Investigating on Students' Acceptance on the Usage of Videos as Teaching Materials

Haslinda Noradzan[1], Noridah Abu Bakar[2], Zarina Zainul Rashid[1]

[1]Faculty of Computer & Mathematical Sciences, Universiti Teknologi MARA Pahang
26400 Bandar Pusat Jengka, Pahang, Malaysia
haslindanoradzan@pahang.uitm.edu.my, zzr@pahang.uitm.edu.my
[2]Faculty of Sports Science & Recreation, Universiti Teknologi MARA
40450 Shah Alam, Malaysia
noridah96@salam.uitm.edu.my

ABSTRACT

As the online and blended learning has started to be accepted as delivery methods for teaching, the educators in institutions of higher education need to explore on how to conduct online class by using multiple types of digital contents to deliver their learning objects. This paper discusses the findings of an empirical study in accepting video as one of the teaching materials to support blended learning activities. Three sets of videos that contain the learning objects for three different courses were distributed to the students through i-Learn portal during their online class. Questionnaires were distributed one week after the videos had been viewed by the students to assess their acceptance of the new approach and the satisfaction on learning using videos. The study was carried out on 120 students from Diploma in Computer Science taking two different computer science courses and 40 students from Diploma in Sport Science taking IT Essential for Sports course. The analysis from the returned questionnaires by the students shows that they can adapt with the new approach since most of the students' are computer and Internet literate. At the same time, they are also gradually adapting various types of learning materials.

Keywords: Blended learning, online learning, students' acceptance, teaching video

INTRODUCTION

Teaching in higher institutions becomes a big challenge to every educator as teaching delivery methods nowadays does not involve face to face lecture sessions and consultation hours only. Blended learning is one of teaching delivery methods that is being used in Universiti Teknologi MARA (UiTM). It combines face to face lectures with non-face to face computer mediated technology. Non-face to face is online learning activities or commonly described as e-learning. The intention to use e-learning relies on individual characteristics, computer self-efficacy and internet self-efficacy (Lee, Hsiao & Purnomo, 2014).

To implement a successful non-face to face session, there are a few activities being suggested by i-Learn Center to help lecturers in delivering the course contents. i-Learn portal is an official UiTM's Learning Management System (LMS) that provides features for all users to support online activities such as content sharing platform, conducting online quizzes, online submission for assessments, and forum discussion. There are lots of learning objects or learning materials in variety of formats that have been uploaded to the LMS since it was officially established. Referred contents are inclusive of text format and learning objects in presentation tools format, interactive courseware, audios, videos and hyperlink to the source of material for ease of reference. Even though previous research by Joi, Camille and Krista (2010) found that there were different expectations and perceptions between various terms of online learning, the provided materials for online learning are still the same. As users of videos for teaching material, Badrul and Mohammed (2015) highlighted that it must be relevant to the student learning objective. Hence, it will be attractive enough to grasp the students' attention and provide them the necessary understandings.

Previous acknowledged researchers have conducted studies and found various advantages of using videos as teaching materials. Hampton (2002) stated that multisensory skills can be developed since the video is a learning material that includes the audio and visual together and also allows the learners to control the video navigation such as play, replay, pause and rewind to the sections of the lessons needed. Mishra (2001) highlighted the videos that show practical and real-life activities are very useful as they can eliminate the cost of conducting experiments and presentations

repeatedly. Using videos as learning materials can also help in saving the cost of repeating the same experiments or demonstrations (Jung, 2005) and Tooth (2002) stated that even though some of the videos are costly to produce, they are very useful for demonstration purposes. In relation to prior information provided, teaching materials are one of the predictors of perceived usefulness of e-learning and playfulness is the predictor of intention to use e-learning (Lee, Yoon & Lee, 2009). Hence, it is important to investigate the acceptance and effectiveness of video usage as teaching materials in order to support the implementation of blended learning in the university

METHODOLOGY

A quantitative method using questionnaire has been adapted in this study. Online questionnaires were given to students who had completed reviewing the materials through i-Learn portal. This study is targeting students as respondents as they play the important role in this blended learning process and become the receivers of the knowledge delivered through the video material. Three groups of students that received different teaching videos from 3 different courses are selected as respondents for this study.

The research design is shown in Figure 1. The questionnaire that was developed comprised 2 parts measured on a 6-point Likert scale. The first part is on the demographic item. The items in part two consisted of evaluation on perception and effectiveness of videos as teaching materials.

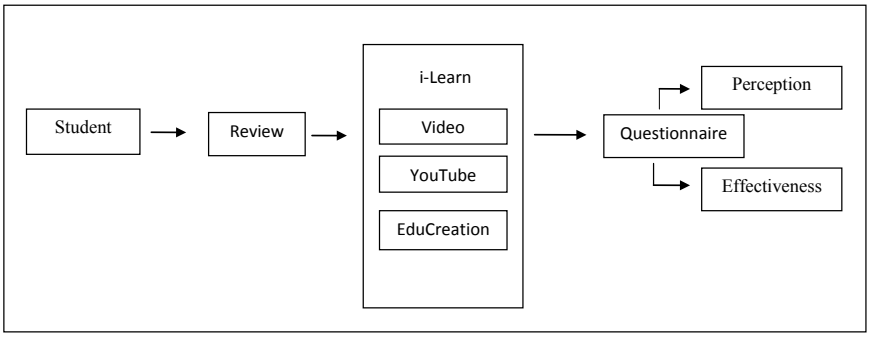

Figure 1: Research Design

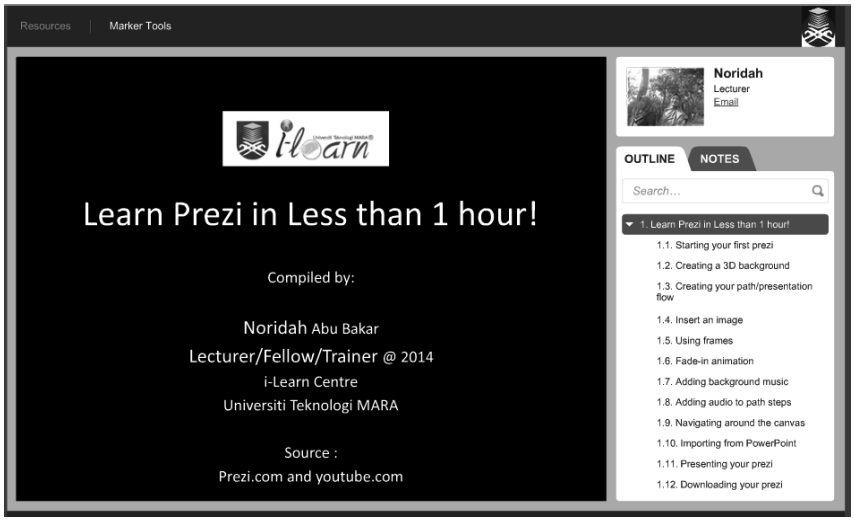

Figure 2: Screenshot on Video for the Course SPS105 IT Essential for Sports

Since the students are those taking 'IT Essentials for Sports (SPS105)' course, the videos given to the students are compiled from YouTube website, demonstrating how to use a presentation tool called Prezi. The students need to follow the given instructions in the video to help them to produce their presentation materials using Prezi application software. The screenshot of the provided course is shown in Figure 2.

Figure 3 illustrates the video for second group of students who are taking 'Computer Organization (CSC159)' course. The instructor recorded the video herself. It contains the demonstration and explanation on arithmetic operation that can be performed using different base numbers.

The other video material used in this study is video for Practical Approach in Operating System (CSC204) course enrolled by Diploma in Computer Science students, who become the third group of respondents. In this video, the instructor recorded the explanation using Edu Creation teaching tool that contains protection files mechanism and storage allocation techniques. The instructor also demonstrates the calculation of protection code and size of storage allocation for each technique. The sample of the image taken from the video is presented in Figure 4.

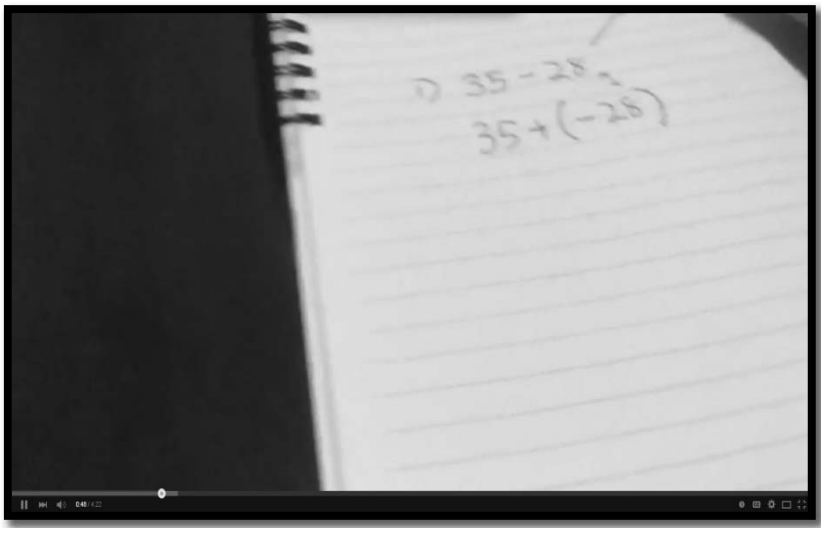

Figure 3: Screenshot of the Video for Course CSC159 for Diploma in Computer Science

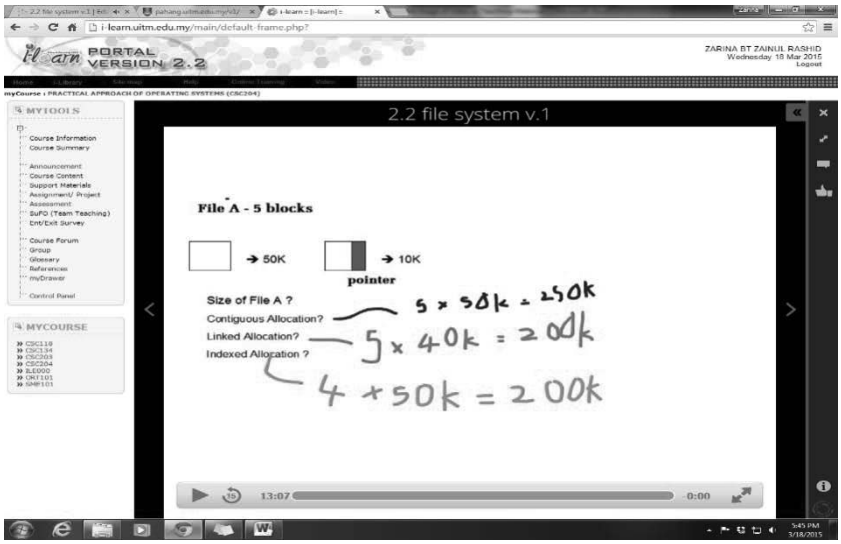

Figure 4: Screenshot of the Recorded Video for Course CSC204 for Diploma in Computer Science

DATA ANALYSIS AND DISCUSSION

The collected data has been inserted into the SPSS software for further analysis. A total of 160 responses have been collected and this includes 100% of the online form filled up by the students. The students were selected through purposive sampling from classes conducted by the researchers who are from Faculty of Computer and Mathematical Sciences (FSKM) and Faculty of Sports Science and Recreation (FSR) in our institution.

Figure 5 shows the demographic information on gender while Figure 6 shows the percentage of students by each faculty. As it is a norm that the higher education institutions in Malaysia are dominated by women, the higher percentage of students who answered the survey also clearly shows that 60% were female students and the remaining 40% were male students. With regards to the portion of students by faculty, 75% of the responses were from FSKM and the remaining 25% were from FSR.

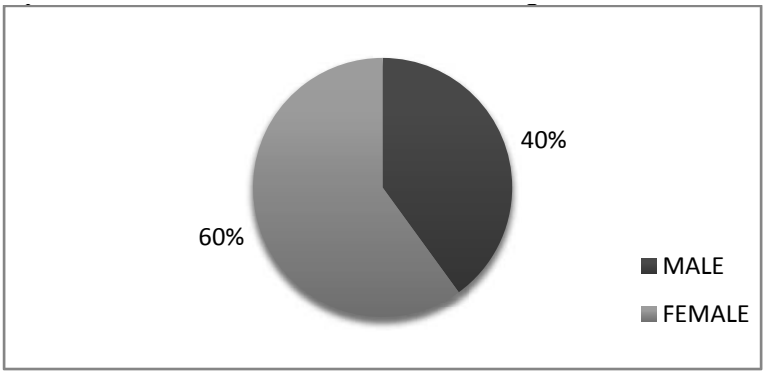

Figure 5: Demographic Information on the Respondents' Gender

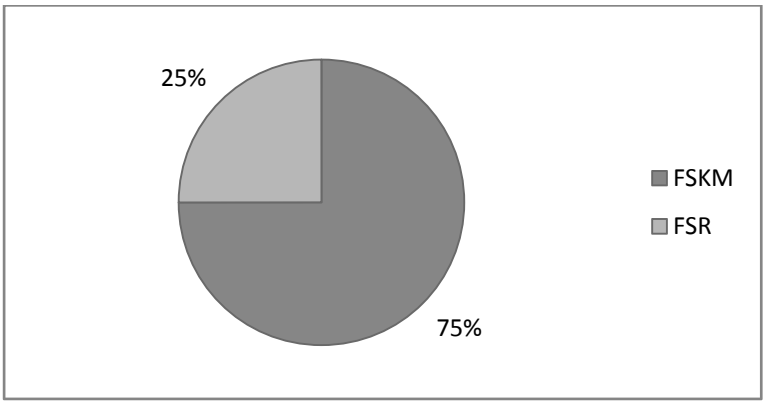

Figure 6: Percentage of Respondents by Faculty

Table 1 shows the collected data from 160 respondents were used in the calculation of Cronbach's Alpha and 100% taken for analysis. No missing data were recorded as the online data collection method was used with the setting of mandatory field in the form.

Table 1: Case Processing Summary

List wise deletion based on all variables in the procedure.		N	%
Cases	Valid	160	100.0
	Excluded[a]	0	.0
	Total	160	100.0

Table 2: Reliability Testing

Variables	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Perception	.89	.888	5
Satisfaction	.89	.894	5

Cronbach's alpha is a popular test in measuring interim consistency. As explained by popular authors in research methods, Sekaran and Bougie (2009); in general, reliabilities less than 0.60 are considered poor, while

those in the 0.70 range are acceptable, and those over 0.80 are good. The obtained alpha score as shown in Table 2 for both perception and satisfaction is 0.89. This indicates that the scale has high internal consistency and proven that the items for each variable are reliable and positively correlated to one another. Thus, it can be accepted for measurement.

Once the reliability test showing a supportive result, the analysis proceeds with the descriptive statistics. For each item, its mean and standard deviation were identified. The computed mean rating for each item that is greater than 2.50 indicated expression of agreement with the items, while means below than 2.50 indicated expression of disagreement with the statement.

Result in Table 3 shows that all the items had mean ratings greater than 2.50. The highest mean below the acceptance variable is 'The given videos is meaningful' with mean 4.29 (SD= 0.982). It shows that the given videos mostly meet their expectations or not poor to facilitate their learning. Even though the statement 'I am able to become a self-learner by learning through videos' shows the lowest means of 3.78 (SD=0.904), all of the students actually rated them above the theoretical mean of 2.50 with reference to the standard deviation value. Indeed, when the videos were given to the students to facilitate their learning, they were so eager to view them and started to focus themselves in learning. This visibly indicated that the acceptance level in learning though videos is relatively high. Apart from that, they also agreed that the videos were interesting, which were suitable to facilitate their learning and supported the statement that other lessons should consider using the videos as well to support learning activities.

Table 3: Descriptive Statistics of Students' Rating

Elements of evaluation for the video-based lesson	Mean Rating	Std. Deviation
Elements for acceptance		
I am able to become self-learner by learning through videos.	3.78	.904
The given videos are meaningful.	4.19	.858
Learning through videos is interesting.	4.29	.982
Videos are suitable to facilitate my learning.	3.97	.921
Educators should also use videos in other lessons.	3.94	1.080
Elements for effectiveness		
It is easy to understand most of the contents in the video lessons.	3.78	1.020
It is easy to follow the video lessons.	3.84	.988
I love the part that we can repeat the video lessons as frequently as we like.	4.76	1.025
The content in the video covers most of the lessons that I need.	3.98	.945
I am satisfied with this learning method (video lessons).	3.99	.971

The mean rating of the items for each of the variables measured as rated by the respondents was computed for both faculties involved in the study. Table 4 shows the mean rating for both groups is high and appears relatively close for most of the questions or items. The result shows that the FSKM students (M=3.91, SD=0.78) and FSR students (M=4.41, SD=0.68) are both positively supporting the video lessons method. With regards to the effectiveness, there is also a positive response by the FSKM students (M=3.94, SD=0.85) and FSR students (M=4.46, SD=0.64). The overall result shows that the students accept the videos as teaching materials even though they are from different groups, different content creators and different areas of studies.

Table 4: Group Statistics

	Faculty	N	Mean	Std. Deviation	Std. Error Mean
Mean Perception	FSKM	120	3.9083	.78340	.07151
	FSR	40	4.4100	.68530	.10836
Mean Effectiveness	FSKM	120	3.9400	.84559	.07719
	FSR	40	4.4600	.63762	.10082

CONCLUSION

This study demonstrates that the students expressed a positive preference for accepting videos as one of the teaching materials. Three types of different recorded video were used and the finding indicates that these videos are effective in terms of delivering the content. Furthermore, the students expressed a strong preference for the video lessons that can be repeated as frequently as they like. Even though different groups of students with different areas of studies have some different perceptions and feedback towards the effectiveness of video learning method, regardless of the overall positive result obtained, it is believed that the students accept this method of teaching and quality learning experience can be improved through usage of videos as online teaching materials. The students will have positive attitude towards e-learning when they find it easy to use and useful for their coursework (Adewole-Odeshi, 2014) and in this study, the videos are proven to be easy and useful for online teaching material.

Nevertheless, as usage of video is good for learning aids and one of the delivery methods for learning materials, it is also necessary to consider learning experience that actively engages students when developing teaching materials. Future work will be needed to consider a more flexible approach to improve quality and value in learning experience.

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