, “I don’t see why we need another expensive textbook when OER can do a great job as well, or even better.”

Dynamic and plentiful materials. Another recurring theme was that OER enriched student learning because of the dynamic, multimedia online resources. One

student explained the situation:

This is an introductory technology course. It makes sense that we used OER to learn technology in a digital age. It would be a waste if we had to “read technology” in a textbook. That will help us use OER effectively when we become teachers.

Another student noted: “I enjoyed not having to buy a book. I think I benefited as much from OER as I would have from a traditional textbook. It is the BEST CHOICE to make an introductory course interesting.” Interestingly, this student’s comment was not solely about the cost saving of OER, but highlights the way in which the use of OER can actually make a course more interesting. Another student noted:

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I am a third-year student taking this introductory course that I didn't take before.

I never had a course that only used OER. It worked great in this introductory course. I hope my professors will use more OER in my senior year.

These comments indicate that students perceived multimedia-enriched OER as effectively contributing to their learning and viewed OER integration to be appropriate for an introductory course.

Understanding the Reasons for Dropping Out

A follow-up procedure adapted Nistor and Neubauer (2010) was implemented and helped to promptly identify and contact dropouts. This procedure was adopted during two 16-week courses. The procedure was based on emails sent after an absence of seven consecutive days from the virtual classroom. The message included an invitation to rejoin the course as well as questions about the teachers' intention to return or not to the courses (Appendix A). All teachers that replied to the emails presented explanations for abandoning the courses and none of them returned to the virtual classroom or rejoined the course afterwards. Their replies were therefore included in the data sample used in the characterization of the reasons for dropping out. Teachers that did not reply to the email and missed two DAs after the email was sent were contacted by telephone for a short interview. The interview focused on the reasons for abandoning the course (Appendix B). This procedure was slightly adapted for the sixth DA (DA6) because the time interval between the deadline for handing in the DA6 and the deadline for submitting the mandatory final paper was shorter. The 21 teachers who failed the DA6 but submitted the final paper were not contacted by email or telephone, as they were not considered dropouts from the course. None of the teachers contacted by email

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or interviewed by phone throughout the whole process submitted the mandatory final paper. Those additional findings corroborate the previous assumption that they all had indeed opted to drop out from the courses. Replies to emails (n=45) and transcriptions of phone interviews (n=104) were pooled and used for further analysis. The categorization of replies to email messages and transcriptions of phone interviews followed a content analysis procedure (Fraenkel & Wallen, 2003). The categories (Table 1) were based on Rovai's (2003) and Park's (2007) theoretical frameworks. Teachers' answers were independently categorized by two coders with an agreement of 97% between them (disagreements were coded by consensus).

Conclusion and Implications

While the findings of this research cannot be generalized, there are two important conclusions that those working in a similar context may find useful. First, SFL-based distance education seems to be an effective tool in helping teachers understand writing as a meaning-making process. Second, teachers' development is a result of the interaction between multiple factors such as self-determination of being a good teacher and external mediation from the distance education. Ultimately, teachers independently adapt their teaching, benefiting their students' socialization into authentic academic English writing communities.

Implications of this study include the following dimensions. One is that in many education contexts (e.g., underdeveloped areas), language teachers have limited access to effective teacher education and they struggle with how to teach genre-specific writing to students from different disciplines at different levels (e.g., mathematics, science; Huang et al., 2017; Schleppegrell, 2016). In response to the uneven and inequitable

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distribution of education and economical resources, SFL-based distance education, with its focus on both language and content, seems to be an optimal approach in assisting teachers in transcending the limitations of time or place. Additionally, given that distance teacher training programs are short, and teachers ultimately have to rely on themselves to gain new knowledge, this study suggests that teachers' agency should be effectively galvanized so that they can better regulate their teaching when exiting teacher programs. Finally, as a case study that was only focused on typical EFL teacher, findings should be carefully treated and can only be extended to similar contexts (Yin, 2014). Future studies could use a similar SFL-based approach and implement distance education for larger cohorts of teachers.

Acknowledgements

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References must be double spaced, alphabetized, follow APA7 and have either a doi or link as appropriate.

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Appendix A

Text of the Email Message Sent to the Teachers

Dear teacher,

You have not accessed the virtual classroom of the course (name of the course) during the last weeks. Please, feel free to contact us in case you are experiencing difficulties in accessing the classroom or facing other issues that are preventing you from doing the course. We will be glad to assist you in any way so that you can continue attending the course.

Best regards,

Fundação Cecierj - Outreach Team

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Tables and figures are displayed in the same way as in-text, but are numbered A1, B1, etc.

Table A1

Participants' Self-Reported Demographic Data

		Persistents (n=1569)	Dropouts (n=1386)	<i>p</i> value
Gender	Male	24.8%	24.4%	<i>p</i> = 0.08***
	Female	75.2%	75.6%	
Age		36.45 (±9.12)	35.75 (±8.29)	<i>p</i> = 0.2294**
Frequency of Internet use. *		6.04 (±1.58)	5.93 (±1.65)	<i>p</i> = 0.1513**
Average number of Internet tools used.		6.90 (±2.46)	6.67 (±2.42)	<i>p</i> = 0.1513**

Note. *In days per week; **Mann-Whitney test; ***Chi-squared test.

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ⁱⁱ Subramaniam, T., Suhaimi, N. A. D., Latif, L. A., Abu Kassim, Z., & Fadzil, M. (2019). MOOCs readiness: The scenario in Malaysia. *The International Review of Research in Open and Distributed Learning*, 20(3), 80-101. <https://doi.org/10.19173/irrodl.v20i3.3913>

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