ONLINE DISTANCE LEARNING AND ONLINE LEARNING IMPLEMENTATION TO CIVIL ENGINEERING STUDENT FOR SUBJECT CSC128

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ABSTRACT

Online Distance Learning (ODL) and Online Learning (OL) are the current trending in flexible education. This approach allows anyone to learn from anywhere and anytime. During this COVID-19 pandemic, all the education institutions in all around the world are suggested to conduct or run their education system using this ODL and OL approach. UiTM Cawangan Pulau Pinang also takes their part to the response to the ministry's recommendation in conducting ODL and OL teaching sessions. All the lectures in UiTM Cawangan Pulau Pinang are required to attend training that helps the preparation to conduct online classes. Variety of platforms and software were exposed during the training to enhance the lectures teaching techniques with online classes. The lecturers have to identify the student facility and requirements before they starts the online clasess.

Keyword: Online learning, distance learning, video developing application, screen recorder

Introduction

Wikipedia define online learning as, courses that offered in education that are 100% virtual. While, distance education that is well known as distance learning is the process of whereby students who may not always be physically present at a school or higher education institutions (Kaplan, Andreas, Haenlein, 2016; Honeyman, Miller, 1993). A number of other terms like distributed learning, e-learning, m-learning, online learning, virtual classroom are used generally synonymously with distance education (Hodges, C., Moore, S., Lockee, & ect,2020). All the terms above will refer and support the process of virtual learning.

Online Distances Learning (ODL) and Online Learning (OL) was suggested to apply during this COVID-19 pandemic for all levels of education system. UiTM also do not left behind

to apply the OL and ODL for all the session during this movement control order (MCO). In UiTM Cawangan Pulau Pinang (UiTMCPP), the lecturers are given brief training to help them to conduct the ODL and OL classes. This short course has exposed the lecturer to variety of platform and software that can be used to develop content and conduct the distance learning during the MCO. Lecturers are given full freedom to design their style of teaching regarding their skills and facilities.

Fundamental of Computer Problem Solving (CSC 128) is one of the servicing courses offered in UiTM for diploma students. CSC128 is a servicing subject for certain courses and the students are novice students. This course is offered for civil engineering students in semester two (2) while for mechanical engineering students, it is being offered in semester four (4) in UiTM Cawangan Pulau Pinang. There are five chapters in this syllabus. Normally this course has two (2) hours of lecture and two (2) hours of lab session during face to face (f2f) session. Inline to MCO, this CSC128 course also has modify the teaching approach from f2f to OL and ODL. The resource person (RP) for CSC128 has design the new guidelines to conduct assessment that is relevant to be applied during this ODL and OL classes.

Data Collection

Before starting the ODL and OL classes, Academy Affairs Division (BHEA) UiTMCPP request the lecturers to conduct a survey among the students to identify the readiness and the constraints as their preparation to ODL and OL classes. From the result, the lectures can design and plan their approaches that can be applied to facilitate their teaching planning during MCO. The lecturers teaching approach must accomplish their student facilities. The lecturers must also plan their ODL and OL by using the suitable platforms, type of materials and assessment.

Identifying Student Preference and Needs for ODL and OL

The CSC128 lecturers team in UiTMCPP who is teaching the civil student has plan and standardized their teaching method during MCO. The lecturer's team for CSC128 courses have done surveys to find the requirement and readiness. They distribute the survey among their civil engineering who registered to CSC128. The number of civil engineering student that have registered are 44 students.

Below are the some of the questions asked in the survey:

- Select available devices for online teaching and learning (you can choose more than 1) *

- Do you have any Internet access at your place? *

- Which of the below platform do you prefer for online teaching and learning? (you can choose more than 1)

- Which of the below material type do you prefer for online teaching and learning? (you can choose more than 1)
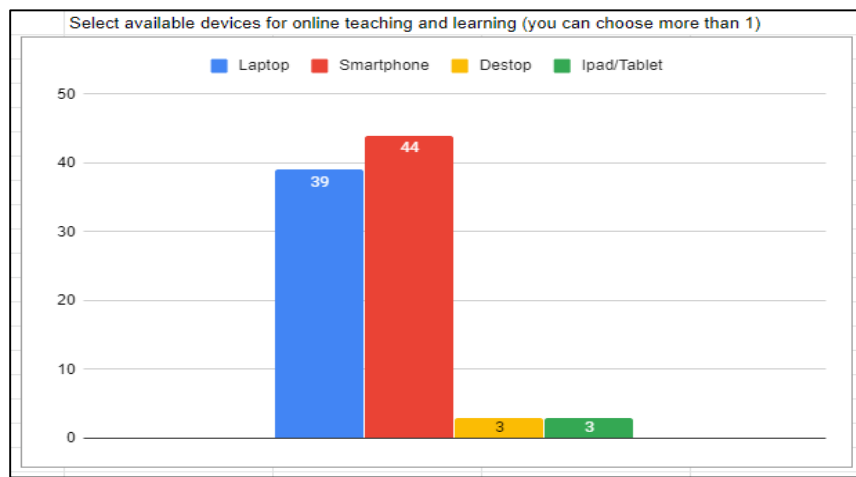

Figure 1: Respondents preference on device availability for ODL and OL classes

Figure 1 shows the respondent's device availability for the ODL and OL classes. Most of the student have their smartphones that can used for online class. Besides that, there are 39 of the respondents have their laptop and 3 of the respondents have desktop and tablet. Here shows that all the student has their basic electronic device that can be used during the online classes.
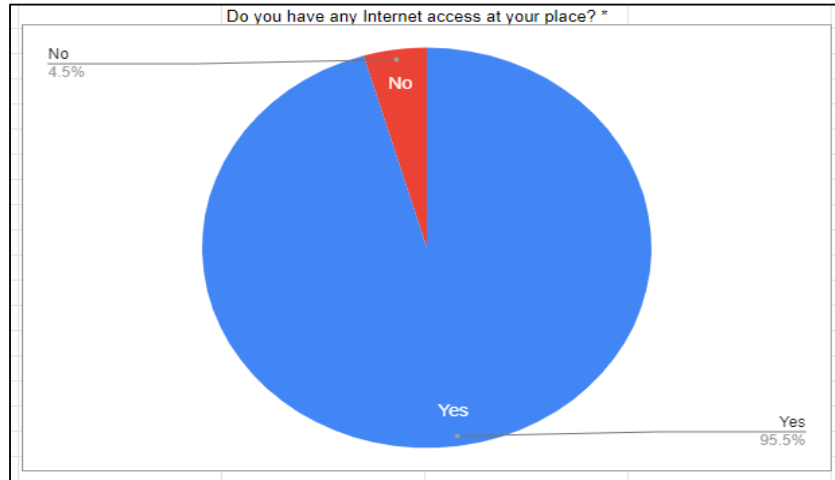
Figure 2: Respondent's internet connection availability

Figure 2 shows that 95.5 % which is 42 of respondent have their internet connection at their place and only 4.5 % which is 2 of the respondents have no internet connection. The respond that have no internet connection it is because they are from rural area.
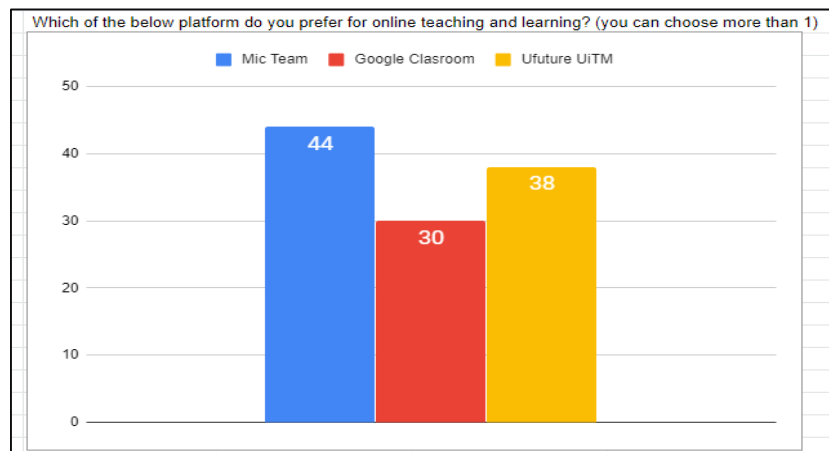

Figure 3: Respondents preference on platforms for executing ODL and OL classes

Figure 3 above shows the result of respondent's preference on the platform that can be used during their online classes. There are given options such as Google Classroom and Microsoft Teams and ufuture from UiTM. The respondent is allowed to select more than one options. Most of the student prefer to use Microsoft Teams as their platform, it is because the Teams platform are free to register. 38 of them had also selected ufuture and 30 of the selected Google Classroom.
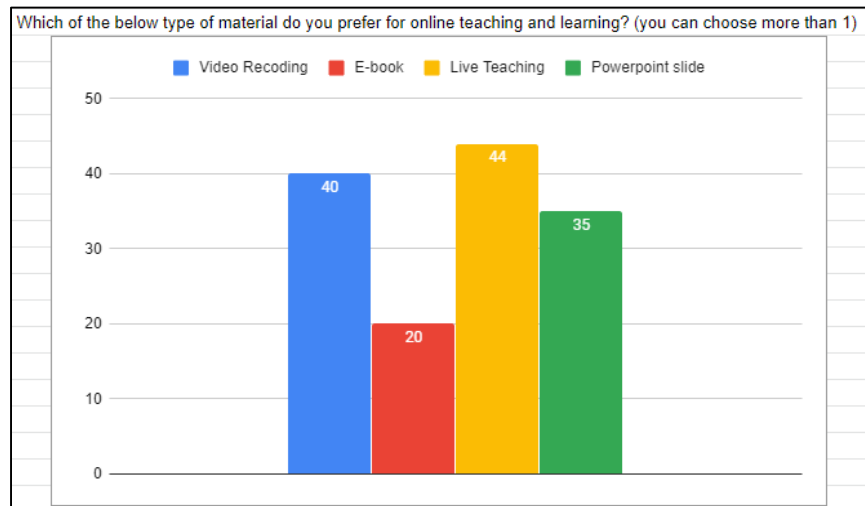
Figure 4: Respondents preference on material type during ODL and OL classes

Figure 4 above shows the respondent's preference on the type of material for their online classes. Video recording, live teaching, E-book and PowerPoint slide are the options given for them to select. The respondent is allowed to select more than one options. Most of the student prefer to have live teaching classes. They are less interested with E book material. They also prefer to see video recording and power point slide.

Preparation of Teaching Materials

Before the ODL and OL classes starts, the lecturer's team of CSC128 have to develop their class materials as their preparation. They decided to develop their notes more interesting based on the student preference as in the survey done. From the survey, student more prefer notes in video style.

The lecturers' team develop their video material using Powtoon and Biteable Software. Powtoon is a web-based animation software that is use to create animated presentation and animated explainer videos. It was launch in January 2012 by a British company. Biteable is also known as free online video creating software. It was initiate by Tommy Fotak, Simon Westlake, and James MacGregor. Both of this video making software are used to develop the content or theoretical part materials.

Screencast O Matic and Online Broadcast software (OBS) are the additional screen recorder that been used to capture the programming example. OBS is a free and open source video recording software.

Figure 5 below shows the example of Powtoon video that is created to develop the notes. Usually, the theoretical notes are created using this video method so that it can be delivered in interesting ways. In this video also the lecturers can record their explanation.
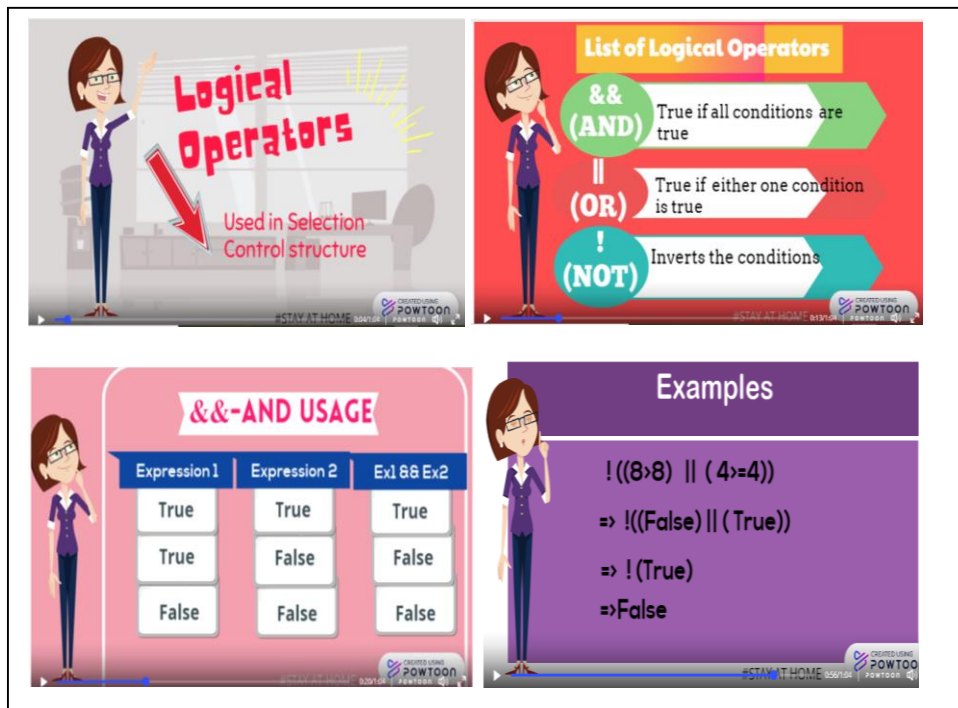

Figure 5: Example of Powtoon videos

Figure 6 show the example of screen recoding that been created to explain the programming questions. The pictures in the figure are recoded using Screencast O Matic video recorder.
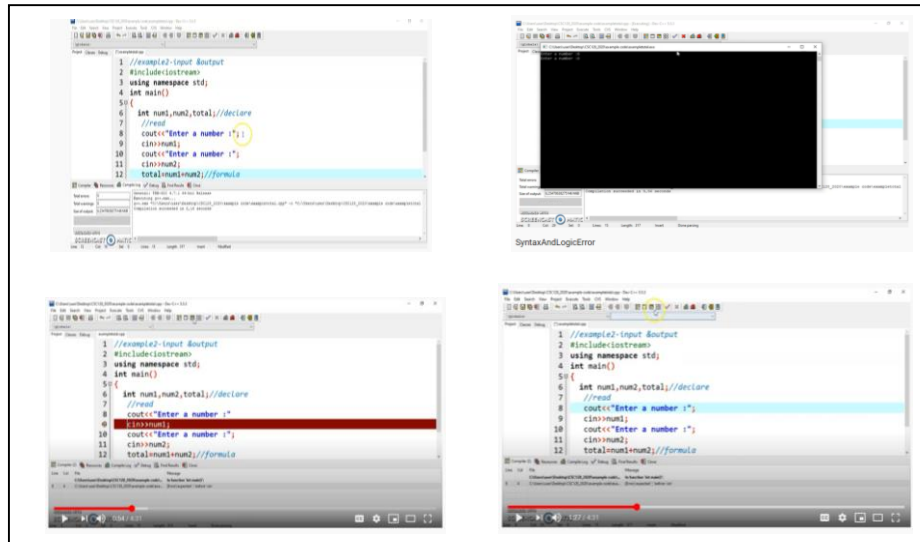
Figure 6: Example of Screencast O Matic videos

Implementing ODL and OL Classes

The lecturers team had to decide the proper platform and variety of teaching method and material that they can used during MCO from the result above. They have decided to conduct most of their class through live teaching using Microsoft Teams based on the student preference. This Microsoft Teams is a hub that has been designed to address a team collaboration as define by wikipedia. Microsoft Teams also is a team collaboration in Microsoft 365 that allow people to integrate their contents, chats, meeting, and video conferencing. The lecturers' team also upload their notes like recorded video and power point slide here. Using this Microsoft Teams, they used this platform as one (1) central hub, here the notes, here the live classes and their assessment. The CSC128 lecturers conduct their OL classes using this platform thru the video conferencing ways. They also asked the student to submit the exercises and assignment through this Microsoft Teams. They also conduct class quizzes through this platform.

Beside Microsoft Teams, the lecturers also used ufuture that been initialized by UiTM. This ufuture is a platform that has been designed by UiTM which is used for delivering online content to any person, any course with no limit of attendance. The lecturers also refer and used additional notes from MOOC that been placed in ufuture. This is because, they want the CSC128

student to be exposed to variety of material that help the student to do revision beside the noted provided to them.

Conclusion

During MCO all the education institution are requested to conduct online learning. UiTM also takes their initiative with helping the lectures and students to implement the ODL and OL. Variety of platforms and softwares are available that can support and smoothness the process ODL and OL. The CSC 128 lecturers' teams who teaches civil engineering students in UiTMCPP has conducted their online classes using platforms of Teams and ufuture. They have development their lecturer material using applications like Biteable, PowToon Screencast O Matic screen and recorder OBS video recorder. These lectures select this platform and material type after conducting surveys among their civil students.

References:

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