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Application of Vi-Learning Based on Rotation Model

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Abstract – e-learning has always been described as a channel through knowledge transmitted between teachers, students, and the wider community. This vi-learning has been used by several universities by encouraging collaborative learning and social interaction. This study aims to determine the response of S1 Social Sciences Education students to the satisfaction of implementing e-learning learning using Vi-Learning Based on Rotation Model. Respondents consisted of 34 students of Social Sciences S1 study program class of 2017 who programmed instructional media courses. Data analysis using statistical discriminant techniques. The conclusions of this study are 1) students responding to satisfied Vi-Learning Based on Rotation Model is influenced by online learning activities and online discussions small grup, 2) students responding to dissatisfaction with Vi-Learning Based on Rotation Model influenced by material sharing and individual work 3) There are differences significant among the four e learning programs, namely: sharing material online, online discussions, material sharing and individual work on the discriminant model of the response of e-learning learning based on facebook. This interactive learning proposition with Vi-Learning is expected to be able to encourage the emergence of discussion of knowledge learned and encourage the emergence of various types of thoughts / activities that are not bound by time and space.

Keywords — Vi-Learning, Rotation model

I. INTRODUCTION

The internet has become one of the vital ways to provide resources for research and learning for teachers and students to share and obtain information [1]. Technology-based e-learning includes the use of the internet and other important technologies to produce materials for learning, teaching students, and also managing courses in an organization. Liaw and Huang [2] define e-learning based on a summary of its characteristics. First, they propose a multimedia environment. Second, they include several types of information. All three e-learning systems support collaborative communication, where users have total control over their own learning situations. In fourth place learning support networks to access information. And fifth, e-learning allows the system to be implemented freely on various types of computer operating systems.

The development of multimedia and information technology, as well as the use of the internet as new teaching techniques, have made radical changes in the traditional teaching process [3]. Developments in information technology, according to Yang and Arjomand [4], have resulted in more choices for education nowadays. School and educational institutions have recognized that e-Learning has the prospect of changing people, knowledge, skills and performance. Also according to Love and Fry [5], colleges, universities, and other institutions of higher learning race to advance the ability of

online courses in the rapidly developing cyber education market. E-learning, has become increasingly important in higher education institutions. The introduction and expansion of various e-Learning tools has initiated several changes in higher education institutions, especially when it comes to sending education and the support process [6].

This new environment for learning centered on electronic networks allows students at the university to receive individual support and also have a study schedule that is more suitable for them and separate from other students. This facilitates a high level of interaction and collaboration between the instructor or teacher and others rather than the traditional environment for learning. E-learning in the academic field which is characterized by the use of multimedia constructs makes the learning process more active, interesting and enjoyable.

Vi-learning is a form of blended learning that blends online and face-to-face learning. In this way using Vi-learning, the delivery of subject matter and explanations is shared between traditional learning methods and e-learning methods in classroom settings. The third one online has no traditional learning participation or class participation. In this form of usage, e-Learning is total so that there is maximum independence from students

This study applies a Vi-learning based rotation model. Learning activities in social studies learning media courses are designed with the main activities face-to-face (face-to-face) with a proportion of 70%, and supplemented with learning supplements with internet-based activities 30%. Internet-based learning utilizes Vi-Learning learning programs. Vi-Learning is an internet-based learning activity developed by Surabaya State University to facilitate online learning

II. METHOD

This research is quantitative descriptive, survey research conducted by researchers lasts for five months, from January to May 2019, by distributing questionnaires directly to respondents online via messenger in Vi-learning. Respondents consisted of 26 students of the 2017 Social Studies S1 study program who programmed learning media courses. Data analysis using statistical discriminant techniques.

The stages carried out by researchers in compiling this study are as follows:

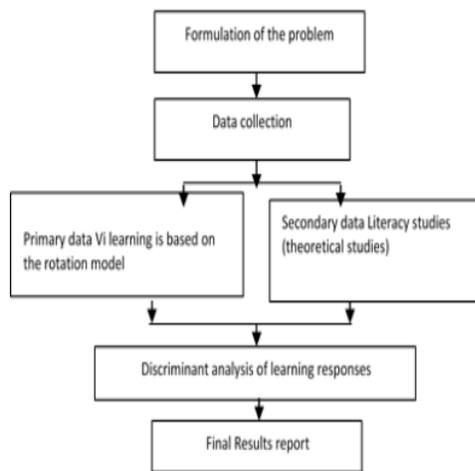


Fig. 1 Research Flow Chart

The research variable consisted of dependent variables in the form of social studies students' satisfaction responses to Vi-learning learning based on rotation models which were categorized into two segments, which were satisfied and not satisfied. The independent variable in the form of respondents' assessment of Vi-learning learning activities in general consists of four segments, namely online learning, online discussion, sharing material and individual work. The independent variable is measured in the form of a question with a Likert scale answer 1-4. If 1 they are very dissatisfied, 2 they are not satisfied, 3 they are satisfied, and 4 they are very satisfied.

The data obtained is then processed, analyzed, and further processed. Data collected from the field are then tabulated and analyzed through inferential statistics with discriminant techniques. Discriminant analysis functions to identify, classify and differentiate data.

III. RESULTS AND DISCUSSION

A. Result

Vi-learning in learning has a variety of features or applications that can be used by students to facilitate learning such as multimedia, pictures with text, various video clips (quotes, ideographic, infographic), and messages. Students during four meetings interacted with Vi-Learning as a supplement to the Social Studies learning media lecture.

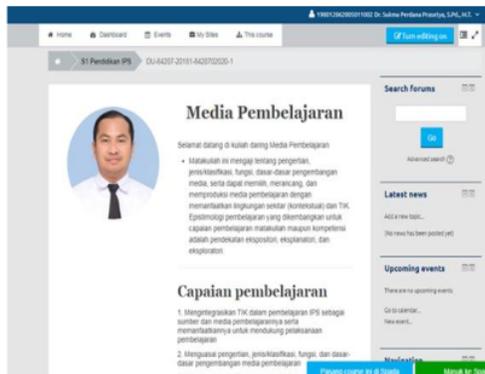


Fig. 2 Vi-Learning Layout

The next step after students learn with vi-learning is based on the rotation model with the following steps:

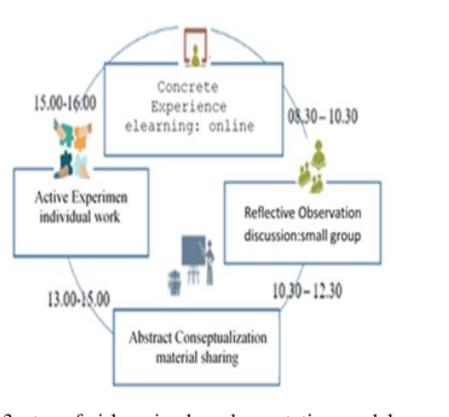


Fig. 3 step of vi-learning based on rotation model

The next step is collecting data in the form of a response to the learning. The data collection step was carried out by conducting a survey which distributed questionnaires to a population of 26 students. Here is table 1 of the data processing results.

TABLE 1. STUDENT RESPONSES TO VI-LEARNING

R	Y	X1	X2	X3	X4
1	P	4	3	2	3
2	P	3	4	1	1
3	P	4	3	4	4
4	TP	2	2	2	2
5	P	2	2	2	2
6	P	4	3	1	1
7	TP	1	2	2	4
8	P	3	4	3	3
9	P	4	4	2	1
10	TP	2	2	1	1
11	P	4	3	2	1
12	P	4	3	3	2
13	TP	2	2	2	2
14	TP	2	2	1	1
15	P	3	3	2	4
16	TP	3	3	2	2
17	P	3	3	3	2
18	P	4	3	2	3
19	TP	4	4	2	2
20	P	4	4	2	1
22	TP	3	1	3	3
23	P	4	3	2	1
24	P	2	4	1	1
25	TP	2	1	2	1
26	TP	2	1	3	3

Explanation:

- R = respondent
- Y = satisfaction decision
- P = satisfied
- TP = not satisfied
- X1 = online program
- X2 = small group discussion
- X3 = share material
- X4 = individual work

25 Likert scale 1-4

1 = very dissatisfied, 2 = not satisfied, 3 = satisfied, 4 = very satisfied

Data that has been collected through questionnaires filled out by respondents, then the data is processed with discriminant analysis techniques. The following results of discriminant analysis.

TABLE 2. DISCRIMINANT ANALYSIS OF STUDENT RESPONSES TO VI-LEARNING

Tests of Equality of Group Means					
	Wilks' Lambda	F	df1	df2	Sig.
online program	.528	20.582	1	23	.000
small group discussion	.497	23.270	1	23	.000
share material	.991	.211	1	23	.650
individual work	.998	.044	1	23	.837

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Wilks' Lambda				
Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.376	20.527	4	.000

Table 2 shows the online program having activities and small group discussion affect the response of student satisfaction in learning with Facebook ($p = 0.00 < 0.05$). Online discussions, share material, and individual work did not affect the satisfaction response ($p = 0.650$ and $0.837 > 0.05$). Table 2 also shows that there are significant differences between the four learning activities with vi-learning, sharing material, online discussions on discriminant models ($p = 0.00$).

Students who take part in Social Media Learning Media lectures are asked to provide feedback on the reasons for attending lectures through vi-learning. Here is a table of results of learning feedback with Vi-learning.

B. Discussion

Learning exploration shows that Vi-learning can promote effective communication and help people build and maintain relationship networks [7];[8]. The results of the analysis showed that in general student respondents responded satisfied with learning activities with Vi-learning, especially in online learning activities and online discussions. In material sharing and individual work activities are not much in demand by students

Sharing material in learning activities with Vi-learning can increase students' active interactions in gaining broad interaction and interaction. According to Suthiwarnarueput and Wasanasomsithi [9], the application of Vi-learning in learning supports interaction factors and Vi-learning can be used as a good and broad tool to be used as a space for interaction. Interaction between participants (students) can foster a variety of knowledge. They come to interact, exchange knowledge, discuss with each other, and help one another correct mistakes.

Students using Vi-learning can exchange knowledge and want to learn more with wider learning resources through the internet. When they have greater interaction, they have the opportunity to exchange experiences. Vi-learning facility as a learning medium is very practical in influencing students' attitudes towards obtaining more effective learning outcomes [10];[11].

The active interaction of students in learning through Vi-learning is widely used by participants. This is reinforced by the opinion of Cheung [12] which states that Vi-learning is the social networking site most widely used by youth in discussions, and supports a number of interactive features to build discussion relationships with individuals and various social communities.

Students who take part in learning have a more positive attitude towards learning through Vi-learning and feel more confident in interactions through learning, this makes their learning smooth and effective. According to Eger [13] Vi-learning media can have a positive influence on education. The Vi-learning network facilitates communication not only with friends and family, but also with other students and possibly with other teachers and experts. This allows students to work together, to organize their activities and to remind assignments

Social networking allows the exchange of information and open discussions about topics with users on one side. Social media in this case must be a tool to improve the quality of the learning process outside the classroom setting, students can also share ideas, use information seeking, discuss problems, and even join groups of other friends. Social media can help wherever and whenever support for distance education is needed.

According to Chou [14];[15], online learning applications in addition to having the attraction of satisfaction with increased learning activities, on the other hand need to be aware that social media is seen more as an arena for fun and playing games. This is not a serious environment for teaching and learning. Learners often spend time on their social networks rather than studying. Social media has many positive attributes but they are not tied to the education system. There are also problems with reduced physical interaction that results in reduced face-to-face meetings between students so students are increasingly unable to interact with humans in the real world.

Social studies learning media lectures have been delivered to students in the study orientation that learning through Vi-learning places more emphasis on constructivism aspects, where the process of building knowledge by students themselves is more emphasized than the achievement of learning objectives. Students are exposed to a free learning environment and freedom is a very essential element. Learning is the process of interpreting new information and learning objectives emphasizing the creation of understanding that demands productive creative activities in real contexts. This interactive learning proposition with Vi-learning is expected to be able to: (1) encourage the emergence of discussion of learned knowledge, (2) encourage the emergence of divergent thinking, not just one correct answer, (3) encourage the emergence of various types of thoughts / activities outflows, (4) emphasizes critical thinking skills, and (5) uses information in new situations

Learning with Vi-learning media is able to motivate learning because interactive learning by students and lecturers takes place intensively. Learning is not bound in the classroom with limited resources and media. Students are more willing to express their opinions because they do not face lecturers directly, so they are not afraid of being embarrassed. They don't have time to think about what other people's responses will be.

So they are very all out in giving opinions in virtual discussions or stronger than face to face communication in the classroom.

Learning through Vi-learning provides opportunities for students to take control of each other's learning success. Learners not only become passive recipients but also become determinants of learning for themselves, meaning students are given the freedom to determine when it will start, when it will finish, and which parts of the content they want to learn first. They can start from the topics or pages that interest them first, or can just pass through the parts that are considered already mastered. If they have difficulty understanding a part they can repeat it again until they feel able to understand. If, after being repeated there are still things that are not yet understood, students can contact the lecturer as a resource person via email or join interactive dialogues at certain times. The communication can also be chosen simultaneously or not. The learning becomes more personal in nature that will meet the needs of different learning strategies

IV. CONCLUSION

The application of Vi-learning in learning lecturers can design, implement, and document the use of computers and mobile devices in lectures both inside and outside of lecture hours. Vi-learning learning uses Information and Communication Technology (ICT) in the teaching and learning process to support learning activities and learning outcomes. Students generally respond positively and feel satisfied in more active learning activities. The satisfaction response is mainly in online learning activities and online discussions, while in material sharing activities and individual work are not factors of satisfaction in learning activities. Learning through Vi-learning media takes place more practically because the provision of lecture material and the collection of assignments that are carried out take place flexibly because every student can access the internet anytime and anywhere as long as it is accessible. Acquisition of learning materials at any time and repeatedly can be done. Students do not need to submit assignments in the form of bound hardcopy but it is sufficient to be submitted via softcopy that is accessed by the internet, so it is cheaper and faster. Discussion forums are designed specifically for virtual interaction of students individually or in working groups with lecturers. In these conditions, students can strengthen their mastery of learning material.

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