Implementation of Project Based Learning to Improve Learning Outcomes for Class X.4 Students of UPT SMAN 11 Maros

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Abstract: This study aims to see the success of the learning process through the Problem-Based Learning (PBL) learning model in the independent curriculum. The research was carried out using the class action research method on grade X high school students at UPT SMAN 11 MAROS. This research was carried out in 2 learning cycles. The results of cognitive tests through learning outcomes tests at the observation and evaluation stages in cycle I and cycle II are reviewed from the percentage where in cycle I students who achieved a score of ≥ 75 were 8.3% while students who obtained a score of ≤ 75 were 91.7%, in cycle II there was an increase where students who achieved a score of ≥ 75 were 75%. The results of the assessment of psychomotor aspects showed that the category of moderately skilled in cycle I increased to the category of skilled in cycle II. The results of the assessment of affective aspects in both cycles showed a neutral category with an increase in KKM values in each cycle. Then for teacher activities, judging from the observation sheet, teacher activities show an increase from the moderate category in cycle I to the good category in cycle II. Teachers' impressions and responses through interviews stated that by applying the PBL model classroom conditions became more active, and students became courageous in expressing their opinions. Students' impressions and responses state that learning activities become more fun and can be trained to solve problems through social activities and be able to think critically.

Keywords: Project Based Learning, PTK, Curriculum Merdeka

Abstrak: Penelitian ini bertujuan untuk melihat keberhasilan proses pembelajaran melalui model pembelajaran Problem Based Learning (PBL) pada kurikulum mandiri. Penelitian ini dilaksanakan dengan menggunakan metode penelitian tindakan kelas pada siswa kelas X SMA di UPT SMAN 11 MAROS. Penelitian ini dilaksanakan dalam 2 siklus pembelajaran. Hasil tes kognitif melalui tes hasil belajar pada tahap observasi dan evaluasi siklus I dan siklus II ditinjau dari persentase dimana pada siklus I siswa yang memperoleh nilai ≥ 75 sebanyak 8,3% sedangkan siswa yang memperoleh nilai ≤ 75 sebesar 91,7%, pada siklus II terjadi peningkatan dimana siswa yang mencapai nilai ≥ 75 sebesar 75%. Hasil penilaian aspek psikomotor menunjukkan kategori cukup terampil pada siklus I meningkat menjadi kategori terampil pada siklus II. Hasil penilaian aspek afektif pada kedua siklus menunjukkan kategori netral dengan adanya peningkatan nilai KKM pada setiap siklusnya. Kemudian untuk aktivitas guru dilihat dari lembar observasi aktivitas guru menunjukkan adanya peningkatan dari kategori sedang pada siklus I menjadi kategori baik pada siklus II. Kesan dan tanggapan guru melalui wawancara menyatakan bahwa dengan penerapan model PBL kondisi kelas menjadi lebih aktif, dan siswa menjadi berani dalam mengemukakan pendapat. Kesan dan respon siswa menyatakan bahwa kegiatan belajar menjadi lebih menyenangkan dan dapat dilatih memecahkan masalah melalui kegiatan sosial serta mampu berpikir kritis.

Kata Kunci: Pembelajaran Berbasis Proyek, PTK, Kurikulum Merdeka

Introduction

The role of education today is very important, where education is the main factor in improving the quality of human resources, therefore currently many learning strategies/models, and learning facilities have sprung up with the aim of attracting students' learning interest (Aryanti et al., 2023). The low interest in learning today is due to the lack of understanding and process skills of students to find and express a problem itself and it is due to the lack of facilities and equipment for students to practice directly and only rely on books or teacher explanations.

Sociology is one of the subjects that students are less interested in because students think that Sociology lessons are very difficult because of the many theories and terms that are difficult to understand. Sociology emphasizes students to find out and do so as to help students gain a deeper understanding of themselves and the environment, as well as the prospect of further development in applying it in everyday life. The Merdeka Curriculum requires learning to be student-centered and to involve students to be active in the learning process. In addition, involving students in the learning process is very important so that learning is more meaningful and students can solve problems accompanied by teachers as facilitators (Mujiburrahman et al., 2023).

This is in line with one of the learning models, namely Problem-Based learning (PBL). Problem-based learning is a learning model that designs students who are active in the learning process to benefit from a learning model that helps them better understand the subjects taught (Inayah et al., 2021). A problem-based learning model is a learning model designed to focus attention on learners. This learning technique teaches learners to think critically when solving problems using real-world examples (Mayasari et al., 2022).

The problem-based learning model is a way of learning that emphasizes student participation in learning, teachers let students solve and find ways or alternatives to solve problems so that students become accustomed to handling problems critically and independently (Mulyanto et al., 2018) (Zahrawati, 2020). Taking into account some of these notions of PBL, it can be concluded that PBL is a learning approach that uses real problems or complex problems as a starting point for learning where the situation allows students to work together in groups to find solutions to problems (Wahyuningsih, 2019).

The Merdeka curriculum or the 2022 curriculum is an improvement from the 2013 curriculum. This curriculum was inaugurated by the Ministry of Education, Culture, Research and Technology of the Republic of Indonesia (Kemendikbud Ristek RI). The Merdeka Curriculum is a curriculum with diverse intracurricular learning, the content will be more optimal so that students have enough time to explore concepts and strengthen competencies. Teachers have the flexibility to choose various teaching devices so that learning can be adjusted to the learning needs and interests of students (Rahayu et al., 2022). The purpose of this curriculum is to optimize the spread of education in Indonesia with diverse intracurricular learning. The implementation of the Independent Curriculum (IKM) emphasizes learning that is comfortable, independent, active, has character, meaningful, independent, and others.

Implementation Method

The method used in this study is the class action research method (PTK). Classroom action research is research that combines research procedures with substantive action, an action carried out in the discipline of inquiry, or a person's attempt to understand what is happening while engaging in a process of improvement and change (Wibawa, 1993). In addition, classroom research can be interpreted as research carried out systematically reflective of various actions carried out by teachers who are also researchers, from the preparation of a plan to the assessment of real actions in the classroom in the form of teaching and learning activities to improve the learning conditions they do (Abdullah & Ridwan, 2008).

The main objective of PTK is to improve and improve the professional services of teachers in handling the learning process. This goal can be achieved by reflecting to predict the situation and then trying it systematically as an alternative action in solving learning problems in the classroom (Ani Widayati, 2008). So, PTK is usually intended to develop new skills or approaches to learning and solve problems with direct application in the classroom.

The study was designed in 2 cycles with the following procedures:

Cycle I

1. **Action Planning Phase**

    The activities carried out at this planning stage are:
    a. Create learning scenarios and syntax of project-based Learning learning models that are arranged based on the material to be taught.
    b. Create student worksheets.
    c. Develop learning evaluation tools.

2. **Action Implementation Stage**

    There are several stages taken in the Project Based Learning learning model, namely :

    1) Initial activities (Conveying goals and motivating students)
        a) The teacher greets and checks the attendance of students.
        b) The teacher conveys the learning objectives to be achieved.
        c) Teachers provide motivation to students to learn.
    2) Core activities
        a) Stimulation

            First of all, at this stage, the learner is faced with something that causes his confusion, then proceeds not to generalize, so that the desire to investigate on his own arises. In addition, teachers can start PBM activities by asking questions, encouraging reading books, and other learning activities that lead to preparation for problem-solving.

        b) Problem Statement

            After stimulation, the next step is for the teacher to give students the opportunity to identify as many problems as possible that are relevant to the subject matter, then one of them is selected and formulated in the form of a hypothesis (temporary answer to the problem question) (Syah, 2014), while according to the selected problem, it must then be formulated in the form of a question, or hypothesis, which is a statement as a temporary answer to the question posed.

Giving students the opportunity to identify and analyze the problems they face, is a useful technique in building students so that they are familiar with finding a problem.

c) Collection
When the exploration takes place, the teacher also gives the opportunity for students to collect as much relevant information as possible to prove whether or not the hypothesis is true (Syah, 2004: 244).

d) Processing
Students conduct interviews, observations, and so on, and then interpret. Data processing is also called coding/categorization which functions as concept formation and generalization. From these generalizations, students will gain new knowledge about alternative answers/solutions that need to be proven logically.

e) Verification
At this stage, students conduct a careful examination to prove whether or not the hypothesis set earlier is true with alternative findings, connected with the results of data processing (Syah, 2004: 244).

f) Generalization
The generalization stage / drawing conclusions is the process of drawing a conclusion that can be used as a general principle and applies to all the same events or problems, taking into account the results of verification (Syah, 2004: 244).

3) Final Activities
a) The teacher assigns homework (homework).
b) The teacher delivers the material to be discussed at the next meeting.
c) The teacher ends the lesson with a greeting.

3. **Observation and Evaluation Phase**
Observation is carried out when the teaching and learning process takes place using observation sheets. Things recorded in observation are the activities of students and teachers during the teaching and learning process. In addition, at this stage, an evaluation (learning outcome test) is also carried out to determine the extent of improvement that has been achieved by students in cycle I.

4. **Reflection Stage**
The results obtained at the observation and evaluation stage are collected and analyzed. At this stage, reflection is carried out to find out the extent of success that has been achieved in cycle I. The results of reflection in cycle I are used as a reference to plan improvements in the next cycle.

Cycle II

1. **Action Planning Phase**
In Cycle II it is planned to continue the program in Cycle I. Things to note:
1) Analyze test results to determine the level of students' ability to learn Physics through discovery learning (Project Based Learning).
2) Follow up on the results of the first cycle.
3) Students are directed to find and write sentences back
4) Prepare practice questions according to the material taught to students.

5) Record all events that are considered important, both regarding student activities in following lessons, doing questions and responses, and statements given by students.

2. Action Implementation Stage
   a. In each meeting in cycle II, continue to explain the concepts in order and in accordance with the learning modules that have been made. In this case, continue to use the Project Based Learning learning model by paying attention to the results obtained by students in cycle I and being taken into consideration in taking action in cycle II. The learning procedure is as in cycle I.
   b. Students discuss issues that are considered important as in cycle I.
   c. Any issues that are considered difficult, are immediately discussed. At the end of cycle II, cycle II test

3. Observation and Evaluation Phase
   At the stage of execution of actions. An observation process is carried out using observation sheets that have been made and carrying out evaluations.

4. Reflection Stage
   Reflection is done at the end of each cycle. The results obtained in the observation and evaluation stages are collected and analyzed. Thus researchers can see and reflect on whether the activities carried out have been able to improve student learning outcomes by looking at the results of observational data. The results of the data analysis carried out in this stage as a reference for carrying out the next cycle.

Results and Discussion

Based on the results of the researchers' initial observations in one of class X at UPT SMAN 11 Maros, teaching and learning activities are carried out by the teacher applying the module learning method, namely, students are required to have their own independence to learn the material in the module and the completion of the subject matter depends on the speed of understanding of each student. In the learning process in class, students are assigned to summarize the content of the material in the module given by the teacher then students are instructed to study the content of the module independently. The teacher gives students the opportunity to ask questions if students do not understand after studying the material in the module. However, in its implementation, student activeness is not seen in the learning process in class. Students lack courage in conveying questions or opinions to the teacher, so students are considered to understand the content of the material in the module. At the end of the lesson, the teacher provides daily test questions to evaluate student learning outcomes. As a result, students still do not understand the content of the material that has been studied independently. This can be seen from the results of daily tests in one of the classes that have been observed. From the number of 36 students, it was found that the average test count in the form of daily test scores on the subject of Social interaction in the class was 66.1 with the highest score of 95 and the lowest score of 20.

The results of these observations show that the activeness of students in class in following the subject matter has not shown the expected results. Teachers have applied a student-centered learning model, but in learning or learning activities in the classroom, there are unbalanced symptoms where a teacher simply delivers teaching materials that

are not based on awareness of wanting to understand students so that students lack respect and do not respond well. In the process, students only memorize the subject matter that is contained in the module without any awareness to understand the content of the material.

The low participation of students in learning activities in class and student learning outcomes in accordance with the results of initial observations is caused by students lacking the ability to formulate their own ideas and lack the courage to express their opinions to others (Isabela et al., 2021). This narrows the student's mindset about an understanding he learns. Multi-directional communication between students and students and teachers with students becomes hampered, by itself student learning results have not achieved maximum results. Another cause is the factor of teachers who are not optimally applying the learning methods delivered to students.

One of the learning models that is a student-centered learning model is Problem-based Based Learning (PBL) or problem-based (Yulianti & Gunawan, 2019). PBL is a learning model that uses problems as the first step in gathering and integrating new knowledge. Students are given problems at the beginning of the implementation of learning by the teacher, and then during the implementation of learning students solve them which finally integrate knowledge into the form of reports (Sofyan & Komariah, 2016).

After making the initial observation, the next is that researchers will conduct research designed in 2 cycles, namely cycle I and cycle II. Each cycle is carried out for 4 meetings, namely 3 meetings for the teaching and learning process and 1 meeting for learning outcomes tests. Each cycle is carried out according to the changes to be achieved. For this reason, each end of the cycle is given a test to determine the level of mastery of students after the learning process.

At this stage, researchers prepare learning tools that will support the learning process in the classroom. In addition, processing observation sheets were also prepared with Project Learning learning models and observation sheets of teacher and student activities. The implementation of teaching and learning activities for the first cycle was carried out at UPT SMAN 11 MAROS with a total of 36 students in class X.4. In this case the researcher acts as a teacher. The teaching and learning process refers to the lesson plan that has been prepared.

In the first cycle, broadly speaking, teaching and learning activities with the Project Based Learning learning model have been implemented well, although the role of the teacher is still dominant enough to provide explanations and directions because the model is still felt new by students.

Value Completeness Table in Cycle I

Range of Values	Number of Students	Percentage of Value Completeness	Information
75 – 100	3	8,3%	Complete
< 75	33	91,7%	Incomplete
Sum	36	100%	

Then, looking at the table above, it can be explained that by applying with the Project Based Learning learning model, learning completeness is not yet optimal, which is 91.7% or there are only 3 people out of 36 students who have completed learning. These results show that in the first cycle, classically students have not completed learning, because students who get a score of ≥ 75 are only 8.3% which is a small percentage of the desired completion percentage of 80%. This is because students still feel new and do not understand what the teacher intends and uses by applying the Project Based Learning learning model.

In the implementation of teaching and learning activities, information is obtained from the following observations:

a. Students must have the readiness and mental maturity to learn using this approach. Students must be brave and willing to know the surrounding situation well.
b. This approach is less effective when used in large classes.
c. Perhaps teachers and students who are accustomed to using traditional approaches, will find it difficult to use this approach.
d. Some argue, that this approach will always attach importance to understanding but less on the formation of attitudes and skills for students.

Perhaps this approach does not provide opportunities for students to think more creatively. In cycle II, researchers prepare learning tools that will support the learning process in the classroom. In addition, processing observation sheets were also prepared with Project Learning learning models and observation sheets of teacher and student activities. The implementation of teaching and learning activities for the first cycle was carried out at UPT SMAN 11 MAROS with a total of 36 students in class X.4. In this case the researcher acts as a teacher. The teaching and learning process refers to the lesson plan by paying attention to revisions in cycle I so that errors or shortcomings in cycle I do not repeat themselves in cycle II. Observation (observation) is carried out simultaneously with the implementation of teaching and learning. The data from research results in cycle II are seen in the following table:

Value Completeness Table in Cycle II

Range of Values	Number of Students	Percentage of Value Completeness	Information
75 – 100	27	75%	Complete
< 75	9	25%	Incomplete
Sum	36	100%	

From the table above, the completeness of learning reached 75% or there were 27 students out of 36 students who had completed learning. These results show that in cycle II the completeness of learning classically has improved better than in cycle I. There is an increase in student learning outcomes because after the teacher informs that at the end of each lesson, there will always be a test so that at the next meeting students are more motivated to learn. In addition, students have also begun to understand what the teacher intends and wants by applying the Project Based Learning learning model.

In the implementation of learning activities, information is obtained from the following observations:
a. Students have a lot of readiness and mental maturity to learn using this approach.
b. Students are brave and willing to know the surrounding situation well.
c. The approach is very effective when used in large classes

From the observations made during the learning process at UPT SMAN 11 MAROS by applying the Project Learning learning model, it provides slight changes to students who follow learning in class, including:
1. Learners are motivated to learn.
2. Students have also begun to be skilled in experimenting and practicum can also support the understanding of the subject matter.
3. Dominant learners are active in the learning process.

After carrying out a series of existing research, it can be concluded that at the beginning of the meeting, there were obstacles that occurred in the learning process, namely there were still students who were not confident to answer questions, ask questions, and there were students who only played in class and were busy telling stories with their friends, and were sleepy during the learning process. However, at the time of the meeting, both learners began to be active in the learning process, more actively asking and answering questions. Learners have changed. But in terms of task work is still slow in the process, for example, given up to 1 week, almost 2 weeks have not been completed for various reasons, for example, for many tasks from other subjects, they have difficulty dividing their time in terms of working on assignments.

Conclusion

Based on the results of classroom action research (PTK) can be concluded as follows:
1. The application of the Project Based Learning learning model can improve student Sociology learning outcomes in class X.4 UPT SMAN 11 MAROS.

2. The application of the Project Based Learning learning model can increase students' engagement in learning, allowing them to develop collaboration, problem-solving, and critical thinking skills. In addition, this model also helps students to be able to relate sociological theories to the practice of everyday life, thus strengthening their understanding of sociological concepts.

3. With the Project Based Learning learning model, sociology lessons that are usually considered difficult for some students become fun.

Thank-you note

Thank you to the school and also friends who have helped in researching so that this research can be carried out and arranged properly.

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