



The Influence of the Case Study Learning Method on Student Learning Outcomes

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Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh metode pembelajaran case study terhadap hasil belajar mahasiswa di Jurusan Fisika, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Negeri Makassar. Jenis penelitian yang digunakan dalam penelitian ini adalah *Pre-Experiment* dengan desain *One Shoot Case Study*. Populasi dalam penelitian ini adalah seluruh mahasiswa di Jurusan Fisika angkatan 2024/2025 yang saat ini berada pada semester 2 yang terdiri atas 4 kelas dengan jumlah mahasiswa sebanyak 100 orang. Total sampel dalam penelitian ini berjumlah 70 orang. Teknik penarikan sampel dalam penelitian ini menggunakan purposive sampling. Variabel dalam penelitian ini adalah metode pembelajaran case study sebagai variabel bebas dan hasil belajar mahasiswa sebagai variabel terikat. Data yang diperoleh menunjukkan bahwa nilai hasil belajar mahasiswa setelah diterapkan metode pembelajaran case study di Jurusan Fisika, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Negeri Makassar mayoritas berada pada kategori sangat tinggi dengan persentase mencapai 94%. Faktor nilai hasil belajar mahasiswa yang sangat tinggi karena metode pembelajaran case study mampu membantu mahasiswa terhubung dengan materi pembelajaran secara lebih kontekstual dan relevan dengan kehidupan mereka selain itu dengan penerapan pembelajaran case study membuat para mahasiswa dapat melihat langsung bagaimana konsep-konsep yang dipelajari diterapkan dalam kehidupan mereka, sehingga pembelajaran menjadi lebih bermakna

Kata kunci: Hasil Belajar, Metode Case Study, Pre-Experiment, Profesi Kependidikan

Abstract

This research aims to determine the effect of the case study learning method on student learning outcomes in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University. This type of research used a Pre-Experiment with a One Shoot Case Study design. The population in this research were all students in the Physics Department of the 2024/2025 class who are currently in the 2nd semester consisting of 4 classes with a total of 100 students. The total sample in this research was 70 people. The sampling technique in this research used purposive sampling. The variables in this research were the case study learning method as the independent variable and student learning outcomes as the dependent variable. The data obtained showed that the value of student learning outcomes after the application of the case study learning method in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University was mostly in the very high category with a percentage reaching 94%. The factor of student learning outcomes is very high because the case study learning method can help students connect with learning materials in a more contextual and relevant way to their lives. In addition, by implementing case study learning, students can see directly how the concepts they learn are applied in their lives, so that learning becomes more meaningful.

Keywords: Learning Outcomes, Case Study Method, Pre-Experiment, Educational Profession

Introduction

The importance of science is enormous for human life, both individually and in social and civilizational contexts. Science enables humans

to understand the world, solve problems, develop technology, and improve the quality of life. Science provides a framework for thinking that enables one to distinguish between fact and myth, truth and falsehood, and make informed decisions. With science, humans can understand various aspects of life, such as health, economics, and the environment, thus enabling them to take better steps to improve their quality of life. Science sparks curiosity and encourages people to continue learning and self-development, both in academic and non-academic fields.

Science must be adapted to the learning patterns implemented in the classroom, especially. Learning needs to be linked to the real world so that the material learned becomes more meaningful, memorable, and relevant to students' lives. By connecting abstract concepts with everyday experiences, students can understand how this knowledge can be applied and useful in real situations.

In response to the dynamics of education, a learning method is needed that supports the learning process and connects students with their daily lives. One learning innovation that can be used is the application of the case study method. Case study learning is expected to provide an understanding of something interesting, a social process that occurs, a concrete event, or the experience of a person who is the background of a case (Ibrahim, 2023). Attention to the suitability of the learning method to the object of the teaching material, the condition of the students and the teacher's preparation. (Hodijah et al., 2022) argue that "This can provide an illustration that the learning method is one of the determinants of learning success." Teaching and learning activities in the classroom must be considered to achieve the expected learning activities more effectively for students and educators. One learning method in the world of education is the case study method. According to (Roza et al., 2022), case-based learning is a path with a case study approach that explores through examples of phenomena that occur to find possible effects of learning and teaching, as an empirical and holistic investigation.

The case study method is a participatory learning approach that involves in-depth analysis of a case to understand the problem and develop a solution. Implementing this method can improve students' critical thinking skills, communication skills, collaboration, and creativity. According to Werdiningsih (2021),

the case study learning model is a participatory learning method that focuses on discussions between students to enable them to find solutions and resolve a case or problem with appropriate results. Implementing this method can hone and improve students' thinking skills in solving problems, enhance their ability to collaborate with other students, improve communication skills, and also stimulate their creativity. The case study learning model is considered to have an impact on student learning outcomes (Rahman, 2020). With the cases presented in Case-Based Learning (CBL), students are given the opportunity to practice their skills (Hidayanti, 2023).

Based on **the results of observations** conducted by the author, it shows that the average value of student learning outcomes in the Department of Physics, Faculty of Mathematics and Natural Sciences, Makassar State University for the educational profession course is still in the moderate category. This suboptimal learning outcome can be caused by internal factors (originating from within the student) and external factors (originating from outside the student). Internal factors include a lack of interest and motivation to learn, a lack of understanding of basic concepts, a lack of concentration, and psychological conditions such as anxiety and stress. External factors include inappropriate learning methods, a lack of parental support, an uncondusive learning environment, and social and economic factors. During the learning process, students are constantly faced with boredom due to uninteresting and monotonous material and teaching methods. This causes students to not pay attention to the lecturer's explanation. The relationship between learning and learning outcomes depends not only on brain brilliance, but attitudes, habits and learning skills as well as external factors also have a significant influence in determining learning success (Magdalena, 2020).

The urgency of this research is that if this research is not conducted, it will impact student learning outcomes. In this case, there is no information related to the analysis of student learning outcomes majoring in physics for professional education courses, so that educators will have difficulty further mapping the causes of these less than optimal learning outcomes. Low learning outcomes can have a negative impact on various aspects, including understanding of subsequent material, learning

motivation, and even overall student behavior. These impacts can be short-term or long-term. Low learning outcomes can cause students to feel frustrated and lose interest in certain courses or even in learning activities in general (Syamsul, 2024).

The novelty of this research compared to other research is that in this research the learning method used is the case study method to review student learning outcomes while the research conducted by (Meirawati, 2022) the learning method used is Project Based Learning (PBL) to review learning outcomes in English lectures with a class system. In addition, there is also research conducted by Asparian (2024) which uses the Project Based Learning (PjBL) learning model on learning outcomes in the Remote Indigenous Community empowerment practice.

Based on these assumptions, it is necessary to conduct research on the influence of the case study learning method on student learning outcomes in the professional education course in order to provide an in-depth picture of the extent to which student learning outcomes have improved after case study learning has been implemented in students of the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University.

Formulation of The Problem

Based on the background above, the problem formulation in this research is as follows: "How is the students learning outcomes after applying the case study learning method ?

The Aims of This Research

The aims of this research is describing the students learning outcomes after applying the case study learning method.

Method

This research employed a pre-experimental design with a one-shot case study. This research involved only one group of subjects, who were given treatment and then measured posttest. There was no control group or pretest.

This research was conducted in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University. The study took place during the even semester of the 2024/2025 academic year.

The population in this research were all students in the Physics Department of the 2024/2025 class who are currently in the 2nd semester, consisting of 4 classes with a total of 100 students. The sampling technique in this study used purposive sampling, namely a sampling technique with certain considerations. The reason for using purposive sampling is because not all classes in the 4th semester program educational profession courses, so of the 4 classes that are the population, only 3 classes can be used as samples because the three classes that program educational profession courses consisting of Class A (28 students), Class B (25 students) and ICP class (17 students). The total sample in this research was 70 people.

The variables in this research consist of two types, namely the independent variable, namely the case study learning method and the dependent variable, namely learning outcomes. The operational definition of the variables in this research is that the case study learning method is a learning method that focuses on in-depth analysis of a particular case or situation to understand, analyze, and solve problems with indicators of students' abilities in critical thinking, problem solving, communication, collaboration, and application of knowledge in real situations. Meanwhile, learning outcomes are students' abilities to achieve cognitive aspects in the revised Bloom's taxonomy of the material after following the learning process within a certain period, including aspects of remembering (C1), understanding (C2), applying (C3), analyzing (C4), assessing (C5) and creating (C6) adjusted to the learning outcomes of the course. These learning outcomes will be shown from the results of a written test in the form of an essay.

The data collection technique used in this research was to administer a learning achievement test to a predetermined sample. The instrument was structured in the form of essay questions covering the indicators of remembering (C1), understanding (C2), applying (C3), analyzing (C4), Evaluating (C5), and creating (C6). Based on the learning achievement test data, student learning outcomes scores were categorized.

Result and Discussion

This research presents descriptive statistical data on student learning outcomes

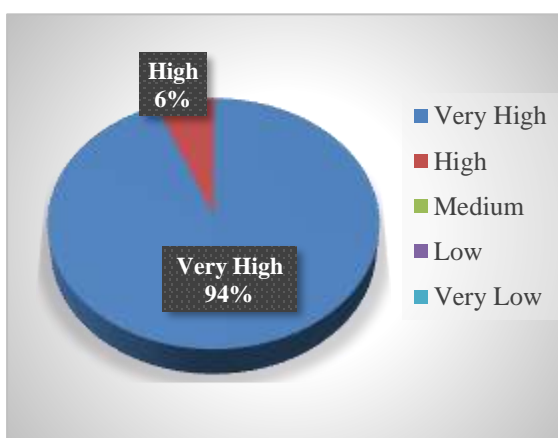
after the application of the case study learning method. Descriptive statistical processing was used to describe the learning outcome scores obtained by students in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University. The research results are described as follows.

A general description of student learning outcomes after the application of the case study learning method in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University is as follows at Table 1 below.

Table 1. *Frequency Distribution of Students Learning Outcome values*

Interval of value	Category	Σ Earned Value	
		Frequency	Percentage
81 - 100	Very High	66	94%
61 - 80	High	4	6%
41 - 60	Medium	0	0
21 - 40	Low	0	0
0 - 20	Very Low	0	0

Based on Table 4.1, the student learning outcomes after implementing the case study learning method in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University, are very high, reaching 94%. This is clearly seen in Figure 1 below:



Picture 1. *Pie Chart of Student Learning Outcomes*

Based on the data obtained, it shows that the value of student learning outcomes through the application of case study learning in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University is mostly in the very high category with a value range of 80 - 100. The value of students who are

in the very high category is mostly in the range of 81.25 - 100. This can occur due to several factors such as the application of case study learning in the educational profession course is very effective, in this case when learning is linked to students' experiences in everyday life, students will be motivated to learn and discuss with their friends in class. So, in this research, case study learning applied in class becomes a real application for students. Students can see directly how the concepts learned are applied in their lives, so that learning becomes more meaningful.

Case study learning can improve conceptual understanding, develop problem-solving skills, and encourage critical thinking and collaboration. This method also helps students connect with learning materials in a more contextual and relevant way. This is what makes students able to obtain very high average scores in class. This is in line with research conducted by Septina (2024) which concluded that the tendency of learning outcomes of fashion design using the Case method learning model in class XI Fashion Design students of SMK Negeri 1 Beringin is included in the category of tending to be good with a percentage result of (58%). Likewise, research conducted by Simbolon (2022) which concluded that the learning outcomes of students in the experimental class (class taught with the Case Based Learning model) have better learning outcome values than the control class (class taught with the conventional model), so significantly, there is an influence of the application of the case based learning method on student learning outcomes in the experimental class and the control class.

Conclusion

Based on this research that has been carried out, it can be concluded that student learning outcomes reviewed from the application of case study learning in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University are in the very high category with a percentage reaching 94% which includes the indicators of remembering (C1), understanding (C2), applying (C3), analyzing (C4), assessing (C5) and creating (C6).

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Curriculum Vitae

Syamsul Wahid S was born in Kalimbua on November 27, 1989. The author is the third of three children, the son of Syamsuddin, BA and Djumaria. The author began his education at MIS Kalimbua then continued his education at MTS Negeri 1 Baraka. After graduating, the author continued his education at SMA Negeri 1 Baraka and graduated in 2008. In 2008, the author was accepted as a student majoring in physics by taking the International Class Program (ICP) class in the Physics Education study program, Faculty of Mathematics and Natural Sciences, Makassar State University (UNM). In 2015, the author continued his educational studies at the Postgraduate Program of Makassar State University, Physics Education Study Program. Currently, the author is one of the lecturers in the Physics Department, Faculty of Mathematics and Natural Sciences, Makassar State University (UNM).