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TECHNOLOGY ENHANCED EDUCATIONAL PRACTICE DURING THE COVID-19 PANDEMIC: TEACHING EXPERIENCE AT PRIVATE COLLEGE IN MALAYSIA

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Abstract

In the year 2020 to 2021, educators faced a dilemma in teaching and assisting undergraduates and postgraduates during the lockdown period due to the Covid-19 pandemic. The unprecedented situation has affected both the teaching and learning practices in higher educational institutions throughout Malaysia. All the educators were conducting online classes by transitioning into fully blended or flipped classrooms in higher educational institutions. Both educators and learners are equally sceptical about the outcomes of online learning and under such circumstances, embracing online learning systems will be a challenging factor for both educators and learners alike. This unprecedented Covid-19 pandemic has engendered us to utilize the existing Learning Management System (LMS) to engage students in learning. This reflection illustrates how the ADDIE instructional design has been integrated into content development to enable virtual classes to be conducted more effectively.

Keywords: *Flipped Classroom, Improving Classroom Teaching, Active Learning, Educators, Learning Management System*

1.0 Introduction

The Covid-19 outbreak has made a huge impact on educational practices in higher educational institutions. There were sudden changes in regulations and closures of universities when the government imposed a Movement Control Order (MCO) to prevent the spread of the disease through social distancing and by following Standard Operating Procedures (SOP). This situation has affected face-to-face teaching and learning practices in higher educational institutions. This unprecedented situation has resulted in a shift from the traditional classroom to an online learning system. In adapting to this abrupt shift, educational institutions face challenges in selecting the right technologies and approaches to educate and engage students (Rashid and Yadav, 2020).

In addition, the role of instructors and higher educational institutions in delivering quality education, accessibility in terms of mode of delivery, the significance of lifelong learning, as well as instructor's perceptions of different types of learners have all been challenged. According to Dhawan (2020), this Covid-19 pandemic provided a great opportunity to pave the way to introducing digital learning. Furthermore, during this pandemic, e-learning tools have been widely utilised to facilitate student learning at various levels of education (Subedi et al., 2020). Moreover, these online learning systems and the sudden changes in teaching and learning practices have required minimal movement and physically challenged students now have more freedom to participate in learning (Basilaia & Kvavadze, 2020). However, Petrie (2020) has stated that a suitable and relevant pedagogy for online learning may rely on educators' and learners' expertise and exposure to Information and Communications Technology (ICT). In these circumstances, flipped classrooms are considered an effective and simple strategy since learning materials prior to class such as pre-recorded videos, articles and YouTube links can be provided to students prior to their classes and the online classroom session can then be utilised for discussions and to promote active learning methods through class activities which can then deepen students' understanding in the subject matter (Doucet et al., 2020).

According to Rashid and Yadav (2020), educators need to focus on modes of curriculum development, e-content development and assessments to cater to their students' needs during this pandemic. Therefore, this reflection explains several aspects of how online lessons have been carried out during the pandemic and post-pandemic. This includes the use of online tools to capture and disseminate learning materials, as well as the effective use of the learning management system (LMS) to aid and involve students in the teaching and learning process. The group message facility available on Whatsapp has been used as a medium of communication to enable prompt responses and to notify students about current updates in the teaching and learning process. Briefly, ADDIE (Analysis, Design, Develop, Implementation and Evaluation) model has been applied in developing teaching materials and formative assessments which can ensure the effectiveness of the teaching and learning process during this unprecedented Covid-19 pandemic.

This reflection is organized as follows: The first section of the reflection explains the content development for flipped classrooms followed by a survey on students' perception of e-content (pre-recorded videos) and an instructor's role in flipped classrooms during the pandemic.

2.0 Literature Review

2.1 Phase One: Content Development Based on the ADDIE Instructional Design Model

First and foremost, educators have been instructed to conduct flipped classrooms (virtual classes) or to create short videos in accordance with the relevant syllabus. Most educators are perplexed by the virtual classroom method due to the lack of explicit rules and guidelines for recording successful short videos for the flipped classroom.

Although most educators have attended training for integrating online tools in teaching such as Screen-o-Matic, Edpuzzle, Blendspace, Padlet, Quizlet, TedEd, and Blackboard, educators never had experience in conducting a live online class session. Furthermore, MPU lecturers faced more complications and challenges in conducting MPU classes virtually due to the number of students and lack of participation in online classes. Therefore, carefully designed teaching and learning practices are needed for teaching large classes by incorporating technology into teaching. Finally, the ADDIE instructional model has been employed to develop course content with the integration of technology based on published articles in peer-reviewed journals about how to effectively integrate technology into the teaching and learning process for online classes.

In this analysis phase, a closed observation process was carried out. MPU educators paid more attention towards students' queries and their difficulties in learning, especially learning through videos and online classes. In line with that, based on the observation three main aspects have been identified namely technical issues, content learning and student engagement. In addition, existing students needed little guidance on technical issues such as logging into Blackboard Learn and accessing the shared videos, and learning materials, as well as online submissions of their assignments and online quizzes. However, our new intake students required more assistance with these technical aspects. Therefore, more chunking videos have been recorded to assist these fresh students during the pandemic.

2.1.1 Design

Firstly, MPU lecturers gathered all the information through teaching and learning sessions and observation processes. Next, designing the class teaching and learning practices to be constructively aligned with the learning outcomes. The MPU lecturers allotted enough time for content production or lesson planning, as well as formative evaluation. All the virtual classes were held using Zoom, Cisco Webex, and Skype. However, MPU lecturers preferred the Zoom sessions as it is more user-friendly, and elected to use this platform to deliver the majority of the virtual classes rather than through Webex or Skype.

Normally, after the first Zoom session, the lecturer takes a 10 to 15-minute break before continuing the lesson in the second Zoom session, and students will have been assigned some class exercises by the end of the second Zoom session. The efficacy of content planning and mind science may be utilized to prepare the instructional content on Microsoft PowerPoint slides to make them more engaging, catchy, appealing, and participatory during classes.

2.1.2 Development

First, all the teaching materials and class activities have been uploaded into the LMS for the development phase (Blackboard Learn). After that, another instructor who teaches the same Mata Pelajaran Umum (MPU) courses reviews the content quality before implementation or before allowing students to access the learning materials. After the content validation, some of the teaching contents and class activities needed some amendments for their betterment. Briefly, during this phase, all the MPU lecturers worked together due to the same teaching experience and most importantly for content validation and towards the final implementation.

2.1.3 Implementation

Finally, the virtual classes commenced with some pre-recorded videos for students' reference. Some important tutorial videos had been recorded on how to access their learning materials on BB (BlackBoard Learn), how to download the class activities, how to submit assignments online and how to do online quizzes on BB.

After the introductory class, the learning contents developed earlier were used for teaching and students were assigned continuous class activities. During virtual sessions, always engaged with the students by asking them some questions relevant to the topic of the day. Apart from that, the students did present their mind maps, and once they had done so, one or two students have been selected at random to answer questions based on the mind maps that they had presented. In doing so, most students were engaged in the session and could learn the course materials efficiently. Before the end of each virtual session, the instructor always recapitulates the lesson including the key topics before assigning class activities to the students for reinforcement purposes.

3.0 Methodology

3.1 Phase Two: A Survey on Students' Perception Towards E-Content and an Instructor's Role in Flipped Classrooms During the Pandemic.

A quantitative method was employed to collect data. This study was carried out via a virtual campus at one of the private colleges in Penang. This study focused entirely on the flipped classroom design. Blackboard Learn was utilised to disseminate learning materials, pre-recorded videos and to engage students with class activities.

This study was carried out from January to April of the academic year of 2021. In this long semester, around 110 students were enrolled for the Hubungan Etnik (MPU 3113) subject. The majority of students were enrolled in the Bachelor of Business Administration, Bachelor of Marketing Management, Bachelor of Business Computing, Bachelor of Engineering, Bachelor of Mechanical Engineering and Bachelor of Information Technology programmes. All the students were informed about the flipped classroom design and the course description was briefed to them clearly. All students received the same lecture notes, pre-recorded videos and overall learning experience.

All the students enrolled for 14 weeks of lessons. The students attended seven virtual sessions and seven flipped-based sessions alternately. All the pre-recorded videos were released on a weekly basis in accordance with the lesson plan. After each lesson, students were instructed to work in

groups to complete their class activities which were assigned weekly. At the end of the semester, students were requested to complete an online survey via Google Form. This was used to gauge students' perceptions towards the pre-recorded videos that had been designed and developed based on the ADDIE model, and the instructor's role in flipped classrooms during the pandemic.

The questionnaire was adopted from Goh and Ong's (2019) study. The questionnaire consists of two main topics, the first being the video lecture. The first topic contains ten questions regarding the content quality of pre-recorded videos. The second topic consists of five questions on the instructor's role in flipped classrooms during the pandemic.

4.0 Results and Findings

4.1 Findings on Pre-Recorded Videos

The mean and standard deviation are depicted in Table 1 and the numbers of students' response feedback are listed in Table 2. Based on Table 2, more than 55% of the students were satisfied with the pre-recorded videos that were provided. Students have given high ratings for question number 6 (67%, n:60) and 7 (70%; n:63). This finding shows that about 60 students have agreed that the displayed chunking pre-recorded videos were nice and clear. These findings are consistent with past researches on the effectiveness of pre-recorded videos in the flipped classroom approach (Giannakos et al. 2016; Yousef et.al., 2014; Rasi & Poikela, 2016).

Table 1: Students' Perceptions Towards the Pre-Recorded Videos and Instructor's Role in the Flipped Classroom Approach During the Pandemic

	N	Mean	Std. Deviation
Video lecture [I like the video lecture in general.]	90	3.76	.878
Video lecture [I think the video lecture is very informative.]	90	3.82	.869
Video lecture [I always engage in the video lecture.]	90	3.62	.842
Video lecture [I think the video lecture is very interesting]	90	3.57	.887
Video lecture [I think the length of the video lecture is just nice.]	89	3.82	.886
Video lecture [The display of the video is nice and clear.]	90	3.80	.837
Video lecture [The voice of the lecture is appropriate.]	90	3.87	.877
Video lecture [I don't have problem understanding the video lecture.]	90	3.73	.884
Video lecture [I like the animation used in the video lecture]	89	3.62	.819

Video lecture [The animation helps me in understanding the lecture better]	88	3.68	.810
Presenter [I like the way of the delivery flipped classroom by the lecturer.]	90	3.78	.884
Presenter [The lecturer understands his topic well.]	90	3.96	.806
Presenter [The lecturer engages me in the flipped classroom.]	90	3.87	.824
Presenter [The lecturer uses two-way communication in the lecture.]	90	3.97	.893
Presenter [I have no problem with the lecture delivered by the lecturer]	90	3.90	.822

4.2 Findings on Instructor's Role

Based on the findings in Table 2, the students rated the instructor's role with more than 60% for all the questions. This finding shows that the students were satisfied with the content delivery in the flipped classroom. The students rated highly for question number 2 with 71% (n:64). The students also liked the method/mode of delivery in flipped classrooms with 58% (n:62); Students also agreed that the instructor was engaging during the flipped classroom sessions 66% (n.60%). These findings are consistent with (Murillo-Zamorano et al. (2019); Awidi and Paynter (2019); Zainuddin (2018). Apart from this, the students agreed the instructor had used a two-way communication method in the flipped classroom sessions. According to Adams et. al (2017), to promote active learning, instructors need to practice two-way communication to engage students**.**

Table 2: Students' Perceptions Towards the Pre-Recorded Videos and Instructor's Role in the Flipped Classroom Approach During the Pandemic (n %)

Category: Video and Presenter	**Strongly Disagree n(%)**	**Disagree n(%)**	**Neutral n(%)**	**Agree n(%)**	**Strongly Agree n(%)**
I like the video lecture in general.	2 (2%)	1 (1%)	33 (37%)	35 (39%)	19 (21%)
I think the video lecture is very informative.	2 (2%)	0 (0%)	31 (37%)	36 (40%)	21 (23%)
I always engage in the video lecture.	2 (2%)	2 (2%)	37 (41%)	36 (40%)	13 (14%)
I think the video lecture is very interesting.	3 (3%)	4 (4%)	33 (37%)	39 (43%)	11 (12%)
I think the length of the video lecture is just nice.	1 (1%)	4 (4%)	26 (29%)	37 (42%)	21 (24%)
The display of the video is nice and clear.	2 (2%)	1 (1%)	27 (30%)	43 (48%)	17 (19%)
The voice of the lecture is appropriate.	2 (2%)	2 (2%)	23 (26%)	42 (47%)	12 (13%)

I don't have problem understanding the video lecture.	1 (1%)	6 (7%)	26 (29%)	40 (44%)	13 (15%)
I like the animation used in the video lecture.	1 (1%)	4 (4%)	35 (39%)	37 (42%)	21 (23%)
The animation helps me in understanding the lecture better.	1 (1%)	3 (3%)	32 (36%)	39 (44%)	24 (31%)
I like the way of the delivery flipped classroom by the lecturer.	1 (1%)	3 (3%)	32 (36%)	33 (37%)	29 (21%)
The lecturer understands his topic well.	1 (1%)	0 (0%)	25 (28%)	40 (44%)	24 (27%)
The lecturer engages me in the flipped classroom.	1 (1%)	1 (1%)	28 (31%)	39 (43%)	21 (23%)
The lecturer uses two-way communication in the lecture.	1 (1%)	1 (1%)	28 (31%)	30 (33%)	30 (33%)
I have no problem with the lecture delivered by the lecturer.	1 (1%)	0 (0%)	29 (32%)	37 (41%)	23 (26%)

5.0 Conclusion

In conclusion, the objective of the present study is to measure the students' perception towards flipped classrooms and the instructor's role in conducting flipped classrooms. The main contribution of this study is to identify Malaysian higher education students' perception towards flipped classrooms during the pandemic. It is very important to assess students' readiness and their perception towards flipped classrooms to design and develop effective teaching materials, pre-recorded videos, and formative assessments to promote active learning in the flipped classroom approach.

According to Goh and Ong (2019), Malaysian Higher Education students have high resistance to adopting this new approach due to their previous education exposure. The lack of research in evaluating Malaysian students' perception towards flipped classrooms is very crucial, especially during this pandemic. These sudden changes in education led us to embrace technology to promote active learning in higher education.

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