EFFECTIVENESS OF PJBL (PROJECT BASED LEARNING) BASED MICROTEACHING MODULES STUDENT LEARNING RESULTS ON BASIC TEACHING SKILLS MATERIAL

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ABSTRACT

This study aims to test the module's effectiveness on student learning outcomes in microteaching courses. The type of research used is Pre-Experimental with a one-group pretest-posttest design. In this study, the treatment given was using teaching modules on essential teaching skills material. The research took place in the anthropology education study program, faculty of social sciences, State University of Medan. With research subjects totalling 30 students who received microteaching courses in the 2022/2023 academic year. Before getting the treatment, students were given a pretest, and after being given the treatment, a posttest was conducted with 50 questions in the form of objective or multiple-choice questions. The increase in learning outcomes was analyzed using the N-Gain formula. Based on the results of the N-Gain analysis, the average value was 0.41. There was an increase in student learning outcomes after using the microteaching module based on the PjBL (Project Learning) learning model on essential teaching skills material with a moderate category.

INTRODUCTION

In the Law of the Republic of Indonesia number 12 of 2012 concerning Higher Education, it is stated that: Education is a conscious and planned effort to create an interesting teaching and learning process in order to develop the potential of students. The potential that can be developed is varied. Not only in the cognitive field, but also in other attitudes and skills that students must master. Especially in this era of globalization, teachers face many challenges (Palacios, R., Larrazabal, S., & Monzalve, 2022). This also includes students who are known as generation Z. For this reason, the government agrees that in order to achieve these national education goals, the performance of teachers as the front guard must be improved.

Identification of problems that are often found regarding education is the low learning outcomes of students (Küçükaydın & Ulum, 2023). After conducting research, the answer will be more or less the same, namely low interest in learning. Interest in learning is closely related to the teacher's teaching strategies in the classroom. There are many learning strategies. However, it is as if this problem does not exist it's over. The more we research, the more data is found that generation Z students prefer surfing in cyberspace rather than reading books. Reading books makes them sleepy quickly. Likewise, learning in the classroom is often used as a scapegoat. In fact, with this lecture method, at least we can know the extent of the teacher's mastery of the material. However, this method is still considered outdated. Students prefer to discuss, unfortunately their mastery of theory is weak. So what often happens is coachman debates (Santamaria-López, T. M., & Ruiz, V. G. 2023).

Thus, the most effective way is to update the methods, models, and teaching media used by teachers. Talking about variations in teaching, there is a lot that today's teachers can do, one of which is by utilizing technology. This ultimately leads to learning outcomes. With interesting and systematic media, it is hoped that Generation Z, who are close to *gadgets,* will be able to participate in learning happily. Learning modules are one of the innovations for today's learning media. Modules can be printed or digital versions. Although most will choose e-modules. For the reason that everything is in their hands, namely cell phones. Generation Z or *Zero Generation* is a generation that is close to the internet. Unfortunately, this does not guarantee that students will improve their mastery of learning material.

Djamarah & Zain (2010: 121-123) say that learning media is a tool to pave the way towards achieving CPMK (course learning outcomes). Using appropriate learning media can maintain the focus of students' attention for longer. So that media can survive as a source of learning today. Because it can be in the form of auditory, visual, and audiovisual. The use of this media must be adjusted to the learning objectives, student characteristics, and of course the teacher's abilities. In this case, the module includes types of visual media that can be printed or with file or digital media to make it more practical.

Apart from learning media, students' learning outcomes can also be influenced by the learning model presented by the teacher. Let's say one of them is the PjBL (Project Based Learning) learning model (Tuaputty, et al, 2023), Tsybulsky, D., & Sinai, E. (2022). Generation Z would prefer learning to be combined with the PjBL model. Čavić, et al (2022) Because those who don't like to sit still and listen will be facilitated by this PjBL assignment model. Because group work, going out into the field, observing, and finding solutions to the problems captured will be very enjoyable for generation Z. This is in line with the research results of (Nugraha, et al, 2021) which states that the implementation of the PjBL learning model is successful in improving student learning outcomes because by In this model, students become more active and meaningful.

In this sophisticated era, visual media can be combined with various learning models as an innovation. Following is Yaumi's (2021: 114) statement that learning modules are a variety of printed media as well as independent learning packages that easily reach every type of student and are practical when used because they can be adjusted to each student's ability to understand and the time they have. He also added that the use of modules could improve student learning achievement Wuttphan, N., & Klinhom, N. (2023).

Microteaching is one of the mandatory courses in study programs on educational campuses. This course emphasizes eight basic teaching skills. This skill must be possessed by every prospective teacher-student. However, the problem is that students now only assume that teaching means being able to stand in front of the class. Without mastering various basic teaching skills. So it looks like you're just doing your assignments during the simulation in front of the class. In fact, we all know that teachers have competency standards. In line with this, Majid (2016: 6-9) said that teacher competency standards aim to establish benchmarks for assessing teacher performance to ensure the

quality of teachers in improving the quality of the teaching and learning process. This is intended to continue to build *public trust* in teachers.

Microteaching courses are prepared in such a way as to improve prospective teachers' abilities in basic teaching competencies (Ambarini, et al,2023). So the class is set up very comfortably with not as many participants as there are classes in regular courses. Microteaching makes students more comfortable with their instructors or lecturers. The method is simulation or practice with small classes. So that all participants will feel perfectly cared for by their lecturers. They will also be comfortable giving each other feedback as a form of class discussion so that the next performance will be even better. However, from the results of observations, mastery of material regarding basic teaching skills is very low. This was discovered after several simulations, students just stood in front of the class and started explaining the lesson. There are eight basic teaching skills that they must master the material first before they are ready to practice in front of the class. This is what encouraged the author to develop a Microteaching module combined with the application of the PjBL model. After the module passes the validity test from expert judgment or material and media validators, the module is ready for use by students. For this reason, further research needs to be carried out regarding the effectiveness of using PjBL (Project Based Learning) based Microteaching modules on basic teaching skills material.

METHOD

This type of research uses quantitative experiments, with a Pre-Experimental one-group pretest-posttest design. Sugiyono (2016) stated that research with a group Pretest-Posttest Design has a pretest before treatment is given to research subjects. In this way, the results of the treatment will be more accurate because the results can be compared with the results before the student was given treatment. This design can be described as follows:
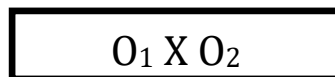
$$O_1 \ X \ O_2$$

Fig 1. One Group Pretest-Posttest Design

Information:
O_1 = Pretest value (before being given the module)
X = Treatment, namely the basic concept module of VCT-based sociology
O_2 = Posttest value (after being given the module)

This research took place in the anthropology education study program, FIS-Unimed. The research subjects were 30 even semester students, namely semester 4. The first stage was to observe which classes would be used as research subjects. After finding the class, the next step is to conduct a pre-test for that class. By answering 50 objective questions. This question was designed in such a way when designing the module and has passed the validity test. After the answer sheets are collected. Only then do lectures use PjBL-based basic teaching skills modules. At the end of the class, there will be a post-test with the same participants. Once collected, the author processes the learning results obtained by the students.

The increase in learning outcomes is calculated using the N-Gain formula. After the answer sheets are collected, the pre-test and post-test scores of individual students are calculated. To get a valid value for analysis of improving learning outcomes. The increase in student learning

outcomes before and after lectures with this module is calculated using the g factor (gain) formula using the Hake formula:

$$\text{N-gain} = \frac{Spost - Spre}{Smaks - Spre}$$

RESULTS AND DISCUSSIONS

This research aims to see the impact of using microteaching modules based on the PjBL model on basic teaching skills material. The module that has been designed has obtained a high average score from the validity test, namely 0.76 and 0.90 with very practical criteria from student responses. Meanwhile, this effectiveness test was carried out to find out to what extent the module that had been designed could influence student learning outcomes and compare it before and after the class was given treatment. Does it increase drastically, moderately, or does not affect at all on users? Therefore, it is necessary to carry out a pre-test and post-test. Before the pre-test was carried out, it was agreed that the KKM (Minimum Completeness Criteria) was 60. The following are the results of data processing using the N-Gain formula:

Table 1. Improved learning outcomes

Average value		Big Enhancement	N-Gain	The highest score		Lowest Score	
Pretest	Posttest			Pretest	Postest	Pretest	Posttest
55,86	74,33	18,47	0,41	78	90	10	62

Based on the analysis of the table above, it can be seen that lectures in microteaching courses before using the basic teaching skills module based on PjBL obtained an average of 55.86. However, students' understanding of basic teaching skills material increased after being given treatment, namely using the module, with an average score of 74.33. It can be seen that the modules designed affect students' mastery of the material, although not drastically, but they are effective. The amount of increase is 18.47. The increase in student learning outcomes before and after lectures using the designed module was calculated using the g factor (gain) formula using the Hake formula and obtained a value of 0.41, which means the normalized gain level is included in the medium criteria. In line with that, Simbolon and Koeswanti (2020) also emphasized in their research that learning carried out with the innovative PjBL model can attract students' interest in learning so that it impacts on better learning outcomes.

This means that the basic teaching skills module is based on PjBL (Project Based Learning) which is designed to be effective in improving student learning outcomes (Payoungkiattikun, et al, 2022). This is marked by an increase in students' pre-test to post-test scores. Generation Z just needs to reduce the use of gadgets and start switching little by little to the use of visual media which places more emphasis on reading skills to conclude material and finally to understand the eight basic teaching skills. So you can answer the questions that have been prepared. Comparison of the lowest and highest scores in the two test sessions. It appears that initially, some didn't understand so they only got a score of 10 and were finally able to catch up with that in the post-test score.

The questions are prepared with the aim of measuring the extent of students' understanding of the eight basic teaching skills and how to implement their tasks by combining the PjBL (Madigan, M. (2022). These questions cannot be separated from the discussion in the module. If the pre-test is used to find out the extent of students' initial understanding of the basic teaching skills material before being given the module, then the post-test is to find out the extent of its influence on students' learning outcomes after being given the module. This is supported by the results of

research by Suwarno et al (2020), Limet al (2023) also explained that the PJBL model assisted by LKS has a positive impact on student competence or creativity, especially in applied science.

John, K., & St. John (2023) Even though the treatment given was the same to 30 students, the comprehension power of each student was still different. It can be seen that some have increased drastically from the pre-test scores, some have only increased slightly and some have remained the same. The diverse characteristics of students can finally be concluded that there are diligent students, if they are given innovative learning media they will be even more enthusiastic. For those who are not diligent in using this module, which can be said to be an independent study guide, it can also make them complacent. Sometimes I'm too lazy to read it because independent learning is adapted to individual regulatory patterns so that success does not belong to every individual. The narrative of Pribadi (2017:218) states that indicators of successful learning are (1) if students can achieve competency, one of which is proven by whether or not they can answer the questions that have been prepared, (2) the learning that takes place can increase learning motivation for students, (3) able to make students remember the learning material longer, (4) ends with students being able to apply the knowledge they have learned.

In this case, the designed module can increase students' motivation or interest in learning so that CPMK is achieved by being able to remember important material from basic teaching skills and practicing it step by step in front of the class (Payoungkiattikun, et al, 2022). Mastering the ins and outs of the rules for opening and closing learning skills, explaining the material, asking questions, managing the class, and implementing innovations in the classroom both in terms of models, media, and teaching strategies. As well as being able to explain and practice skills in managing small group discussions, teaching small groups or individuals, and providing reinforcement (Tian, et al, 2023).

From the results of in-depth interviews with several randomly selected students, it was found that today's students' interest in reading is very low because Generation Z has been spoiled by the internet. They think anything is on the internet so why bother reading? However, once this module is designed systematically, equipped with various colors due to the inclusion of illustration elements in it avoids long paragraphs, and is filled with more important material points, then motivation to learn begins to rise again. Mursid, et al (2022) The module is also equipped with examples of project results in answering a problem. If the problem previously discovered was a learning model that was still conventional without being combined with a cooperative learning model, then the follow-up to the case study was to design a more interesting model, media, and teaching strategy. Because the true concept of evaluation in learning includes tests, measurements, and assessments. Evaluation is meaningful as a consideration of the goals to be achieved so that the next follow-up action taken is not wrong (Widoyoko, 2020: 1-3), Mitchell, J. E., & Rogers, L. (2020). Mursid et al (2022) in their research confirmed that there is an effect of PjBL on students' creative thinking skills. And recommends lecturers to use this model in lectures in order to improve student learning outcomes and unconsciously increase students' creative and critical thinking. McCall et al (2023), Moghaddas, M., & Khoshsaligheh, M. (2019), Garmendia, et al (2021) With the N-Gain results obtained it is 0.41 meaning The increase in learning outcomes is included in the moderate category. As a follow-up, teachers can of course try other media, because in reality there are many forms of learning media and they should be used interchangeably so they don't get bored.

CONCLUSION AND SUGGESTION

The research results show that the microteaching module based on the PjBL (Project Based Learning) model on basic teaching skills material can improve student learning outcomes. This is proven by the increase in learning outcomes according to the N-Gain formula, obtaining an average value of 0.41. The students' pretest results initially only obtained an average of 55.86 and the posttest was 74.33, meaning that there was an increase in learning outcomes of 18.47 after being given the module.

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