Mastering Principles of Risk Management, Insurance, and Takaful: A Comprehensive UiTM Massive Open Online Course

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ABSTRACT

The need to integrate technology into the education system has always been on the rise in the 21st century. The emergence of Coronavirus 2019 (COVID-19) has further increased the need for web-based education since educational institutions have to temporarily close to curb the spread of the virus. Universiti Teknologi MARA (UiTM) has also chosen to migrate its face-to-face classroom teaching and learning approach to open and distance learning (ODL). UFUTURE is a platform developed by UiTM for lecturers and students to have online learning through the development of massive online open courses (MOOCs) which can also be accessed by anyone who wants to self-learning. Principles of Risk Management, Insurance and Takaful course has also been transformed into MOOC to assist anyone especially UiTM students in learning this course remotely. This paper will discuss the design of ASC173 in the UFUTURE platform that implements various types of learning materials and evaluate the usability of the platform using the System Usability Scale (SUS) test among the students who took this course in the semester March 2022. The obtained SUS score 92/100 indicated that respondents were satisfied with the form of the proposed MOOC and it is acceptable to be implemented for anyone who wants to learn this course.

Keywords: COVID-19, MOOC, ODL, teaching, learning

INTRODUCTION

Learning in the 21st century has shown great development in the education system. From traditional classroom teaching to the integration of using the internet and gadgets, the process of knowledge transfer from educators to learners has been greatly changed. With the emergence of the Coronavirus 2019 (COVID-19) pandemic, the global education sector has faced challenges in delivering knowledge and information to students [1]. Since most countries in the world have to temporarily close educational institutions to curb the spread of the virus and reduce infections [2], educational institutions were forced to impose a temporary halt in the academic calendar while looking for the best method to assist the teaching and learning process. Due to this situation, the need for web-based education through online learning platforms to store learning materials that can transcend time and place is on the rise. A massive open online course (MOOC) platform is one of the online learning methods used by educational institutions to provide open and distance learning environments even before the emergence of COVID-19 [3]-[5]. However, the use of MOOCs has rapidly increased following the event of COVID-19 movement control order to ease the dissemination of learning materials to students.

Universiti Teknologi MARA (UiTM) is one of the universities in Malaysia to use MOOCs to cope with the problem of not being able to conduct face-to-face learning during COVID-19. As the largest public university in Malaysia with 34 campuses and more than 150,000 students [6], the use of a massive online

platform is very important to reach all local and international students. Thus, UiTM has chosen to complete its academic calendar by migrating its traditional face-to-face classroom to open and distance learning (ODL) method starting on 13th April 2020 for all its campuses nationwide [7]. UiTM has developed its own Learning Management System (LMS) namely UFUTURE as its MOOC platform [8]. By using UFUTURE, lecturers can deliver learning content online that is not only limited to UiTM students but also open to anyone who wants to take a course with no limit on attendance and accessibility.

The UFUTURE platform has also placed all UiTM MOOCs that previously had been placed on the OpenLearning platform. Starting in 2019, OpenLearning platform would charge the users who want to use the platform. Thus, UiTM has taken the initiative to develop its own MOOCs platform for free that was placed in UFUTURE platform [9]. Until now, there were 1,837 total MOOC courses available on this platform and the number keeps rising. UiTM has had MOOCs since 2014 and has been continuously upgrading MOOCs together with its content, rigorously enhancing academic staff performance, and actively adding suitable courses for conversion to MOOCs [10]. In addition, MOOC was a platform that considered the learners or users to be evaluated to understand the subjects more effectively [11].

The Principles of Risk Management, Insurance and Takaful course or can be referred to by its course code ASC173 is one of the MOOCs developed in UFUTURE after the COVID-19 outbreak. The development of this course started in March 2021 and was completed and readily used by the end of the same year. This course was fully conducted face-to-face with 4 contact hours per week before the use of UFUTURE. During the pandemic, lecturers have difficulty teaching the course since they have to use multiple channels to store learning materials and conduct lectures in order to make sure that each student can access the contents, do learning activities, and submit assessments, while monitoring their participation. The development of ASC173 in UFUTURE has made it easier for lecturers to store learning materials in only one platform and enabling it to be recognized as a blended learning course where half of its total contact hours can now be conducted online.

In this paper, we will discuss the design of ASC173 in the UFUTURE platform. Next, we will evaluate the usability of the platform in delivering ASC173 during online learning using the System Usability Scale (SUS) test among the students who took this course in the semester March 2022.

MOOC PRACTICALITY AND ADVANTAGES

The use of MOOCs for online learning has tremendously increased since its introduction and accelerated during COVID-19 movement control order. Many universities worldwide use MOOCs as a complementary learning tool due to their advantages in supporting the process of knowledge distribution to the end-user that is the student. As a free online platform, the use of MOOCs has been promoted through past studies and research [12]-[14]. According to Younos [15], the main goal of MOOCs is to provide open access for a high-quality education while supporting the process of learning and knowledge creation through social interactions.

As the name indicates, MOOCs can support massive and large enrollments at the same time. This is different from traditional learning where educators can only entertain a small number of students at the same time. Besides, openness is also one of its core components [16] where participation and communication are open for anyone who enrolls in the course [17]. The students also like the flexibility that MOOC can offer because they can access the contents and materials at their own pace. This has made learning much easier as they can learn almost anytime and anywhere [12], [18]. All of these features of MOOCs as designed in UiTM UFUTURE have made it easier for ASC173 to be conducted virtually with the potential to be offered to students in any UiTM campus since it does not require a physical instructor to be present.

In addition, the ability of MOOCs to drive diversity in education has encouraged and engaged students for lifelong learning while enhancing teachers' skills by developing open education [19]. New knowledge can

be shared in a connectionist approach, allowing the knowledge to be openly used to improve the MOOC itself and to give continuity to the learning community [20]. Thus, anyone who is interested in learning this course can join through UFUTURE platform as it is not only limited to UiTM students.

DESIGNING MOOC ASC173

UFUTURE is the platform that provides the accessibility of the available MOOC courses for UiTM students. It helps the students to undergo learning sessions in open and distance learning. This platform not only consists of UiTM MOOC but is also available for UiTM courses and Micro-Credential courses for all UiTM students and external users.

MOOC ASC173 course is developed and published on this platform to facilitate online learning for UiTM students and the public for free. Experienced lecturers act as content developers and share their resources as learning materials for this course. Fig. 1 presents the flow chart of the overall process. It consists of five main activities which are the storyboard design phase, create learning activities phase, design MOOC according to guidelines, create homepage or landing page and add interactive content.

The design of MOOC ASC173 starts with a storyboard to plan the suitable materials to be included in the MOOC. The storyboard design is important in providing the developers' overall view of the MOOC. The storyboard is designed according to the topic of the ASC173 course. The topics are identified and divided into seven as listed below:

Topic 1: Risk and Insurance

Topic 2: Introduction to Risk Management

Topic 3: Insurance Company Operations

Topic 4: Legal Principles in Insurance Contracts

Topic 5: Fundamental of Life Insurance and Life Annuities

Topic 6: Fundamental of General Insurance
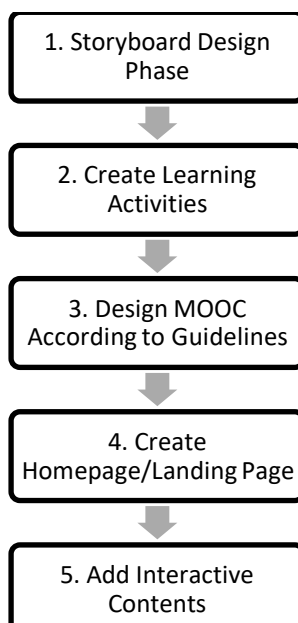
Topic 7: Fundamental of Takaful

Fig. 1 MOOC ASC173 main activities

The contents of each topic were designed in MOOC learning activities. These contents were further divided into several subtopics as in the course scheme of work where lecture notes and videos can be uploaded for students' learning. In addition, additional materials, discussion, and learning activities can also be included in the learning activities menu. For example, Topic 1 contains an introduction to the topic, several subtopics related to the topic, conclusion, teaching video, additional materials, discussion, and activities. Example of subtopics in Topic 1: Risk and Insurance is presented in Fig. 2.
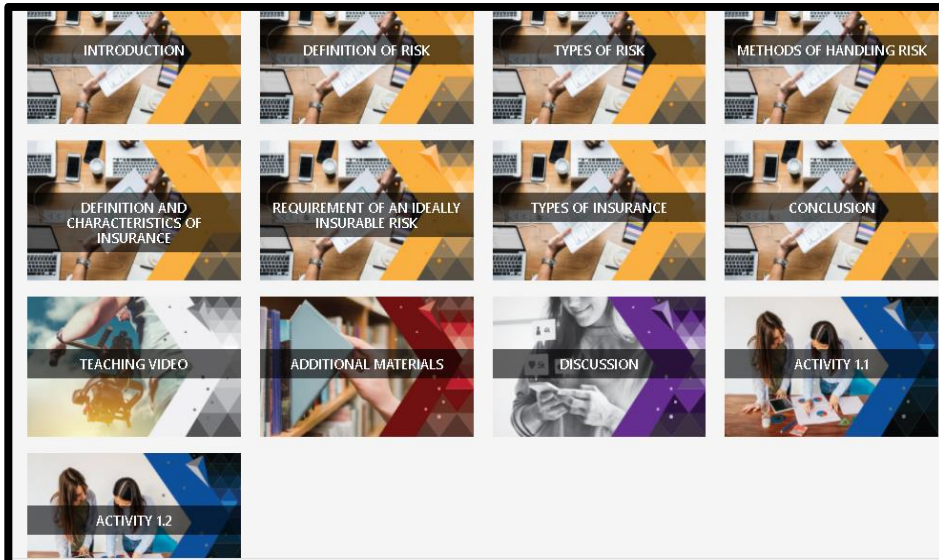

Fig. 2 Example of subtopics

UiTM MOOC developers were given the freedom to design this MOOC as stated in the guidelines. According to the Guidelines for Development and Delivery of Malaysia MOOC, the first component is the homepage or landing page. This page should have an introductory video of the subject, course information, course synopsis, and course learning outcomes (CLO) [21]. Thus, an introductory video of the course has been placed on the homepage as an overview of the course. Fig.3 shows the introductory video of the course.
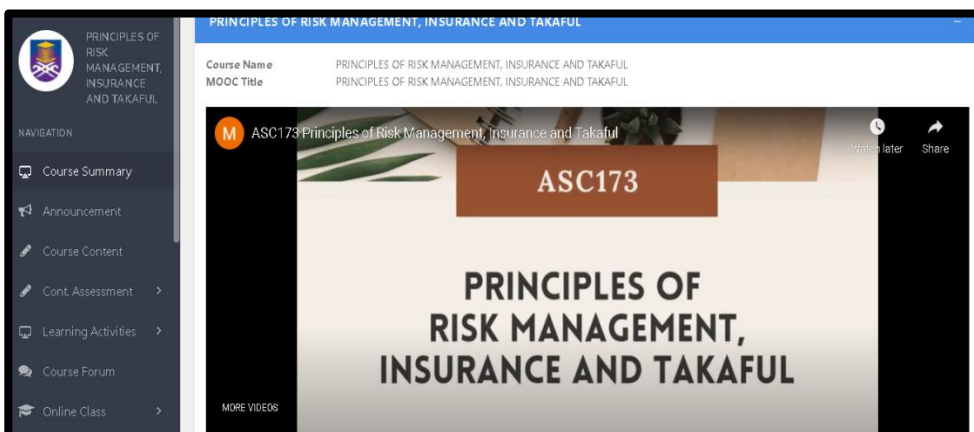

Fig. 3 Introductory video

In order to boost student engagement in the online learning environment, the developers were encouraged to add interactive content as mentioned in the last main activities in Fig. 1. The contents for the subtopics were created by using animated videos such as Canva, PowToon, and Biteable. All animated videos have been converted to YouTube videos to make it easier for students to view these videos directly from this platform where they can also be downloaded. Whereas, the contents for activities were developed by using Genially, digital flipbooks, crossword puzzles, and matching activities. Fig. 4 shows activity in Topic 3 that was developed using Genially.
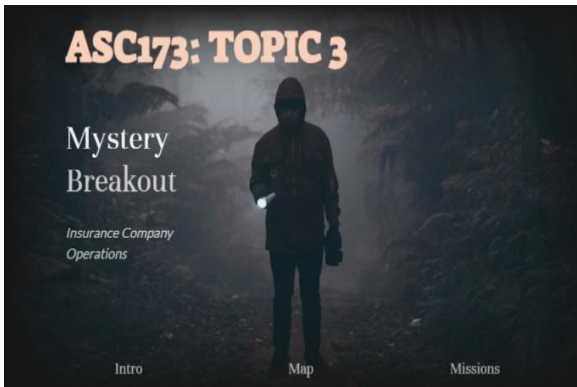
Fig. 4 Example of activity

Another advantage of using UFUTURE is the lecturers could also monitor the progress for the participation of each student from the activity tracker. This tracker could count the amount of time a student spends on this online course and calculate the percentage of activities completed on each topic. Fig. 5 illustrates some of the tracking activities for each student.

Fig. 5 Tracking activities

Students can also give feedback and post their opinions or questions regarding the course on this platform. From the students' feedback and comments, they expressed their love and joy in learning using this MOOC because all the information needed such as video notes, activities, assessments, and reference materials are always available. They can easily get all the learning materials and do various types of activities or assessments from only one platform. In addition, the students can browse this MOOC anywhere as long as they have internet access.

USABILITY OF MOOC ASC173

In order to study the usability of the completed form of this MOOC, we evaluated the MOOC using the System Usability Scale (SUS) test. The test was conducted on 20 students who registered ASC173 course in semester March 2022. The SUS test was chosen as it has been widely used for measuring the usability of an application [22-24] or platform that involves learning through a virtual environment [25-26].

The respondents were randomly selected without considering the cumulative grade point average (CGPA) in the previous semester, gender or having an IT savvy background. The SUS test is used to obtain feedback towards the overall design, which helps to improve the usability and functionality of the MOOC. Respondents will answer the questions based on the provided scale from strongly disagree (1) to strongly agree (5).

Table 1 demonstrates the questions presented to the respondents. The questions consist of 10 questions constructed by positive and negative statements. The SUS score is calculated based on the response selected by the respondent and the overall result of the user acceptance towards this application. The obtained SUS score is divided into three categories; not acceptable if the score is below 50, marginal if the score is above

50 and below 68 and acceptable if the score is above 68 [27].

Table 1. SUS Questions

Number	Questions
1	I think that I would like to use this MOOC frequently.
2	I found the MOOC unnecessarily complex.
3.	I thought the MOOC was easy to use.
4.	I think that I would need the support of a technical person to be able to use this MOOC.
5.	I found the various functions in this MOOC were well integrated.
6.	I thought there was too much inconsistency in this MOOC.
7.	I imagine that most people would learn to use this MOOC very quickly.
8.	I found the MOOC very cumbersome to use.
9.	I felt very confident using the MOOC.
10.	I needed to learn a lot of things before I could get going with this MOOC.

From the obtained responses, the proposed MOOC achieved 92 points out of 100. The obtained point has indicated that the usability of this MOOC is above average and 'acceptable to be applied'. Fig. 6 shows the score for even and odd questions for each respondent and Fig. 7 presents the SUS score of each respondent. The overall result indicates all respondents were satisfied with the form of the proposed MOOC. However, there are four respondents that returned less than 90 points, which are respondents 6, 11, 18 and 19 compared to other respondents. This is due to several reasons such as the respondents still not prepared his or her mind in learning this course, maybe the respondents prefer to choose face-to-face learning instead of using online approaches and maybe the respondents prefer to read books instead of using online materials provided in this MOOC course.
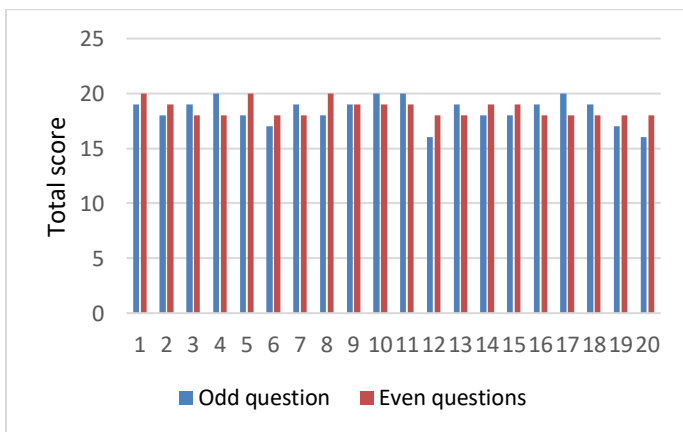

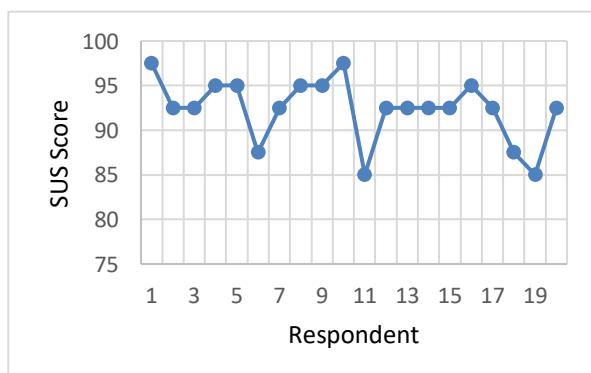Fig. 6 Total score for odd and even questions of each respondent

Fig. 7 SUS score of each respondent

CONCLUSION

The emergence of COVID-19 has proved the importance of developing MOOC for this course. MOOC ASC173 acts as the first online platform where students who want to learn this subject can easily get all the learning materials in one platform. The ease of use is not only favorable to the students, but it is also like by the lecturers in conducting classroom in the virtual environment. The ability of the MOOC to store and present various learning materials from different kinds of websites and applications can also increase students' interest in learning the subject. Students can also test their understanding of the topics learned through the provided activities and assessments. Thus, the creation of this MOOC makes it possible for learning materials to be delivered more interactively while improving assessment methods. The SUS score and the students' feedback also concluded that learning this course through UFUTURE is one of the best experiences for ODL. However, further research should be done to evaluate the students' achievement by comparing their examination results before and after the implementation of this MOOC for better improvement.

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