BUILDING SELF CONFIDENCE OF THE STUDENTS THROUGH REALISTIC MATHEMATICS EDUCATION APPROACH

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Abstract

Self-confidence is a soft skill that has a very important role in optimizing someone’s hard skills. Academic skills of an individual will not be useful if he/she does not have a good self-confidence. Someone will tend to be reticent even though he/she is able to solve the academic problem. A similar problem can occur in mathematic learning activities in elementary school. One of effort to build the self-confidence of the students in mathematics learning is by using appropriate learning approach. Realistic Mathematic Education (RME) is one of good learning approach to build the self-confidence of the students in learning mathematics. One of the characteristics of RME approach is it use contextual problems. This characteristic will make the learning process more applicable. Students will construct mathematical concepts to solve problems which found in their daily life. Students believe that the mathematical concepts that are found can be used to solve problems in life. When the student's belief has been built, then the students' self-confidence also built by itself.

Keywords: Self-confidence, Realistic Mathematics Education, Elementary School

INTRODUCTION

Successful education is education that creates qualified individuals. Qualified individuals are individuals who are not only intelligent from the hard skill aspect but are supported with good soft skill. A person's hard skills will not work properly if they are not supported by soft skills (Elfindri et al, 2011). Elfindri et al (2011) also state that soft skills determine the direction of utilization of a person's hard skills. It would be very worrying if someone who has high hard skills but not balanced with good soft skills. One of soft skill that needed by individual is self-confidence.

Self-confidence has a very important role. Self-confidence is the basis of one's existence in a social life. Humans are social beings, it is required to be able to mingle with others. Raghunathan (2000) explains that self-confidence is more important than ability and other properties. Then Sar, A.H., Avcu, R. & Isiklar, A. (2010) assert that self-confidence has a very significant impact in expressing one's self within the social group. Self-confidence also has a very important role in learning mathematics. Student's belief in teaching materials and herself will support the success in learning mathematics.

It takes a real picture of the concept of mathematics in everyday life to build students' confidence in mathematics. Welford (2012) also explains that self-confidence is something that is built and trained, not innate. Student confidence in what he understands will wake up automatically if the students already know the application of mathematical concepts in everyday life. This study is intended to provide an overview of how the RME approach can build student self-confidence. The principles, characteristics and learning steps using the RME approach will be presented in this paper. The author hopes the reader can link between self-confidence with RME and apply RME in mathematics learning process.
DISCUSSION

The definition of self-confidence is expressed by some experts which include the following:

1. Bandura (1994) states that self-confidence is to believe in own ability to mobilize the motivation and the resources needed.


3. Genctan (Sar, Avcu and Isiklar, 2012) describes the self-confidence as an individual recognition of his ability, to love him and be aware of his emotions.

It can be interpreted that self-confidence is a positive mental in giving confidence to the competence and skills owned so dare to take action to solve problems and achieve goals. Self-confidence affects some aspects of life, such as goals, making decisions, as balance and fluency in dealing with problems.

Nuraeni (2014) found there are several indicators to measure self-confidence in mathematics learning, which consists of 1) showing confidence with the ability possessed, 2) showing independence in making decisions (mathematical ability) 4) Showing optimism, be calm, and never give up, 5) have the ability to socialize, 6) show a positive attitude in the face of problems, 7) able to adjust and communicate in various situations.

One of the approaches that developed in mathematics is Realistic Mathematics Education (RME). Realistic mathematical approach presents realistic problems as early as in learning to be solved by students through organized performance. Swangsih and Tiurlina (2009, pp. 134) explains the realistic mathematical approach is an approach that uses realistic problems as the starting point of learning and through mathematical horizontal-vertical students are expected to find and construct mathematical concepts or formal mathematical knowledge. Meanwhile, Irzani (2010, p.27) suggests that a realistic mathematical approach is an approach developed based on the thinking of Hans Freudenthal who says that mathematics must be related to reality and mathematics is a human activity.

An important point in the RME approach is a real problem for students. The realistic mathematical approach uses real problems and can be imagined by students as the beginning of learning. According to Webb, CD, Kooji, van der H. Geist, M. R (2011) an important point in the RME that "it is important to point out here that the realistic aspect of RME is not just because of its connection with real world context, but it is related to the emphasis that puts on offering students RME problem roommates are situations imaginable". RME approach emphasizes more on student activity. Sanjaya (2006, p.264) explains that the role of the teacher is nothing more than a facilitator, moderator, and evaluator while students think, communicate, train the atmosphere of democracy by respecting the opinions of others.

According to Suherman et al. (2003, pp. 147) there are five main principles in the "curriculum" of realistic mathematics:

a. Dominated by problems in context, serves two things as sources and as an applied mathematical concept;

b. Attention is given to the development of models, situations, schemes and symbols.

c. The contribution of the students, so that students can make learning to be constructive and productive, meaning that students produce self-constructed and self-constructed, so as to guide students from the informal mathematics level to formal mathematics.

d. Interactive as the characteristics of the learning process of mathematics.

e. Intertwining between topics or inter-subject or inter 'strand'.

Treffers (Wijaya, 2012, p. 21) and Soedjadi (2001) state that there are five characteristics of RME is to use contextual problems, using the model, using the contributions...
of students, interactivity, integrated with other topics (intertwining). Gravemeijer (in Tarigan, 2006, p.6) also explains the existence of five characteristics of realistic mathematical learning, including the use of the context that is used in the initial process of learning. Mathematical learning using RME approach begins with the contextual problem used at the beginning of the lesson. Students are required to be able to develop models from problems into the mathematical model. This is a bridge for students from the level of understanding one to another level of understanding.

In learning process with RME, students play an active role in finding and building mathematical concepts are taught. In addition, it is expected that students can interact with teachers interact with other students in the learning process. Optimizing the learning process with the interaction between students and students, students with teachers and even students with the tools that can be used. Teachers should assist students in this interaction process, directing students in the process of discussion. The concepts that will be studied by the students must be related to other topics both in mathematics itself and with other subjects. This is so that students can understand that math is very closely related to other topics and even related to daily life. It will make students better understand the concepts learned with meaning.

Hadji (in Anisa, 2014) argues that there are steps in the learning of mathematics through realistic mathematics learning, ie the teacher conditioned the class to be conducive, the teacher convey and explain the contextual problem, the students solve the contextual problem, the conclusion, and affirmation. Meanwhile, Aisyah (2007, p.7) discloses the steps of learning activities of realistic mathematics approach starting with the activity of understanding the contextual problem and discuss it. After the students can determine their answers, the teacher facilitates the students to represent the results and discusses that students can compare, respond to the answers of the other students, the active participating students in the learning activities. The teacher directs students to draw conclusions about the problem solving, concepts, procedures or principles that have been built together with the results of class discussions.

Based on the principles and characteristics of realistic mathematics education and with regard to a variety of opinions about the learning process of mathematics with RME approach above, the structured learning steps approach is as follows.

**Table 1. Structure Learning Steps**

<table>
<thead>
<tr>
<th>Steps</th>
<th>Teacher and student activity</th>
<th>Characteristics that appear</th>
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<tbody>
<tr>
<td>1. Understanding</td>
<td>The teacher provides contextual problems in accordance with the subject matter the student is learning. Then ask the students to understand the given problem. If things are poorly understood by the students, the teacher provides the necessary guidance to the parts that the student has not understood.</td>
<td>Using contextual problem as a starting point in learning, and the fourth characteristic is interaction.</td>
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<td>contextual issues</td>
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<td>2. Resolving</td>
<td>Students describe contextual problems, interpret the existing mathematical aspects of the problem and think of problem-solving strategies. Furthermore, students</td>
<td>The second characteristic, using the model</td>
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<td>contextual issues</td>
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work to solve problems in their own way based on the initial knowledge they have, so that possible differences in the completion of students with each other. Teachers observe, motivate, and provide limited guidance, so that students can get resolved these problems.

3. Compare and discuss answers

Teachers provide time and opportunity for students to compare and discuss their answers in groups, then compare and discuss in class discussions. At this stage, students can be courageous to express their opinions even if they differ from others.

The third characteristic that is using student contribution (student contribution) and fourth characteristic that there is interaction (interactivity) between student with other student.

4. Conclude

Based on the results of class discussions, the teacher gives the students the opportunity to draw conclusions of a concept or procedure related to the realistic problem being solved.

The interaction (interactivity) between students and teachers (mentors).

The characteristics of RME make it possible to create meaningful math learning. RME's characteristic with the use of contextual problems enables students to build students' confidence in themselves, mathematical intelligence, optimism and positive attitudes. Contextual problems in RME is a mathematical problem that comes from everyday problems that are easy to find students. Student motivation to solve the bigger problem. The student's mathematical intelligence will be used and developed to solve the problem. The student's self-confidence and optimism begin to grow in line with his conviction of finding solutions to the problems presented. Then students think critically to solve the problem.

Mathematics is a symbol language. The use of symbols in mathematics to describe a broad and international nature. The RME characteristics of the model use foster students' ability to manipulate variables into the forms of mathematical symbols. Learning activities that involve student contribution build self-confidence, independence in decision-making by students and build a sense of optimism.

Learning by RME allows different answers, ways, opinions of students to be valued and given equal opportunities to be expressed. The truth about answers will be found and summarized by the students themselves through discussion activities. These will build self-confidence, independence and student optimism.

The optimal learning process through RME is the interactivity. Interaction occurs between teacher and student and student with the student. This activity encourages social activity and improves the ability to adapt and communicate. In RME Learning, the topic studied has relevance to other topics. Knowledge of other related topics will support each other to find an understanding of the topic being studied. This encourages confidence and optimism about students' self-abilities.

In addition, the application of contextual issues will also build as learning approach that uses contextual problems as learning materials create a sense of confidence of students (self-confidence) will mathematical concepts. High self-confidence on students will support the
learning process. Student self-confidence will encourage student activity and contribution in learning. The final impact is an increase in student achievement.

CONCLUSION
Self-confidence is a positive mental in giving confidence to the competence and skills owned so dare to take action to solve problems and achieve goals. Therefore, self-confidence of students towards mathematics that will encourage math optimal learning results. RME approach is an approach designed for math learning. Learning with this approach is based on the use of contextual problems as a starting point in learning. Characteristics of RME is to use contextual issues, using the model, using the contributions of students, interactivity, integrated with other topics (intertwining). These characteristics are able to boost the self-confidence of students in mathematics learning characterized by increased sense of confidence in the ability of self-esteem, self-sufficient in taking decisions, mathematical intelligence, a sense of optimism, social skills, a positive attitude in dealing with problems, and is able to adapt and communicate in a variety situation.

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