



Cawangan Kedah  
Kampus Sungai Petani

Faculty of Administrative  
Science and Policy Studies

# i-SPIKE 2021

*Leading An Artificial Innovation In Knowledge, Education And Design*

## **i-SPIKE 2021 INTERNATIONAL EXHIBITION & SYMPOSIUM E-PROCEEDINGS**

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## **E-POCKET NOTE: AN INTERACTIVE VIDEO LEARNING FOR EFFECTIVE ONLINE TEACHING AND LEARNING PROCESS**

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### **ABSTRACT**

The COVID-19 outbreak had significantly impacted our daily lives since the year 2020, forcing the Malaysian government to restructure many sectors, including the education system. As a result of the pandemic, Malaysia's education system has made a rapid transition from face-to-face to open and distance learning (ODL) classes. This situation brings greater challenges for teachers, they need to find a better method to teach students effectively, especially during online classes. Therefore, the objective of this study is aimed at creating an interactive video learning that we called an e-Pocket Note for students' use during the online learning process. This application contains a set of interactive videos together with questions and answers related to certain topics that will enhance students' understanding. A survey has been distributed among the students to know their perception regarding the use of video as one of the teaching methods. The results showed that there is a need for the use of interactive videos during the ODL classes. Thus, the use of the e-Pocket Note application is compatible with the recent educational situation. It also allows for increased student motivation to learn as well as improved student-teacher engagement, which leads to an effective teaching and learning process.

**Keywords:** COVID-19, education, ODL, videos, students

### **INTRODUCTION**

The open and distance (ODL) concept in education has been widely used after the development of radio and television in the 1950s where people found the new delivery

system outside the traditional classroom. According to American Association for Distance Learning (UDSLA), ODL means “the process of acquiring knowledge through a variety of media used to transfer education and information, including all types of technology and various forms of education level for distance learning.” ODL is one of the most suitable strategies that integrates virtual technology that will allow the continuation of the teaching and learning process (Md Saidi, Sharip, Abd Rahim, Zulkifli and Md Zain, 2021). In addition, Singh and Thurman (2019) defined online learning as learning experiences either in synchronous or asynchronous environments through different technologies so that students can learn and interact with teachers anywhere and share the ideas with their friends simultaneously.

The synchronous approach allows both educators and students to meet in real-time during content delivery through video conferencing such as Google Meet, Zoom, Jitsi, Microsoft Team, and Cisco Webex (Md Saide et al., 2021). While, the asynchronous environments permit the sharing of teaching materials such as pre-recorded video, PowerPoint slides and tutorial questions with the use of the Learning Management System (LMS). Chung, Subramaniam and Dass (2020) documented that majority of the students preferred pre-recorded lectures uploaded to Google Classroom and YouTube because they can replay the recorded videos many times to gain a better understanding of the content. In the absence of face-to-face contact, the chat applications such as WhatsApp, Telegram, Email, Facebook, Instagram, and Twitter are used by students to get connected with their peers and educators. Most of the students favour asynchronous over synchronous approaches because they face difficulties in terms of limited internet access, insufficient online devices and unsuitable learning environments to have virtual classes (Wei, Kuah, Liew, Lee & Koh, 2021).

The introduction of pre-recorded video enables the presentation to go smoothly. The quality of the subject presented can be controlled. The problem of internet connectivity and other distraction to viewers could be minimized. Several innovative solutions including the flipped classroom model, online practice questions, tele-conferencing in place for an in-person lecturer to facilitate the ODL environment. Nevertheless, there is none such substitute for hands-on-learnings wherein commanding more practical realistic need many scholars claim that using direct online lecturer are effectively limited only for theoretical aspects when compared to the calculation or statistical subjects (Wahyudi et. al, 2020). However, with the current pandemic environment, the education industry efforts must not sacrifice the knowledge virtues and the learners’ absorb momentum. Approaches need to be redefined to keep the quality and future assessments (Noetel, Griffith, Delaney, Sanders, Parker, Cruz & Lonsdale, 2021). This has been supported by a study done by Hakkarainen (2011), using video production which supported the Program Based Learning model to be more effective and meaningful learning. In this study, the students reported their emotional involvement in learning using the video was positively toned (Kort & Reilly, 2002) which synthesis as having an enjoyable learning environment (Strobel & Van Barnevel, 2009), hence resulted to be beneficial for their motivation to learn, their learning process and outcomes (Meyer & Tuner, 2002).

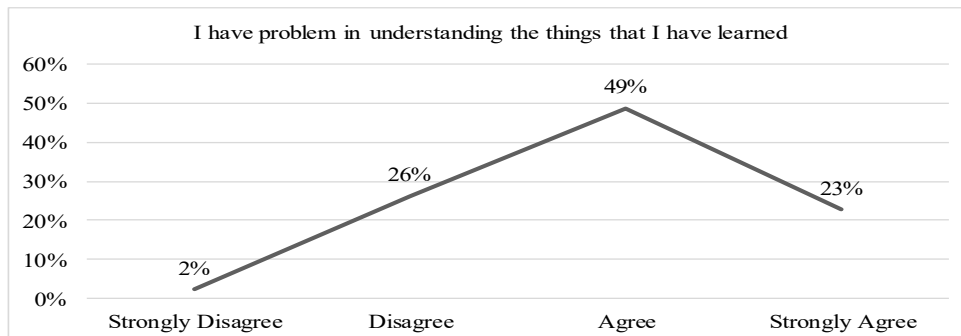
## METHODOLOGY AND MATERIALS

An e-survey was conducted among Diploma in Accountancy (AC110) and Diploma in Accounting Information System (AC120) students from Universiti Teknologi MARA Perak branch, Tapah Campus in getting their feedbacks on perceptions of using interactive video



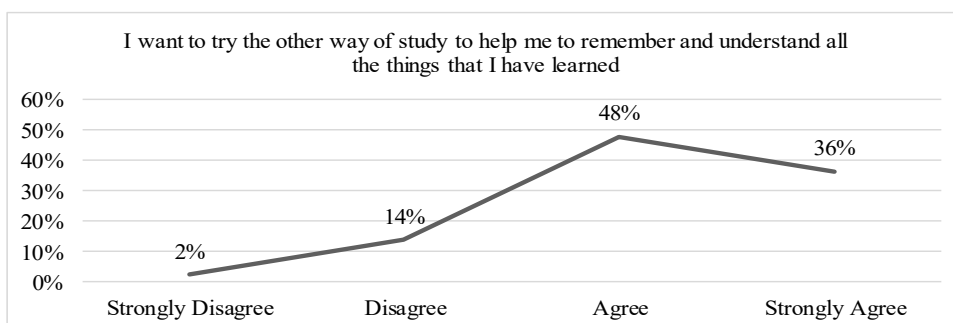
during the online teaching and learning process. A total of 320 students responded to the e-survey. The questionnaire consists of 2 sections. The first section requires respondents to fill in their demographical information, while the second section asked about student's online learning experience and their perception of using interactive videos. The statements were assessed on a four-point Likert scale ranging from 1 to 4, where 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree. A total of eleven questions were asked in the questionnaire and the results are presented in the next part of the paper.

## RESULTS AND DISCUSSION



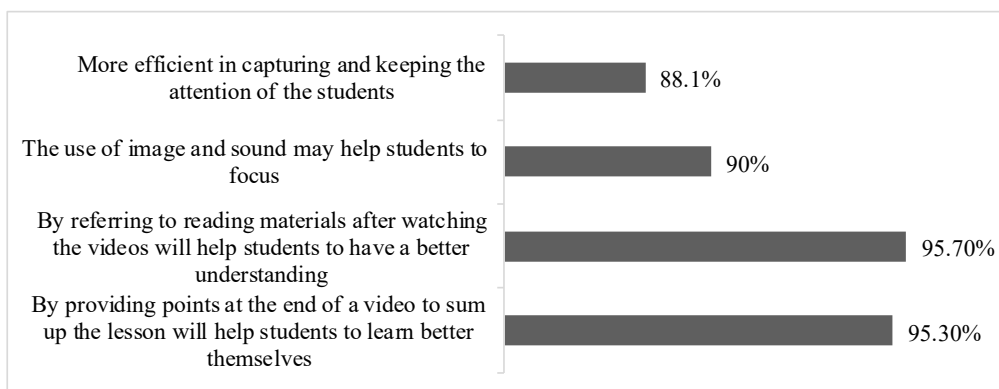
**Figure 1.** Students' feedback on the challenge during a study in the online class.

Figure 1 shows the feedback from students on the challenge they face during an online class. It appears that more than half of the respondents (49% agree and 23% strongly agree) had difficulty in understanding the things they have learned during an online class. The remaining 28% of respondents had no difficulty comprehending the online lecture. This is verified by research conducted by Azmi and Lai (2021), who discovered that students may feel dissatisfied with ODL since they require more time to adjust to a new learning environment.



**Figure 2.** Students' feedback on the need to change the method of study for the online class.

In response to the question in Figure 1, another question is asked about the student's willingness to improve their current method of study. Figure 2 demonstrates that most respondents, 48% and 36%, agreed and strongly agreed to shift their way of study for the online class, respectively. They had difficulty remembering and understanding the material they had studied while using the current method of study.



**Figure 3.** Students' feedback on the perception of using interactive video during the online teaching and learning process.

Following that, this study proposes that an interactive video be used as one of the alternate ways of study for the online teaching and learning process. Figure 3 illustrates the students' perceptions of using interactive video during the online teaching and learning process. The usage of interactive video just before referring to reading materials such as textbooks or lectures notes was mentioned by most respondents (96%) may help them understand better. The result is supported by Noetel, et al. (2021) when they found that rather than replacing existing teaching techniques with video-based learning, integrating video into current teaching approaches resulted in significant learning benefits. Furthermore, 95% of respondents perceived that a summary of the lesson at the end of the video would help students learn better. According to 90% of respondents who agreed that the utilization of pictures and sound may help students to focus, and the other 88% of respondents agreed that video will efficiently grab and maintain their attention during the teaching and learning process.

## CONCLUSION

From the findings, it appears that most students are having difficulty in understanding what they have learnt, suggesting the need for a different technique of study to assist them in addressing the issue. Most of the respondents hold positive views on the use of interactive videos together with the reading materials that may help them to enhance their understanding. Thus, the use of the e-Pocket Note application is compatible with the recent educational situation. This application contains a set of interactive videos together with questions and answers related to certain topics that will enhance students' understanding while additionally promoting an enjoyable learning experience for them. It enables students to interact with the video elements, for example clicking on the correct answer of simple quizzes at the end of a topic, selecting a video topic to play or control the flow of the video. They are often captivating and thus increases the attention span. Besides, it also allows for increased student motivation to learn as well as improved student-teacher engagement, which leads to a more effective teaching and learning process. This explains the relevance of the development of the app which may ultimately lead to the commercialization of the product so it can reach a larger community of students.

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