

ELEMENTARY STUDENT'S HABIT OF MIND PROFILE ON GRADE 5th KECAMATAN MINAS, KABUPATEN SIAK

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Abstract : Mathematical Habit of Mind, which is often called the habit of thinking mathematically, in primary school students, is one of the students' inclinations to be able to perform mathematical activities effectively, collaboratively and communicatively. This study aims to describe the student mathematical habits of mind from 5th grade elementary school student in Minas, Siak Regency, province of Riau. The study population was all primary schools in Minas Subdistrict with a sample of six classes from three schools. In order to measure the mathematical habit of mind, students use instruments with Likert scale. The results of the research show that the student's habit of mind average score in Minas elementary school is 72.05%. This means that the mathematical thinking habits of students reach 72.05%. The greatest indicator in the mathematical thinking habits of students is to work carefully and precisely and the lowest indicators are aspects of fantasizing, creating and innovating.

Keyword : *Habit of Mind, elementary school student*

1. Introduction

Mathematics is a universal language but abstract. For some people it is difficult to understand a problem from a mathematical point of view. This is because they do not know how to think mathematically correctly and correctly, so misunderstandings often occur. For elementary school children, abstract mathematics is an obstacle because the mindset of children aged 7 - 12 is still concrete, so they can not understand abstract things.

According to Piaget, those who are in this age are still in the phase of concrete operational thinking. The ability that appears in this phase is the ability in the process of thinking to operate the rules of logic, although it is still bound by concrete objects (Heruman, 2008 p. 1).

Along with the development of science today, education should be a major milestone of change. One of the universal changes is to emphasize high order thinking skills (HOTS) in various evaluations of students' abilities internationally, either PISA or TIMSS. High-level thinking skills in mathematics also known as Higher Thinking of Math (HOM) are abilities that must be possessed by every student in response to the challenges of the 21st Century. This is in line with the objectives of mathematics learning that is saved in the national education standard, namely the formation of capable individuals. creative, independent and become a democratic and responsible citizen, has an attitude of respect for the usefulness of mathematics in life, attitude of curiosity, attention, and interest in learning mathematics, as well as tenacity and confidence. In other words, individuals with HOM are expected to full fill the mathematical vision of individuals being able to compete and simultaneously be able to work together to face increasingly tense global challenges. In mathematics learning, HOTS 'abilities are presented in an irregular and semi-concrete problem that requires the ability of students to abstract the proposed problem. The process of abstraction in solving mathematical problems is very necessary considering mathematics is abstract. One of the abilities that can bridge this gap is the habit of mathematical thinking or mathematical habit of mind.

Habit of mind is seen as one of the habits that greatly affects the success of the curriculum, especially in mathematics learning. By utilizing the habit of mind, the teacher can familiarize students to continue to make decisions and steps wisely and intelligently in dealing with various mathematical problems. This is consistent with the long-term goal of basic education, which is to lay the foundation for the intelligence of knowledge, personality, noble character and the skills to live independently and follow further education. Habit of mind can also be seen as students' ability in imagining things that are abstract, creating, innovating and affective in the form of collaborative attitudes, empathy for one another and *kemadirian* in learning so that students with good habits of mind are expected to be able to learn well and *efisien*

Understanding the importance of mathematical habit of mind, as an effort to improve the habit of mathematical thinking, researchers are interested in deepening the mathematical thinking habits of fifth grade students in public elementary schools in Minas sub-district, Siak regency.

2. Related Works/Literature Review

Habit of Mind is one of the mathematical dispositions that students must possess in developing the ability of HMOT (High Mathematic Order Thinking). Ownership of adequate HOMT in students will support the achievement of national education goals and the objectives of mathematics learning and affective aspects. These objectives include the establishment of capable, creative, independent individuals and being democratic and responsible citizens, having an attitude of respect for the usefulness of mathematics in life, attitude of curiosity, attention, and interest in learning mathematics, as well as tenacity and confidence. In other words, individuals with good HoM are expected to fulfill the mathematical vision of individuals being able to compete and simultaneously be able to work together to face increasingly tense global challenges.

Simply stated, habit of mind is defined as a habit of thinking (in this case thinking mathematically) so that someone who has this habit will be able to think flexibly and systematically. Habits of mind according to Costa and Kallick (2001) can be associated with one's intelligence in acting. When someone acts by taking several decisions, he will consider several things to anticipate problems that

will occur in the future. Burgess (2012) through his research found that there was an influence of teaching thinking ability as a habit of mind for children aged 7-12 years (Lestari, 2015). Rustaman (in Safitri, 2013) states that habits of mind are very important to be developed at various levels and instilled early on, and implemented through learning in the field of study. Leager (2005) states that the strategy to foster the development of habits of mind science is to include it in the learning model (Lestari, 2015). The rationales that support the above statement include completing HOMT tasks, in addition to students mastering the mathematics content in question, they also need to have strong, resilient, and willing to interact with other people (Herdiana, et al, 2017).

Furthermore Costa (Costa, Ed., 2001) identified sixteen habits of thinking, when individuals respond intelligently to problems, namely:

- 1) Surviving or never giving up: trying to analyze the problem, then developing a system, structure, or strategy to solve the problem. When it fails to implement the strategy, immediately look for other alternative solutions. Individuals who do not have a defensive nature, when facing problems, are easily frustrated, feel helpless, and are unable to solve the problem.
- 2) Set conscience: think reflectively, think before acting, plan activities, try to understand instructions, and design strategies to achieve goals, consider various alternatives and consequences before acting, gather relevant information and listen to other alternative views.
- 3) Listen to other people's opinions with empathy: understand others and empathize
- 4) Think flexible: open and able to change their views when obtaining additional information
- 5) Metacognitive thinking: thinking about what is being thought of by metacognitive thinking, thinking comparatively, assessing readiness in a variety of ways, and monitoring its thoughts, perceptions, decisions and behavior
- 6) Trying to work conscientiously and precisely: respecting the work of others, working conscientiously, trying to achieve high standards, and continuing learning, trying to get the right results
- 7) Ask and raise problems effectively: request supporting data, explanations, and / or information on conclusions made
- 8) Utilizing old experiences to form new knowledge: doing analogies and linking old experiences to similar cases faced
- 9) Thinking and communicating clearly and precisely: communicating and defining terms carefully, using the right discussion, correct name, avoiding excessive generalization and distortion
- 10) Utilize the senses in collecting and processing data: utilizing sharp senses, intuitive thinking, and making predictions of reasonable solutions
- 11) Creating, fantasizing and innovating: looking at problem solutions from different perspectives
- 12) Enthusiastic in responding: working passionately, happy to do it
- 13) Dare to be responsible and face risks: not afraid of failure, accepting uncertainty based on prior experience, the risk has been estimated
- 14) Ridiculing: looking at the situation faced as something important and giving appreciation to others
- 15) Thinking interdependent: as human social beings need each other, member and accept each other and are more minded than self
- 16) Continuous learning: having a view of lifelong learning, being sustainable, looking for something new and better, trying to improve themselves and doing things, situations, pressures, conflicts and the environment as good opportunities for learning

3. Material & Methodology

a. Data

This study uses a descriptive quantitative approach that aims to find out how much mathematical thinking habits of elementary school students in Minas District. In connection with this, the research data obtained from the Habit of Mind questionnaire developed by Hendriana, et al (2017) were then modified according to the conditions of elementary school students.

b. Method

Data was collected by giving questionnaires to as many as 147 students from 6 classes from 3 elementary schools in Minas sub-district, Siak regency. The questionnaire contains statements using a Likert scale of 41 statements.

4. Results and Discussion

a. Result

From the results of data, it was obtained the fact that the average score of habit of mind questionnaires for grade V students in Minas District Elementary School was 72.05. The distribution of students' mathematical habit of mind is contained in the following table:

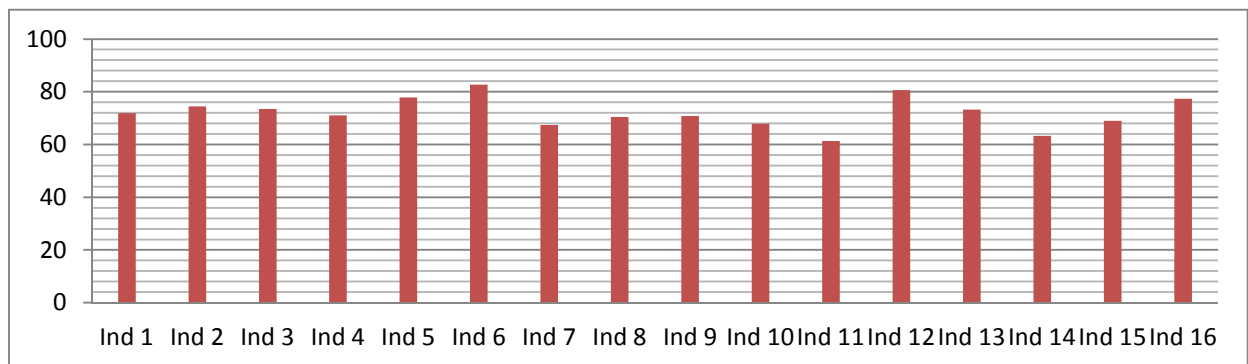


Table 1. Habit of mind average profile

From the data above it can be seen that all students' mathematical habit habit of mind in general can be said to be evenly distributed. This means that there is no significant difference between one aspect and another.

d. Discussion

Noticing to the data in Table.1, obtained the fact that on average each indicator of the habit of mind of Elementary School Sub-district of Minas can be said to be in the sufficient category. The lowest average students' mathematical habit of mind scores are found in the indicators of creating, imagining and innovating that is 61.39%. This means that the wisdom to fantasize about creating and innovating students is in the sufficient category. The achievement of this initiator must be improved considering that this indicator is one of the requirements for high-level thinking skills of students. In this connection, to face the challenges of the 21st century, students' habit of thinking mathematically in building imaginary power, creating and innovating must be emphasized so that creative skills in mathematical thinking can be built. In addition, imagination and creating power also support students 'problem solving abilities and students' creative thinking skills so that students are able to see problems from different perspectives and find solutions in different ways.

The next lowest student mathematical habit habit of mind is found on the humorous aspect which is 63.27%. These results are in line with various previous studies and students' stigma of mathematics generally says that mathematics is a difficult lesson so it cannot be learned in fun ways. This paradigm must be minimized and if possible eliminated especially elementary school children so that in the future mathematics becomes the preferred subject.

The next lowest indicator is to ask and raise problems effectively and to use indicators of the senses in collecting and processing data of 67.43% and 67.91% respectively. Both of these indicators are generally trained in the learning process, so that students are expected to be familiar with these two indicators. On the other hand, these two indicators are found in all subjects.

Indicators of interdependent thinking, achievement of 68.99%. This indicator shows the habit of interacting between students where students must separate when they must cooperate and when they must try their own abilities. Things that happen in the field are based on several previous studies, if students are taught in group learning, only a few students do the tasks given by the teacher while some

students no longer. This implies two things: some students only try themselves without looking at other students and are able to have other opinions in working on a problem because they are used to themselves so that if they are called interdependent, they assume that they are the losers. While students who are very dependent on their friends or do not do the task at all become very dependent with negative connotations. This will weaken the ability of the student in building his own knowledge so that he is not independent in learning

Furthermore, the second highest indicator is excited in response by 80.67%. This is an opportunity for teachers to improve student learning activity. Students with a great response spirit must be directed so that they understand when to respond, when to listen to opinions not only teachers but also their peers. This also affects the ability of students to understand so that when in the future students respond, not just respond, but also provide logical reasons for the response given

The highest indicator of students' mathematical habit of mind is found in the aspect of trying to work accurately and precisely at 82.71%. This is very supportive of the smooth process of learning so that students do not do tasks that are given inadvertently and irresponsibly. Even if the student's answer is wrong, he has tried as much as possible so that the answers he got were not wrong. Therefore the teacher has the opportunity to teach students independently or in groups..

5. Conclusion

From Discussion above, that is conclude:

- a. The mathematical Habit of mind Elementary School students in Minas Subdistrict reach an average score of 72.05% with the highest indicator in the aspect of trying to work conscientiously and precisely and lowest in the aspect of creating, fantasizing and innovating. The ability to strive to work conscientiously and appropriately has been instilled in students from the beginning so as to have an impact on this habit of thinking. While creating, imagining and innovating implies advanced thinking skills, so it needs more intensive emphasis in learning to answer the demands for learning to think further is 21st century students' learning demands
- b. For further research can be the application of learning models, especially those mandated by Permendikbud to see how much influence the model has on the habits of mind of students, especially in learning mathematics.

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