THE RELATIONSHIP BETWEEN ANALYTICAL SKILLS AND THE STAGES OF THE CASE METHOD IN DETERMINING THE BEST SOLUTION

Satria Mihardi[1], Derlina[2], Alkhafi Maas Siregar[3], Yanthy Leonita P. Simanjuntak[4]

[1][2][3][4]Universitas Negeri Medan, Indonesia

Corresponding author: mihardi@unimed.ac.id

ABSTRACT

The case method reports descriptive information regarding a trial or experiment, event or analysis, or project. The case method can also be interpreted as the result of intensive and systematic investigations carried out by individuals, groups communities, or units to examine data that is related to several variables. Students or teachers usually take a broad and complex topic or phenomenon in the case method. Then, the topic is narrowed down to the questions to be analyzed. Analysis is an activity that consists of a series of activities such as; parsing, distinguishing, and sorting things to be regrouped according to certain criteria and then looking for connections and interpreting their meaning. The ability to analyze is one of the high-level cognitive abilities that is important for students to master in learning. The selection of control and experimental samples was carried out using class random. This is done to reduce bias when determining or drawing conclusions that may result in adjustments to the circumstances being made. The form of research is a quasi-experiment with a two-group pretest-posttest type. Data analysis in this research was carried out descriptively by determining the residual regression test with the help of the SPSS program. The treatment given through the case method makes analysis the basic and most developed ability in learning. These results prove that the case method analysis each stage of students' basic thinking in providing arguments and conclusions based on the thought analysis itself. Analytical skills can be developed through the case method stages. The case method stages require analysis at each stage to provide arguments and possible solutions. Repeated training helps students improve their analytical skills.

Keywords: Analysis; Case methods; Learning; Solution

PENDAHULUAN

The right learning method can be adjusted to the material to be studied to make it easier to achieve learning objectives as expected. Choosing the right learning method can also affect increasing students' abilities both in terms of academic grades and other skills. One learning method that can be used is the case method. The case method means students carry out scientific research or social research. Then, students conclude. The case method reports descriptive information regarding a trial or experiment, event or analysis, or project. The case method can also

be interpreted as the result of intensive and systematic investigations carried out by individuals, groups communities, or units to examine data that is related to several variables(Andayani et al. 2022; Chumak et al. 2022; Sato and Knaus 2022). Students or teachers usually take a broad and complex topic or phenomenon in the case method. Then, the topic is narrowed down to the questions to be analyzed. Individual assessment shows the success of the process experienced by each individual during learning(Lo et al. 2022; You 2020). Every effort made and improved by each individual

is the key to successful learning. Process-based learning cannot be linked to overall assessment but rather to assessment of the processes that occur in each individual and each activity.

In achieving Medan State University's IKU in learning, it can be seen that online learning cannot reflect the learning expected in Unimed's IKU, because learning activities are not visible in the process of delivering subjects to students. This results in learning being ineffective and unable to be monitored. For this reason, it is necessary to apply appropriate learning methods and/or models as an alternative learning base which becomes a description of the instructional activities carried out by students. This is used as an exercise to improve students' desired skills through activities that are internalized into online learning.

The case method is discussion-based participatory learning to solve a case or problem(Brinkerhoff 2005; Campos Retana and Rodriguez-Lluesma 2022; Sato and Knaus 2022; Sharafi et al. 2018; Temirgalinova et al. 2021). The application of this method will hone and improve critical thinking skills to solve cases or problems, communication skills, collaboration, and student creativity. In applying the case method students are given assignments in groups. This is because real-life problems require solving problems together using different perspectives and various strategies proposed by group members. This case method is a type of case-based learning. Students have the main role in solving cases while the teacher acts as a facilitator whose job is to observe, direct the discussion, ask questions, and invite students to conclusions from the results of the discussion.

Analysis is an activity that consists of a series of activities such as; parsing, distinguishing, and sorting things to be regrouped according to certain criteria and then looking for connections and interpreting their meaning. The ability to analyze is one of the high-level cognitive abilities that is important for students to master in learning(Turnip et al. 2019; Yoandita 2019). The science-based learning process identified as based on scientific learning has relevant and simple steps that must be applied to the online learning process. Comfort at this stage is the basis that is mainly chosen to be used as a learning process activity, which is a basic skill that every student must have. These skills will be the basis for forming other skill indicators to be developed into skills for students. The synchronization of scientific learning steps is internalized with the system into independent learning steps that are systematically regulated by the learning system. Analytical skills are needed to observe something which of course aims to get the final results from the observations that have been made. So, it can be concluded that Analytical Ability is the ability that a person has to observe something in depth and detail through the process of breaking down the various components that make it up or arranging these components for further study or investigation until they get a solution and conclusion from what has been done(Hernawati et al. 2019; Rohrer and Weiss 2022; Sari 2020; Verma et al. 2019). The ability to analyze is one of the high-level cognitive abilities that is important for students to master in learning.

METODE PENELITIAN

The initial implementation was carried out by designing the RPS by the case method. Making Lesson Plans is adjusted to the circumstances that might be implemented during learning by considering whether the learning is online, blended, or offline. The lesson plans prepared are validated by the course management team. Sampling was carried out on students who took the Physics Teaching Program Development course. The selection of control and experimental samples

was carried out using class random. This is done to reduce bias when determining or drawing conclusions that may result in adjustments to the circumstances being made. The form of research is a quasi-experiment with a two-group pretest-posttest type. Data analysis in this research was carried out descriptively by determining the residual regression test with the help of the SPSS program. This test is to determine a decision on the hypothesis being tested. This is done to be able to find out the problems faced and user responses to the products offered in Physics learning.

HASIL DAN PEMBAHASAN

The results of the analysis can be seen in Figure 1. The results of this analysis show that the regression between the analysis variables shows a normally distributed relationship with criteria that are almost evenly distributed on the left and right sides. This

shows that in general analysis has a relationship with the case method process which is used as a learning treatment(Campos Retana and Rodriguez-Lluesma 2022; Rohrer and Weiss 2022; Turnip et al. 2019; Verma et al. 2019). Analysis is needed to observe something which of course aims to get the final results from the observations that have been made. So, it can be concluded that Analytical Ability is the ability that a person has to observe something in depth and detail through the process of breaking down the various components that make it up or arranging these components for further study or investigation until they get a solution and conclusion from what has been done(Hernawati et al. 2019; Rohrer and Weiss 2022; Temirgalinova et al. 2021; Verma et al. 2019). In short, analytical skills are skills in collecting and analyzing information, solving problems, and making decisions.
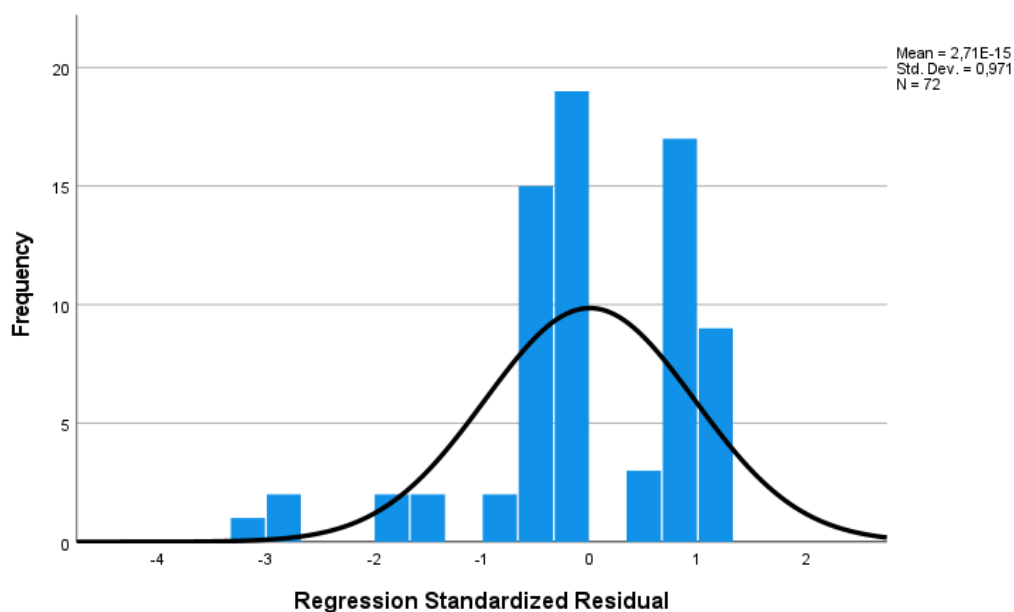

Figure 1. Regression Analysis of the Case Method

The treatment given through the case method makes analysis the basic and most developed ability in learning. These results prove that the case method analysis each stage of students' basic thinking in providing

arguments and conclusions based on the thought analysis itself(Chumak et al. 2022; Deneen and Hoo 2023; Sato and Knaus 2022; Temirgalinova et al. 2021). Repeating the stages of the case method in each problem-

solving proposed in physics learning, students' analytical skills become deeper and sharper towards drawing more effective solutions(Campos Retana and Rodriguez-Lluesma 2022; Geithner and Pollastro 2016; de Kleijn 2023; Temirgalinova et al. 2021; Turnip et al. 2019; Verma et al. 2019). This makes training in analysis students to provide the best solutions through tested stages to develop analytical skills. Analytical skills are not only able to provide effective solutions but can prove the effectiveness of the solutions used as solutions in their application. Skills that are frequently trained will become more effective and become habits in every action taken(Du, Krakauer, and Haith 2022; Duche-Pérez and Quispe 2022; Merchant, Klinger, and Kirby 2022; Murray and Häubl 2007; Svartdal et al. 2022). With this habit, students can become more critical in solving problems and obtaining solutions. The solution accepted is not just a solution without a strong reason. The solutions provided can be the key to achieving realistic and innovative conclusions.

SIMPULAN

Analytical skills can be developed through the case method stages. The case method stages require analysis at each stage to provide arguments and possible solutions. Repeated training helps students improve their analytical skills. So, it needs to be implemented to advance solution thinking in gaining competition in the world of work. Limited thinking can disrupt the analysis process in presenting solutions.

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