The Effectiveness of VILCON'S Blended E-Learning Model in the Covid-19

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Abstract

Along with development existing technology , implementation from Internet use for learning one of them is e-learning. On the situation the Covid 19 pandemic required online learning . Applied online learning No free from objective same learning . As partners and facilitators, lecturers demanded selecting and processing the learning process , so need consider the use of appropriate learning models with characteristics eye college. Selection of the learning model used influential to quality and yield learning. Study This held in framework test the effectiveness of the ViLCon blended e-learning model that has been developed in offline or online learning so learning going on with effective and efficient so that objective Study reached. Study This including quasi- experimental research . Research design experiment used in study is a one group pre-test post-test design. test used has analyzed its validity with tested validity and reliability. Validity test carried out on 40 students class A validity test instrument form question choice double. For measurement done with use help SPSS application. Score average test initial (pretest) understanding draft student before learning is of 38.33% of ideal score and percentage average posttest score of 74.63% of ideal score . Meaningfulness enhancement from percentage average pretest and posttest scores can represented by the average normalized gain that is of 0.59. If confirmed in category from Hake (1999), then results enhancement the including in category medium. this show that use of the VilCon Blended E-learning learning model effective in increase understanding draft students in lecture learning models math. Based on analysis the results and discussions that have been studied outlined can concluded that module VilCon Blended E-Learning learning in learning model lectures mathematics effective used For increase results learning and motivation Tadulako University PGSD student.

Keywords: Effectiveness, Learning Models, Blended E-Learning, Vilcon, Covid-19

INTRODUCTION

As partners and facilitators, lecturers are required to choose and process the learning process, so it is necessary to consider using a learning model that is in accordance with the characteristics of the course. The selection of the learning model used influences the quality and learning outcomes. Therefore good learning requires development, improvement and change over time in accordance with current needs. Thus the use of information technology is needed.

Blended Learning is a combination of face-to-face learning and online learning with the help of appropriate information and communication technology to achieve learning goals (Ningsih et al., 2017). According to Arif Permana Putra, Blended Learning is used to describe learning situations that combine several learning methods at once in a learning atmosphere that sets the goal of creating an effective and efficient learning process (Putra, 2015). Meanwhile, according to Apriliya Rizkiyah Blended Learning is a combination of the characteristics of

traditional learning and an electronic learning environment (Rizkiyah, 2013). Based on the opinions above, it can be concluded that Blended Learning is an online-based learning that combines classroom learning. This learning can be done at the same time and different places. This learning strengthens learning in the classroom by utilizing today's learning technology.

The concept of Blended Learning is mixing conventional learning models with online learning (Sari, 2021). Students are expected to always be active and be able to find a way of learning that suits them. The teacher only functions as a mediator, facilitator and friend who creates a conducive situation for the construction of knowledge in students. Blended Learning will strengthen conventional learning models through the development of Educational technology (Zaharah Hussin et al., 2015).

During the Covid 19 pandemic, online learning was an option that had to be implemented. Online learning that is applied cannot be separated from the same learning objectives. Previous research by Mufidah (2021) has developed a ViLCon blended e-learning model which has been designed to be implemented with the result of being able to make students learn independently and also support a learning atmosphere in online learning. The steps of Vilcon's Blended Learning learning model with reference to ICT-based learning (Ramsay, 2001), namely: 1) Seeking Information; 2) Acquisition of Information; 3) student understanding test; and 4) Synthesizing of knowledge. In Seeking of information, educators or Facilitators share lecture materials and assignments by uploading them through the LMS using the "Material" and "Assignments" features for students to study at home. Next is Acquisition of information, at this stage students individually or in cooperative-collaborative groups seek to find, understand, and confront them with ideas or ideas that already exist in the minds of students, then interpret information/knowledge from various available sources, until they are able to communicate back and interpret the ideas and results of their interpretation using the facilities. At this stage the lecturer accompanies students to conduct guided discussions as a form of assistance by using the "Video Meeting" and "Class Discussion" features on the LMS. Lecturers can start question-and-answer activities that can help students communicate their understanding. In the next stage the lecturer gives a test to determine the level of student understanding. Lecturers use the "Quiz" feature to measure understanding. And students can upload their learning results in the "Assignments" feature and the lecturer corrects the results of independent learning carried out by students from home. In the synthesizing of knowledge stage, students construct/reconstruct knowledge through processes of assimilation and accommodation starting from the results of analysis, discussion and formulation conclusions from the information obtained. Lecturers provide reinforcement of the material provided face-to-face through Video Meetings. This research was conducted to test the effectiveness of ViLCon's blended e-learning model in offline or online learning so that learning takes place effectively and efficiently so that learning objectives are achieved.

The results of this study are expected to provide benefits for students, teachers, and schools, especially in learning the Elementary Mathematics Learning Model. This research provides benefits including increasing student understanding in learning the SD Mathematics Learning Model, training students to be active in the learning process and improving group work skills.

METHOD

This research is a quasi- experimental research. The experimental research design used in the research is one group pre-test post-test design . The research design is as follows:

Group	Pre-test	Treatment	Post-test
E	O_1	X	O_2

Information:

E : Class E PGSD student

O1 : Pre-test scores of student learning outcomes

O2 : Post-test scores of student learning outcomes
X : Learning using the multiplication integer learning module
contextual based

The data collection technique in this study is the technique of collecting data on student learning outcomes through tests. The test is a series of questions to measure student learning outcomes starting from before and after using the contextual-based integer multiplication learning module. The test was carried out twice, namely the initial test (pre-test) and the final test (post-test).

Before carrying out an analysis test through hypothesis testing to find out whether or not the use of contextually based integer multiplication learning module is effective or not. The researcher conducted a prerequisite test first. The prerequisite test in this study is a normality test to determine if the data obtained is normally distributed . In the normality test , researchers use the Kolmogorov formula Smirnov with the help of the SPSS application. The basis for decision making is that if the significant value is > 0.05, then the regression model meets the normality assumption . To test the hypothesis the paired samples t- test was used with the help of SPSS. The criteria for establishing and rejecting the hypothesis for the t-test are that if the calculation obtained t count is greater than or equal to t table, it can be seen that H0 is accepted and Ha is rejected. Conversely, if tcount is smaller than ttable then H0 is rejected and Ha is accepted. The significance level for accepting and rejecting the hypothesis is 5%. Meanwhile, Ha is said to be effective if the average (mean) value of the post-test is higher compared to the average pre-test value . Conversely, if the average post-test score is lower than the average pre-test score .

RESULTS AND DISCUSSION
Improving Students' Understanding of Concepts in Mathematics Learning Model Lectures
Description of Improved Understanding of Student Concepts

This research was conducted for 1 semester. Prior to learning, an initial test (pretest) was carried out to measure conceptual understanding and motivation before students received treatment. After the initial test (pretest), learning is carried out for fourteen meetings by applying the VilCon Blended E-learning learning model . Furthermore, at meeting 16, a final test (posttest) was carried out to find out the understanding of the concept and student motivation after being given treatment (treatment).

Students' conceptual understanding of the mathematics learning model lectures was measured by a multiple choice test consisting of 18 questions with five answer choices. The concept understanding test was carried out twice, namely before the treatment (pretest) and after the implementation (posttest). The percentage of achievement of the average score of the pretest , posttest and normalized gain (N-gain) can be seen in Figure 1.
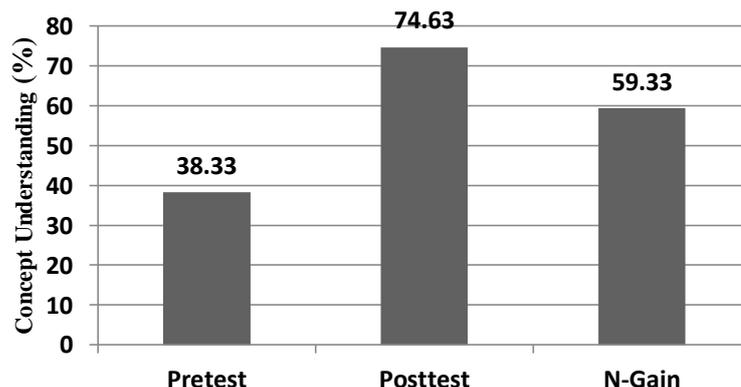

Figure 1 . Diagram of Comparison of Percentage of Average Scores in Pretest , Posttest and N-Gain Understanding of Concepts

Figure 1. shows the average pretest score (pretest), the average posttest score (posttest), and the average gain score normalized <g> for the understanding of the concepts achieved by students after applying the learning model Blended E-learning VilCon . The average pretest score of students ' understanding of concepts before learning is 38.33% of the ideal score and the average percentage of the posttest score is 74.63% of the ideal score. The significance of the increase in the average percentage of pretest and posttest scores can be represented by the normalized average gain of 0.59. If confirmed in the category from Hake (1999), then the results of the increase are included in the medium category. This shows that the use of the VilCon Blended E-learning learning model is effective in increasing students' understanding of concepts in mathematics learning model lectures.

Description of Improved Understanding of Concepts for Each Aspect

Improved understanding Student concepts in each aspect of the ability to understand concepts can be seen from the results of the test scores obtained by students on each item given in the initial test and the final test which tests the sub-concepts in question. The number of concept comprehension questions used in this study consisted of 18 multiple choice questions. There are six aspects of understanding the concept included in the concept of the mathematics learning model, namely the ability to interpret, exemplify, classify, conclude, compare, and explain. The average N-Gain score for each of these aspects is shown in Figure 4.2. Complete data can be seen in the attachment.
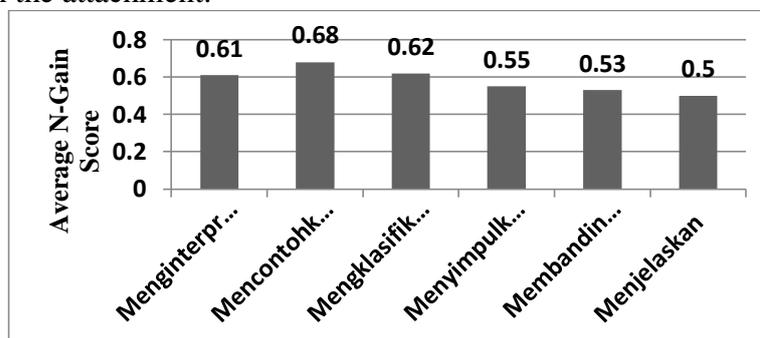

Figure 2. Diagram of Comparison of the Average N-Gain Score **for** Each Aspect of Understanding the Concept

Based on Figure 4.2 it can be seen that acquisition average score normalized gain (N - Gain) students highest in aspect exemplifies that is of 0.68 and the lowest in aspects ability explain that is of 0.50. If seen from category normalized gain mean score <g> developed by Hake (1999), then normalized gain mean score <g> for sixth indicator understanding This included in the category medium . this _ show that understanding draft student For every indicator understanding of learning models mathematics increase with category currently after application of learning models Blended E-learning VilCon . Analysis gain normalized mean score <g> each indicator understanding more can see in Appendix.

Upgrade Motivation Students in Lecture Learning Models mathematics

Student motivation is measured by administering a student learning motivation questionnaire. The increase in student learning motivation was explored based on the pretest and posttest answers after the application of VilCon's Blended E-learning . Comparison of the percentage of achieving the average score of the pretest , posttest and normalized gain (N-gain) can be seen in Figure 4.2. Complete data can be seen in the attachment.
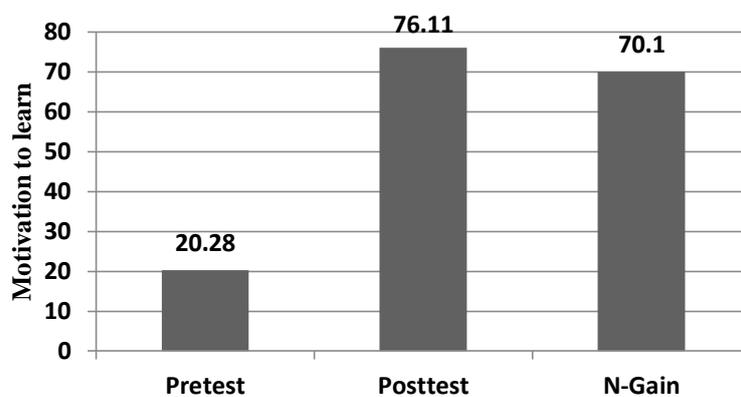
Figure 3. Comparison Diagram of the Percentage of Average Scores of Pretest , Posttest and N-Gain of student learning motivation

Figure 3. shows that the average score of student motivation has increased by 55.83% after applying the learning model Blended E-learning VilCon . The average score of the initial test (pretest) of student learning motivation before learning is 20.28% of the ideal score and the average percentage of the posttest score is 76.11% of the ideal score. The significance of the increase in the average percentage of pretest and posttest scores can be represented by the average normalized gain of 0.7. If it is confirmed in the category from Hake (1999), then the results of the increase are included in the high category. This shows that the use of VilCon's Blended E-learning model is effective in increasing student motivation. Complete data on the results of processing test scores and the N-gain of static student learning motivation can be seen in the appendix.

Relationships understanding Draft with Motivation

Analysis connection understanding draft student with motivation student done with using the correlation test statistics nonparametric for understanding N-gain data concept and motivation student in class experiment . Correlation test used _ that is processed spearman correlation test _ with help device soft data processor IBM SPSS Statistics 18 . Amount question understanding draft is 18 points questions and 56 items question For motivation . Statistical test analysis connection between understanding draft with motivation more can see in the attachment .

Discussion
Implementation of the Learning Model

During lectures for 1 semester, this research was carried out using the VilCon Blended E- learning Model . VilCon's Blended E-learning in this study was carried out by combining online and face-to-face learning using LMS-Video Meeting-Face to Face. At meetings 1-4 and 9-12 face to face is used. Then at meetings 5-8 and 13-16 video meetings were used. As for the collection of assignments, online discussions, the provision of teaching materials accessed through the FKIP LMS that has been provided by the Faculty. The pretest and posttest were carried out in a video meeting by activating the camera and microphone and filling out a concept understanding test using the LMS and learning motivation using the Google form within a predetermined time.

Based on the results of observations made on learning activities using the VILCON Blended E-Learning learning model, it shows that the implementation of learning as a whole is almost going well, both in the form of lecturer activities and student activities . Even though the percentage of the implementation of student activities in all meetings was not 100% implemented, improvements occurred at each meeting so that there was an increase in student activity. Some of the activities were not implemented because students were not familiar with VilCon's Blended E-learning model .

In the preliminary stage, the lecturer conducts apperception by asking questions to students to find out how far students know the material being studied. Determining prior knowledge, can be started with a simple question: "What do you know about ..?". This phase aims For prepare students to be conditioned in taking the next phase by exploring their initial knowledge and ideas and to find out the possibility of misconceptions in previous learning (Bently et al., 2007).

At the first meeting, when the lecturer asked questions to students, almost more than 8 students could answer the questions asked. The number of students who can answer the questions posed at this stage continues to increase in subsequent meetings . Then in the engage phase , the lecturer conducts demonstrations to attract student interest and motivation then asks questions to explore students' initial conceptions of the material to be studied. As a lecturer in blended learning learning must can direct or give instruction with Good to student to source existing learning _ (Musdalipa, 2021). In this phase, almost more than half of the students were able to express their opinions/answer the questions posed by the lecturer.

Student activities that were not fully implemented in the first meeting were the engage phase , explain phase, elaborate phase , and extend phase . In the explain phase , student activity in responding to the results of other group experiments is still lacking. This is because students are not familiar with the learning model Blended E- Learning VILCON in class. Meanwhile, student activities that were not fully implemented in the second and third meetings were the engage phase, and the extend phase . In the engage phase, most of the students did not record the learning objectives conveyed by the lecturer, while in the extend phase , most of the students were less able to provide examples of application or work on the exercises given by the lecturer.

The core activity includes a scientific approach at the implementation stage of the VILCON Blended E-Learning model , namely the activities of observing, asking, trying, associating and communicating. This activity was carried out almost entirely in every meeting during the learning process. Even though the questioning activity was carried out well in the first meeting, most students were still not enthusiastic when given the opportunity to ask questions. To find out the problems faced by students, researchers conducted interviews with several students after the first meeting. The results of the interviews show that the lack of enthusiasm in asking students is caused by a lack of self-confidence in students. Their students are afraid if the questions asked are not relevant to the material being studied, so they feel afraid when asked by the lecturer to ask questions (Fitri & Zahari, 2019). From the results of these interviews, in the next meeting the researcher tried to find a solution to this problem by requiring two student representatives from each group to ask questions related to the demonstrations carried out by the lecturer. By applying this rule, students are expected to be trained to ask questions related to what they observe (Amalia Izzati et al., 2021).

In addition, other activities such as in the explore phase, although implemented 100%, there were several important notes from the observers, namely that most students were less skilled in using teaching aids in mathematics learning models. Based on the results of interviews with several students, they rarely carry out learning with visual aids so that sometimes they still experience confusion in their use in explaining concepts. In addition, students seem still confused about how to collect and analyze the research data they obtained . At the explain stage , the lecturer asked two groups to present reports on the results of observations/cases that they had discussed previously. At this stage, communication activities are included which are part of the scientific approach. However, in practice, namely at the first meeting, not all students were involved in class discussion activities . This is because some students do not pay attention and chat during the discussion process (Jaya Saragih et al., 2020). To correct this deficiency, at the next meeting the lecturer tries to be more assertive by reprimanding students who don't pay attention.

elaborate stage , students are guided to conduct class discussions regarding the application of the concepts they have learned. At the extend stage , students are asked to discuss examples of application of concepts related to what has been taught to various other situations

of a similar nature in its application in learning mathematics. This activity was not carried out in the first and second meetings. Based on the results of interviews with several students, most students were still confused and did not know other examples of the application of the concepts that had been taught. According to students, they should be given more time to find out about the application of the concepts that have been taught. Students also revealed that in previous teaching and learning activities, examples of concept applications related to the material that had been taught were always delivered by lecturers. So they are not trained to think about the problem on their own (Dhianti Haeruman et al., 2021).

Elaborate and extend stages , even though at the initial meeting the students were still not brave enough to express their opinions, at the next meeting almost half of the students were able to be involved in class discussions. To overcome the non-implementation of student activities in the extend phase , the lecturer tries to explain things that students must understand and do first, including that students should find a concept itself, understand the concept with certainty and understand the special characteristics of the concept. Lecturers also provide motivation to students to dare to express their ideas and thoughts, namely by providing added value for these students.

Improved Understanding of Concepts

pretest data analysis, the understanding of the concept of the mathematics learning model shows that the average score of the experimental class before the application of the Blended E-Learning model VilCon of 38.33% of the ideal score. This shows that students have a low ability to understand concepts. Then students are given treatment, namely by applying the Blended E- Learning learning model Vilcon in class. To find out the impact of applying the learning model to increasing students' understanding of concepts, a posttest was carried out and the results were analyzed.

Posttest mean score Students' understanding of concepts after being given treatment is 74.63% of the ideal score, with an average <g> normalized gain score of 0.59. If the <g> normalized average gain score is confirmed by the category developed by Hake (1999), then it is included in the medium category. These results indicate that the application of the Blended E- Learning model In general, VilCon can improve students' understanding of concepts with moderate improvement categories. This is because students learn actively and independently in building their knowledge based on their previous knowledge and experience with the help of social interaction with colleagues and lecturers.

The use of this learning model is very instrumental in fostering an interactive and communicative learning atmosphere (Sjukur, 2013). This can be seen from the student activities during the learning process, where students are very enthusiastic and enthusiastic in answering the direction questions given by the lecturer and dare to ask questions regarding the things being studied. As long as the activity takes place in groups, namely in the explore phase , the lecturer only acts as a mediator and facilitator. This is in accordance with the opinion expressed by those Yen (2018)who stated that in learning the most important thing is students who are active in learning. Such learning helps the teaching and learning process run well and students actively build their own knowledge, so that the concepts learned will be remembered longer and can improve student achievement. Improvements that occur include the ability of students to interpret, give examples, classify, conclude, compare, and explain.

The ability to interpret is related to the ability to change information from one form to another. The ability to interpret includes the ability to change words into other words (for example, paraphrasing), pictures into words, words into pictures, numbers into words, and the like. (Fadhilaturrahmi et al., 2021). Based on data analysis, it was obtained that the average N-Gain score on the ability to interpret was 0.61 in the medium category. This ability in the learning process is trained at the stages of the Blended E- Learning model VilCon , among others, at the explore stage .

In the explore stage students are trained to be able to interpret the data they obtain through literature review activities in the form of words which they then write on student activity sheets (LKS) or interpret the information they obtain in the form of learning videos. With the efforts made by the lecturers as above, the lecturer hopes that students' interpreting abilities will become more trained . The explore phase of the learning cycle provides opportunities for students to observe, isolate variables, plan investigations, interpret results and develop hypotheses and organize conclusions (Eisenkraft , 2003).

The next increase in understanding indicators is an increase in exemplary indicators, namely with an average N-Gain score of 0.68 in the medium category. Exemplary ability relates to the ability to provide examples or general principles. The increase in the exemplary indicator is an increase in the highest understanding of the concept of the other six indicators. This is due, among other things, because students have understood the concepts being studied by connecting these concepts to the application of concepts in the case of learning mathematics.

In learning activities, the ability to model has been trained through expressing ideas starting from everyday problems or events submitted by lecturers at the elicit stage which stimulate students' ideas and thoughts regarding the application of the concept of mathematics learning models in everyday life. In addition, the ability to model is also introduced at the extend stage through activities associating the material they have learned with the experiences of everyday students. At this stage it is hoped that students will get an overview and examples of the concepts they are learning where students are trained to be able to provide examples of the application of the concepts they are learning. According to (Sari, 2021), students' in-depth understanding can help students to apply the new knowledge they have learned to real life and new situations.

The next improvement in understanding indicators is an increase in classifying indicators. The ability to classify is related to the student's ability to know that something (a particular example or event) belongs to a certain category (eg a concept or principle). Classifying involves finding relevant traits or patterns, which match specific examples and general concepts or principles. Based on data analysis, it was obtained that the average N-Gain score for this ability was 0.62 in the moderate category. This is because during the learning process this ability has been trained on students and students are considered to have understood the concepts they are learning so that they are able to classify certain examples or events. (Lake, 2020).

In the learning process, the ability to classify is trained at the engage stage and the explore stage through demonstration activities. In demonstration activities students are given direction questions posed by the lecturer related to what they observe, in this case the lecturer will display a video of the application of the learning model in class. From this activity students are trained to be able to classify including finding characteristics or patterns that are relevant to general concepts or principles.

The next improvement in understanding indicators is an increase in concluding indicators. The ability to conclude is related to the process of finding patterns in a number of examples. Concluding occurs when students are able to summarize or abstract a concept or principle that occurs from a series of examples or events by drawing relationships between the characteristics of the series of examples or events. Based on data analysis, it was obtained that the average N-Gain score for this ability was 0.55 in the medium category.

This ability in the learning process is trained at the explore stage , namely the application of a scientific approach at the associating stage. The activity of "associating/processing information/reasoning" in class learning activities is processing information that has been collected by students during the learning process, especially at the explore stage. namely from the results of collecting/experimental activities. This activity is carried out to find the linkage of one piece of information with other information, find patterns of the linkages of the information. Students are trained to draw conclusions from the experimental activities they have carried out and write them down on the worksheets that have been provided.

The next increase in understanding indicators is the increase in comparing indicators. The ability to compare relates to students' ability to find similarities and differences between two or more objects, events, ideas, problems, or situations. Based on data analysis, it was obtained that the average N-Gain score on the ability to compare was 0.53 in the moderate category. This can be caused, among other things, because students already understand the concepts they have learned so that there is an increase in students' ability to compare by finding similarities and differences between several events, problems, or situations.

The next improvement in understanding indicators is an increase in explaining indicators. The ability to explain is related to the ability of students to build and use a causal model of a system. Based on the data analysis, the average N-Gain score for the ability to explain is 0.5 in the medium category. The increase in the aspect of explaining ability was the lowest compared to other aspects of ability in understanding concepts. In fact, the ability to explain has been trained during the learning process, namely at the explain stage . At this stage students are trained to explain concepts or what they found and faced in the previous phase in their own words. Students are required to explain their ideas regarding problems based on the results of investigations, data collection, and data processing that they have done before (Eisenkraft , 2003) .

Overall there was an increase in students' understanding of concepts during the learning process, this can be seen from the average N-gain score of all aspects of the ability to understand concepts which are in the medium category. The increase that occurred was due to VILCON's Blended E- Learning model facilitating students to recall the subject matter they had previously obtained; provide motivation to students to be more active and increase their curiosity ; train students to learn to find concepts through experimental activities; provide opportunities for students to think, search, find and explain examples of the application of the concepts they have learned (Lorsbach , 2006; Huang , 2008).

Blended E- Learning learning activities VilCon , students are encouraged to learn actively, namely active thinking (mind-on) and active doing (hands-on). Carin (1993) describes that in the exploration phase, students get physical experience and carry out social interactions so that they can help students build mental (physical) ideas. knowledge). In addition, at the exploration stage, students are trained to reason. Reasoning is a part of thinking beyond the rote level (Krulik & Rudnick , 1996).

Description of Increasing Student Motivation for Each Aspect

pretest data analysis, student motivation shows that the average score of the experimental class before the application of the Blended E- Learning model VilCon is 20.28% of the ideal score and the average percentage of student motivation posttest scores is 76.11% of the ideal score. The significance of the increase in the average percentage of pretest and posttest scores can be represented by the average normalized gain of 0.7. If it is confirmed in the category from Hake (1999), then the results of the increase are included in the high category. This shows that the use of the Blended E- Learning model VilCon effective in increasing student motivation.

There are two aspects of motivation that are measured in this study, namely intrinsic motivation and eccentric motivation. According to Gunarsa (2008) intrinsic motivation is a strong urge or will that comes from within a person. The stronger the intrinsic motivation that a person has, the more likely he is to show strong behavior to achieve goals. The indicators for measuring intrinsic motivation in this study were student learning activities, being tenacious in facing learning difficulties and being diligent in doing assignments. The average result of learning motivation for the pretest intrinsic aspect is 40% in the weak category and the posttest results show an average result of 73% in the strong category. While extrinsic motivation according to Gunarsa (2008) what is meant by extrinsic motivation is anything that is obtained through self-observation, or through suggestions, suggestions or encouragement from other people. The indicators for measuring extrinsic motivation in this study are information/support

from lecturers, feedback, and reinforcement. The average result of learning motivation for the pretest extrinsic aspect is 55% in the sufficient category and the posttest results show an average result of 77% in the strong category.

The Relationship between Understanding Concepts and Motivation

Analysis of the relationship between understanding of concepts and motivation was carried out using a nonparametric statistical correlation test for N-gain data on students' understanding of concepts and motivation. The correlation test used is the Spearman correlation test processed with the help of data processing software IBM SPSS Statistics 18 . Statistical test results obtained a correlation value of 0.62. The magnitude of the relationship between understanding the concept and motivation is indicated by a correlation value of 0.62, which means that both have a strong and positive relationship. This relationship is also in accordance with the findings of research that has been done. Based on the findings above, it is proven that the application of the Blended E - Learning model VilCon can improve students' understanding of concepts and motivation. These results mean that by using this learning model, students' intrinsic and extrinsic motivation can increase, making it easier for students to improve their understanding of the concept. Students who are highly motivated in learning will probably get high learning outcomes too, meaning that the higher the motivation, the higher the learning outcomes they get.

These results are in accordance with the findings of Sinaga, P (2013) that student motivation depends not only on their mindset but also on their understanding of the student's concepts. This statement is also supported by research conducted by Wilson et . al (2009) that the learning model of learning cycle can increase knowledge, motivation to learn, and students' arguments in learning. Learning with the Learning model Cycle has been proven to be able to encourage students to carry out scientific investigations, understand how science works, and how scientists think or use their reasoning (Lawson, 1991).

Blended E- Learning VILCON consists of several learning activities that can be used to motivate students to understand complex natural phenomena through direct experience. In the learning cycle students are trained to make observations, test ideas, and make conclusions based on learning motivation. Based on the results of research showing that the learning cycle is effective for helping students enjoy science (Physics), understand content, and apply scientific processes and concepts in authentic situations (Cavalo , 1996; Colburn & Clough , 1997; Lawson, 1992; 1996; 2000).

Piburn's research (in LE Klopfer , 1990) which examined the ability of PGSD students to reason, obtained the result that there was a significant relationship between conceptual understanding and students' reasoning abilities.

Therefore, motivation is strongly related to students' understanding of concepts. If students use their scientific reasoning abilities during the learning process, this will help students have a deep conceptual understanding of physics concepts. Furthermore, through direct and active involvement of students in building knowledge (concepts) leading to more detailed, complete and scientific knowledge (concepts), making the knowledge (concepts) obtained deeper and stored longer.

CONCLUSION

Based on analysis the results and discussions that have been studied outlined can concluded that module VilCon Blended E-Learning learning in learning model lectures mathematics effective used For increase results learning and motivation Tadulako University PGSD student . Using Blended E-Learning VilCon need get used to in every learning process Because based on results study proven effective in increase understanding draft as well as capable increase motivation Study student . this suggestion based on findings researcher in the showing field that part big lecturer Still just do the learning process limited to knowledge transfer use method lecture.

RECOMMENDATION

Blended E- Learning learning activities VilCon . Based on the findings in the field , the facilities and infrastructure in the study program have not been properly prepared because apart from unstable internet access, supporting facilities such as infocus and study rooms are still lacking.

ACKNOWLEDGMENT

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