MATHEMATICS LEARNING IN COASTAL STUDENTS

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ABSTRACT

Mathematics learning in coastal students is learning about mathematics using the perspective of the environment in which they live. All mathematical activities are directed with the understanding and reasoning of mathematics in accordance with the area of residence. This learning using mathematical concepts that are associated with all mathematical activities that are considered abstract by students such as grouping, measuring, determining locations, and so on, so that it becomes more concrete because it is adapted to the coastal environment. This paper will describe several things including a) the definition of mathematics learning in coastal students, b) how to apply mathematics learning in coastal students by adjusting to the environment in which they live.

Keywords: *mathematics learning, coastal students learning, coastal students*

1. INTRODUCTION

Students begin their first learning in their environment. Likewise mathematics learning. Many activities involve students with their parents at home before they enter formal school (Pianta, LaParo, & Hamre, 2008; Foster, Froyen, Skibbe, Bowles, & Decker, 2016). Therefore, it is fitting that mathematics learning given to the learning class must also adjust to the lives of students.

If the presentation and learning of mathematics that are given are contrary to the lives of students, the consequences received by students become heavy, because students will find it difficult to apply academic experience in their lives. Especially with abstract mathematical properties.

Abstract mathematics makes the teacher must be able to answer students 'mathematical needs by reinforcing the needs of the students' concrete operational development stages (Ekowati, 2017). So the teacher must have the ability to manage information and the environment as a means and medium for concrete mathematical properties abstraction in learning activities.

Over the years, teachers and researchers have tended to develop learning models without looking at the actual conditions of student learning environments. And even just focus on classifying students based on multiple intelligences (Yerizon, Putra, & Subhan, 2018). This causes a lot of learning that is more directed towards completing semester achievements. So that student achievement in understanding and mathematical reasoning becomes very less. In fact, a better understanding of mathematics learning experiences is very much related to the development of students' mathematical skills (Jung, Zhang, & Chiang, 2019).

Related converse to understanding mathematics, if we point to learning by adjusting the environment in which students live it is easy for students to understand. Because everything that has been learned in class learning can be applied in they life. So it can make students learn to understand the conditions of the environment in which they live with academic experience that has been obtained. All activities carried out by students in their lives become a culture for themselves. So it is fitting, the teacher makes student life activities in line with the academic experience received.

This applies equally to students who are on the coast. All learning activities

and mathematical activities must be in line with the coastal environment. Where all mathematical activities are directed with the understanding and reasoning of mathematics in accordance with the environment in which they live.

Many of us actually look more at students who have a high level of mastery, but that does not mean those who live on the coast are far from that mastery. Therefore, this paper becomes an eye for us to see how good learning should be given to students on the coast. So that all academic experience received is in line with the culture of life.

2. DISCUSSION

Mathematics Learning in Coastal Students

Many learning models and methods are available and can be used in learning activities. However, the model or method may fail if the teacher presents learning beyond what can be achieved by students.

There have been many discussions regarding procedural and conceptual understanding in mathematics education (Hiebert & Lefevre, 1986; Star, 2005). But actually teaching it has not been done well. Why is that?

As we all know, everything we do will become a normal thing if it continues to be done. Its same like the case with learning mathematics. If students are continually equipped with good procedural and conceptual mathematics, both forms of understanding will become normal for students. And that is very good for students and teachers. Because mathematics is inseparable from everyone's life and becomes an important part that is needed everywhere (Novitasari, 2016).

Mathematics is valued as a complex study in its study (Habibi, 2014). So the teacher needs to adjust the provision of teaching with the characteristics of the material (Litiloly, 2017), and the environment and daily culture of students. This is because, learning mathematics is not only at the school level. However, it is also obtained in the student's residence environment. In addition, the significance of parental contributions to student development has not been directed when combined with teacher teaching practices in terms of students' mathematical skills (Jung, Zhang, & Chiang, 2019). So that it is necessary to adjust the characteristics of the students' daily environment and culture with the material to be taught so as to be able to achieve understanding, reasoning, and mastery of good mathematical skills.

Mathematics is often called the foundation of student knowledge. This has resulted in the view of mathematics being unfavorable by students. Therefore, the teacher should make that view better by presenting a learning that looks at the characteristics of students' daily life and culture.

Mathematical learning depends on several factors, namely the choice of the situation, how to contextualize the problem, and the learning resources used (Godino, Rivas, Burgos, & Wilhelmi, 2019). A good situation in learning will make the conditions of learning conducive and enjoyable, as well as contextual delivery of problems. If mathematical problems are given in the context of mathematical contexts, the students' academic experience will be better. This is because there are problems that are articulated in the daily culture of students making students understand well the location of the problem and how to find solutions to those problems.

Another thing that is most supportive is the selection of learning resources. If students with their living environment are the beach and the coast, the teacher can make the test environment as a learning resource presented in mathematics learning.

The main focus in this paper is on the mathematics learning of coastal students.

Often coastal students are considered less adaptable to the increasingly rapid development of science and technology. So that makes them slow to accept and apply the lessons learned in their lives.

Coastal students are the same students as other students, the striking thing is the culture of life that needs to be connected with the academic experience received at school. Because students learn more and better when they can control their learning by setting their goals and monitoring their own progress.

Coastal students are students who live on the coast. The environment where he lives can be used as a learning material by teachers so that coastal students are able to understand that the learning obtained from the teacher can be applied in their environment.

This learning using mathematical concepts that are associated with all mathematical activities that are considered abstract by students such as grouping, measuring, determining locations, and so on, so that it becomes more concrete because it is adapted to the coastal environment.

Mathematical learning by adjusting the characteristics of the material, students, and the coastal environment can be combined with the term mathematics learning of coastal students. This learning not takes place on the coast, but doing learning by linking to the lives of coastal students.

Learning by linking to the coastal environment where students live, will make students more enthusiastic in learning. This is because students will feel that the learning given is very related and even precisely in the culture of their lives. So that makes students come to feel that what is learned today will be very useful in their lives. And not rule out the possibility if students will teach the material to their families so that it can be applied when finding the same conditions.

Applying Mathematic Learning in Coastal Students

The application of mathematics learning in coastal students using TEBEKAN (guess the weight of fish) activities. As for carrying out these activities using fish-shaped cardboard media. The following explains how to make and use media to guess the weight of fish.

Making and Using The Media

1. Tools and Materials
   The tools and materials needed in making fish guessing media, i.e :
   a. Whiteboard
   b. Cardboard
   c. Print a picture of 16 fish on F4 paper
   d. Sticky note
   e. Pen
   f. Marker
   g. Cutter
   h. Glue
   i. Double tip

2. Steps of Making Media
   a. Cut the paper that have been printed into various shapes of fish according to the size of the image of the fish
   b. Cut the cardboard as many folds as there are on the cardboard (8 parts)
   c. Use glue to attach the cut fish to cardboard, after that cut into the pattern of the fish
   d. Write the weight of the fish behind the piece of cardboard fish
   e. Explain the meaning of large and small pieces of cardboard fish

3. Use The Media
   a. There are three forms of cardboard fish namely, large, medium and small.

b. The larger the shape of the fish, the greater the weight of the fish
c. Using by the heaviest amount is 1 ton
d. Stick the cardboard fish provided on the board using the double tip
e. Use a pen to write the definition of the weight of the fish on a sticky note to put on the board at the bottom of the cardboard fish
f. Repetition can be for ensure students understand the game TEBEKAN

Learning Steps

The following is explained the things that need to be in the guessing activity.

1. Teacher explains the path that will be carried out in the learning of weight units
2. Explain the media to be used is cardboard fish and not real fish
3. Teacher distributes cardboard fish and sticky notes containing definitions of fish weight to students
4. Teacher gives time for students to read and understand the media they have gained
5. Teacher asks students who get fish shapes of the same color to join into one group
6. Then, the teacher asks students to count the number of fish they have in one group
7. The next step, students who get sticky notes with the definition of fish weight are welcome to come forward to read the written definition
8. For groups that find the same number as the friend in front, it is permissible to attach the cardboard fish and the definition
9. Then the group is permissible to explain the similarity obtained by the existing definition to determine the unit conversion of mass / weight
10. The treatment is repeated until finished
11. Then an evaluation is made to students to train students' memory regarding the conversion of mass / weight units
12. Next the teacher explains making conclusions from the TEBEKAN activity that from several forms of weight that are grouped can form a unit of weight that is interrelated and can be converted
13. Teacher closes the learning.

3. CONCLUSION

Learning does not only occur in classroom learning by focusing on teaching materials. But learning is a treatment that is obtained by students everywhere and can be used as academic experience that can be applied in the culture of student life. Because meaningful learning is learning that can be experienced and understood well by students. Likewise mathematics learning, not only focuses on the content of the material and numbers. But mathematical experiences related to the culture of student life. Therefore, the teacher should involve students in learning mathematics by linking learning with students' daily culture or life (Fauskanger & Bjuland, 2018).

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