

Students Readiness in Online Lectures During the Pandemic: What is the Ideal Lecture Model?

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Abstract. *This study identifies the readiness, perceptions and preferences of students in facing online learning. This study will also propose an effective online learning model design. Data obtained from 362 students through a questionnaire using a likert scale. The results shows that in general the students are ready to carry out the process of online learning. Besides using a live conference media, students prefer the use of teaching videos made by lecturers himself as an alternative method when quota and internet signals are the main problems. The distribution of learning materials should be carried out at least one day before the learning schedule. Meanwhile, the allocation of lecture time is not too much in the attendance process. Furthermore, the evaluation process is also carried out for each material topic. Thus, the focus of the on learning model should consider teaching media, material distribution, time allocation and learning evaluation process.*

Keywords: *readiness, preferences, on line learning; effective*

INTRODUCTION

In recent years, investment in digital learning technologies has grown significantly (Mehta et al., 2019). Even so, the development of this learning technology still couldnot be implemented optimally, it has even experienced rejection by students (Sonia & Eric, 2013; Recker, 2016). This condition indicates that technological developments do not automatically encourage the development of education. Technology supported online learning should be used by both lecturers and students. According to Pahinis et al., (2007), Ruiz et al., (2006) and Ramlogan et al., (2014) that online learning saves time and money. Besides, it offers a variety of learning methods and allows students to study anywhere and anytime.

However, even though technology gives various advantages of online lectures, there are still many students who feel comfortable with offline ones that has been undertaken for years. The absence of an obligation to carry out a technology-based learning process and the perception that transferring technology in the learning method is an additional complicated effort, adding the reluctance to adapt to technology. These perceptions are in line with Davis et al., (1989) who found that a person's acceptance of technology can be influenced by user perceptions of the technology's attributes, specific benefits and ease of use.

However, the current condition of the Covid 19 pandemic is an extraordinary case that should be addressed positively by actors of education. The sugestion to study from home is actually the right momentum to optimize the application of technology, especially in the learning process. These sudden changes make some lectures are not ready to prepare the suitable teaching methods. Lecturers and students must take the consequence that the directly face-to-face learning process cannot be carried out and must be replaced with on-line-based learning methods. Although the face-to-face method can still be run through an on-line-based learning process, there are still significant differences from directly face-to-face learning processes. These differences can be in the form of material distribution techniques and teaching techniques. This condition causes the emergence of additional work for lecturers. Besides preparing the appropriate material, selecting the learning media and assessment rubrics must also be adjusted. In the selection of instructional media, lectures must also combine the accuracy of the learning material with the media used to deliver. When lecturers are accustomed to using online-based learning media, the only problem

that arises is in the effort to adapt the material to the learning media. However, when lecturers are not familiar with online-based learning media, adapting the use of new learning media can be an additional problem and even become a major problem. Meanwhile, adapting with the new learning media will need an extra effort for some lecturers.

From the students' point of view, one of the differences between on-line and off-line learning methods is in terms of readiness or availability of learning facilities or equipment. This will be significant especially for students who do not have the main supporting devices such as personal computers (PCs) or adequate laptops. More over, internet network conditions vary at each point of location, is also an obstacle that often arises in on-line learning methods.

Even though on-line learning methods will face various obstacles, the current condition of the Covid 19 pandemic does not seem to provide an alternative learning method other than on-line learning methods. Both lecturers and students are faced with the condition to accept changes in learning methods, from off-line to on-line based. Thus, online-based learning process is found as an effective teaching approach method so that learning constraints can be minimized and learning success can be achieved.

Oliver, (2001) found that among the factors of the success of on-line learning are the readiness of students to switch to online lectures, the ability of lecturers to teach online and the quality and design of lecture material content. Parsazadeh et al., (2013) also found that one of the factors for the success of online learning are in terms of ease of access, use of various on line tools and student satisfaction. Meanwhile, according to Pahinis et al., (2007), students' assessment of the equipment and value of online learning and evaluation of their attitudes are important factors for assessing the success of the online learning system. Thus, this study focus on identifying student readiness in transitioning to online lectures, student perceptions and student preferences for online lectures during the pandemic.

Previous research found that teaching methodological preferences are related to the effectiveness of the learning process (Butler & Pinto-Zipp, (2005); Cambiano et al., (2001); Delahoyde, (2009)). Thus this research will also propose an effective online learning model as part of the learning method by considering the common obstacles faced by students during a pandemic.

The concept of online learning readiness was first proposed by the Australian vocational education and training sector by Warner et al., (1998). There are 3 aspects in online learning readiness, (1) student preferences in terms of delivery of material that is different from direct face-to-face method (2) the ability of students to use the internet and supporting equipment to undergo the online learning process and (3) involvement in the learning process. To measure online learning readiness, McVay, (2000) uses 2 basic instruments, "comfortable learning online and able to learn independently". Student readiness and preferences must be considered in achieving online learning success. In accordance with Lin & Hsieh, (2001) who found that online learners will be successful when they can make their own decisions to meet their needs at their own pace in accordance with the knowledge and learning objectives they have. Technical skills in the use of computers and internet networks will be related to student learning achievement (Peng et al., 2006)

Even though provides advantages such as convenience and flexibility, online learning provides a limitation in the interaction between teachers and students (Smith, 2010). This limitation will make online learning ineffective. Thus, lecturers are required to be able to understand student preferences in learning so that the learning process can run effectively (Smith, 2010). This argument is in line with Dorça et al., (2013) and Kolb & Kolb, (2005) found that learning will work well if the strategy and learning materials are in accordance with the learning styles of students. (Dorça et al., 2013; Kolb & Kolb, 2005).

Every student must understand their responsibility to determine the direction of their learning (Hartley & Bendixen, 2001; Hsu & Shiue, 2005). Each individual has the initiative to understand their learning, build learning objectives and identify learning sources, select and

implement appropriate learning strategies and evaluate learning outcomes (Knowles, 1975) in order to manage their time well (Hill, 2002; Roper, 2007), can keep up with the learning process and complete assignments on time (Discenza et al., 2002) and to be able to actively contribute to learning (Garrison et al., 2004).

Students Readiness

The students readiness is seen when they are ready to take lessons, ready for the material to be taught, ready with writing tools and their attention is focused on the lecturer (Hadiningrum, 2019). To understand the achievement of online learning effectiveness, it is important to know what dimensions of readiness students should have (Hung et al., 2010). Thus, lecture activities or the material presented will be easier to understand. Students learning readiness is very necessary in every learning process so that students can easily follow lectures and understand the material presented by the lecturer (Hadiningrum, 2019).

Online learning requires adequate hardware and software that is easy to use (FitzPatrick, 2012). Previous research show that most students do need computer skills and the ability to access the internet. while the ability to explore, find and upload the assignment is also needed easily and comfortably (Asiry, 2017). Thus, student readiness for learning is an initial condition for students who will face the lecture process, including online, which makes them ready to respond to themselves in achieving certain goals. Apart from equipment readiness, readiness for the ability to use the equipment will also determine the success of the lecture process. In line with Peng et al., (2006) that the ability of students to use computers and the internet will have an impact on the success of students.

Effectiveness of Online Lectures

Effectiveness is the relationship between goals and outputs. The greater the contribution to the goals, the greater the contribution of output to achieving these goals (Mahmudi, 2005). Therefore, the more effective an organization, program, or activity is.

Meanwhile, the quality of online tutorials is one of the key factors of online lectures successes. This quality is influenced by student learning preferences, multimedia design, image and audio quality, internet speed and material delivery methods (Asiry, 2017). Furthermore, the suitability between the learning objectives and the facilities used must be considered in order to achieve learning objectives (Peslak, 2003). Thus, these factors must be considered so student satisfaction in learning can be achieved.

(Selim, 2007) found that the critical factors for the success of online lectures can be grouped into four categories: trainers, students, information technology, and institutional support. In line with Sun et al., (2008) that the dimensions of students, teachers, subjects, technology, design, and the environment are critical factors for the success of online lectures.

Student Preferences

Kotler, (2002) argues that preference is a person's attitude towards a choice that is formed through evaluation of various available choices. Meanwhile, according to Frank, (2008) while learning preferences refer to differences in the way students collect, process and manage information to achieve an understanding. These preferences include learning by listening, seeing, doing or a combination of these (Carmona et al., 2007).

In general, every student has different preferences. There are those who like active learning, but some are the opposite. Thus, this study identifies student preferences in lectures so that the lecture process that is undertaken can lead to student understanding of the material presented.

METHOD

This study uses primary data collected by questionnaires via google form. The question items were adopted from (Asiry, 2017) and Yamaguchi et al (2019) by having relevant modifications in accordance with the research objectives. The questionnaire was submitted to Padang State Polytechnic students who are currently undergoing theoretical or practical courses. The scope of the respondents are students in majors who do not use computers as a means of main lectures or who study computer technology. It is to reduce bias in terms of student readiness of equipment. Each questionnaire statement uses a likert scale; (5) strongly agree (4) agree (3) neutral (2) disagree (1) strongly disagree. The results of the questionnaires will be classified and analyzed according to the research objectives.

RESULTS AND DISCUSSION

Profile of Respondents and Descriptive Statistics

Based on the Slovin formula, the selected sample are 362 students. 50.8% were females and 49.2% were males. It means that gender is not the issue in this study. Likewise with the grade of respondents relatively equal to one another. Table 1 shows that among the readiness factors, most students know how to access the learning media. Meanwhile, most students think that tutorial video ceated by their own lecture will improve their knowlwdge. Moreover, most students would rather study with an explanation than not.

Table 1. Descriptive Statistical Analysis

Variables	Questions	Respondents	Minimum	Maximum	Mean	Dev. Std
Readness of Online Lectures	X1.1	362	1	5	3.876	1.29
	X1.2	362	1	5	3.166	1.08
	X1.3	362	1	5	4.064	1.049
	X1.4	362	1	5	4.182	0.874
Effectiveness of Online Lectures	X2.1	362	1	5	2.917	1.076
	X2.2	362	1	5	2.481	1.05
	X2.3	362	1	5	3.362	1.11
	X2.4	362	1	5	3.011	1.038
	X2.5	362	1	5	2.423	1.009
	X2.6	362	1	5	3.304	1.105
Preferences of Online lectures	X3.1	362	1	5	2.809	1.158
	X3.2	362	1	5	3.743	1.108
	X3.3	362	1	5	4.110	1.064
	X3.4	362	1	5	3.091	1.165
	X3.5	362	1	5	4.017	0.979
	X3.6	362	1	5	3.840	1.061
	X3.7	362	1	5	4.171	1.064
	X3.8	362	1	5	3.663	1.061

Analysis and Discussion

For student readiness, Table 2 shows that most students are ready to take online lectures. Most students have their own computers that can be used for online lectures (24% agree and 44% strongly agree). As many as 17% of respondents chose the doubtful answer because the computer they use for lectures is not really their own which is free to use at any time (family owned). For internet networks, only 36% of students have relatively smooth internet networks. Most of them

still have unstable one. This occurs due to the variety of students domicilies in terms of internet network coverage.

Table 2. Student Responses to The Readiness of Online lectures

	(1)	(2)	(3)	(4)	(5)	Average	Number of Respdents
1 I have my own computer for online lectures	32 9%	23 6%	61 17%	88 24%	158 44%	3,876	362
2 I have a relatively stable internet network	20 6%	77 21%	134 37%	85 23%	46 13%	3,166	362
3 I access the internet every day	7 2%	27 7%	60 17%	110 30%	158 44%	4,064	362
4 I know how to access the learning media, such as attendance, assignments, discussion, upload assignments, and so on.	1 0%	15 4%	55 15%	137 38%	154 43%	4,182	362

Most students (74%) are familiar with the internet. They always regularly access it both related to lectures and those related to social media needs. Almost all respondents understand how to access learning media such as attendance, assignments, discussion and other features. These results indicate that some students are ready to face online lectures both in terms of equipment availability, usage ability and internet network stability.

Regarding the effectiveness of lectures, Table 3 shows that, most students (55%) find difficulties to improve their understanding if the material given is only a PPT without any additional explanation from the lecturer. This is due to the lack of motivation of students just reading the power point slides. Meanwhile, 29% of respondents think that using live video conferencing may improve their understanding of learning materials. However, a number of students (38%) answered doubt. This is due to the variety of delivery technics of the lectures. More over, if the lecture is done only by chat media, it would be much more students maynot understand the subject delivered (53%).

Table 3. Students Responses to the effectiveness of Online Lectures

	(1)	(2)	(3)	(4)	(5)	Average	Number of Respdents
5 Online lectures using video conference media (Zoom / Google Meet, WhatsApp Video Call, etc.) can improve my understanding	39 11%	82 23%	136 38%	80 22%	25 7%	2,917	362
6 Online lectures using chat media can improve my understanding (ex:WhatsApp Chat)	71 20%	118 33%	112 31%	50 14%	11 3%	2,481	362
7 Online lectures using video recording made by its own lecturers can improve my understanding	21 6%	58 16%	109 30%	117 32%	57 16%	3,362	362

8	Online lectures using video recording media that are not made by its own lecturers (for example from YouTube) can improve my understanding	31	67	162	71	31	3,011	362
		9%	19%	45%	20%	9%		
9	Online lectures by learning the text form (lecture notes or power point slides), without explanation from the lecturer can improve my understanding	72	125	113	44	8	2,423	362
		20%	35%	31%	12%	2%		
10	The long process of attendance will reduce the time to understand the material	24	52	133	96	57	3,304	362
		7%	14%	37%	27%	16%		

Table 4. Students Responses to the preferences of online lectures

		(1)	(2)	(3)	(4)	(5)	Average	Number of Respdents
11	The quiz held at the beginning make me understand better than at the end of class hours	54	88	125	63	32	2,809	362
		15%	24%	35%	17%	9%		
12	The quiz is held after each material make me understand better than if it is held after completing several materials	15	32	91	117	107	3,743	362
		4%	9%	25%	32%	30%		
13	Online lectures that are on schedule are more comfortable than those outside the class schedule	12	18	56	108	168	4,11	362
		3%	5%	15%	30%	46%		
14	In video conferencing lectures, I feel more comfortable if the camera is activated	39	63	134	78	48	3,091	362
		11%	17%	37%	22%	13%		
15	In video conferencing lectures, I understand better if the lecturer explains using additional media (such as power points) rather than just explaining it	6	19	73	129	135	4,017	362
		2%	5%	20%	36%	37%		
16	I better understand if the material is given at least one day before the lecture schedule than when the lecture is started	12	22	95	116	117	3,84	362
		3%	6%	26%	32%	32%		

17	In counting topic, I understand better if the lecturer explains with examples than directly working on the questions independently without prior explanation	10	20	54	92	186	4,171	362
		3%	6%	15%	25%	51%		
18	If there is material that I don't understand, I prefer to find answers independently (such as searching via google or asking directly to the lecturer) rather than to ask through forums	10	39	105	117	91	3,663	362
		3%	11%	29%	32%	25%		

In unstable network conditions and limited internet quota, most students (48%) feel that the learning material delivered through video that is made directly by the lecturer who teaches the course may increase their understanding. This is due to the opportunity for students to replay the video anytime and anywhere. Besides, the video made is relatively in accordance with the established Semester Learning Plan. It might be different if the material was taken from other sources such as YouTube, which has the same topic but relatively incompatible with the Semester Learning Plan as a whole.

Furthermore, too much time allocation for attendance session was not favored by students because this would reduce the time allocation for material delivery. However, almost part of students do not mind this. In term of learning evaluation, most students (62%) prefer the quiz which is held at the end of each meeting topic than the one which is held for several meeting topics. According to them, the quizzes held at each meeting would be easier because the materials are not too much and still fresh in mind. Thus, they may get better score. Due to the focus on scores, students dislike the pretest because they are worried that it will reduce their score. This is because, pretest is a test that is carried out before the lesson learned in the class so have no preparation in it.

Regarding the timing of the lecture, students (76%) feel comfortable if lectures are carried out according to a predetermined schedule. This due to the student time management planning to do assignment that are aligned with regular class schedules. In direct lectures (live video conference media), students will better understand the course if the lecturer explains the material with additional media such as power point slides. Meanwhile, in terms of material distribution, students will better understand if the learning material distribute at least one day before the lecture schedule. Students feel that earlier learning material distribution will encourage them to prepare more for lectures so that they can serve feedback on the material addressed by the lecturer.

From various results of respondents' and analysis of research results, online learning models that may encourage students to understand the topic is presented in Figure 1, below.

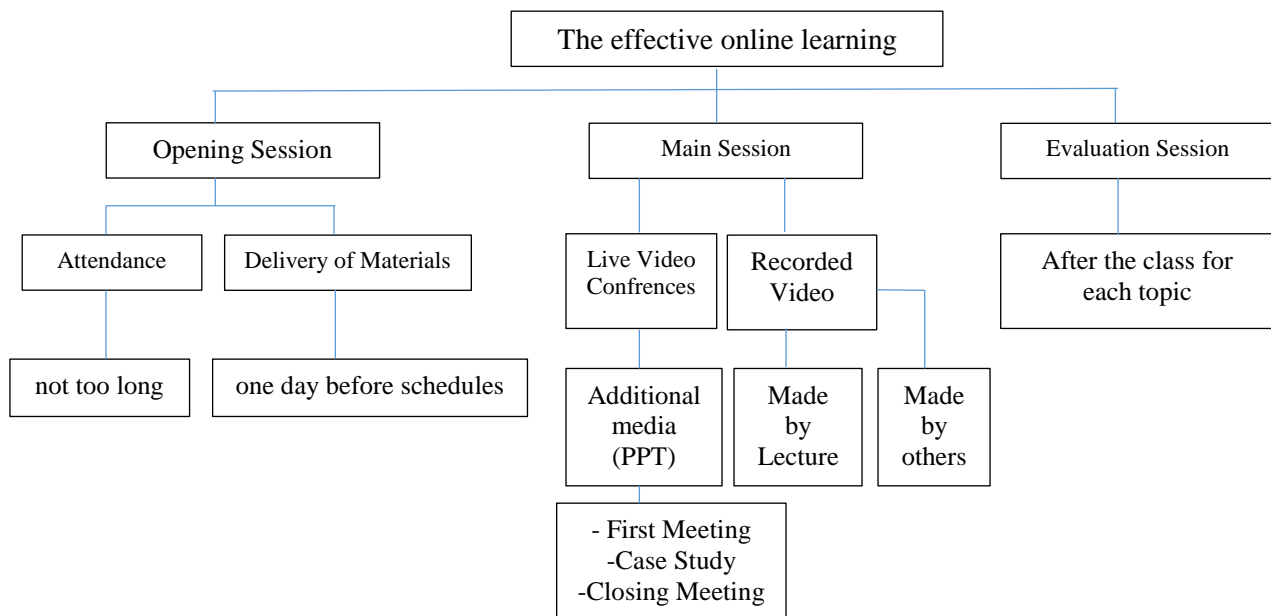


Figure 1. Chart of Effective Online Learning Models

CONCLUSION

The results showed that, although the unstable internet network is still a major obstacle, in general students were ready to carry out the online learning process both in terms of supporting facilities and skill readiness. The effective lecture process according to students in general is by using live video conference media. However, if there are problems with the internet network, then using video recordings made by lecturers who teach the course might be effective to increase student understanding.

An effective learning model would be effective if the lecturer doesn't take much time in attendance session. Lecture materials should be distributed at least a day before lectures begin. Meanwhile, for the core process, the use of live video conference assisted by PPT slides and the like is the main choice. However, if the internet network problem is a big case, learning video recording media made directly by the lecturer who teaches the course, is more understandable than taking it from other sources, such as you tube. In that case, live class session using video conference should be arranged at least for first or opening session, case study and closing session. Furthermore, for the evaluation process, it would be better if it is carried out at the end of the class session for each material than at once for several materials in other class session.

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