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The Use of Project Based Learning in Microteaching Courses to Instill Students' Creative Thinking Ability

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ABSTRAK

Rendahnya kreatiftas siswa dalam proses perkuliahan microteaching, ditunjukkan dengan masih banyaknya mahasiswa yang kesulitan dalam menyusun RPP, bahan ajar, dan lembar kerja peserta didik. Selain itu, mahasiswa menyusun administrasi pembelajaran masih berdasarkan apa yang ada di internet tanpa ada modifikasi. Untuk mengatasi permasalahan tersebut maka diperlukan adanya penerapan model pembelajaran yang tepat untuk meningkatkan kreatifitas mahasiswa. Adapun tujuan dari penelitian ini yakni untuk mengembangkan kemampuan siswa dalam menciptakan administrasi pembelajaran secara kreatif dengan memanfaatkan model pembelajaran project based learning pada mata kuliah microteaching. Penelitian ini termasuk jenis penelitian kualitatif dengan menggunakan pendekatan deskriptif. Subjek penelitian berjumlah 30 orang, 28 perempuan dan 2 laki-laki. Metode pengumpulan data menggunakan observasi dan tes. Instrumen yang digunakan lembar observasi dan tes. Analisis data dilakukan dengan tahapan reduksi, penyajian data, verifikasi dan penarikan kesimpulan. Dari hasil analisis data diperoleh bahwa tingkat kreativitas mahasiswa sudah berada pada level kolaborasi. Mahasiswa secara bersama-sama membagi tugas dalam menyusun administrasi pembelajaran. Terlihat dari hasil observasi bahwa dalam setiap kelompok membuat daftar tugas yang harus dikerjakan. Dilihat dari hasil kerja, mahasiswa sudah bisa menyusun administrasi pembelajaran secara kreatif. Tingkat kreativitas dari hasil project masih pada 75%. Masih terdapat beberapa bagian yang perlu diperbaiki, seperti tujuan pembelajaran, materi, dan bentuk penilaian yang belum sesuai kompetensi dasar. Namun, penggunaan project based learning mampu menanamkan kreativitas pada mahasiswa dalam menghasilkan produk. Tentu masih diperlukan penelitian lanjutan untuk menghasilkan project yang bagus.

ABSTRACT

The low creativity of students in the microteaching lecture process is indicated by the fact that many students still need help preparing lesson plans, teaching materials, and student worksheets. In addition, students arrange learning administration based on what is on the internet without any modifications. To overcome these problems, it is necessary to apply the right learning model to increase student creativity. This research aims to develop students' ability to create creative learning administration by utilizing project-based learning models in microteaching courses. This research is a type of qualitative research using a descriptive approach. The research subjects were 30 people, 28 women, and 2 men. Methods of data collection using observation and tests. The instruments used were observation sheets and tests. Data analysis was done with the reduction stages, data presentation, verification, and conclusion. From the results of the data analysis, it was found that the level of student creativity was already at the collaboration level. Students jointly divide tasks in preparing learning administration. It can be seen from the observations that each group makes a list of tasks that must be done. Judging from the work results, students have been able to arrange learning administration creatively. The creativity level of the project results is still at 75%. Several parts still need to be improved, such as learning objectives, materials, and forms of assessment that are outside of basic competencies. However, using project-based learning can instill creativity in students in producing products. Of course, further research is still needed to produce a good project.

1. INTRODUCTION

Changing times require students to have 21st-century skills (Minan et al., 2021). Besides critical thinking skills, 21st Century Skills also require creative thinking competencies (Rahayu et al., 2022; Sulistyo et al., 2021). Applying skills-based learning in the 21st Century is a form of student character development (Angga et al., 2022; Nurmeidina et al., 2022). Skill-based learning in the 21st Century can build and empower students to use all their potential to form better characters (Mulyati et al., 2022; Rahayu et al., 2022). It is what has been programmed by the government in developing the education

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curriculum, from elementary to tertiary levels. In developing the curriculum, four basic things are emphasized: critical thinking and problem-solving, creativity, and innovation, communication, and collaboration (Laar et al., 2020; Primayana, 2019; Sinaga, 2023). At the tertiary level, students must have these four skills to solve every real problem (Fiana et al., 2019). Social changes and technological advances that are so fast require students to think critically and creatively and innovate to survive in the midst of such rapid progress (Aranzabal et al., 2022; Dalilan & Sofyan, 2022). Creativity is a cognitive activity or thought process to produce new, creative, and innovative ideas (Febrianingsih, 2022; Hasanah et al., 2022). In addition, creativity requires students to be able to complete something that is out of the ordinary, unique, and has never been done by anyone else (Handayani, 2020).

Creativity can be determined by fluency, flexibility, originality, and elaboration (Andayani, 2022; Anggraini & Wulandari, 2020). Thinking creatively will enable students to see a problem from a different perspective and create more innovative solutions (Batubara, 2019; Putra & Amalia, 2020). Various ideas and solutions that are better and more effective will emerge (Purwanti et al., 2022; Susanta & Rusdi, 2020). The reality shows that students' creative thinking ability is still relatively low. It is in line with the results of observations made with 30 students. The observation results show that students need help preparing learning administration, starting with lesson plans, teaching materials, and student worksheets. Lesson Plans, Teaching Materials, and Student Worksheets created by students are still entirely sourced from the internet and taken for granted without any modifications. These difficulties indicate that student creativity in problem-solving still needs to improve, so efforts to improve the learning process are needed. Even though students need to have creative thinking competence to solve problems, the ability to think creatively will encourage students to be able to produce a product for the problems they face so that they become commodities with high use value (Husnul et al., 2022; Nurjannah et al., 2022). It is necessary to have learning activities with innovative learning models. Innovative learning is learning that can apply models, media, materials, and a combination of technologies to achieve learning objectives to overcome these problems (Sari, 2021; Syam, 2022).

One learning model that can be used to improve students' creative thinking skills is project-based. The project-based learning model (project-based learning) is a learning model based on a project in which students are faced with a problem and then collaborate to create a solution to the problem (Adriadi et al., 2022; Noviyana, 2017; Putri et al., 2018). Project-based learning emphasizes student-centered learning with assignments in the form of projects (Mulia, 2019; Salam & Wahyuni, 2021). Project-based learning allows students to work autonomously in groups to increase creativity in completing projects (Allanta & Puspita, 2021; Ilmudinulloh, 2022). Such learning allows students to develop their creative abilities in developing projects based on their critical abilities (Wicaksana & Sanjaya, 2022; Zakiah et al., 2020). Project-based learning also provides opportunities for students to build good collaboration between group members, so project-based learning has great potential to train students' creative and critical abilities (Suryanti et al., 2023; Widyastuti & Andika, 2021).

Several previous studies have revealed that applying the project-based learning model can significantly increase the creativity of elementary school students (Natty et al., 2019). The results of other studies also revealed that besides increasing the creativity of the PJBL model, it could also significantly improve students' scientific attitudes (Utomo et al., 2020). Further research revealed that the PJBL model could significantly increase student motivation (Lilik, 2020). Based on some of the results of these studies, the PJBL learning model can significantly increase students' creativity, motivation to learn, and scientific attitudes. In previous studies, no studies specifically discussed fostering students' creative thinking skills in microteaching courses by utilizing project-based learning. So that this research is focused on this study with the aim that students can create creative learning administration by utilizing project-based learning models in microteaching courses.

2. METHOD

This research belongs to the type of qualitative research with a descriptive approach. Qualitative research involves various efforts, from asking questions and clear procedures to analyzing data inductively and interpreting the meaning of data. The research subjects were 30 students, with details of 28 women and 2 men. The average research subjects are fifth-semester students taking microteaching courses—the data source from the project preparation process to the final project. Students produce three projects: lesson plans, teaching materials, and worksheets. Data collection is done by observation and tests. Observation to determine student activity in groups. Test to arrange learning administration. Data collection instruments used observation sheets and tests. However, the main instrument in this research is the researcher herself. Researchers have an important and proactive role in research. It is because

researchers still adhere to certain grids or criteria to assess each learning administration prepared by students. The research instrument grid can be seen in Table 1.

Table 1. Accuracy of Learning Administration

No	Assessment Indicator
1.	Students can formulate learning objectives appropriately based on the Basic Competencies that have been selected.
2.	Students can create lesson plans, Teaching Materials, and student worksheets by Basic Competencies, learning objectives, and achieved indicators.
3.	Students can present material with a level of novelty
4.	Students can develop evaluation tools based on Basic Competency

The research data comes from student projects in microteaching courses, which include Learning Implementation Plans, Teaching Materials, and Student Worksheets. The data type is the accuracy of the constructs of presentation of the three learning administrations made by students and the product's originality. The assessment of the three learning administrations is based on the assessment guidelines, as shown in Table 2.

Table 2. Aspects of Product Assessment

No	Assessment Aspects	Assessment score
1.	Compatibility of basic competencies with learning objectives	10 –2 5
2.	Accuracy of lesson plan presentation, Teaching Materials, and student worksheets	10 –2 5
3.	The novelty of the material presented	10 –2 5
4.	Accuracy of assessment indicators with basic competencies	10 –2 5
	Total	**100**

The data that has been collected is then analyzed using data reduction, data presentation, and data verification. The data reduction stage involves selecting and focusing research on important things. Furthermore, the presentation of data is carried out by presenting and connecting data with relevant theories or studies. The final stage is the verification or conclusion stage, which is carried out to answer all the problems raised in the research.

3. RESULT AND DISCUSSION

Result

The research was conducted by analyzing the microteaching learning process with a project-based learning model and analyzing the compilers of learning administration projects. First, microteaching learning with a project-based learning model. Microteaching is one of the prerequisite courses that fifth-semester students of the Indonesian language education study program must take. Microteaching courses are a prerequisite for students to take PPL courses. The microteaching course is also known as the Field Experience Practice One course. The aim of this course is for students to have basic teaching skills. They start from opening lessons, presenting lessons, managing classes, closing lessons, and evaluating learning and the ability to make learning administration used for teaching practice. In microteaching lectures, project-based learning models aim to teach students collaboratively to solve problems in the field of learning, namely the preparation of lesson plans, teaching materials, and student worksheets. Learning administration is prepared in collaboration to be used together in teaching practice. The application of the project-based learning model follows the syntax or steps of the PjBL, namely identifying and formulating projects to be made, preparing time plans for project preparation, gathering information related to project completion, processing information, and compiling project-related reports.

The identification and project formulation phase is carried out by forming students into several groups, where the student groups are directed to identify and formulate the project to be made, namely learning administration for teaching practice. Students will collaborate in preparing lesson plans, teaching materials, and Student Worksheets for use during teaching practice. The second stage is the stage of

compiling the design time for the preparation of the project, which students and their group partners carry out to arrange a project completion schedule guided by the lecturer. The schedule for preparing the project is carried out for four weeks, starting from the fourth week to the seventh week. The third stage is the stage of gathering information related to project completion. Students can use various sources to help complete projects at this stage, including syllabus, textbooks, and other sources. The fourth stage is information processing, which students carry out to gather information related to lesson plans, teaching materials, and assessment instruments. The final stage is the stage of compiling a report which is carried out by making a written report regarding the project completion progress.

Second, the compiler of the learning administration project. Project preparation is carried out for five weeks of lectures. Students work on projects in groups. Students are divided into seven groups, each group consisting of four people. Each group must choose one of the existing basic competencies, both junior and senior high school levels. There are no mandatory provisions regarding the selection of educational levels. Students are free to determine their education level to measure their ability. From the results of projects that have been worked on for five weeks collaboratively in groups, data is obtained regarding lesson plan projects, teaching materials projects, and student worksheet projects, as shown in Table 3, Table 4, and Table 5.

Table 3. Lesson Plans Project

Group	Lesson plan project (Basic Competency)
I	Examine the structure and linguistic aspects of procedural texts about how to do something and make it (how to play regional music/dance instruments, make regional specialties, make souvenirs, etc.) from various sources that are read and heard.
II	Identify information in the descriptive text about objects (schools, tourist attractions, historic sites, and the atmosphere of regional art performances) heard and read.
III	Identify information (news, needs, requests, or requests) from personal and official letters that are read and heard.
IV	Identify the elements of news text (develop and motivate) that are heard and read.
V	Summarize the contents of the procedure text about how to do something and how to make it (how to play regional musical/dance instruments, how to make regional specialties, etc.) from various sources that are read and heard.
VI	Examine the structure and language of fables/local legends that are read and heard.
VII	Finding elements from the fiction and non-fiction books you read

Table 4. Teaching Material Project

Group	The title of the teaching material project
I	Structure and Language Aspects of Procedure Text
II	Information in Description Text
III	Personal Letters and Official Letters
IV	News Text Elements
V	Concluding the contents of the Procedure Text
VI	Fable/Legend Structure and Language
VII	Elements of a Fictional Book

Table 5. Student worksheet projects

Group	Student worksheet project title
I	Examine the structure and linguistic aspects of procedural text
II	Identify information in descriptive text.
III	Identify information (news, needs, requests, or requests)
IV	Identify the elements of news text (develop and motivate)
V	Concluding the contents of the procedure text about how to do something and how to make
VI	Examine the structure and language of fables/legends.
VII	Finding elements from the fiction and non-fiction books you read

The data in Table 3 shows that the group chose junior high and high school education on average. Students dare to choose a higher level of education to develop a project for teaching practice. From here, the level of student confidence can already be seen even though it is still in the practical stage. Furthermore, the data in Table 4 shows that each group can compile teaching materials based on the competencies selected. Teaching materials are arranged in the form of modules and material summaries. Teaching materials are arranged following the systematic presentation of modules and are equipped with several questions to measure users' abilities. Table 5 shows that students have jointly made worksheets to complement the lesson plan. Student worksheets are carried out by the basic competencies that have been agreed upon in the group.

Based on these results, several findings were obtained regarding cultivating students' creative thinking skills by utilizing the project-based learning model, including first, from microteaching learning with a project-based learning model, students can collaborate in preparing projects. Second, from the project's construct analysis results, the average group has completed the project. However, things still need to be improved so that the presentation is immediately perfected based on input from other groups and lecturers. Third, in the teaching materials section, the average group has been able to make teaching materials for use in microteaching learning with a level of creativity and elaboration (detail). Fourth, in the student worksheets section, each group has been able to make student worksheets even though there are still several groups that do not match the indicators tested in the form of an assessment instrument with a level of creativity at the level of originality (original).

Discussion

This study's results indicate that project-based learning in micro-technical learning can make students think creatively. It shows that the ability to think creatively greatly influences the quality of projects or products produced by students (Febrianingsih, 2022; Hasanah et al., 2022; Wahyuni & Kurniawan, 2018). In addition, the use of project-based learning is very effective in assisting in solving problem-solving or given problems. In this study, students were seen starting to have the ability to think creatively in completing projects. Student creativity arises based on collaboration that is built between group members (Andayani, 2022; Anggraini & Wulandari, 2020). The form of creativity is reflected in the project, which initially still imitates what already exists, but after being given an explanation and using the project, the quality of the project is purely the result of discussion and collaboration between members (Batubara, 2019; Putra & Amalia, 2020). The project developed by students in this study was in the form of preparing learning administration, including Learning Implementation Plans, Teaching Materials, and Student Worksheets. Creative thinking skills instilled in students are based on four critical thinking competencies: fluency, flexibility, originality, and elaboration (Angga et al., 2022; Handayani, 2020; Nurmeidina et al., 2022).

The first project is the lesson plan design project, which shows that students have completed the lesson plan project well. However, some needed to be more appropriate. For example, in group one, the basic competencies and learning objectives were not yet in sync, and in group three, the basic competencies and material were incompatible. However, after getting input from other groups and lecturers, improvements were made during the project presentation. Educators use Lesson plans in the learning process (Dadi et al., 2020; Sakti et al., 2021; Sukma, 2021). The lesson plan becomes signs that need to be considered to achieve the learning objectives (Mokere, 2021; Rahmawati et al., 2021). Therefore, project-based learning is appropriate for microteaching courses because students can collaborate to create a Learning Implementation Plan project. Through the PJBL learning process, students will also be able to analyze phenomena or cases surrounding education in their surroundings to be able to produce contextual projects and become more critical in seeing phenomena surrounding the administration of learning used by educators so far (Adriadi et al., 2022; Harahap & Yusra, 2021; Noviyana, 2017; Putri et al., 2018).

The second project is a teaching material development project in which students and their groups can make teaching materials for use in micro-technical learning. However, some things could have been improved in each group's preparation of teaching materials. These errors include discrepancies in the concept of material developed by each group. Each group develops teaching materials too far from what is the learning objective. In addition, teaching materials made by students are still guided by existing textbooks. After being given input and suggestions, each group made improvements according to what had become the rules for completing the project. Teaching materials are one of the important components that a teacher must own to carry out learning properly. It is because teaching materials are materials or learning materials arranged systematically, which teachers and students use in learning (Cahyadi, 2019;

Nuryasana & Desiningrum, 2020). Teaching materials are unique and specific, so teaching materials made by teachers can only be used by certain students at certain levels and schools (Bawamenewi, 2019; Hidayat et al., 2021). That is, teaching materials are made based on the abilities and conditions of students in certain educational units (Laar et al., 2020; Primayana, 2019; Sinaga, 2023). The preparation of teaching materials must be adapted to the conditions of students, the demands of learning objectives, and supporting facilities and infrastructure.

The third project is the lesson plan preparation project, which shows that each group has made student worksheets even though several groups still need to match the indicators tested with the form of the assessment instrument. However, after being given input and suggestions, each group can adjust the assessment instrument with the assessment indicators. The results of student work have shown a level of creativity. It is caused by project-based learning, which gives freedom to students to be creative according to their level of ability (Adriadi et al., 2022; Noviyana, 2017; Putri et al., 2018). The learning process in the classroom is very important. For the learning process to run well and smoothly, it is necessary to have maximum preparation to achieve maximum results. Learning outcomes can be achieved if educators prepare complete learning administration and have gone through the stages of observation and analysis of students' initial abilities (Allanta & Puspita, 2021; Ilmudinulloh, 2022). In addition to preparing Learning Implementation Plans and teaching materials, educators must also prepare Student Worksheets. The Student Worksheet is an instrument containing tasks that students will carry out. Student worksheets are equipped with indicators and assessment forms (Wicaksana & Sanjaya, 2022; Zakiah et al., 2020).

The results obtained in this study align with previous research results, which also revealed that applying project-based learning models could significantly increase the creativity of elementary school students (Natty et al., 2019). The results of other studies also revealed that besides increasing the creativity of the PJBL model, it could also significantly improve students' scientific attitudes (Utomo et al., 2020). Further research revealed that the PJBL model could significantly increase student motivation (Lilik, 2020). Based on some of the results of these studies, the PJBL learning model can significantly increase students' creativity, motivation to learn, and scientific attitudes.

4. CONCLUSION

Based on the results of the research that has been done, the use of project-based learning models in microteaching courses can foster students' creative thinking abilities. It is evidenced by the ability of students to create three learning administrations, namely lesson plans, teaching materials, and student worksheets. Students prepare learning administration collaboratively, including lesson plans, teaching materials, and student worksheets.

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