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Identification of Student's Difficulties in Physics Learning in MAS Lamno

Muhammad Nasir^{1*}, Khairul Raziqin², Musdar³, Hasbullah⁴

^{1,2}Physics Education Department UIN Ar-Raniry Banda Aceh, Banda Aceh, Indonesia

³Physics Education Department Syiah Kuala University, Banda Aceh, Indonesia

⁴Physics Education Department Abulyatama University, Aceh Besar, Indonesia

Email: muh.nasir@ar-raniry.ac.id

Abstract

The Study of the identification of students' difficulties in physics learning in MAS Lamno has been done. The aim of this study was to know the factors of the reason of the student difficulties to learn physics. This study was conducted in qualitative descriptive type. The subject of this study was taken randomly with the number of 20 students for certain reasons. Data collection in this study was conducted using student questionnaire instruments and interviewing the students. The result of this study showed that there were four problems of student difficulties in learning physics. The four problems were the lack abilities to solve the math problem, difficulty to recall and applied the physics formula to solve the physics problem, afraid to deliver the questions of the problem, and difficulty to summarize the physics course that has been studied.

Keywords: physics learning, student's difficulties

INTRODUCTION

Learning is an activity that a person does to get a change in himself through training and experiences. Learning can bring changes to the perpetrators, both changes in knowledge, attitudes, and skills. With these changes, of course, the perpetrator will also be helped in solving life's problems and be able to adapt to the environment. According to the psychological understanding, learning is a process of change, namely changes in behavior as a result of interaction with the environment in meeting the needs of life. These changes will be expressed in all aspects of behavior. Understanding learning can be defined as a business process carried out by a person to obtain a new change in behavior as a whole, as a result of his own experience in interaction with his environment.

Learning difficulties are a condition in which students are not taught properly, because there are certain disorders. The term learning difficulties that the author means is a condition where students cannot learn optimally due to obstacles, obstacles or disturbances in their learning. Learning is a series of mental and physical activities to obtain a change in behavior as a result of individual experiences in interactions with their environment which involve cognitive, affective and psychomotor.

According to Abduraman, in general, learning difficulties can be classified into two groups. First, developmental difficulties including motor and perceptual disorders, language and communication learning difficulties, and learning difficulties in adjusting to social behavior. Second, Academic learning disabilities are learning difficulties that include failures to achieve academic achievement in accordance with the expected capacity. These failures include mastery of skills in reading, writing, or mathematics.

According to Kirk and Glagher, suggesting that there are some factors that cause students to have learning difficulties: (1) physical conditions, which include visual impairment, hearing loss, balance and spatial orientation disorders, body image, hyperactivity, and malnutrition; (2) family, community and school environments that are less favorable for children hinder social, psychological development and academic achievement; and (3) motivation and appreciation factors, these two factors can aggravate children who have learning difficulties, children who always fail in one or several subjects tend to be insecure, ignore assignments and have low self-esteem, this readiness will reduce learning motivation and negative feelings emerge.

Physics is a part of natural sciences along with Chemistry and Biology At high school level, physics is important to be taught to students, physics subjects are also intended as a vehicle to grow thinking skills that are useful for solving problems in everyday life. The factors of learning difficulties have been studied and researched by several previous people. The results of research that have been done previously include Titik Harjuinatun Asror, the results in this study indicate that a physics learning difficulty profile can be obtained with an absorption level of less than 50%. This factor provides a source that there are still many students who understand Physics. Erlina, Based on the results of the study, it was found that the learning difficulties experienced by students did not find significant problems with the percentage of students' learning difficulties that exceeded 65% or was classified as high.

MAS Lamno is the only islamic senior high school located in Lamno, Aceh Jaya Regency, Aceh which teaches islamic, language and social education, including exact sciences such as mathematics, chemistry, biology, and physics. The teaching and learning process at MAS Lamno that is often applied by educators, especially in physics learning is using lectures and summarizing. These two strategies are likely to cause students to be uninterested and difficult in learning physics. Although this summarizing strategy has activated students in a learning process, this method cannot be said to be effective in generating interest/motivation of students in learning physics.

RESEARCH METHOD

The method used in this research is a descriptive method with a qualitative approach, because it aims to describe or provide an overview of a real-life phenomenon. As stated by Moleong (2013) that qualitative research is research that intends to understand the phenomenon of what is experienced by research subjects (eg actors, perceptions, motivations, actions, etc.) Holistically and by means of description (in the form of words and language). the data obtained will be analyzed into one hypothesis and will be presented in a descriptive/narrative form.

This study does not attempt to prove a particular hypothesis or this study does not test a hypothesis. But rather try to describe the actual conditions that occur in the field. The subject of this study was taken randomly with the number of 20 students for certain reasons. Data collection in this study was conducted using student questionnaire instruments and interviewing the students.

RESULTS AND DISCUSSION

Based on the results of the research in the table above, it shows that most students do not like physics. This is probably caused by several factors related to the causes of the

difficulties in learning physics experienced by students, this can be seen from the results of student answers summarized by the author from the questionnaire statements distributed to 20 students. This data is also supported by interviews conducted by researchers on 10 students to support the results of the questionnaire that have not been obtained in the questionnaire.

From the results of research and data analysis, it was found that there were four types of difficulties experienced by students in learning physics at MAS Lamno. These difficulties are caused by several causes, on average experiencing the same difficulties in various forms and interrelated causes. The first difficulty is that it is difficult to carry out mathematical operations, students generally cannot master calculations that involve mathematical arithmetic operations such as addition, subtraction, multiplication and division.

The author also finds several students who are still having difficulty in performing integer multiplication operations. The author assumes that students also have difficulty in arithmetic operations involving decimal and fractional numbers. This is in line with Andriani's (2016) research, the difficulty of students in solving problems at the stage of understanding the questions is because students do not understand the questions and cannot translate/change the questions into formulas or mathematical forms so they cannot write what is known and asked.[2] As Wardoyo et al said that in physics, mathematics plays a major role, in addition to its ability to solve physics problems from the simplest to the most complex, mathematics is very helpful for one's reasoning in tracing the intricacies of physics which is not easy.

Then the second type of difficulty is Difficult to memorize physics equations and use physics equations in solving physics problems / problems, problem solving difficulties for students are influenced by several reasons, namely not being able to master mathematics, the way the teacher explains is difficult to understand. This is supported by students' statements, which state that they cannot solve physics problems, especially in the form of problem solving. This is caused by the weak understanding of students about the principles and rules of physics and also the teaching style of teachers who are rigid and lack mastery of the material. As stated by Brok et al, physics teachers have not been effective in training problem solving skills. so that students lack or even do not have the ability to solve problems.

The third difficulty is that it is difficult to express an opinion for fear of being wrong. In general, students at MAS Lamno still find it difficult to express their respective opinions. This is because the teacher is not friendly, afraid to be asked to come forward to solve the questions ahead by the teacher, afraid to express opinions because they are confused about how to convey it (can't speak well), afraid because they don't understand the material. As Sugiyono (2009: 80-81) found that the low level of opinion and courage was caused by teachers more often using the lecture method in delivering material.[3] The facts in the field show that there are very few students at MAS Lamno who dare to come forward to express their opinions during the learning process. The problem of at least students who are able to express opinions in the learning process takes place, one of which is experienced by students who are selected as samples by the author.

The last difficulty is that students find it difficult to conclude the material that has been studied. This is caused by teachers who do not review what has been taught, do not evaluate and do not provide follow-up to students on the material that has been taught. According to Wena (2011), the initial knowledge that has been previously owned and relates it to the concepts being studied. Finally, students are able to construct new

knowledge.[4] In the learning process the teacher must give assignments after explaining the material so that students can more easily understand what has been learned, and when the teacher wants to carry out the components of the closing learning activity in order to re-evaluate the lesson and draw conclusions so that students can easily understand the material. and tell the next material to students. so that they can find information about the material so that during the learning process in the future they are not confused.

Learning difficulties experienced by students that are not handled properly will have an impact on the low achievement of learning outcomes. Learning is a process of effort carried out by a person to obtain a new change in behavior as a whole, as a result of his own experience in interaction with his environment. In this case, according to Hamalik (2009: 30) evidence that someone has learned is a change in behavior in a person, for example from not knowing to knowing and from not understanding to understanding, if someone has done an act of learning it will be seen that there is a change in one's behavior. one or more aspects of the behavior.

Before the teacher started the learning process, students felt lazy to learn because students had learning difficulties, which resulted in not being able to concentrate and not knowing how to study well. This makes students less motivated in learning, causing students to be lazy to learn. With a lack of motivation in students, students are less interested and do not know how to take advantage of their free time and lack confidence in expressing their opinions.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the analysis of research data, it can be concluded that there are four learning difficulties of students at MAS Lamno in physics learning, namely lack of mastery of mathematics, difficulty in memorizing physics equations and using physics equations in solving physics problems/questions, difficulty expressing opinions for fear of being wrong, and difficulty concluding the material that has been studied. In general, these difficulties occur because students have not mastered mathematical arithmetic operations, teachers are not friendly, teacher explanations are difficult to understand and confused in expressing opinions.

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