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THE PROBLEMS OF INTEREST IN LEARNING MATHEMATICS IN SCHOOL

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Abstract: Mathematics is abstract science which is compiled deductively. So learning mathematics is learn mathematics concepts which are abstract. Student (Especially Elementary School) is on stage thinking which is marked by logical reasoning about the things that can be found in the real world. Mathematics concepts that require higher reasoning, not only can be communicated through the definition, but also need to be given the concrete examples that suitable to the subject matter. With the concrete examples that suitable with the concepts that is taught, it is meant to cultivate students' interest in learning mathematics. There are some factors that cause low interest in studying mathematics, such as cultural, educational system, the assessment system, parents, nature field of study, and the teacher factor. Teacher factor is often considered to be the cause of many students feel scared or have lower interest towards mathematics. Teacher holds an important role in growing and increasing student interest in learning mathematics. Teacher should develop skill and ability in mathematics teaching so that students become interest in math. Teacher can apply the inductive and contextual method in mathematics, increasing the provision of mathematics through making props, and change the public perception of mathematics through fun learning.

Keywords: Learning Interest, Mathematics.

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A. INTRODUCTION

Interest is a symptom of psychic like curiosity, interest, a sense of fun of an object to know and learn about an object without being forced because it attracts attention. For example, interest in learning mathematics can appear from the actions/activities that are stimulated by the desire to satisfy one's curiosity to the learning activities. So it becomes the responsibility of teacher to create learning process that can stimulate students' interest in learning. Uzer, Moh. Usman (2002:27) states that the condition of effective teaching and learning has interest and attention, in the teaching and learning, interest is a trait that is relatively settled in a person. Thus, the interest is a major motivational instrument that can improve student learning so that lessons were easily accepted and understood.

In addition to the teacher, many other factors that can affect the interest in learning, such as: curriculum, assessment system, family, and cultural factors. Mathematics curriculum that we use today is dense with matter. Teachers are always burdened with the target to complete the burden which is large of materials. If there are two teachers meet, it will be talked about the material that be held in the class. Not discussing how to deliver interesting material. In mathematics, we should learn the logical reason, but it has been changed to memorise lessons. It is very strange if a math lesson that is given with lecture by the teacher in front of the class or "talk" with the board, while the students only make a note then memorize it. Learning mathematics must go through a process that lasts from simple concepts to more complex concepts. Each mathematical concept can be understood if the first is presented in concrete form.

Another problem that needs to be mentioned here is perception that develops in students that mathematics is a science

that no benefit. Of course this is very miserable. Mathematics is an abstract science. Maybe it is hard to digest. This is natural. But as a teacher must constantly strive to demonstrate the relevance of mathematics in real life. With the developing of the perception of irrelevance or not beneficial mathematics, the motivation of learning mathematics of students become down, or even be lost. As a result, many of our children memorize math.

"Math is hard" is a classic statement. It may be that most of the students justify the sentence, especially those who do not like math certainly assume that science is complex, meticulous, confused, and get headache alone. Finally they are so lazy to learn mathematics. Mathematics is the science of the structure, sequence (arranged hierarchically), and the relations that include basic calculation, measurement, and the depiction of objects. While the math is one of the lessons which is learned by students from elementary until college. Therefore, mathematics plays a very important, because by learning math correctly, reasoning power of students will be processed. Unfortunately, there are still many students who complained about math. Many students consider math as a lesson scary, unattractive, dull, and difficult.

B. PROBLEMS OF INTEREST IN LEARNING MATHEMATICS

One of the problems in mathematics is the low interest of the students towards math. It can be seen from the daily learning activities that are less well as learn mathematics just before the exam, rarely homework math on time, wasted time, often do not follow the math, and do not want to ask for things that are not known at the time of learning mathematics.

According Supardi (2013), an average interest of the students' attention 11.66%, the average interest of interest in the students 16.25%, and the average interest willingness of students to 15%. This shows that the interest in learning is still low. This can happen because of the style of mathematics teacher in teaching is still less varied, where teacher is more dominant in the learning process so that interests, lack of student participation, as well as the lack of creativity of researchers in connecting what is taught to the real life that experienced by students daily. Interest in learning can be defined as a feeling like that is very high in the learning process in schools. A student who pays great attention to something (lessons) will focus more intensively on these subjects which then grows the spirit of learning. Interest in learning mathematics is a desire or willingness that is accompanied deliberate attention and liveliness that eventually gave birth to a sense of pleasure in changing behavior either in the form of knowledge, attitude and skill to the science of number, the relation between the numbers, and the procedures that used to generalize, compile evidence, to explain the ideas, and the statements of Mathematics. Interest in learning mathematics can be interpreted as engaging themselves fully in mathematics learning activities at home, at school and in the community. Students who have an interest in learning math means have an effort and a willingness to learn mathematics.

Why the students have not a high interest in math? According Supatmono (2009:1-3), there are several factors, they are:

1. Cultural Factor

In our society, there is a culture that people are less like with the culture of hard work. The more technology that can replace the role of human labor, the

more that people do not want to work hard and tend to leave things to the engine or other aids. There are many students who want the instant process of achieving goals and ignore the hard work, so it makes students memorize and do not pay attention to the process.

2. Education System' Factor

Our education system tends to determine everything from "above". In this case the teacher is the main source of information and students are considered as empty vessels to be filled with a variety of science. The learning process still focuses on the teacher and not focus or pay attention to the development of students. Teachers must change their roles, no longer as the highest authority of science (the main source of information), but being a facilitator who guides students toward the formation of knowledge by themselves. Through this paradigm is expected that students more active in learning, discussion, convey and accept the idea, have a high confidence, and etc. Students can not be seen as passive recipients of mathematics, but students should be given the opportunity to discover again mathematics under the guidance of adults. Thus learning mathematics becomes more meaningful for students and can provide adequate competence provision either for further studies or to enter the real world of working.

3. Assessment System' Factor

The assesment system in schools just tends to assess the final results of student's work and not to assess the process of student's work. For example, the National Examination which is formed in multiple choice. Multiple choice' question can not assess the problem-solving process. As a result, students who are trying hard, if the

results are wrong, then it will get poor grades. If the student is asked whether "3x4" with "4x3" same? they will say the same. Unfortunately again, if the students' answer is not the same as the teacher' answer, it will be considered fault without delving into the cause, actually the students' answer is right for the question which they write.

4. Parents or Family' Factor

Many parents are less able to understand the burden of students' learning in school, so they pay less attention for developing learning outcomes of children in the school. Another problem is there are many parents who do not master the material and how to teach math, so it will be confusion when their children ask math problems to their parents.

5. Field of Study' Factor

The Characteristic of mathematics, such as the abstract object, use symbols that are not widely used in daily life, thinking process is limited by strict rules, and the material in mathematics sometimes not visible usefulness in everyday life. This is definitely the student must have the perseverance and the willingness to work hard to discover the wonderful of mathematics, so they will be interested in mathematics.

Soedjadi (1989:7) states that the abstract object of mathematics as a science, can not be changed into concrete. But to understand can be reached in various ways, such as by using concrete objects. The characteristics of a set of concrete objects, can be used as a starting point to understand the abstract of mathematical subjects. Furthermore, Jean Piaget (in Muhsetyo, 2007: 19) divides the mental development of children at four stages as follows: sensorimotor (age 0-2 years),

preoperative (age 2-7 years), concrete operations (age 7-11 years), and formal operations (age 11 -adult). Elementary school student is in the stage of concrete operations. Therefore, the material of abstract mathematics should be taught in concrete, so that students can easily understand math concepts.

6. Teacher' Factor

Teacher has a predominant role in the educational process because the teacher is the executor of the process. The method which is used in teaching math sometimes is not appropriate with the way of students' thinking, and also not appropriate for students' development. Directorate PLP (in Widdiharto, 2004: 1) states that most teachers in teaching is still less attention to students 'thinking skills, or in other words do not do meaningful learning, the method that is used less variation, and as a result the students' motivation becomes difficult to be grown and the pattern of learning tends to memorize and mechanistic.

According Suwarsono (in Supatmono, 2009:3), from various studies, the teacher factor is often considered to be the most important cause why there are a lot of students feel scared or have lower interest towards mathematics. The learning process of mathematics tends to the achievement of the target material according to curriculum and oriented to fill the passing target. Consequently, the learning process does not emphasize on the understanding of the material being studied. Students do not construct their own knowledge of mathematical concepts, but tend to memorize the mathematical concept without knowing the meaning that contained in the concept. Students are drilled as much of a variety of types and students memorize the answer.

According to Shah, Muhibbin (2002: 132), the factors that affect

student interest is divided into three, namely (a) Internal factors (there are two aspects: physical and psychological aspects), (b) External factors (there are two aspects:

The aspect of environmental social and non-environmental social, (c) factors of learning approaches (including for the strategies and methods that used by students to learn the material of subject matter).

Besides factors above, there are other things that are believed (myth) and can cause society (including students) do not like math. Matrisoni (2009:1-2) states five myths that can mislead about mathematics, namely:

1. Mathematics is the science that is very difficult that only a few people or students with certain minimum IQ is able to understand. Although not the easiest science, mathematical science is actually quite easy if compare to other sciences. Math is difficult for the students, because they do not understand the concepts that they are learning.
2. Mathematics is the science of memorization of many formulas. This myth makes students lazy to learn mathematics and ultimately do not understand anything about mathematics. In fact, the true is mathematics is not memorizing formulas, because without understanding the concepts, formulas memorized will not be helpful. Indeed, only a mathematical formula that needs to be (but not necessary) be memorized, whereas most other formulas do not need to memorize it, but quite understandable concept.
3. Mathematics is always associated with the speed of the calculate. Indeed, calculating is an indispensable part of mathematics, but the ability to calculate quickly is not the most important thing in mathematics. The most important thing is the understanding of the

concept. Through an understanding of the concept, we will be able to conduct analysis (reasoning) to the problem (question) and then transform into the model and the form of mathematical equations. If the issue is presented in the form of mathematical equations, it requires the ability of calculating.

4. Mathematics is the science of abstract and unrelated to reality. This myth is clearly wrong, because the facts show that math is very realistic. In this case, mathematics is a form of analogy from daily reality.
5. Mathematics is boring, stiff, and not recreation. This assumption is clearly wrong. Although the answers (solutions) because the exact mathematical solution was single, does not mean that mathematics is stiff and boring. Although the answer is only one (single), the manner or method of a math problem actually may vary. Besides not being boring, mathematics is also a recreational and fun.

One thing that must be understood and realized, not all students have a high intellectual level. The ability of each student to catch the subject matter that presented different. "Every student has a different reason. Their response to material that submitted by teacher is fast and slow. Especially for mathematics subject, do not ask children to memorize the formula, because mathematics is an exact science that requires the understanding and practice perseverance. Teachers should have a teaching method that arouse the students' interest.

According to Djamarah, Saiful Bahri (2002:133), there are several ways you can do to generate interest in student learning as follows:

1. Comparing the existence of a requirement on students, so they are willing to learn without coercion.
2. Connecting learning materials which are given, with the issue of students' experience, so that students are receptive to learning materials.
3. Giving opportunities for students to get a good learning outcomes by providing a creative learning environment and conducive.
4. Using a variety of forms and techniques teaching in the context of individual differences of students.
5. Give examples of the benefits of learning mathematics to students who are lazy to learn mathematics, so that students are aware of the benefits and importance of learning math. There are several benefits of studying mathematics, they are:

- In mathematics, our brain is accustomed to solve the problem systematically. So that when it is applied in real life, we can solve problems more easily
- The way of thinking in mathematics is deductive (conclusions drawn from the things that are common).
- Learning mathematics trains us to be human who has more careful, accurate, and not careless in the act.
- Learning mathematics teaches us be patient in facing of all things in life.
- There are many mathematical concepts that can be applied in real life.

There are some tips that can be applied by teachers in mathematics' learning.

1. As teachers try the way of teaching more interesting for the students so they like you and also the subject. Try to guide them patiently to learn. Give forms of math games that can support math material.
2. Do not force the children to memorize math formulas. Invite them to understand the theory and working steps by giving an example that is close to the world of children. Use concrete objects that exist around the learning environment in explaining mathematical concepts.
3. Try sketching to facilitate students' understanding about the story. Especially for geometry (lesson shape), invite students to make the props together. Make props to attract the attention of students and to increase the understanding of mathematical material.
4. Give the questions to students starting from easy to difficult (varies) as an exercise, teacher and all the students try to solve all the problems together. It also formed study groups. Each group must have 1 and 2 students that good at math so they can help their friends.

Sobel, Max.A and Evan M.Maletsky (2004:1-26) give the tricks in teaching so that students become interest or interested in learning mathematics. The tricks are arts of teaching with the following steps:

1. Start the lesson with interesting way. Give interesting and challenging questions so that students hooked to think about and discuss with friends.
2. Use topics of history if necessary. By knowing the topic of mathematics' history, students are expected to know the process of development in mathematics as a whole, so that they will like math.
3. Use props effectively and attractively, especially on topics that require an understanding of mathematics in concrete. With the use of props, abstract math concepts can be presented in concrete, so it can be understood easily by the students.
4. Provide equipment for the discovery by the students. This step can help students to develop their creativity and

originality of students in learning mathematics.

5. Finish the lesson with something special. By introducing a special topic in the last few minutes, it is expected students will leave the class with something fun talking about math. The special topic can be a game, or mathematical puzzles.

C. CONCLUSION

Problems that occur in the learning of mathematics in schools, such as students are less interested in math. Many students consider that math as a scary subject, unattractive, boring, and difficult. It is caused by several factors, they are: cultural, educational system, the assessment system, parents, field of study, and the teacher' factor. Teacher' factor is often considered to be the most important cause why there are a lot of students feel scared or have lower interest towards mathematics. Therefore, teachers need to expand the teaching skills of mathematics, so that students become more interested and do not think that math is hard. Mathematical material which is abstract should be taught in concrete, so that students can easily understand mathematical concepts and make mathematics as an enjoyable lesson.

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