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The Effect of Using Online Learning Media and Learning Styles Towards Marine Cadets Learning Motivation

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ABSTRACT

The study aims to determine the interaction of web-based learning media used and the student learning styles in influencing learning motivation during the distance learning process during the pandemic. The research population was cadets of Surabaya Merchant Marine Polytechnic in the second semester. The sample in this study was 196 people, taken using the purposive sampling method. This method used in this research is the Expose Facto survey method with two-way ANOVA analysis for a 2x6 factorial design. The results showed that there was no significant (significant) difference in the learning motivation of marine cadets in terms of the variety of learning media ($F=0.997$; $p>0.05$), and there was no significant (significant) difference in learning styles ($F=0.640$; $p> 0.05$), moreover, there was no interaction between learning media and learning styles ($F=0.407$; $p>0.05$).

Keywords: Learning motivation, Learning style, Learning media.

1. INTRODUCTION

The Covid-19 pandemic which is currently sustained by almost all countries in the world has had a significant and massive impact, not only in the health, economic, social fields, but also in the educational world. Strictly, the government eliminates face-to-face learning in class for all levels of education. Therefore, distance learning using online learning in the teaching and learning process is considered as a solution so that the education could keep going straight on during the current Covid-19 pandemic emergency.

The use of online learning involves elements of technology as the media and the internet network as the system [1]. Thus, online learning provides benefits in providing learning access for everyone, thereby, removing barriers physically as a factor for learning in the classroom setting [2].

The existence of online learning requires a change in the learning media used in the teaching and learning process. Lecturers and students are required to be able to use existing applications to continue the continuity of learning and teaching. Refer to [3], applications such as e-classroom, video conferencing, telephone or live chat, zoom, or through Whatsapp groups are widely used as learning media. Each lecturer could choose the learning media used according to their needs and ability to use them.

The selection of internet-based technology learning media must be seriously considered because if it is not appropriate it can have a negative impact on learning outcomes. Therefore, lecturers must be able to understand the principles and factors that can affect the effectiveness of digital technology in the learning process [4].

Being an effort to realize educational teaching, it is stated that every decision and action of the lecturer in the scheme of teaching and learning activities will have an impact or effect on students. To anticipate that all cases, the role of lecturers is very important in achieving the expected results. Good lecturers are not only capable to deliver important information to their students but also they could foster and reinforcing

student learning motivation through the methods and learning media which they use.

Motivation is a theoretical construction to explain the initiation, direction, intensity, persistence, and behavior quality, especially goal-directed behavior [5].

Someone who learns with high motivation would carry out his learning activities seriously, enthusiast and passionately. On the other hand, students who study with low motivation will become lazy and even do not want to do tasks related to the lesson [6]. In line with the results of research, [7] shows that motivated students are more likely to do challenging activities, be actively involved, enjoy the process of learning activities, and show increased learning outcomes, persistence, and creativity.

Motivation can affect what we learn, how we learn, and when we choose to learn [8]. Even motivation is a series of attempts to provide certain conditions so that someone wants and wants to do something, and if he doesn't like it, it will try to obviate the dislike feeling [9].

Therefore, student learning motivation is one of the keys to success in learning [10]. Reference [11] is also reinforced by the findings of the research which states that there are differences in the learning results between students who have high and low learning motivation.

Various research results say that online learning is effective to be applied in learning in universities [12] [13]. However, not all learning can be transferred to an online learning environment [14] and not all students will be successful in online learning due to differences in learning environment factors and student characteristics [15].

Characteristics of students include personalities, beliefs, choices, and behaviors which are used by individuals to assist and help in their learning in conditioned situations, where such things are called learning styles. This implies that each student has a different way or habit of learning [16].

Each student learns according to his way which is called by the name of learning style and further it is explained that the suitability of teaching style with learning style can enhance learning effectiveness.

Reference [17] emphasized that one's learning style is: visual, auditorial, and kinesthetic (V-A-K). Although each of the students learns using these three styles at some stage, most students are more likely to one of the three.

Knowing the learning characteristics of each student in the class is one part of the pedagogic competence that must be possessed by lecturers. By

knowing the learning characteristics of each student, especially student learning styles, creates lecturers will be more effective in choosing strategies or learning media so it could create student motivation to learn. As stated in [18], there are several strategies to generate learning motivation, namely by using a variety of interesting presentation methods.

Based on the description above, the authors conducted the research on the effect of using online learning media and learning styles towards the marine cadets learning motivation at Surabaya Merchant Marine Polytechnic. The online learning media that is mostly used by lecturers are by utilizing e-learning which is built by the system and owned by Surabaya Merchant Marine Polytechnic and also utilizes the Google Classroom application, Zoom Meeting, Google Meet, and others.

Motivation is considered an important factor for learning success, including in an online learning environment, so researchers need to examine how the marine cadets learning motivation, between classes using Google Classroom as the main learning media and classes using Google Meet/Zoom Meeting as the main learning media. Besides that, the researcher examines how the learning motivation of marine cadets between cadets who have the learning styles of visual, auditory, kinesthetic, auditory-visual, kinesthetic auditory, and kinesthetic visual. As well as knowing online learning media interactions which are used and learning styles in influencing learning motivation during the distance learning process in the pandemic. The whole problem above is formulated into the research problem formulation as follows:

1. Are there differences in learning motivation in terms of the online learning media used?
2. Are there differences in learning motivation in terms of cadets' learning styles?
3. Is there an interaction between the use of online learning media and learning styles on cadets' learning motivation?

2. RESEARCH METHOD

Based on the objectives and formulation of the research problem above, the type of research that will be used in this research is to use the Ex Post Facto method.

In this research, the researchers measured the level of marine cadets learning motivation by comparing the cadets who study in classes using online learning media such as Google Classroom with Google Meet/Zoom Meeting as well as from the

learning styles which is belonging to each marine cadets.

In this research, there are two independent variables, namely online learning media, learning styles, and learning motivation as the dependent variable. Based on the variables which are used in this research, so the research design which is used is a 2 x 6 factorial design, as it is described in table 1 as follows:

Table 1. Research Design

Learning Media	Learning Style					
	Visual	Auditory	Kinesthetic	Visual Auditory	Visual Kinesthetic	Auditory Kinesthetic
Google Classroom	A1B1	A1B2	A1B3	A1B4	A1B5	A1B6
Meet/Zoom	A2B1	A2B2	A2B3	A2B4	A2B5	A2B6

Description :

A1B1 : Groups taught through Google Classroom learning media with visual learning style

A1B2 : Groups taught through Google Classroom learning media with auditory learning style

A1B3 : Groups taught through Google Classroom learning media with kinesthetic learning style

A1B4 : Groups taught through Google Classroom learning media with visual auditory learning style

A1B5 : Groups taught through Google Classroom learning media with visual kinesthetic learning style

A1B6 : Groups taught through Google Classroom learning media with auditory kinesthetic learning style

A2B1 : Groups taught through Google Meet/Zoom Meeting learning media with visual learning style

A2B2 : Groups taught through Google Meet/Zoom learning media with auditory learning style

A2B3 : Groups taught through Google Meet/Zoom learning media with kinesthetic learning style

A2B4 : Groups taught through Google Meet/Zoom learning media with visual auditory learning style

A2B5 : Groups taught through Google Meet/Zoom learning media with visual kinesthetic learning style

A2B6 : Groups taught through Google Meet/Zoom learning media with auditory kinesthetic learning style

3. RESULTS AND DISCUSSION

Motivation was divided into 3 categories: 1) low, 2) moderate, 3) high. Based on the results of research that has been conducted on 196 respondents can be known there are as many as 45 people (23.0%) who are classified as having relatively moderate

learning motivation, and 151 people (77.0%) others classified as having high learning motivation. The results of descriptive analysis of learning motivation consist of: mean, standard deviation, median, and variance can be seen in table2.

Table 2. Description of the marine cadets learning motivations

Learning Media	Statistic	Learning Style					
		B1	B2	B3	B4	B5	B6
A1	n	43	29	5	16	6	10
	Mean	150,56	160,10	159,13	153,13	131,67	152,50
	Std.dev	23,41	21,71	15,87	23,41	23.07	19,38
	Min	96	110	135	112	115	114
	Max	186	188	179	187	158	180
A2	n	39	18	9	10	3	5
	Mean	151,15	153,61	149,56	141,60	160,67	150,40
	Std.dev	21,57	26,31	18,07	28,41	20,79	12,03

	Min	101	106	121	102	137	131
	Max	182	188	177	172	176	163

Table 2 shows that A2B5 had the highest average learning motivation score with an average of 160.67 while A1B5 had the lowest average learning motivation score with an average of 131.67. This illustrates that the majority of learners with auditory-kinesthetic learning style have high motivation in the classroom that use Google Meet/Zoom Meeting as its main learning media and the majority of learners with auditory-kinesthetic learning style have moderate motivation in the classroom that uses Google Classroom as the main learning media. The results of testing hypotheses using two-way Variance Analysis (ANOVA) can be seen in Table 3.

Table 3. Two-way variance analysis test results

Tests of Between-Subjects Effects				
Dependent Variable: Learning Motivation				
Source	Df	Mean Square	F	Sig
Learning Media	1	0,005	0,000	0,997
Learning Style	6	358,743	0,713	0,640
Learning Media *Learning Style	5	513,559	1,020	0,407

Based on Table 3, it can be seen that the average comparison of learning motivation scores value based on learning media (google classroom and zoom meeting) shows a significance value of 0.997 (p>0.05), so it can be concluded that there is no significant difference on the scores value average in learning motivation between Google classroom and zoom meeting learning media.

This is due to the value of the average score of learning motivation in every media of learning does not differ too much and the difference is not too much, so the test results show that the learning motivation scores value based on learning media (Google Classroom and Zoom Meeting) is not different significantly.

Based on the results of this research, it shows that the learning media Google Classroom and Zoom Meeting can both improve learning enthusiasm from marine cadets.

In line with the findings of the research as in [19] which stated that Google Classroom can increase learning motivation in Mathematics. Google Classroom is an application that allows the creation of a classroom in the virtual world. In addition, Google Classroom can be a means of distributing tasks, submitting assignments, and even assessing the tasks that were collected [20].

Based on the results of the study as in [21] which states that students have enthusiasm to study online by using Google Classroom media. This is because Google Classroom media has interesting features such as the delivery of learning materials conducted by lecturers who can be accessed by students easily, students can open the material sent by lecturers at any time and easily in their use, especially at the time of delivery of materials and this media provides task or assignment features or worksheets where students can directly see the score given by lecturers for the task given. In addition, Google Classroom has a communication feature or (chat room) that can be used by lecturers and students to communicate even though communication tends to be one-way.

Thus, this application can help or facilitate the lecturers and cadets in carrying out the learning process more deeply. This is because both cadets and shishlecturers can collect assignments, distribute assignments, assess assignments at home or anywhere without being tied by the time limits or lesson hours.

The Google Meet and Zoom Meeting applications are involved in one of the video conference applications. Video conference is included in synchronous learning, an activity carried out jointly by educators and students. Synchronous learning is real time. Synchronous learning that uses video conferences and other multimedia techniques can allow educators and students to interact with each other at the same time even though they are in different places [22].

Video-conference learning can replace the learning that is usually done face-to-face in class into virtual face-to-face activities through applications that are connected to the internet network.

Thus, students can still observe the explanation of learning material that used to be through the blackboard, this can be facilitated by the share screen feature in the Google Meet and Zoom applications while listening to the explanation directly through the existing audio. By this application, lecturers can give assignments in the form of group presentations to students and it is possible for discussions that involve

to interaction between lecturers and all students. It is also possible for the lecturer to scold and remind students directly to keep on enthusiastic in the learning process if it is seen and heard that students are less enthusiastic in learning.

Zoom is an effective video conference application that is used as a learning media during the Covid 19 pandemic. In line with the results of this research which show that Meet/Zoom can motivate students to take a part in learning [23] [24].

Table 3 show that the average comparison of learning motivation scores at the time based on each learning style (auditory, kinesthetic, visual, visual-auditory, visual-kinesthetic, auditory-kinesthetic) shows a significance value of 0.640 (p>0.05), so it can be concluded that there was no significant difference in the score average of learning motivation based on learning styles.

This is because the average of the score of learning motivation for each learning style does not differ too much by the difference is not too much, so the test results show that the learning motivation scores are based on learning styles (auditory, kinesthetic, visual, visual-auditory, visual-visual, kinesthetic, auditory-kinesthetic, and visual-auditory-kinesthetic) were not significantly different.

Based on the research results, it shows that each learning style possessed by marine cadets has the same opportunity in improving learning motivation. There is no better learning style than other learning styles in motivating marine cadets on the learning process.

Learning style is students' characteristic in learning. How someone uses certain learning methods which it could make more comfortable and easier to receive learning materials. Thus, in general, learning styles are assumed to refer to the personalities, beliefs, choices, and behaviors used by individuals to assist or help them in learning. Certain methods may be effective for one individual but not for another.

The research results showed that there was no significant difference in the average score of learning motivation based on interactions between learning media classes groups (Google classroom and zoom meeting), as well as each learning style. This is because the average score of learning motivation in each interaction between learning media groups and learning styles does not differ too much by the difference is not too much, so the test results show that the learning motivation scores is based on interactions between learning media groups (Google classroom and zoom meet), while each learning style is not significantly different.

Based on the research results, it shows that the E-learning/Google Classroom and Zoom Meet learning media both can make marine cadets by each learning style motivated in participating in learning.

However, descriptive data analysis shows that the Zoom Meet learning media group class with the auditory-kinesthetic learning style has the highest learning motivation score average while the group class that gets the E-learning/Google Classroom learning media with the auditory-kinesthetic learning style has the lowest learning motivation score average. This shows that the majority of marine cadets with auditory-kinesthetic learning styles have high motivation in classes that using Zoom Meet as their main learning medium, the majority of marine cadets with auditory-kinesthetic learning styles have moderate motivation in classes that using E-learning/Google Classroom as a main learning media. Thus, the marine cadets learning media by using auditory-kinesthetic learning styles are more motivated to participate in learning by using online learning media in the form of Zoom Meet.

This is in line with the characteristics of auditory-kinesthetic learners who learn things through listening skills well. This learning style type tends to be conducted in the forms of material presentation through lecturing and discussions. Meet/Zoom Media can facilitate auditory-kinesthetic learners to listen to learning materials and conduct the discussions.

Learning motivation is dynamic and influenced by many things, some of them are students' goals, students' learning abilities, learning environment, and teachers' efforts in terms of mastering the material, how to convey it, attracting the students' attention [25]. Thus, learning media and learning styles are not the only things that can affect the marine cadets learning motivation in the medium and high categories.

4. CONCLUSION

Based on the results of research and discussion, it can be concluded that: (1) There is no influence of Google Classroom and Zoom Meet learning media towards the marine cadets learning motivation, (2) There is no influence of visual, auditory, kinesthetic, visual-auditory, auditory-kinesthetic, visual-kinesthetic learning styles towards the marine cadets learning motivation, (3) Interaction between learning media and marine cadets learning styles does not influence towards learning motivation. The selection of the right learning media according to the student's learning style can motivate students to learn even though there is only a slight difference. There are still many things that can be done to motivate students, such as mastering the material, how to convey it, attracting the attention of students.

AUTHORS' CONTRIBUTIONS

All authors conceived and designed this study. All authors contributed to the process of revising the manuscript, and at the end all authors have approved the final version of this manuscript.

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