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Student Learning Independence in Online Learning Depends on Motivation

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ABSTRACT

Online learning requires high internal motivation and learning independence to achieve satisfying results. Student learning independence is a internal ability to study independently, and can overcome its own problems related to the internet and the use of applications, so as to be able to motivate themselves for online learning. This study want to find out how the independence of student learning in online lectures, the obstacles to implementing online lectures, and the factors supporting the independence of student learning in Department of Electrical Engineering. Research data collection conducted by a questionnaire through survey research with an online system. The research sample is students who study in the even semester 2019-2020 in the Department of Electrical Engineering whose lectures are with online systems. Five courses are selected in each study program in the Department of Electrical Engineering, and 10 students per course. Data were analyzed descriptively as a percentage. The obstacles that are often experienced by students are internet disruption, limited internet quota, and rarely use certain applications. Factors that support student learning independence are wanting to succeed and continue studying even though studying online from home.

Keywords: Online learning, Learning independence, Motivation for success

1. INTRODUCTION

The Covid-19 pandemic occurred not only in Indonesia, but almost all over the world, with regardless of country, religion, position, age, rich or poor, everyone can be infected as well as transmitting to others the disease covid 19. Covid-19 is a global disaster, anyone is potentially exposed if their immune system is not strong, they do not adopt a lifestyle healthy, or not applying physical distancing, and a common enemy that must be fought, for example, breaking the chain of its spread.

The status of the Covid 19 pandemic becomes the emergency eesponse stage on March 17, 2020. The President has also issued Presidential Decree No. 7 of 2020 concerning the Task Force Acceleration of Corona Handling to accelerate handling of COVID-19 through synergy between ministries/ agencies and local governments, to increase readiness and ability to prevent, detect and respond to COVID-19.

The spread of the Covid-19 pandemic not only has an impact on health problems but also humanitarian issues that have an impact on social, educational, economic, and aspects the economy of the State. The government introduced a policy to stop school activities by doing a semi lock down by asking the community to do 3B (study, work, and worship) at home. The impact of school from home (SFH) is limiting lecturer and student interactions and learning activities. This encourages humans to using communication and information technology as an efficient tools of use in the remote activity method, and the world of education is no exception. Development information technology and digital technology in the era of the fourth industrial revolution (4.0) are becoming very important where data is unlimited, and information is also unlimited.

Online learning is not only assigned and done, but deep in learning there are interactive activities between students and lecturers, such as giving material explanations or making presentations or students have to present the results their work during lessons is done from home. These online lectures requires tools that frequently used ones such as Zoom meetings, Google Meets, Google Classroom, Edmodo, Schoology, and Unesa's Vi-learn (Vinesa). Briggs argued that learning media were messengers that could be used for learning purposes [1]. Students in general are very enthusiastic about participating in learning programs such as video conference (vicon) based tutorials because they can feel

an atmosphere similar to lectures at regular universities which are face-to-face so that bold learning will be maximized. However online learning can be successful, if students consciously feel a need to understand the material and can organize themselves to learn, on the other hand, lecturers also continue to apply student-centered learning. Although students and lecturers need time to adjust to the lecture schedule because it is not only lectures that are held during the work from home period, but there are other agendas for both students and lecturers. Learning with an online system, encouraging students to be more active in determining themselves in learning, and able to create independent character in them. Learning does not not only on the learning model and the technology that supports it, but learning is essentially a process interaction between teachers, students and learning resources. Online learning or e-learning can be used independently by students, but the existence of lecturers is very meaningful as adults who function to provide support, direct and accompany students in the learning process [2]. Besides that, there are very varied types of video conferencing, some can be clear face and voice, but there is also the opposite, there is no face and voice, such as using google classroom. The existence of various video conferences, making students more independent and creative, while lecturers become more innovative and find it easier to update material or choose fun learning strategies. Moreover, makes it easy to control student assignments. However, with a variety e-learning system has not been fully effective in improving learning because the e-learning application process requires a stable internet connection in order to get it running smoothly besides that the lecturers have not fully understood the various operational methods video conference. Online learning requires internal motivation and high independent learning to achieve satisfactory results.

Independent learning frees students to carry out learning activities according to their learning style, learning speed, interests and talents [3]. Independence is needed especially independence in learning, because students learn from home, none of his classmates can help to study, while the lecturer is also at their home, so that internal abilities determine the continuity of each learning individual. Brookfield argues that independent learning is learning that is carried out by students freely in determining their learning goals, using learning resources they choose, making academic decisions and carrying out activities to achieve their learning goals [4]. In other word, students are free to plan their learning strategies, choose learning sources, and carry out

activities to achieve learning goals. High learning independence will be more successful than low learning independence. High learning independence is needed in learning with an online system. Interest and independence of learning will grow and be maintained if teaching and learning activities are carried out in a varied manner, both through a variety of models and interactive learning media. For this reason, a study was conducted, to determine student learning autonomy in online learning, especially during the covid-19 pandemic.

Based on the description of the problem above, the research objectives of the researcher are: 1) to find out the independence learning of student in online courses in the Department of Electrical Engineering during the covid-19 pandemic; 2) to find out the obstacles that students encounter during the implementation study online during the covid-19 pandemic; 3) to find out the supporting factors learning independence for student in online lectures in the Department of Electrical Engineering

1.1. Online Lecture

Online lectures or e-learning is learning that is supported by the internet and is a tool that can be a learning solution during the covid-19 pandemic hits Indonesia and the world. This online lecture can be implemented because not constrained by distance, time and cost, but still prioritizing the interaction between students with subject matter, students with other students, and interaction with the teacher.

This is because in online lectures, students don't listen to material descriptions from educators only, but also actively observing, doing, demonstrating, and actively asking or responding. Teaching materials can be virtualized in various format so that it is more interesting and more dynamic, besides that the material can also be searched for by students themselves, so as to motivate students to learn more about a material. Learning using the e-learning model has the advantage that students can learn without the limits of time and space. E-learning refers to an alternative method of teaching and learning using all electronic media, including the internet, network, audio / video tape, and CD-ROM. Learning with the e-learning model has the advantage that students can learn without the limits of time and space, E-learning also provides a one-stop service for teachers and learners in order to create and deliver educational content quickly, effectively, and economically[5]. E-learning is an alternative method for learning that uses media electronic internet, intranet, satellite, Smart TV and

Mobile that are electronic media used in learning often, both synchronously (at the same time) or asynchronously (at different times).

Accordance with the 4th industrial revolution era, Indonesia is developing the system distance learning or through online learning further, so there is no learning space boundaries (borderless). The development of information technology, it is increasingly easy for humans to obtain information, in just seconds without time and space limits. The development of digital technology has given rise to various new applications including in the field of education, and used as a learning tool. Online lectures emphasize on student-centered learning, and improve 21st century skills (critical thinking skills, communication, collaboration, creativity, IT literacy, cross culture understanding, problem solving, self-directed learning).

Gagne argues that learning is a kind of change that is shown in changes in behavior, which are different from before the individual is in a learning situation and after taking similar actions. The learning situation in this case is not only soft, but also physical, such as roads, television, computers, and so on [6]. The environment in this case is not only soft, but also physical, such as roads, television, computers, and so on. The existence of virtual learning media can help students easily understand the content of a course. The success of learning that is built through online models in schools and colleges is required: 1) students are able to independently learn and manage learning time, manage the effectiveness of internet use and various motivating applications, and organize themselves in online learning; 2) educators are able to develop knowledge and skills, facilitate learning, understand learning and things needed in learning, and; 3) availability of adequate infrastructure facilities.

1.2. Learning Independence

Students who have independent learning have characteristics, namely, 1) independent in learning, namely being able to take full responsibility in analyzing, planning, implementing, and evaluating their own learning activities independently, 2) self-management, namely being able to identify what they need during the learning process , set individual learning goals, control their own time and efforts to learn, and organize feedback for their work, 3) have a desire to learn for the purpose of acquiring knowledge, motivation of independent learners to learn is very strong, and 4) problem solving to achieve learning outcomes best,

independent learners make use of existing learning resources and appropriate learning strategies to overcome difficulties that occur in the learning process [7]. Appropriate with the definition in the large Indonesian dictionary (KBBI online), independence is defined as a state that can stand alone without depending on others. Students who have high learning independence tends to can learn better, be able to monitor, evaluate, and set a schedule learn it effectively. Learning independence can be influenced by internal and external factors. External factors are the creation of relationships between teachers and students and the formation of a supportive environment, while internal factors are skills that students must possess such as focusing memory and attention and problem solving, understanding how learning occurs, and skills, feelings and emotions.[8] The data collection instrument used was an independent questionnaire student learning with indicators includes 4 (four) aspects, that is: self-confidence, responsibility, initiative and discipline [9]. Learning independence can be achieved by exercising self-control such as 1) intention control only focuses on tasks, 2) emotional control and motivation by aligning motivation with learning objectives and avoiding emotional states that can hinder task completion, 3) controlling actions, 4) controlling willpower in putting discretionary efforts into achieving goals.[10] If the students themselves can develop his independent learning ability, then the learning outcomes achieved will be of higher quality, original, and durable.

1.3. Motivation

Motivation has an important role in learning. This is because motivation can determine the level of speed at which a person works in doing something to achieve their goals. Thus the motivation that students have can determine whether the learning is effective or not. With the motivation that students have, it can provide encouragement to achieve their desires because it has targeted goals so that learning achievement will increase, in education motivation affects the success of learning carried out by students [11]. Motivation appears characterized by feelings and reactions in achieving goals which are manifested in a real activity in the form of physical activity [12]. There are two types of learning motivation, namely intrinsic and extrinsic motivation. Intrinsic motivation is motivation that comes from within students to complete their assignments. Meanwhile, extrinsic motivation is motivation that comes from outside such as the environment. Students who are

intrinsically motivated will complete the task and show better performance than students who are extrinsically motivated [13]. The learning experience of students who are intrinsically motivated will be more meaningful because students explore the material being studied [14].

Keller stated that there are four categories that represent motivational characteristics, namely, 1) student interest in subjects in building curiosity and continuous attention, 2) relevance between subjects and the interests students need in learning, 3) student expectations of the subject. these lessons in building self-confidence through success motivation, 4) student satisfaction from the learning process of these subjects in managing intrinsic and extrinsic reinforcement [15]. With developments in the four categories mentioned, the learning activities carried out will run effectively. Conversely, no matter how good the learning design that has been made, but students are not motivated to learn, learning activities will not occur because students will not perceive information in the ongoing learning. McLelland said there are six indicators of motivation to learn [16], namely 1) enjoy assignments or personal responsibility, 2) enjoy feedback on tasks performed, 3) enjoy moderate tasks whose difficulty level is not too difficult but also not too easy, 4) diligent and resilient in work, 5) full consideration and calculation, 6) success of the task and remain realistic.

2. METHOD

The approach and method used refers to the formulation of the problem and the research objectives. This research used a quantitative approach with a survey method. From the data, facts or information obtained through the survey, the condition of each variable under study can be described so that it is possible to know the effect of one variable on another. This research was conducted online, especially data collection.

2.1. Place and Time of Research

This research was carried out in the Department of Electrical Engineering, Faculty of Engineering, Universitas Negeri Surabaya. The research implementation time was in the odd semester of the 2020-2021 academic year.

2.2. Population and Research Sample

The population of this research is all students in the Department of Electrical Engineering, while the research sample is students who take a program courses that are taught online in the semester 2019-2020 and represents each study program in the Department of Electrical Engineering, that were Electrical Engineering Undergraduate Study Program, Electrical Engineering Education Undergraduate Study Program and Diploma 4 Electrical Engineering Study Program. Five courses are selected for each study program, and students who program these courses.

2.3. Data Collection Technique

Data collection technique used a questionnaire by collecting primary data from the respondents who were selected to be the research sample. The research questionnaire/ questionnaire is prepared by submitting a closed statement and the choice of answers on a likert scale.

2.4. Data Analysis Technique

Descriptive analysis is an analysis used to analyze data by describing the data that has been collected as it is without intending to make general conclusions or generalize. This research uses a questionnaire.

The results of the calculation of the percentage of independent learning are then interpreted by the following criteria [9].

Table 1. Interpretation of learning independence precentage

Percentage	Criteria
0%-20%	Very Bad
21%-40%	Bad
41%-60%	God
81%-100%	Very good

The criteria for student learning independence in the assessment indicator items are good if the percentage obtained is ≥ 61%.

3. RESULTS AND DISCUSSION

3.1. The Independence Learning of Student

Learning activities from home require independent learning in students. Lectures that are conducted online require students to be able to be independent in learning, manage the use of the internet and various motivating applications, and organize themselves in online learning. To find out how independent student learning was conducted a survey using an online questionnaire to the

research sample. The questionnaire consists of 5 indicators, namely self-confidence, being able to work alone, active in learning, having the desire to compete to advance, and being able to make decisions. To find out the level of self-confidence they have, it is necessary to look at the aspects of students in believing in their own abilities, having the courage to express their opinions, speaking fluently during online lectures, enthusiastically participating in group discussions, and trying to do their own assignments. The ability of students to work alone can be seen in the aspects of students doing tasks without being ordered by others, completing tasks without the help of others, and being satisfied with the results obtained. In the student's ability to be active in learning, it is necessary to look at the aspects of students asking questions, answering lecturer questions, having the courage to ask questions that are not yet understood, and daring to respond to friends' questions based on the concepts they understand. The desire to compete for progress that is owned by students needs to be seen in the aspects of curiosity they have, their experiences, and their creativity. In addition, students in making decisions need to be careful in making decisions and be able to solve problems on their own.

To determine the independence of student learning, it is necessary to pay attention to the average based on the overall aspects. The results obtained are based on the questionnaire that has been given, it is known that the total average value for each aspect is 1363 with 17 aspects, so the overall aspect average value can be calculated by dividing the average number of each aspect by the number of aspects and multiplying by 100. % . The result of the calculation is 80.1%. In accordance with the interpretation of the percentage of independent learning in table 1, independence learning of student is at a percentage of 41% -60% so it can be said to be good.

3.2. The Obstacles that Student encounter

The obstacles that student encounter to independent learning in doing online learning activities are in the indicators of students' ability to work alone and self-confidence. Most students in face-to-face learning activities require a lecturer or friend to understand the material or complete the assignment given. The level of difficulty in understanding the material increases when learning activities are carried out independently. This can be due to a lack of knowledge due to lack of reading or the material being studied is indeed difficult material to master if studied independently. Likewise with the completion of assignments, most students complete

assignments given by the lecturer with the help of their peers. This is still related to the lack of mastery of the material being studied independently.

In this connection, it is also influenced by the level of self-confidence. There are still many students who do not believe in their abilities which leads to completing assignments assisted by friends. To increase their self-confidence, students must be brave in expressing their opinions and be enthusiastic in participating in the discussions that are being held. Thus, the knowledge that is owned will increase and concepts that may not be mastered can be understood through the discussion that is carried out.

3.3. The Supporting Factors Learning Independence

Supporting factors learning independence in online lectures can be divided into internal factors and external factors. Internal factors are factors that come from themselves. Internal factors that greatly influence are discipline, motivation and responsibility. Students who have a high level of discipline will have a big influence on their independent learning. This is because the attitude of the discipline that they have will help students in managing the time that must be determined to carry out independent learning activities according to their abilities and characteristics. Motivation affects the independent learning carried out by students in terms of the indentation they have to achieve the desired goal, and that is mastering the concept of a material with their own abilities. The responsibilities that students must have play an important role as a manifestation of their awareness of their obligations. As a student, students must be aware of their obligation to master the concept and complete the assigned task properly.

External factors are factors that come from outside such as the family and school environment. The family environment plays a very important role in student learning independence. This is because in online learning, students carry out independent learning activities at home. Thus students and family members must have good interaction and cooperation in order to create a learning environment that is conducive to independent learning. The school environment has a role in supporting students in carrying out independent learning activities. Because learning activities are carried out online, schools can support students in learning such as helping to provide internet access, that is by providing data packages to students.

4. CONCLUSION

Online lectures require high internal motivation and learning independence to achieve satisfactory results. Student learning independence is meant to be independently able to learn, regulate the use of the internet and various motivating applications, and organize themselves in online learning. On the other hand, lecturers must also be able to develop knowledge and skills, to facilitate online learning, and the availability of adequate infrastructure facilities for conducting online lectures from home.

Based on the results of the research conducted, it can be seen that students have good learning independence. This can be due to the habits that have been carried out by students during face-to-face learning activities, so that students are familiar with the independent learning that is carried out. For the obstacles that students have in carrying out independent learning activities online, that is the ability of students to do work independently and the confidence that students have. Furthermore, factors that can affect student learning independence consist of two internal factors such as discipline, motivation, responsibility and external factors such as the family environment and the school environment.

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