THE DESIGN AND IMPLEMENTATION OF MASSIVE OPEN ONLINE COURSE (MOOC): ENGLISH FOR PRE-DIPLOMA STUDENTS

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ABSTRACT

Higher institutions are being reshaped to include technology-based syllabus in their curriculum design. It is worth to note that the emerging of Massive Open Online Courses (MOOCs) has triggered the university’s curriculum reviewers to include the platform in the syllabus contents. An English MOOC for Pre-Diploma was developed. To evaluate the course developed, the study aims to determine students’ perceptions on the MOOC course. The data were collected via survey and there were 186 respondents involved. Three main areas of the course evaluation were evaluated: 1) Content Evaluation, 2) Instructional Evaluation and 3) Technical Evaluation. The study revealed that content evaluation has the mean value of 4.25 (SD=0.68), technical evaluation with the mean value of 4.24 (SD=0.71) and instructional evaluation with the mean value of 4.14 (SD=0.70). The average mean value reported for three different types of evaluations is 4.21 (SD=0.70). The finding indicates that the respondents are most likely strongly agreed with the course content, instructional and technical part, thus, has effectively helped the users to learn the English language by using MOOC platform.

Keywords: MOOC; NALI; Instructional Learning; UiTM-MOOC; Pre-Diploma

INTRODUCTION

Massive Open Online Courses (MOOCs) has created radical impacts on how knowledge transfer goes beyond campus has gone limitless to every corner at home and abroad. In relation to this trend, MOOCs has exerted a great influence on the use of English language in delivering the content via MOOCs [1]. Li [1] indicates that the platform of Coursera provides 12 language courses, and 91% of them are lectured in English. It is worth to note that English has an important role as the main learning tool and online users can enhance their English levels by focusing on some knowledge points. Hence, this study aims to examines the students’ perceptions towards learning English course by using Openlearning.com platform. The evaluation of the English course is divided into three main parts which are Content Evaluation, Instructional Evaluation, and Technical Evaluation. The process of teaching and learning through MOOC is a unique and complex methods. Hence, the MOOC instructors may use the
method to encourage critical thinking among target students. In contrast with the conventional style of teaching and learning, students will be more active when interacting with technology independently while the instructors act as facilitators. The design and implementation of MOOC that meet the requirement of pre-diploma students in Malaysia is evolving and constant engagement of instructors are needed for the effectiveness of learning process through MOOC via Openlearning.com website. With this concern, English MOOC for Pre-diploma was developed and implement in one of the Malaysian universities. Students perception on the course developed was used as an evaluation of the course. The MOOC course developed will contribute to the flexible learning policy in Malaysia tertiary education. It also supports the third shift: Lifelong Learning and ninth displacement which is a global online learning for Malaysian Education Development Plan (PPPM25) [2].

The Development of English-MOOC

The researcher has developed an English course namely “English for Pre-Diploma 1” designed for pre-diploma students whose English level is at beginner to intermediate level (https://www.openlearning.com/courses/english-for-pre-diploma-1/HomePage).

Figure 1 shows the screen shot from “English for Pre-Diploma 1” with navigation bars on the left. The homepage also shows the learning modules available in the course: Module 1: Introduction to the Course; Module 2: Speaking; Module 3: Listening; Module 4: Reading; Module 5: Grammar; and Module 6: Writing. The course was designed based on the current syllabus content and outlined course assessments. As certified and appointed course developers for the university, the researcher has uploaded and developed the content of the course accordingly to the approved syllabus from Malaysian Qualifications Accreditation (MQA). The users or learners who registered the course are among active users for English MOOC which need 14 weeks to complete.
Lecture Materials

The content of the course is based on the lecture materials such as lecture notes, slides and lecture videos used for the course in the conventional face-to-face class. The lecture notes in the MOOC course are downloadable to all registered students in the mixed form of various types of files such as pdf, word documents, PowerPoint slides and jpeg form. Each main topic contains an overview of the topic and learning outcome. Figure 2 shows the various form of lecture slides from the course.

![Figure 2. Various form of Lectures Notes and Slides](image)

Lecture Videos

The course also developed an interactive and fun video for teaching and learning purposes. The videos consist of narrated videos from the instructor and shared videos from YouTube platform. According to Breslow et al. [3], an effective learning videos to fit the learners’ attention span is on an average of less than 10 minutes. Similar with the flipped classroom approach, the videos uploaded have similar content with the uploaded lecture notes and downloadable by students as well. After each session of the videos, students’ learning will be measured by quizzes designed by using the quiz widgets. These quizzes are designed to test the level of students learning after each topic. Figure 3 shows an example of video available in the course.

![Figure 3. A Sample of a Video Using Powtoon Platform](image)
Assessments

Openlearning.com provided various quiz widgets to design effective and fun assessments. Course activities include video making assignments, writing assignments, quizzes, crossword puzzle (Figure 4) and discussion segments by using the chat below every page. Students are required to leave their opinions in the chat section in order to ensure they have viewed the lesson in each page. Besides that, opinions left in the discussion section provide room for collaborative learning to foster more meaningful and attainment among the learners. By using this platform, instructors can keep track of their learners’ opinions and interact with them to engage and create fun teaching and learning process. For example, one of the sections in the navigation bar of the course is the “Smash-Hits!” section in which students will listen to various types of English songs and arrange the lyrics according to the right sequence. By utilizing the mix and match quiz widget provided by Openlearning.com, this activity is a fun and effective way to help students to improve their listening skills. In addition, the “Smash-Hits!” section was aligned with the course assessment outline in the syllabus. The screenshot of the “Smash-Hits!” activity is shown in Figure 4.

![Smash-Hits! Activity by Using Mix and Match Quiz Widget](image)

**Figure 4. Smash-Hits! Activity by Using Mix and Match Quiz Widget**

LITERATURE REVIEW

According to Chea [4], in 2008, MOOC was first introduced to the education world by George Siemens and Stephen Downes with the course title and code: Connectivism and Connective Knowledge (CCK08). In relation to this, another two anonymous MOOC projects were initiated known as OpenupEd and FutureLearn. OpenupEd, an open, non-profit partnership offering MOOCs with the aim to benefit individual learners and the society with limitless access to knowledge [2]. Significantly, their objective is to provide accessible and flexible online higher education through content experts.

At present, higher education institutions are increasingly developing a positive attitude towards MOOCs and countless positive experiences have been shared which
has added values to the MOOCs. Most importantly, the number of MOOCs has increased tremendously in Malaysia; a sign indicating the peak of MOOC among higher tertiary education [4]. Significant shifts across the education system, marked by the trends of MOOCs in delivering the knowledge contents was observed. The changes and shifts are historic in terms of their size, speed, and scope [5]. From 2000 onward, the education system has changed radically in arriving on the Internet. At present, social networks, mobile platforms and apps, advanced analytics and big data, cloud and artificial intelligence are occurring increasingly rapidly. Higher education systems are greatly affected, thus, blended learning and flipped classroom have been integrated to cope with the rapid changes of technological advancement. Everything can be reduced to the human-to-machine, machine to machine, and machine to human. With regards to the education system, the curriculum has designed and allocated hours for blended learning and flipped classroom [5]. There are many benefits that institutions can derive from offering MOOCs. According to [6], European institutions offer MOOCs to students worldwide and design flexible learning opportunities. Chea [4] further added that there are many institutions offering MOOC as an opportunity for learning online pedagogy. Significantly, MOOC is the answer to survive the Fourth Industrial Revolution in preparing future graduates with the ability to personalize their learning ability and learn via authentic materials [5]. In addition, many students who register in MOOC gain benefits to improve their personal development [4] and develop specific skills [6]. Despite these benefits, it is worth to note the challenges of MOOC. Crucially, Chiam and Abu Kassim [7] highlighted the needs to design the MOOC curriculum to meet the learning outcomes of the course and the usage of video lecturers to engage the learners. Moreover, student dropout is the biggest concern among all MOOC developers. Empirical research studies prove that only a small proportion of enrolled participants complete the course [4, 6].

METHODOLOGY

The purpose of this study is to develop and implement English MOOC for pre-diploma students and examine students’ perceptions of the course developed. The study employs quantitative data analysis and a survey was distributed to respondents who have enrolled for the course. The survey consisted a 5 Likert-scale rating questions with three main sections namely “Content Evaluation”, “Instructional Evaluation” and “Technical Evaluation”. The survey was taken by English MOOC’s users anonymously after they have learned and used the MOOC as one of the tools for the blended learning option. The teaching and learning in this course consisted of blended face-to-face teaching lectures, together with online participation through MOOC during the blended learning weeks according to the course scheme of work. The respondents were randomly selected among pre-diploma students. There were
186 respondents involved in this study who enrolled themselves in the English course namely English for Pre-Diploma students.

RESULTS AND DISCUSSIONS

The findings of this study are illustrated in Table I. There are 70 male respondents and 116 female respondents with 62.4% and 37.6% respectively.

| TABLE I. FREQUENCY OF THE RESPONDENTS |
|--------------------------------------|
| Frequency | Percent |
| Female    | 70       | 62.4 |
| Male      | 116      | 37.6 |
| Total     | 186      | 100  |

Table II shows the findings of the content evaluation of the English MOOC. There were six items evaluated in the content evaluation of the course. The lowest mean value reported for “The content of the MOOC is not confusing” with 4.12 (SD=0.72). Subsequently, “The content of the MOOC is accurate” has the mean value of 4.13 (SD=0.71), “The content of the course is easy to understand” with the mean value of 4.21 (SD=0.67), “The content of the course gives a big picture for better understanding about English language in a deeper and clearer way” with the mean value of 4.28 (SD=0.66), “The content of the course is useful to answer grammar, reading, writing and listening related questions” with the mean value of 4.37 (SD=0.70) and “The content of the course guides me to identify the basic use of the English language” with the mean value of 4.40 (SD=0.62). The average mean value is 4.25 (SD=0.68). The average mean value indicates that the respondents most likely to strongly agreed with the content designed in the online course of English for Pre-Diploma.

| TABLE II. CONTENT EVALUATION OF THE ENGLISH MOOC |
|-----------------------------------------------|
| Content Evaluation                            | Mean | SD  |
| Content Evaluation of the MOOC (English for Pre Diploma 1) | 4.12 | 0.72 |
| The content of the course is not confusing.    | 4.13 | 0.71 |
| The content of the course is accurate.         | 4.21 | 0.67 |
| The content of the course is easy to understand. | 4.28 | 0.66 |
| The content of the course gives a big picture for better understanding about English language in a deeper and clearer way. | 4.37 | 0.70 |
| The content of the course is useful to answer grammar, reading, writing and listening related questions. | 4.40 | 0.62 |
| The content of the course guides me to identify the basic use of the English language. | 4.25 | 0.68 |
| Average Mean Value                            | 4.25 | 0.68 |

Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Table III shows the findings of the instructional evaluation. There were 10 relevant items. The lowest mean value was 3.98 (SD=0.74) for “The level of difficulty of the course is appropriate for me”, followed by “I can control the navigation of using the course buttons accordingly” with mean value of 4.11 (SD=0.72), and “The
The presentation of the course is clear and logical” with mean value equal to 4.12 (SD=0.65). The mean values showed that the respondents are most likely to agree with the designing features of the MOOC. The items for “The instruction is integrated with my previous experiences” had the mean value of 4.13 (SD=0.72) and “The learning can be generalized to an appropriate range of situations” had the mean value of 4.13 (SD=0.69). The mean value of 4.14 (SD=0.70) is reported for “The graphics or colour used in designing the course”, thus indicating that the choice of the layout and colour were suitable and attractive for the target learners. “The MOOC effectively stimulates my creativity” had the mean value of 4.18 (SD=0.71), and 4.19 (SD=0.71) agreed that the MOOC achieves its defined purpose. The highest mean value was 4.27 with SD=0.69 which indicated that the learners almost strongly agreed to use badges and comment section for motivation purposes. The overall mean value for the Instructional Evaluation of this course was 4.14 (SD=0.80) which further indicated that the layout and general appearance of the MOOC were suitable and pleasant to the learners’ views.

**TABLE III. INSTRUCTIONAL EVALUATION OF THE ENGLISH MOOC**

| Instructional Evaluation                                      | Mean | SD   |
|--------------------------------------------------------------|------|------|
| The level of difficulty of the course is appropriate for me.  | 3.98 | 0.74 |
| I can control the navigation of using the course buttons accordingly. | 4.11 | 0.72 |
| The presentation of the course is clear and logical.         | 4.12 | 0.65 |
| The instruction is integrated with my previous experiences.  | 4.13 | 0.72 |
| The learning can be generalized to an appropriate range of situations. | 4.13 | 0.69 |
| The graphics/colour are used for appropriate instructional reasons in the course. | 4.14 | 0.70 |
| The learning outcomes and learning objectives of the course is well defined. | 4.17 | 0.71 |
| The course has effectively stimulates my creativity.         | 4.18 | 0.71 |
| The course achieves its defined purpose.                     | 4.19 | 0.71 |
| The use of the badges and comments section is motivational.  | 4.27 | 0.69 |
| **Average Mean Value**                                       | 4.14 | 0.70 |

*Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree*

Table IV shows the technical evaluation of the English MOOC with 6 relevant items. The average mean reported is 4.24 (SD=0.71) which shows that they are most likely to strongly agreed with the technical part in designing the English MOOC in terms of layout and the general appearance.

**TABLE IV. TECHNICAL EVALUATION OF THE ENGLISH MOOC**

| Technical Evaluation                                      | Mean | SD   |
|-----------------------------------------------------------|------|------|
| The course is reliable in normal use.                     | 4.31 | 0.69 |
| The information displays are effective.                   | 4.25 | 0.69 |
| I can easily and independently use the course.             | 4.20 | 0.74 |
| The course is comprehensive in term of its support for you. | 4.22 | 0.67 |
| The course is effective in term of clear, readable and attractive printed text. | 4.24 | 0.71 |
| The course is effective in term of readable and appropriate diagrams. | 4.19 | 0.74 |
| **Average Mean Value**                                    | 4.24 | 0.71 |

*Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree*

Table V summarizes the perceive evaluation of the MOOC based on the three main evaluations: 1) Content Evaluation, 2) Technical Evaluation and 3) Instructional
Evaluation. The overall mean value was 4.21 (SD=0.70). This value indicated that the respondents are most likely to strongly agreed with the course in helping them to learn the English language effectively.

| Summary of Evaluation of the MOOC | Mean | SD  |
|----------------------------------|------|-----|
| Content Evaluation               | 4.25 | 0.68|
| Technical Evaluation             | 4.24 | 0.71|
| Instructional Evaluation         | 4.14 | 0.70|
| Average Mean Value               | 4.21 | 0.70|

Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

CONCLUSIONS

In conclusion, based on the students’ perceptions, MOOC has benefited them to understand and discover a whole new experience of learning the English language by using the platform provided by Open Learning. Significantly, the respondents found that there were learning benefits in engaging with a MOOC and the flexibility offered by MOOC added another positive value to learn anytime and anywhere. Students in this MOOC are also the knowledge producers based on the coalition of knowledge in the discussion chat room. The advancements in technology form the dynamic development of open learning resources via MOOC platform that helps learners from various learning preferences to learn English language in fun and interactive ways. The online course of English for Pre-Diploma 1 appears to offer a different approach in learning the English language whereby the content of the course is based on authentic learning materials. However, smooth accessibility in viewing the videos requires a strong Internet connection and powerful computers/tablets/phones with the latest Android/iOS updated systems. It is worth to note that some research studies argued that a MOOC is not a course because it lacks the scaffolding presence of experienced teachers in assisting the learners throughout the entire course. With this concern, the findings of this study exposed theoretical gaps in the current MOOC literature. Most importantly, these findings would help MOOC developers to overcome the challenges to successfully implement MOOC in learning the English language thus to reduce student dropout and increase the number of completions of the course among the enrolled participants. Despite these limitations in MOOC, the findings found in this study agreed that English for Pre-Diploma 1 (online English MOOC) had stimulated experience in learning the language effectively. Hence, MOOC has significantly provided more areas for future research such as more technical research into how learners use the technology tools of the MOOC platforms, their motivations and what helps them to succeed in completing a course designed by using MOOC platform. Besides that, future research studies can also focus on the Malaysian universities readiness to implement MOOC, the MOOC learning pedagogy and the quality of delivering the knowledge through MOOC.
REFERENCES

1. Li, W. 2015. “Impact of International MOOCs on College English Teaching and Our Countermeasures: Challenge and Opportunity,” Research Inventy: International Journal of Engineering and Science., 5(4):11-15.
2. OpenupEd Homepage. 2015. Retrieved from http://www.openuped.eu
3. Breslow, L., Pritchard, D. E., DeBoer, J., Stump, G. S., Ho, A. D. and Seaton, D. T. 2013. “Studying Learning in the Worldwide Classroom: Research Into edX’s First MOOC,” Research and Practice in Assessment., 8(1):13-25.
4. Chea, C.C. 2016. “Benefits and Challenges of Massive Open Online Courses,” ASEAN Journal of Opean Distance Learning., 8(1).
5. Schwab, K. 2017. The Fourth Industrial Revolution. Crown Business, New York.
6. Jansen, D. and Schuwer, R. 2015. “Institutional MOOC Strategies in Europe: Status Report Based on a Mapping Survey Conducted in October – Desember 2014,” Retrieved from http://eadtu.eu/documents/Publications/OEenM/Institutional_MOOC_strategies_in_Europe.pdf
7. Chiam, C. C. and Abu Kassim, Z. 2015. “Massive Open Online Courses (MOOC’s); A Learner’s Perspectives,” Conference Proceedings Asian Association of Open Universities (AAOU), Malaysia.
8. Collins, R. B. 2018. “Understanding the Faculty Experience Designing, Developing, and Delivering Massive Open Online Courses to Inform Academic Leaders Considering MOOC Initiatives (Order No. 10785521),” Available from ProQuest Dissertations & Theses Global. (203683944). Retrieved from http://search.proquest.com.ezaccess.library.uitm.edu.my/docview/203683944?accountid=42518
9. Kleinman, M. A. 2018. “Teaching at Scale: Instructor Experiences with Massive Open Online Courses (MOOCs) (Order No. 1106724),” Available from ProQuest Dissertations & Theses Global. (2124411811). Retrieved from http://search.proquest.com.ezaccess.library.uitm.edu.my/docview/2124411811?accountid=42518
10. Bruff, D., Fisher, D., McEwen, K. and Smith, B. 2013. “Wrapping a MOOC: Student Perceptions of an Experiment in Blended Learning,” Journal of Online Learning and Teaching., Retrieved from https://my.vanderbilt.edu/douglasfisher/files/2013/06/JOLTPaperFinal6-9-2013.pdf