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The Influence of Intelligence Level on Mathematic Communication of Junior High School Students in Solving Hots Category Questions

Fitri Retnaning Wulandari[1], Yusuf Fuad[2], Rooselyna Ekawati[3]
[1,2,3] *Universitas Negeri Surabaya*
fitri.18015@mhs.unesa.ac.id, yusuffuad@unesa.ac.id, rooselynaekawati@unesa.ac.id

Abstract

The quality of education in Indonesia is still not good when seen from the ranking results released by PISA (Program for International Students Assessment) where the indicators used by PISA to assess are reading, math and science skills. The assessment of mathematical ability in the PISA survey uses HOTS questions, and based on Bloom's Taksono.mi to solve the HOTS category questions a higher cognitive level is needed than the LOTS questions, the cognitive level needed is at levels C4-C6, which means that HOTS questions will be able to completed by students with high cognitive levels which are generally known as students who have a high IQ. This study uses a mixed method sequential explanatory, where the researcher collects and analyzes quantitative data, then proceeds to collect and analyze qualitative data. The results of quantitative research prove that IQ levels affect students' mathematical communication skills in solving HOTS questions, and from qualitative research, it is known that the main obstacles experienced by students in performing mathematical communication are, students do not understand the material and are less able to perform mathematical operations calculations, Students who understand the material will be able to understand the problem points of the questions that they will solve, and know how to solve them, which formula to use, how the sequence of work is done, and perform calculations correctly.

Keywords
influence; intelligence; communication

I. Introduction

Indonesia in basic education, among other ASEAN countries, is the country with the lowest quality of education along with the Philippines and Thailand, reflecting the results of the latest survey released by PISA (*Program for International Students Assessment*) on December 3, 2019, Indonesia is ranked 72 for reading and math scores, and 70 on science scores, out of 78 participating countries. PISA in assessing the quality of a country's education uses three indicators of student abilities, namely math skills, science skills and reading skills.

Figure 1 below, depicts Indonesia's PISA scores from 2012 to 2018, showing a downward trend in scores across all abilities observed by PISA. It can be seen that reading ability experienced the most significant decrease in value, which was down by 26 points, while math and science skills experienced the same decrease, namely 7 points.

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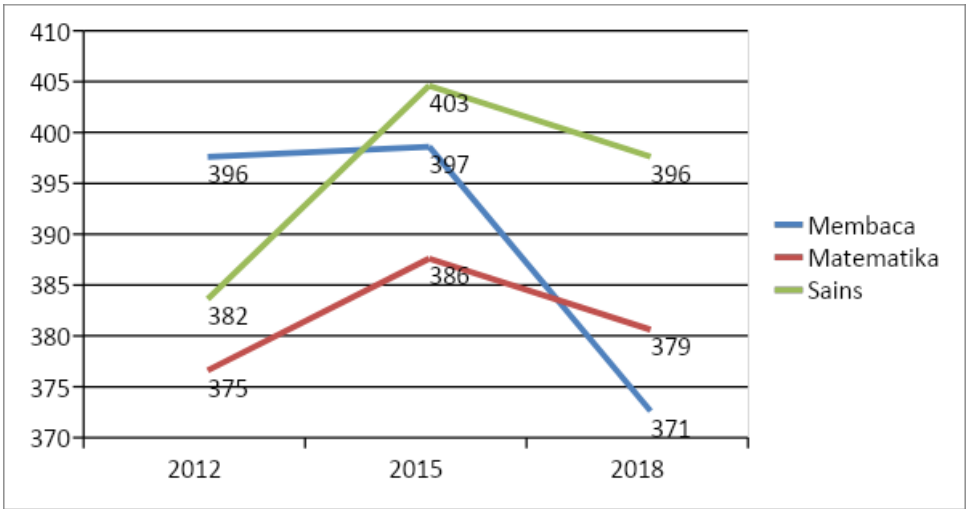


Source: Data Processing Results

Figure 1. *PISA Score Graph*

As quoted from (https://tirto.id/alasan-why-kualitas-pisa-siswa-indonesia-bad-enfy) which was published on December 12, 2019, the reasons why Indonesia have never gotten a high score in the PISA survey, because the questions used in the PISA survey use HOTS category questions, while our curriculum is still focused on low and medium order thinking skills, so that students have difficulty in working on the questions given to them. during the PISA survey. The low score of mathematics ability in PISA, may also be influenced by perceptions about mathematics itself, such as the results of research conducted by Restanti (2017), research conducted at SMP Negeri 5 Kendari with an object of 30 students, found that 65% of students have the perception that mathematics is a relatively difficult subject compared to other subjects and boring. In the development of the world of education, especially after the rolling reforms, new phenomena have arisen in educational institutions, which are schools that use the term Integrated Islamic Schools (Titik, 2010: 42). The school is essentially aimed at helping parents teach good habits and add good character, also given education for life in society that is difficult given at home. Thus, education in schools is actually part of education in the family, which is also a continuation of education in the family (Daulay in Ayuningsih, W. et al. 2020).

The PISA survey uses HOTS category questions, the term high order thinking skills (HOTS) is the product of thought and was first coined by an American educational psychologist, Benjamin Samuel Bloom, who was later known as taksono.mi Bloom. The composition of Bloom's Taksono.mi in the form of students' ability levels in understanding the material and solving problems is as follows: (1) Remembering, at this level students are expected to be able to recognize and remember the material provided, (2) Understanding, at this level students are expected to be able to interpreting, giving examples, summarizing, drawing inferences, comparing and explaining, (3) Applying, at this level the goal is students are able to apply concepts, principles and procedures to solve problems, (4) Analyzing, at this level of ability students are expected to be able to describe, organize , dividing existing concepts and looking for relationships between parts, (5) Evaluating, students are expected to be able to examine and criticize and combine various parts of existing concepts into a unified whole, and (6) Creating, students are expected to be able to formulate, plan and Execute thought-out ideas into real works.

Based on Bloom's taksono.mi, in solving HOTS type questions students are required to master the ability to apply, analyze, combine and assess together, because solving HOTS questions requires the ability to use logic and *analytical thinking* compared to solving *low*

order thinking skills. When viewed from the point of view of the abilities needed by students to be able to solve HOTS type questions, students who are classified as intelligent can solve HOTS questions, and in general intelligent students are students who have a high IQ.

Students who study mathematics in addition to being able to understand the topics being taught are also required to be able to communicate them to other people, for example to teachers or to other students, so that their ideas can be understood and accepted. According to Wahyumiarti (2015) by learning mathematics students will be able to explain to others, namely to fellow students, or teachers about the ideas proposed and be able to explain clearly the situation about a problem.

So students in learning mathematics are expected to be able to communicate mathematically. Mathematical communication is a means used by students to express or present the results of thoughts or ideas, strategies and solving mathematical problems both verbally and in writing. Communication is crucial in mathematics and mathematics education. Clark (2005) states that "*Math is communication. You have to be able to communicate the concepts. You have to be able to communicate your thinking. Numbers are no.t eno.ugh for any good mathematician. You have to prove. You have to convince*".

The importance of mathematical communication has encouraged several experts in the field of mathematics education to conduct research on mathematical communication. Gusni (2006) states that: 7th graders have difficulty in transforming in visual form, especially to transform a three-dimensional shape (for example, a building composed of small blocks) into a two-dimensional form using boards, paper. and vice versa.

Qohar and Sumarmo (2013) in their research involving 15 teachers from several junior high schools in Yogyakarta stated that many of the 7, 8 and 9 grade students still find it difficult to convey or express opinions, ideas and mathematical ideas that are in their minds, in verbal or written form, this is an indicator that the students are still not good at communication skills. This is presumably because the students are still afraid and not used to expressing their ideas and ideas to others, either orally or in writing.

Mathematical communication skills describe the ability of students to understand and convey to others about how and the results of solving various forms of mathematical problems, one form of mathematical problems is HOTS category questions. Sulastri and Prabawati (2019) examined the mathematical communication skills of grade 9 students in answering math problems in the *high order thinking*, and the results are shown as follows, 3.57% of students have high communication skills. by 7.14% medium ability and 89.29% low mathematical communication ability.

In addition, Ramadhan and Mulyono. (2019) examines the relationship between students' mathematical communication skills in solving math problems based on intelligence levels, this study involved 10th grade students, and the results found that students who had an IQ above the average and an average IQ, had good mathematical communication skills. relatively the same that is relatively high, while students who have a low IQ mathematical communication looks relatively low too, which means that the IQ level of students affect their mathematical communication skills.

In solving HOTS category questions, students are also required to have critical thinking skills, so that students can understand the subject matter correctly, through analyzing, interpreting and evaluating *case* being faced and then being able to determine how to solve the strategy. This research will combine critical thinking indicators namely FRISCO into students' mathematical communication skills, so that a new indicator of the results of the matrix between FRISCO and writing skills will appear. This matrix is prepared on the basis that mathematical communication skills based on critical thinking skills are more suitable for research objects with HOTS category questions.

II. Review of Literature

2.1 Mathematical Communication

According to Prayitno. et al. (2013) mathematical communication is a way for students to express and interpret mathematical ideas orally or in writing, either in the form of pictures, tables, diagrams, formulas, or demonstrations. Another definition of mathematical communication according to Rianti (2018) is the process of delivering mathematical information from one person to another through oral or written which aims to clarify the problem given. From the above definition, an understanding of the definition of mathematical communication can be drawn, namely a process of delivering mathematical information both orally and in writing in the form of pictures, tables, diagrams, formulas or demonstrations, from a mathematical case, with the aim of being understood by the recipient of the information.

2.2 Mathematical Communication Skills

Baroody (1993) explains that " Mathematical communication skills really need to be developed in learning. Because in learning, students are required to have mathematical communication skills in communicating mathematical ideas with five aspects, namely representing, listening, reading, discussing and writing".

2.3 Intelligence Quotient

One factors that influence students' mathematics learning ability is *Intelligence Quotient* where this ability has an influence on students' mindsets, how to process information and define each problem. Intelligence is a psychological factor that is very important in the student learning process because these factors determine the quality of learning students where the higher the intelligence of an individual, the greater the opportunity for that individual to achieve success in learning but also vice versa, the lower a person's intelligence, the smaller the chance of achieving success in learning.The term intelligence was introduced for the first time by someone named *Francis Galton* who explained that intelligence is a cognitive ability to adapt effectively to a complex and ever-changing environment and is influenced by genetic factors, (Marsuki, 2014).David

2.4 Math Problem Type HOTS

HOTS is an abbreviation of *Higher Order Thinking Skill* which means a higher order thinking ability. One of Benjamin Bloom's books published in 1956 on educational taxonomy, namely educational goals taxonomi which essentially explains that there are three main aspects of education, namely cognitive/knowledge, affective/emotional and attitude, and psychomotor/physical activity. (Hamid, 2019).

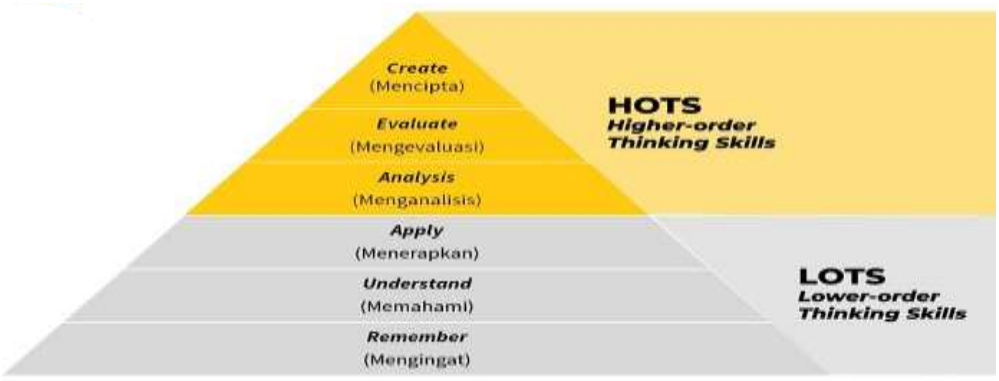


Figure 2. *Bloom*

's Taksono.mi The Taksono.mi created by Bloom from the lowest to the highest level are as follows: (1) Remembering, at this level students are expected to be able to recognize and remember the material given, (2) Understanding, at this level students are expected to be able to interpret, give examples, summarize, draw inferences, compare and explain, (3) Apply, at this level the goal is that students are able to apply concepts, principles and procedures to solve problems, (4) Analyze, at this level students are expected to be able to describe, organize, divide existing concepts and look for relationships between parts, (5) evaluate, students are given able to examine and criticize as well as combine various parts of existing concepts into a unified whole, and (6) To make, students are expected to be able to formulate, plan and execute thought-out ideas into real works.

2.5 Relationship between Intelligence Level and Mathematical Ability

Logically, students' intelligence level will affect their mathematical communication skills, because students' intelligence level will affect the thinking process in understanding a problem, seeking problem solving from the problems encountered and conveying it to others either in writing or orally.

2.6 Conceptual Framework and Hypothesis

There is still an *empirical gap* in research on the influence of intelligence level with mathematical communication skills, as the results of research by Ramadhan and Mulyono. (2019) which states that the level of intelligence affects mathematical communication skills, where students with high IQs show better mathematical communication skills than average and low IQ students, especially in terms of verbal communication. And research by Wahyumiarti, et al (2015) that students with high IQ levels have better and more complete mathematical communication skills than students with medium and low IQ levels.

III. Research Method

This research is a *mixed method research.* research that uses quantitative and qualitative methods simultaneously, so that more complete information will be obtained. According to Sugiono. (2011) a combination research method (*mixed method*) is a research method that combines or combines quantitative methods with qualitative methods to be used together in a study, so that more comprehensive, valid, reliable and objective data are obtained.

III. Result and Discussion

3.1 Finding Quantitative

The results of descriptive data processing obtained the following information:

Table 1. Description Variable Mathematical Communication Ability

Component	N	Minimum	Maximum	Mean	SD
Focus	87	1.00	5.00	2.65	0.84
Reason	87	1.00	5.00	2.34	1.11
Inference	87	1.00	5.00	2.26	1.00
Situation	87	1.00	4.00	2.41	0.82
Clarity	87	1.00	5.00	2.34	1.12
Overview	87	1.00	5.00	2.31	1.08

Mathematical communication ability	**87**	**1.00**	**4.50**	**2.38**	**0.89**

Source: Data Processing Results

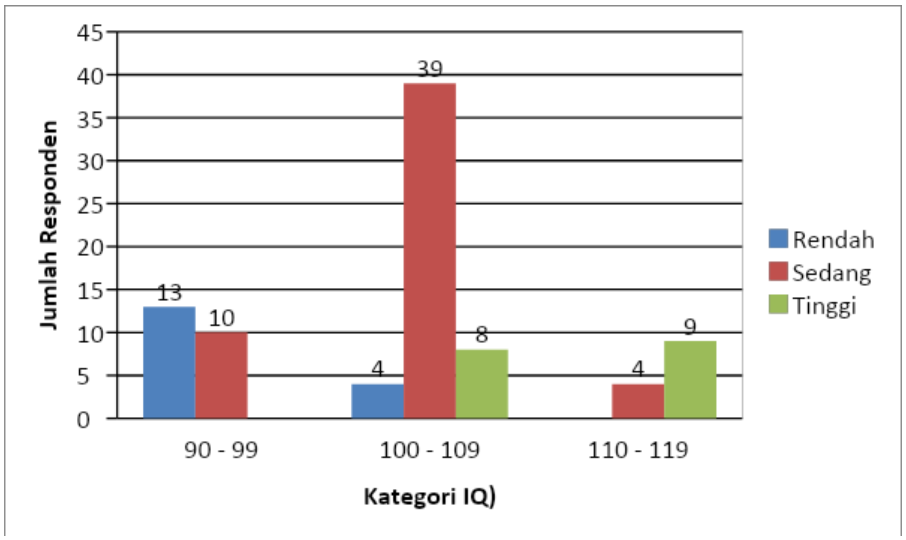
Based on the data in Table 3, it is known that from a total of 87 respondents in this study, the results of the ability score the lowest mathematical communication is 1 and the highest is 4.50. The average value of mathematical communication skills is 2.38 with a standard deviation of 0.89. average indicates that the diversity of mathematical

Table 2. The *tends* between

			scores			**.**
			deviation	**standard**	**value**	
be	**to**	small	ability	communication	the	respondents
		smaller	56.5%	43.5%	0.0%	100.0%
	100 – 109	total	4	39	8	51
		%	7.8%	76.5%	15.7%	100.0%
	110 – 119	total	0	4	9	13
		%	0.0%	30.8%	69.2%	100.0%
Total		number	17	53	17	87
		%	19.5%	60.9%	19.5%	100.0%

Source: Data Processing Results

Analysis *crosstab*, it can be it is known that most of the respondents who have an IQ in the range of 90 – 99, have Mathematical Communication Ability in the low category. Then respondents who have an IQ in the range of 100 – 109, have Mathematical Communication Ability in the medium category. And respondents who have an IQ in the range of 110 – 119, have Mathematical Communication Ability in the high category. More details can be seen through the following graph:



Source: Results of Data Processing

Figure 3. *Graph of IQ with Mathematical Communication Ability*

3.2 Hypothesis Test Results with Simple Linear Regression

Significance testing is used to test the hypothesis regarding the influence of the independent variable partially on the dependent variable. The significance test can be seen through the summary in the following table:

Table 3. Results of Regression Analysis

of Independent Variables	Coefficient	of T Statistics	Sig.
(Constant)	-8.808	-7.529	0.000
IQ	0.109	9,587	0.000

Structural Model:

Mathematical Communication Ability = -8.808 + 0.109 IQ

T statistic resulting from the influence of IQ on mathematical communication ability is 9.587 with a significance value of 0.000. The significance value is smaller than the *significant alpha* 5% or 0.05. This means that there is a significant effect of IQ on mathematical communication skills. The resulting coefficient is 0.109 (positive), which means that the higher the IQ, the higher the mathematical communication ability.

The coefficient of determination is used to determine the magnitude of the diversity of the independent variables in explaining the diversity of the dependent variable, or in other words to determine the magnitude of the contribution of the independent variable to the dependent variable. *The coefficient of determination* in the regression analysis is denoted by R^2.

Table 4. Coefficient of Determination

of Model	R	R Square	Adjusted R Square
1	0.721	0.520	0.514

The R-square value in the model is 0.520 or 52.0%. This can indicate that the variable of mathematical communication ability can be explained by the IQ variable by 52.0% or in other words the contribution of the IQ variable to the mathematical communication ability of 52.0%, while the remaining 48.0% is the contribution of other variables that do not discussed in this study.

3.3 Finding Qualitative

a. Mathematical Communication Ability, Comparison of Participants with High and Low Mathematical Communication Skills

Following is a description of written mathematical communication skills, in solving HOTS questions based on the framework of critical thinking skills in 4 participants, namely 2 participants with high mathematical communication skills (HT1 and VT2) and 2 participants with low mathematical communication skills (CR3 and ZR4), the results of the final data recap are as follows:

Table 4. Research Participants

Skills Mathematical Communication Ability based on Critical Thinking				
Components	**HT1**	**VT2**	**CR3**	**ZR4**
Able to express thoughts in writing about what the problem points are that must be resolved (Focus)	✓	writ e	X	Abl e
in written form about the correct way of solving problems (Reason)	X	X	Able	to
to write appropriate conclusions according to the context of the problem (Inference)	X	X	Able	iden tify
and write down important factors that need considered in solving the problem (Situation)	X	to	X	Abl e
explain his opinion in writing in a language that is understood by all students and teachers (Clarity)	X	to	X	Abl e
trace back the problem solving process that has been done in written language (	Over view	X	)	X

Both participants with high mathematical communication skills, based on qualitative data analysis have the same ability, which is able to meet all the assessment indicators prepared by the researcher, both are able to solve HOTS 1 and HOTS 2 questions with very good results. These two participants HTI and VT2 have IQs that are quite high compared to their friends, which are both have an IQ level of 111.

Likewise, two participants with low communication skills, based on qualitative data analysis also have the same ability, that is, both of them have not been able to answer correctly the HOTS questions given by the researchers, both HOTS 1 or HOTS 2 questions, they answered with the wrong answers. These two participants CR3 and ZR4 have relatively low IQ levels compared to their friends, namely CR3's IQ level is 95 and ZR4's IQ level is 92.

In indicator 1, namely being able to express thoughts in writing about what the problem points must be resolved (Focus). HT1 and VT2 were both able to fulfill this indicator very well, even though both of them did not write in the form of "Know" and "Asked" and "Answered" statements, but through the interview session they were very fluent in explaining the points of the problem raised. must be resolved.

While participants with low mathematical communication skills have differences in this indicator, CR3 is able to meet this indicator, but ZR4 is not. Both of them did not write "Know" and "Asked" but in the interview session CR3 was able to answer the problem points of each question number given, while ZR4 still answered the question incorrectly about this important point.

If viewed from the C4-Analyzing ability in Bloom's taxono.mi, indicator 1 is included in the ability to "Distinguish" which is being able to sort information into relevant and irrelevant parts. The ability to sort out information in solving HOTS questions is really

needed, because the characteristics of HOTS questions are usually in the form of story questions that are more complex than LOTS questions, so they are prone to errors in understanding the information given in the questions, and misunderstanding what the real problem points of the questions to be are and both of these participants have good information sorting skills.

In indicator 2, namely being able to write in writing about the appropriate problem-solving method (reason). These two participants who have high communication skills, are able to solve HOTS questions, both HOTS 1 and HOTS 2 well, both can write down the stages of problem solving well, through the use of the right formula, the right mathematical calculation operations as well, as well as making representations of flat shapes. clearly.

Meanwhile, the participants with low mathematical communication skills were unable to fulfill this indicator, they were wrong in using the formula, they were wrong in calculating mathematical operations, and had not been able to make the representation requested by the question.

This Reason ability is basically an understanding of the material that is the test material and the ability to calculate good mathematical operations, if someone is able to have a good understanding of the material that is the test material, it is likely that he will be able to fulfill this second indicator, because he will know what formula to use. match the problems he will be working on, and with the calculation skills he has, he will be able to calculate accurately, whether when adding, dividing or multiplying.

Reason ability based on Bloom's taxonomy, included in the C6-Creating ability, namely forming solutions or creating new things from activities combining various elements in the problem. C6 ability is included in the aspect of creative thinking and problem solving, which includes the ability to formulate, plan and produce.

The two high category participants were able to make good problem solving, if it was drawn on Bloom's taxonomy, then they had this C6 ability at a high level. They are able to formulate problems, plan how to solve problems, and implement these plans into appropriate problem solving.

In contrast to the low category participants, they have this C6 ability at a low level, so they are not able to formulate problems, plan how to solve problems, and implement the plan into solving the right problems, so they give the wrong answers in doing the work. about HOTS.

For example, in solving problem no. 1, after the main problem is determined, they must know how to step to find the total cost of tiles asked in the question, they must know the floor area, area of each tile, perform unit conversions in order to find the number of tiles needed, and then calculate the total cost of tiles All of these steps go through the process of planning and implementing a problem-solving plan.

Indicator 3 is able to write appropriate conclusions according to the context of the problem (Inference). On indicator no. In this case, both HT1 and VT2 participants were able to fulfill it well, they made conclusions with detailed and clear answers at the end of the answers to each question. While participants CR3 and ZR4 have not been able to meet this indicator, they are wrong in answering the questions given, so the conclusions given must also be wrong, not in accordance with the context of the problem.

Indicator no. 3 of this in Bloom's taxonomy, including the ability of C4 to be able to articulate, namely the ability to determine the pattern of relationships between parts of information, and make the right conclusions if someone can relate one information to another.

Meanwhile, in 2 participants with low mathematical communication skills, both of them still could not fulfill this indicator. these two participants have a lack of material

understanding about flat shapes, they don't know the formula needed to solve the problem, let alone the implementation of the formula on the HOTS question, they certainly don't understand, this makes them not understand what information is important in order to solve the problem. the questions correctly.

This 4th indicator is in Bloom's taxono.mi, then it is included in C4 organizational ability, namely the ability to identify information into an organized information structure. The fourth indicator will be fulfilled if students are able to organize the information contained in the questions, knowing what information if not taken into account can make them wrong in answering the questions.

The fifth indicator is being able to explain his opinion in writing in a language that is easily understood by all students and teachers. Participants with high mathematical communication skills HT1 and VT2 were able to fulfill this indicator, they were able to explain in writing about how to solve the questions given by the researcher in a clear and easy-to-understand manner. High category participants explained in a coherent manner the steps in solving the problem.

In contrast to participants with low mathematical communication skills CR3 and ZR4, they were not able to explain the steps of solving problems clearly, in answering questions they sometimes did not write down the formula, they immediately wrote down mathematical calculation operations in the form of multiplication or addition, and the results of calculations sometimes is also wrong, then the researchers have difficulty understanding the meaning they convey through the answers to these questions.

This difference in conditions is caused by the difference in the level of understanding of the participants to the material that is the material for the HOTS test, and the level of understanding of this material is influenced by the cognitive level of the participants.

The 6th indicator is being able to trace back the problem-solving process that has been done in written language (Overview). Participants with high and low mathematical communication skills from the interview were found that they both did an overview, or traced back the answers they had compiled. They re-check the answers they have made on all questions.

But the difference is, in the high category participants because they know how to solve the problem solving strategies for the questions given by the researcher, they can know that in the overview process something is wrong or not, while in the low category participants they do not know how to answer the questions correctly. question, then the overview process that they do does not have any impact on the quality of the answers they make.

This 6th indicator in Bloom's taxono.mi is in the ability of C5 to check, namely the ability to check and determine the wrong part of a process or result that has been stated. This C5-Checking ability must be accompanied by the ability to understand the object being examined, otherwise the inspection process will not be useful because it does not know that the process or result being examined is right or wrong. So here, if the object being checked is a math problem in the HOTS category, then the examiner is required to have critical thinking power and high-level abilities in Bloom's taxonomy, which are usually owned by high IQ people.

b. Mathematical Communication Ability Barriers

Barriers to mathematical communication make students less than optimal in working on the questions given by the researcher, so that on average students only achieve moderate scores in the HOTS test given. The obstacles faced by students in carrying out

mathematical communication obtained from observations of students' answer sheets when working on HOTS 1 questions and completed with interview results are as follows:

1. Students are not careful in doing calculations, doing division and multiplication
2. Students are wrong in doing unit conversion
3. Students do not answer all the questions given
4. Students do not understand the material, do not memorize the formula for flat shapes
4. Students know formulas but do not know how to apply them in the given HOTS questions
5. Students are less thorough in understanding the questions and data provided
6. Students are often confused by long narrated story questions
7. Students are lazy in working on questions, they only write random answers
8. . Students' representation skills are still low.
9. Students do not understand the meaning of the question
10. Students' perception that mathematics is a difficult and boring subject
11. For students who are not gifted with mathematics, even though efforts have been made, the ability is still not good compared to students who are gifted with mathematics
12. Students do not write the statement "It is known", "Asked" and "Answered" when working on math problems, so it is prone to errors in working on the questions.
13. Students feel nervous and afraid to explain verbally about how to solve the HOTS questions they have done, because they have never done it before and are afraid of being wrong in answering.

c. Strategies to Improve Mathematical Communication Skills

Strategies to improve mathematical communication skills in this study are strategies that from the students' point of view, which they think will be able to increase their interest in mathematics, increase understanding of the material being taught and they will be able to enjoy the process of learning the subject. mathematics, which is expected to improve mathematical communication skills, and from the students' point of view the strategies are as follows:

a. Maths lessons are taught in the morning
b. Math lessons are delivered through games, which have prizes
c. Mathematics lessons can sometimes be done outside the classroom through case demonstrations real
d. Oral tests can be done like quizzes, those who can answer correctly will be rewarded, for example, given a snack, chocolate or candy (HE-4)
e. The closeness between students and teachers will motivate students to study harder, because students don't want to disappoint the teacher. He feels close to him
f. Creative teacher in teaching, teacher must be able to teach in a fun way
g. Teacher gives demonstration with teaching aids about solving math problems
h. For students with low math skills, they will dare to ask if the teacher is close to him
i. Learning apart from being explained, is also equipped with animated videos, making it easier to understand
j. Learning mathematics outdoors

IV. Conclusion

According to the results of quantitative and qualitative data analysis, there are several research findings that resulted from the research, namely as follows:

1. Based on Bloom's taksono.mi, that to solve HOTS questions critical and creative thinking skills are needed, and this requires higher cognitive abilities compared to solving LOTS questions, this is in line with the results of this study, that IQ affects students' mathematical communication skills in solving HOTS questions, where students who Those who have a high IQ tend to have higher mathematical communication skills than students who have a lower IQ level.
2. Understanding of learning material, is the basis of mathematical communication skills (writing), from qualitative research it can be seen that if students have a good understanding of the material, students will have good mathematical communication skills as well, and vice versa.
3. The main obstacles for students to carry out mathematical communication in solving HOTS questions are:
   a. Lack of understanding of students about flat shape material
   b. Students have difficulty understanding story questions with long narratives
   c. Ability to count mathematical operations that are still not good
   d. Lack of understanding and ability to do unit conversions
   e. Students are in a hurry in solving problems, so that they are quickly completed
4. Strategies to improve mathematical communication skills, from the students' point of view are as follows:
   a. Teachers are the main key factor to improve students' mathematical communication skills, in teaching they are required to be creative to do a combination of indoor and outdoor learning, materials and demonstrations using teaching aids, using conventional learning media and animated videos that are easier for students to understand, as well as conducting oral tests that are packaged like games with prizes, such as chocolate snacks, ciki-ciki, a know stationery.
   b. Students with poor math skills need an approach, because they will be open to ask questions about things they don't understand, when they feel close to the subject.

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