

A COMPREHENSIVE ONLINE CLASSROOM OF INTERACTIVE MULTIMEDIA COURSE FOR LECTURE SESSIONS, LAB TUTORIALS AND PROJECT EXHIBITION USING UFUTURE AS MOOC PLATFORM

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ABSTRACT

Massive Open Online Courses (MOOC) is an emerging learning approach where learners can experience the teaching and learning processes via online platform. Universiti Teknologi MARA (UiTM) launch its own in-house developed platform named as UFUTURE that tailored to UiTM needs in September 2019. UFUTURE integrates full-time and part time learners and MOOCs users from all UiTM campuses. With the main objective to enhance the quality of learning and teaching, UFUTURE has improved user accessibility and time flexibility to engage learners in the learning process. Responding to the boundless potential of UFUTURE, the development of MOOC for Interactive Multimedia course (CSC253) has been initiated. This project objectives are to provide online learning platform by utilizing MOOC features provided in UFUTURE to cater wide diversities of learners' preferences, to embed traditional face-to-face teaching in the online learning environment and to give opportunity for research and development in online education. Through this project, a comprehensive online classroom that comprises components for lecture sessions and lab tutorials are developed. Each component incorporated with clear instructions, comprehensive notes, inclusive teaching videos, helpful additional materials, fascinating activities, adequate self-assessment questions and a well-designed feedback survey. All of these components are vital in the process of achieving the project objectives of becoming a comprehensive online classroom for the Interactive Multimedia Course. Besides that, this project takes extend measures by using UFUTURE as a project exhibition platform that becomes as students' project showcase which includes posters, montages and video projects. This paper also presents promising positive findings obtained from feedback surveys which indicate the effectiveness of this online classroom in delivering its objectives.

Keywords: Interactive Multimedia, MOOC, UFUTURE, UiTM, Online Classroom

1. INTRODUCTION

An online classroom allows lecturers and students to connect either synchronously (real-time, with teachers and learners meeting at the same time or asynchronously with interaction lecturers and students occurring intermittently with a time delay; lecturers and students are generally separated by location. Through the online classroom, students are given the opportunity to study at own pace in which students have the opportunity to learn at any time, from anywhere at their own pace (Bezovski and Poorani, 2016; Nayak and Anjali, 2020). This idea has been incorporated in Massive Open Online Courses (MOOC) which is an evolving learning approach where learners can experience the teaching and learning processes via online platform (Juhaida et al, 2019). Responding to the widely used of the online classroom, Universiti Teknologi MARA (UiTM) launch its own in-house developed platform for online classroom named as UFUTURE. This platform can be accessed not limited to UiTM lecturers and students but also by other learners. Through UFUTURE, various learning components have been encompassed to be explored and applied by lecturers in order to prepare an online classroom for their students. These components can be used limitless by lecturers according to their creativity.

Responding to the limitless potential of UFUTURE, the development of MOOC for Interactive Multimedia course (CSC253) has been initiated. This project's objectives are to provide an online learning platform by utilizing MOOC features provided in UFUTURE to cater wide diversities of learners' preferences, to embed traditional face-to-face teaching in the online learning environment and to give opportunity for research and development in online education.

Through this project, a comprehensive online classroom that comprises components for lecture sessions and lab tutorials are developed. Each component incorporated with clear instructions as shown in Figure 1, comprehensive notes as shown in Figure 2, inclusive teaching videos as shown in Figure 3, helpful additional materials as shown in Figure 4, fascinating activities as shown in Figure 5, adequate self-assessment questions as shown in Figure 6 and well-designed feedback survey as shown in Figure 7. Besides that, this project takes extend measures by using UFUTURE as a project exhibition platform that involves of students' project showcase as shown in Figure 8. This project exhibition includes of posters, montages and video projects.

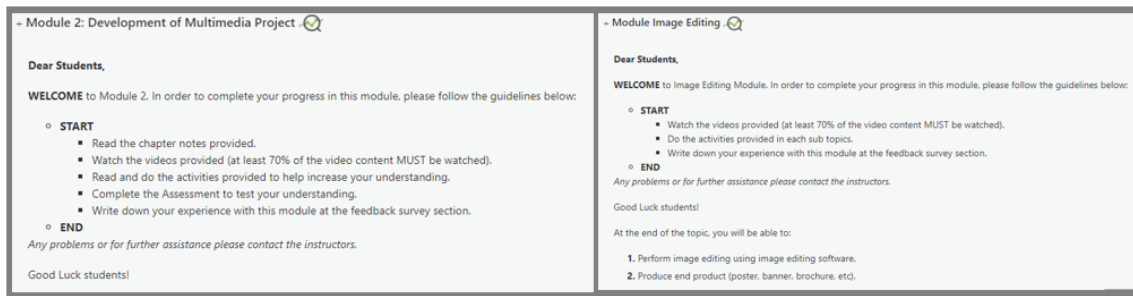


Figure 1. Clear Instructions



Figure 2. Comprehensive Notes



Figure 3. Inclusive Teaching Videos

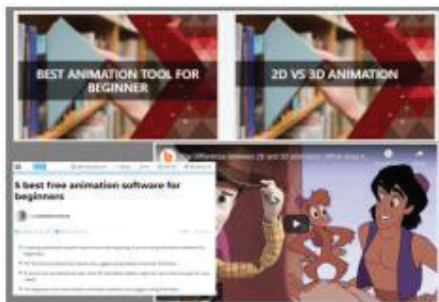


Figure 4. Helpful Additional Materials

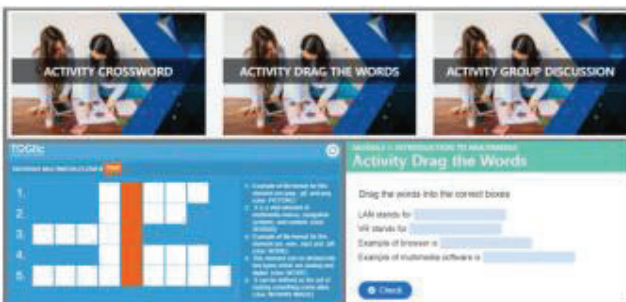


Figure 5. Fascinating Activities



Figure 6. Adequate Self-Assessment



Figure 7. Well-designed Feedback Survey

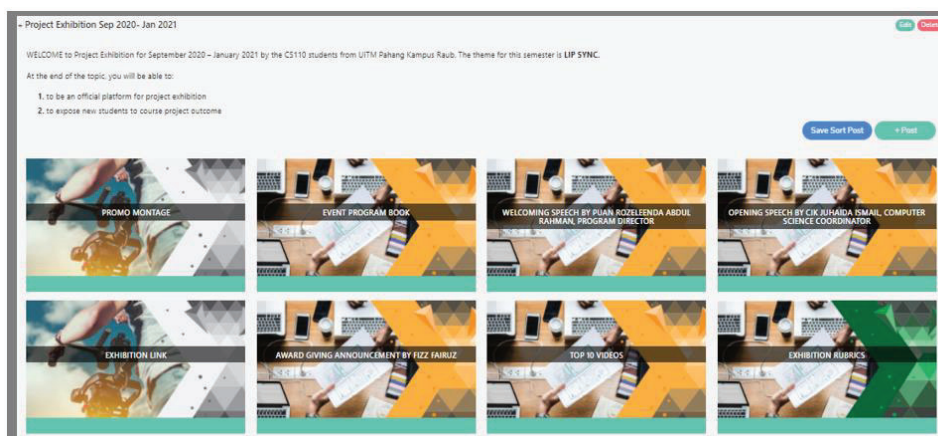


Figure 8. Project Exhibition

All of these components are crucial in the process of achieving all the project objectives of becoming a comprehensive online classroom for Interactive Multimedia Course.

2. METHODOLOGY

For this project, thorough overview through web observation on other online classroom platforms has been conducted to capture the vital components of an effective online classroom. Web observation is a way of collecting data through web observing. The web observation data collection method is classified as a participatory study because the researcher has to immerse herself in the setting where her respondents are while taking notes and/or recording. Web observation can be divided into two types which are structured and unstructured web observation. For this project, unstructured web observation has been chosen as a method in studying the components needed in this online classroom. Through this unstructured web observation, an open and free manner in the sense that there would be no pre-determined variables or objectives are applied.

As to study the feedback from students, this study adopted the quantitative methodology where a self-examined questionnaire was used to assess students' experiences in using this online classroom. A set of structured questionnaires are used to gain students' feedback towards this online platform. This feedback survey is distributed to 1745 numbers of students who sit for this course for one whole semester across different programs and campuses. The data were gathered using Google Form and then being analysed using Microsoft Excel. The questionnaire set consists of six (6) questions with 5-point Likert scale to get responses on students' understanding on instructions given, quality of notes provided, quality of teaching videos provided, quality of activities provided, adequacy of self-assessment, and

students' overall satisfaction towards the course. In addition, these questionnaires also seek for suggestions and recommendations from students in the process of services and delivery improvement. The methodology adopted in this study is illustrated schematically in Figure 9.

Research Problem	<ul style="list-style-type: none"> No dedicated online learning platform for Interactive Multimedia Course (CSC253) Online notes provided only cater for limited type of learners Current situations that requires online learning to be conducted through the whole semester hence it requires a comprehensive online learning platform
Research Objectives	<ul style="list-style-type: none"> To provide comprehensive online learning platform by utilizing MOOC features provided in UFUTURE to cater wide diversities of learners' To embed traditional face to face teaching in online learning environment To give opportunity for research and development in online education
Research Approaches	<ul style="list-style-type: none"> Unstructured Web Observation on other online platforms – to capture components of an effective online platform Structured Feedback Survey Questionnaires – to obtain students feedback on the online platform for Interactive Multimedia Course (CSC253)
Research Findings	<ul style="list-style-type: none"> Components of an effective online platform Analysis on feedback from students

Figure 9. A Schematic Overview of the Methodology Adopted in this study

3. RESULTS AND DISCUSSION

The results and discussion for this study are divided into two (2) parts which are components of online classroom and overall feedback from students towards this online classroom after its launch. To capture components of an effective online classroom, an unstructured web observation has been carried out as explained in the previous part. From the web observation, three (3) main components have been identified as crucial in an online platform which are:

- learning materials (notes, teaching videos)
- activities
- assessment/assignments

Those three components can be found in almost all online platform as it serves as the foundation for an online classroom. For this project, researchers have taken extra miles by adding more additional features on top of the basic components in order to ensure that this online classroom can serve as a comprehensive online classroom that caters for lecture sessions, lab tutorials and project exhibitions.

Table 1 below shows the percentage for students' feedback on each component assessed.

Table 1. Feedback on Components of MOOC for Interactive Multimedia (CSC253)

	Percentage				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>The instructions given for the topics are clear and easy to understand</i>	0	0.9%	12.1%	44.5%	42.4%
<i>The notes provided for the topics are aligned with the learning outcomes</i>	0	0.5%	10.9%	45.2%	43.4%
<i>The teaching videos provided for the topics help to improve understanding regarding the topics</i>	0	0.6%	10.9%	45.8%	42.7%
<i>The activities developed for the topics are able to improve understanding regarding the topic</i>	0.1%	0.7%	11.7%	45.4%	42%
<i>The self-assessment given for the topics are helpful to measure understanding regarding the topic</i>	0	0.5%	11.7%	46.8%	41.1%

From the analysed result, more than 85% of students mostly agreed that all components provided were well-aligned and significantly improved their understanding regarding topics in the course. At the end of the questionnaire set, students were required to respond on their overall satisfaction towards the course which depicted on Figure 10 below.

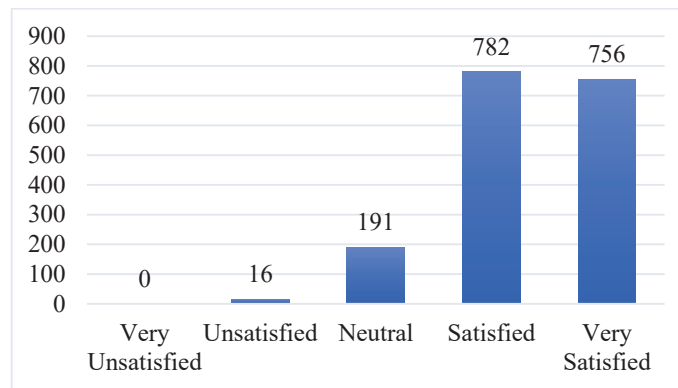


Figure 10. Students' Satisfactions towards MOOC for Interactive Multimedia (CSC253)

4. CONTRIBUTION AND USEFULNESS/COMMERCIALISATION

This project is the only MOOC for CSC253, Interactive Multimedia course that serves for students who are interested in the multimedia course without limitation from which field, courses, campuses or universities. This project is developed with achievable objectives through UFUTURE which is UiTM official ODL platform. With the objectives of providing an online learning platform by utilizing MOOC features provided in UFUTURE to cater wide diversities of learners' preferences, to embed traditional face to face teaching in the online learning environment and to give opportunity for research and development in online education, it is believed that this project will be received enormous positive responses from time to time. This has been reflected from the early launch of this course as it received very promising positive feedback from lecturers and students.

5. CONCLUSION

Creating a comprehensive online classroom needs a very well-designed structure in accommodating the requirements of the course. The structure must consist of all vital components in enhancing the quality teaching and learning processes as well as reaching wide diversities of learners. New features can also be added to the project so that significant improvement can be done progressively. Over this project development, it also received positive feedback from the students and consequently giving the opportunity for the researchers in contributing new insights for online education.

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