



The Difference in the Learning Achievement in Civic Education by Using Blended Learning Models

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Abstract

The aim of this research was to see the differences of the usage of model blended learning towards the learning achievement in civic education in students of the Faculty of education science education North Sumatera Islamic University. The sample of this research was conducted on a Mathematical Education Study Program numbered 20 people and Biology Education Study Program numbered 18 people carried out on in the teachings of the 2017/2018. Hypothesis testing is done using analysis of variance (Anava) one way at 0.05 significance level by using the SPSS program 24.0 for Windows. Test the hypothesis on this research used independent T test. Based on the results of the Testing is significant value of 0.032. Next, the value of significant $0.032 < 0.05H_0$ is rejected and then accepted the H_1 so that it can be concluded that there is a difference in learning achievement in Civic Education on student of Mathematic Education Study Program and Biology Education Study Program.

Keywords: Blended Learning, Civic Education Courses

1. Introduction

Developing learning in teaching and learning process is one way to improve the quality of education in Indonesia. The development of learning innovation is very important because Indonesia is faced with various global projects needed for globalization. In order to build a globally competitive Indonesian society, the Ministry of Education and National formulated the vision of Indonesian national education with a foundation and boils down to the concepts and values of Pancasila and the 1945 Constitution and adapted to the evolving social realities of the global society. Educational macro vision is implemented in curriculum policies based on character and competency-based 2013. In line with the implementation of Curriculum 2013, the Citizenship Education course that is being implemented in the Faculty of Education and Education of the Islamic University of North Sumatra uses the Curriculum 2013. The course of Citizenship Education as one of the teachers in higher education, they need to adapt and coherent to the needs and apply globally that will change.

The Citizenship Education course has outlined the commitment to realize the nation's character-building process. The consequences and education of Islamic University of North Sumatera education, learning activities that produce graduates should be able to assist in developing the potential and competence of students in which they live. Civic Education should be able to bring students into a society of character, democratic, religious, civilized, united, and social justice in accordance with the concepts, values, norms and morality express and implicit in Pancasila and the 1945 Constitution. The success and failure of Citizenship Education is mostly products of learning which are important assets in enhancing and preparing the younger generation to contribute to the realization of a democratic society[1] The course of Citizenship Education should be able to develop independence, develop analytical think-

ing, develop thought, and provide benefits to responsible and responsible members of society[2].

Learning activities of the Civic Education course in college should help students to socialize in a democratic environment and give them a democratic experience[3]. The civic education learning classroom is a context in which students can be used for processes that allow students to learn, discuss issues, and work with others who will develop their citizenship skills[4]. The reality in the learning of Citizenship Education so far does not include the values of democracy and the sense of responsibility of students to their social environment[5]. Furthermore, the direct course of Citizenship Education in universities is quite strong and is a subject that must be followed by all students. This is evident in Article 37 of Law Number 20 Year 2003 on the Indonesian National Education System. In accordance with Indonesian counseling around the world around the world people have been using information technology in different ages, they are studying Citizenship Education in colleges and also developing paradigms to the paradigm using information technology. For that the use of information technology into the learning process of Citizenship Education needs to be done. It is now imperative to reform the learning of Citizenship Education using communication and information technology in order to prepare well-educated and successful people in the global digital age[6]. It is intended that the learning process of Citizenship Education is not only a boring routine activity, but also can develop the ability to develop, and accelerate the learning process. Through the use of information technology into the learning process. Citizenship Education can improve student learning outcomes in Civic Education activities activities at the Faculty of Education and Education of Islamic University of North Sumatra. Based on research that says the course of Citizenship Education is a boring Lesson[7]. To enable the use of information technology in Civic Education education activities is necessary for real learning purposes of Citizenship Education to achieve, which is to inculcate nationalism and the establishment of

a good citizen for every student in the Faculty of Education and Education of the Islamic University of North Sumatra.

Given the importance of Civic Education learning in forming good citizens of the Faculty of Education and Education of the Islamic University of North Sumatra, it is necessary to modify and vary the learning of Civic Education. The effect that accompanies the development of communication and information technology, especially internet network technology is the development of learning models based on computer technology and internet[8]. The development of learning models is based on the growing number of students who will follow the learning process of Citizenship Education. Faculty of Education and Science Education Islamic University of North Sumatra has a very heterogeneous student background in the sense that students not only come from one graduate school medium course but derived from various graduates with the conditions of students who are already working, so with their background is very heterogeneous so that their needs and learning styles also become very varied.

Along with the development of background and variations of student learning and teaching variations of lecturers, blended learning model is now a trend that many developed as a model of learning in universities. The blended learning model is a learning model that uses an open and accessible learning environment through the internet, with the aim of facilitating learning and building student knowledge through meaningful interactions[9]. The underlying assumption of the use of this learning model is that students have the opportunity to use edmodo-based learning resources. This blended learning model combines learning model with face-to-face learning model using internet is traditionally done in the classroom and can also be done online either executed independently or in collaboration. The concept of blended learning learning can be seen in Figure1 below:

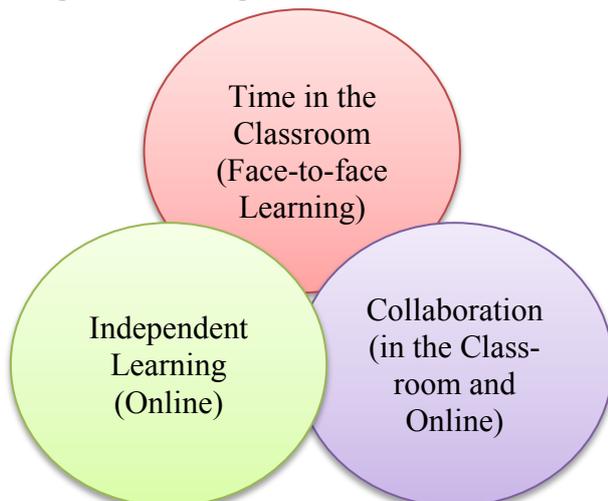


Fig. 1. Concept of Blended Learning

Referring to the concept of blended learning, it can be stated that blended learning model can use various approaches that can utilize any kinds of technology consisting of: (a) learning model that combine between face to face where between student and lecturer interact directly and each - students and lecturers can exchange information about course material, (b) self-study where students can learn by using various modules that have been provided, (c) self-study online. Furthermore, this blended learning model consists of the components as seen in Figure 2 below:

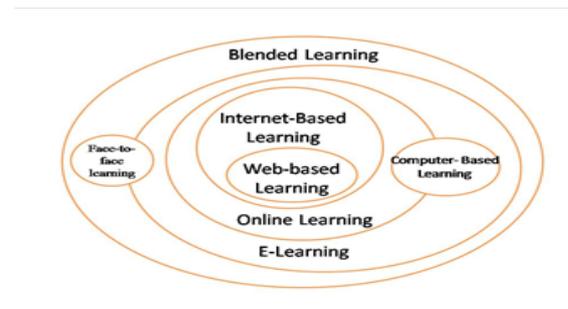


Fig. 2. Component of Blended Learning

Look at the Figure. 2 above can be stated that the blended learning model is a combination of approaches to face-to-face learning and online learning using internet based learning, web-based learning, online learning, and e learning. Given the flexibility of the use of blended learning model, some considerations in using blended learning model are: (a) the characteristics of learning objectives to be achieved, (b) relevant learning materials, and (c) selecting and determining learning materials which are relevant to face-to-face learning and what learning materials are relevant to online learning. The components of the learning model above show that the blended learning model component consists of face-to-face and online learning. Face-to-face learning is conducted in one place and at the same time, resulting in direct interaction between teachers and learners while online learning usually refers to the use of networked information technology deliberately designed in learning blended learning. Blended learning learning model used in this research is a learning model based on edmodo blended learning. It is based that one form of online learning can be done using edmodo. The use of Edmodo-based blended learning model is a learning activity designed to support enjoyable online learning activities and does not reduce meaningfulness in learning[10]. Learning activities conducted based on edmodo should contain instructional media in accordance with edmodo system[11]. Therefore, edmodo blended learning learning model in Civic Education course is a medium that combines face-to-face and online learning using edmodo application appropriately to achieve the learning objectives of Civic Education course.

By applying blended learning model based on edmodo, there will be a change, where the learning process is not only listening to the material description from the lecturer but the student can use online learning which can be accessed anywhere and anytime can improve the learning result of Civic Education course in Faculty of Education and Science Education Islamic University of North Sumatra. In the process of learning the subject of Citizenship Education assessment activities is one important component in order to provide information about the achievement of student learning outcomes.

Learning outcomes are the most important part in the course of Civic Education. Learning outcomes are the result of an interaction of learning and teaching action[12]. Learning outcomes are also interpreted throughout the skills and results achieved through a series of classroom learning processes within the scope of the campus expressed by numbers or values through the test. Learning outcomes are classified by three domains, namely: cognitive, affective, and psychomotor[13].

The cognitive domain is related to intellectual ability learning outcomes. Affective domain is related to attitude and value learning outcomes. Psychomotor domains relate to the learning outcomes of skills and the ability to act. The learning outcomes to be assessed in this study are the results of cognitive learning. The importance of measurement of cognitive learning outcomes in this study is based on the results of the study showed that learning outcomes are significantly influenced by the knowledge of students before they use online learning based learning[14]. The implication is that online-based learning is superior only if previously designed for instructional purposes first, and if not done the previous instructional design will have an undesirable impact. The

results of this study indicate that adopting information technology without interspersed with faculty briefing does not necessarily lead to better learning outcomes. A study on online learning-based learning programs reports that only highly motivated and educated students can benefit from online learning-based learning where future human capabilities need to grow[15]. Humans are required to be able to solve non-routine problems, namely solve problems that have no settlement procedures. Resolving issues that have not yet completed the procedure of completion not only requires technology, but also require guidance and lecturer direction in face to face. Research[16]shows that the trend of human skills that are needed is the expert skill is the ability to solve non-routine problems that have no standard solution. Several studies have shown that the use of appropriate learning models can speed up and improve interaction between lecturers, students and teaching materials[17]. So that the use of learning model in accordance with the characteristics of subjects into a need in a learning activity.

2. Methods

2.1 Research Design

The research design adopted in this study is quantitative research in which the data are analysed statistically by using SPSS 24 for windows. Factorial design in this research using analysis of variance (Anava) one way.

2.2 Sample

The research samples are students on Education and Teaching Science of Islamic University of North Sumatera at Sisingamangaraja Street, No 2 A Medan. The research samples are using random sampling technique. Sample Probability (Random Sampling) are also interpreted as sampling which allows each items on owned population have an equal chance to be involved in research sample. Based on sample randomization, there were 20 students of Mathematic Education study program and 18 students of Biology Education study program had selected that held in the academic year 2017/2018. The research samples are all students of mathematics education and biology education study program. Meanwhile, the research subjects in this research are Mathematics Education and Biology Educations' student who took Civic Education Subject. The research subject's composition can be seen on Table 1 below:

Table 1. Research Subject's Composition

Research Subject	Biology Education Study Program (A1)	Mathematic Education Study Program (A2)	Total
Learning Model			
Blended Learning	18	20	38

2.3 Instrument

The instrument in this study was developed by researchers. Instrument in this study depends on the number of variables studied. From these variables, the conceptual definition and operational definition are defined first, then the indicators to be measured are determined. From these indicators then an instrument is made in the form of student Civics learning outcomes test which aims to measure the cognitive domain of students in multiple choice forms. The purpose of using the student Civics learning outcomes test instrument on this cognitive aspect is to reveal the level of stu-

dents 'ability in mastering the students' possessions regarding the content of the subject matter obtained by students during the PKn learning process within 1 (one) semester. The instrument used to measure student learning outcomes in cognitive areas using (1) PKn learning outcomes tests in the form of multiple choices as many as 72 (seventy two) items, the form of questions and multiple choice test statements are prepared with 4 (four) answer choices namely A, B, C, D and E. The learning outcome test questions and statements are designed in such a way as to cover the cognitive area according to Bloom, namely aspects of understanding (C2), application (C3), analysis (C4), evaluation (C5) and creation (C6). The composition in the preparation of evaluation of Civics learning outcomes, the level of competence mastered by students in the form of understanding 28% (twenty eight percent), application 33% (thirty three percent), analysis 17% (eight percent), evaluation 11% (eleven percent), and creations 11% (eleven percent). Test contents are developed based on the Curriculum 2013(K-13).

2.4 Data Collection and Analysis

After determining the research subject, then blended learning learning activities and analysis of research data were carried out. Before the test of learning outcomes the Citizenship Education subject is used as a research instrument, the validity test and the reliability of the research instrument are first tested. Validity and reliability testing were analyzed using the help of SPSS 24 for Wondows program. The implementation of blended learning in the Citizenship Education subject can be seen in Figure 3 below:

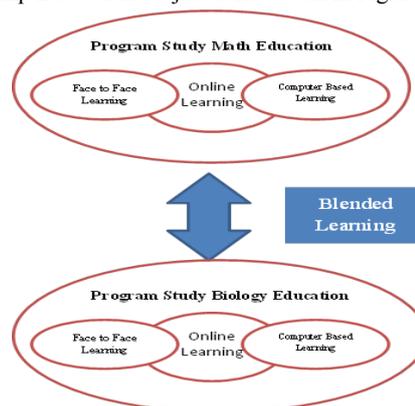


Fig. 3. The Application of Blended Learning

Based on Figure 3 above, it can be seen that the Mathematics Education Study Program and Biology Education Study Program are given face-to-face learning and e-learning learning is also given. During face-to-face learning, the lecturer uses the lecture, question and answer and group discussion methods. When using e-learning learning, every student must use electronic media that is connected to internet media. Each student can access the same module module that has been prepared in advance by the lecturer of Citizenship Education. Learning e-learning uses the edmodo. platform. The implementation of the learning process above is evaluated using the test of learning outcomes of Citizenship Education. This learning outcome test before the hypothesis test is first carried out the prerequisite test of the results data analysis by using the normality test and homogeneity test. To test the requirements for normality using SPSS 24.0 for Windows with the Kolmogorov-Smirnov test with a significant level of $\alpha = 0.05$ or 5%. The results of the normality test can be seen in Table 2 below:

Table 2. Normality Test

		Levene's Test	
		F	Sig.
Score	Equal variances assumed	,010	,920
	Equal variances not assumed		

Furthermore, to test homogeneity using the Levene test which can be seen in Table 3 below:

Table 3. Homogeneity Test

One-Sample Kolmogorov-Smirnov Test			
		Math	Biology
N		18	20
Normal Parameters ^{a,b}	Mean	77,1111	84,2000
	Std	9,19648	10,25260
Most Extreme Differences	Absolute	,138	,181
	Positive	,098	,146
	Negative	-,138	-,181
Kolmogorov-Smirnov Z		,585	,810
Asymp. Sig. (2-tailed)		,884	,528

By looking at the normality test in Table 2 above it is obtained 0.884 for students who learn to use the blended learning model in the Mathematics education study program and students who learn to use the blended learning model in the biological education study program are obtained at 0.872. Regarding Mathematics Education Study Program students have a significant value of 0.884 which is greater than 0.05 ($0.884 > 0.05$) and Biology Education Study Program students have a significant value of 0.528 which is greater than 0.05 ($0.528 > 0.05$), then students of Mathematics Education Study Program and Biology Education Study Program students have a normal distribution. Whereas based on the homogeneity test in Table 3 above, the F value in the Levene test obtained 0.01 with a significant value of 0.920. To see whether the two classes between Biology education study students and those taught by the Mathematics Education Study Program using blended learning models have the same variance, if the significant value is greater than 0.05. By referring to a significant value of 0.920 greater than 0.05 ($0.920 > 0.05$), the second between students of the Biology education study program and those taught by the Mathematics education study program taught using the blended learning model has the same variance. Further hypothesis testing is conducted to see whether there are differences in the learning outcomes of Civics Education courses for Biology Education students and students of Mathematics Education study programs using a blended learning model.

3. Results

Hypothesis testing is done using the T test which can be seen in Table 4 below:

Table 4. Hypothesis Test

			Score		
			Equal variances assumed	Equal variances not assumed	
Independent Samples Test	t-test for Equality of Means	t	2,234	2,247	
		df	36	36	
		Sig. (2-tailed)	,032	,031	
		Mean Difference	708,889	708,889	
		Std. Error Difference	317,359	315,506	
		95% Confidence Interval of the Difference	Lower	,69013	,69013
			Upper	1,348,765	1,348,765

Based on the hypothesis test above, it is found that the T test has the same variance of 2.234 with a significant value of 0.032. By using a significant level of 5%, the test criteria are if the significant value is more than equal to 0.05 where H_0 is accepted and H_1 is rejected if the significant value is less than 0.05. The results of the hypothesis test show H_0 is rejected and H_1 is accepted because the results of the data obtained is 0.032. Because the significant value of 0.032 is less than 0.05 ($0.032 < 0.05$). Since H_1 is accepted, it can be concluded that there is a difference between the scores of the results of the Citizenship Education learning outcomes of Biology study students and the score of the learning outcomes of the Citizenship Education program of Mathematics study students.

4. Analysis

Based on the findings of this study indicate that the application of edmodo-based blended learning model creates a different learning atmosphere from the usual learning activities carried out in the Education and Education Faculty of North Sumatra Islamic University. By looking at the implementation of blended learning, it has been proven that the use of blended learning models in the Civics Education course is able to improve the learning outcomes of students' Citizenship Education courses. From the results of the study showed data $0.032 < 0.05$, thus there were differences in scores of learning outcomes of Citizenship Education in Biology Education students and students of Mathematics Education study programs. The results of this study are quite reasonable because basically students of the Biology Education study program always learn by following 4 (four) characteristics of the Biology Education study program namely the process (scientific processes), products (scientific knowledge), attitude (scientific attitudes), and technology. Scientific attitudes are attitudes, beliefs, values, opinions / ideas and objectivity that will emerge after carrying out a scientific process known as a scientific attitude. Scientific attitudes are also interpreted as attitudes as scientific scientists work such as: honest, thorough, objective, patient, not easy to give up (resilient), respect for others. Technology in science is interpreted as the application of science which acts as a tool to solve problems in everyday life. The nature of this science brings logical consequences in the learning of Civics Education using a blended learning model. According to Carin & Sund (1990), the implications of understanding the nature of science are the implementation of learning that contains the following elements: (a) active learning, which involves students actively in a series of scientific processes through science process skills; (b) scientific literacy, which is learning that can accommodate students about: the context of science, and scientific attitudes; (c) science, technology, and society, which uses science to solve daily problems in society [18]. The essence of science is in line with Edmodo's based blended learning model in the Education Education Faculty of North Sumatra Islamic University. Blended learning model provides easy learning for students in actively involving students in a series of scientific processes through learning process skills, accommodating students about the context of subjects, and scientific attitudes, and learning technology-based students, science, welfare in society. The results of this study support the research of which states that by learning to use technology and science students can search for material resources and discuss online in learning. Based on the observations that the researchers did show that the science attitudes of the students of the Biology Education study program made the implementation of the blended learning model more meaningful. Ideally biology learning is in accordance with its essence as science, namely at least referring to three things: process, product, attitude. During a series of scientific processes, scientific attitudes are expected to be developed such as: honest, objective, thorough, respect for others, discipline. The principle of biology learning is very relevant to the purpose of Citizenship Education courses that is to establish honest behavior and be a responsible citizen. Thus, it is very reasonable if the results of the learning of Citizenship Education in Biology Education study students are better than students of the Mathematics Education study program. The implication of the use of blended learning model in the Citizenship Education course for students of Biology Education study program and students of the Education and Education Faculty of Education Islamic University of North Sumatra Mathematics Education program can be seen from the use of edmodo-based blended learning model can not be separated from the conditions of internet use by current student. Generally, students in the information technology era are accustomed to interacting with the media or social networks. When students

learn by using edmodo-based blended learning learning models at least they already have a social networking account. Students who study in the Information Technology era are used to having social networking accounts. So much information technology such as social networking accounts used in learning in the form of e-mail, cellphones, and smart phones[19]. The results of this study provide an overview that all students already have a social networking account and can utilize the social networking account for learning activities. The number of social networking accounts used by students to become social capital bridging positively related to the learning outcomes of Citizenship Education courses where students are free to access various lecture materials. Edmodo's blended learning model provides opportunities for students to learn flexibly[20]. The number of social networking accounts that students have suggests that the Education and Education Faculty of the Islamic University of North Sumatra has e-learning facilities and the internet network used to access them. This study also found that learning Citizenship Education courses by using blended learning opens up internet access through the use of mobile phones, laptops / netbooks, personal computers that have increased access to student learning.

The implication of the next research is the use of the internet in addition to relating to internet use, it turns out that the internet has also been used for the purposes of civic education. The initial forms of use by using the internet for lectures began with a sense of student need for information on Civics Education course material but also for communication and even counseling on student learning problems. This is in line with the statement that the use of the internet as a source and means of learning can be in the form of browsing, resourcing, searching, and consulting and communicating. These forms of internet utilization activities indicate that they are sufficiently supportive to organize the Citizenship Education course material and the use of EDMODO in learning. Both students of Biology Education and Mathematics Education study programs have benefited from blended learning in the following forms: (a) sending e-mail assignments, (b) accessing lecture material from lecturer blogs, and c) accessing research journals related to subjects Civic education.

Provision of appropriate learning support and planning for students supports the use of the internet to be combined with systematic face-to-face lectures. This research statement is in line with that stated by Medina (2018: 42) that students are willing to use this new technology opportunity in higher education because it provides several different scenarios and is more flexible for learning. Utilization of internet access in lectures in accordance with the times and the demands of competence in the information age is stated to be very appropriate. E-learning which is a component of blended learning offers flexibility in terms of time and place in supporting learning activities for the Education and Education Sciences Faculty and lecturers to disseminate learning materials. Citizenship Education Learning by using blended learning further improves student learning outcomes because of the diversity of learning material resources obtained by students. Use of the internet for learning purposes, where all learning content is like; instructional materials, group discussions, consultations, assignments, and examinations are fully conveyed through the website. The development of edmodo applications that are tailored to the needs of students will be able to help students download lecture materials online, so that lecture materials can be prepared based on the mapping of material made in the edmodo program[21]. Blended learning can be applied with a combination of time allocation starting 75% face to face for online learning and 25% for online learning. This difference in needs can be in accordance with the characteristics of Biology and Mathematics Education students who are still just starting out with online learning, even though most students have information communication technology devices, they need skills in using them.

5. Conclusion

The calculation of statistical analysis concluded that there were differences in the learning outcomes of Citizenship Education courses for students of the Mathematics Education and Biology Education Study Program. Based on the hypothesis test, it is found that the T test that is assumed to have the same variance is 2.234 and the significant value is 0.032. By using a significant level of 5%, the test criteria are if the significant value is more than equal to 0.05, H₀ is accepted and H₁ is rejected if the significant value is less than 0.05, H₀ is rejected and H₁ is accepted. Based on the results by the significant value data obtained is 0.032. Because the significant value of 0.032 is less than 0.05 (0.032 < 0.05) then H₀ is rejected and H₁ is accepted. Since H₁ is accepted, it can be concluded that there is a difference between the scores of the results of the Citizenship Education learning outcomes of Biology study students and the score of the learning outcomes of the Citizenship Education program of Mathematics study students.

The use of edmodo-based blended learning model is appropriate to be used by students of Biology and Mathematics Education, North Sumatra Islamic University in learning that combines face-to-face learning in class with online. The development of Edmodo program in Citizenship Education courses is used as a learning medium in blended learning so that it can improve learning independence that encourages student-centered learning that is not limited in time and space. This development is still limited to learning in the Biology Education Study Program and the Mathematics Education Study Program so further research is needed to find out the effectiveness of edmodo-based blended learning on student learning outcomes.

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