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The Quality of Learning Tools Numeration Hots Literacy Made by Teachers of SMPN Medan

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Abstract:- This study aimed to analyze the quality of the HOTS LITERACY learning tools made by the teachers of SMPN Medan. The learning tools assessed were Lesson Plans (RPP), Teaching Materials, and Numerical Literacy HOTS of students' worksheets (LKPD) for Mathematics Lessons. This study used descriptive research where the research subjects were six teachers at SMPN Medan. The object is the HOTS Literacy Mathematical Numeracy learning tools made by the teachers of SMPN Medan. This study uses a validation observation sheet and the practicality of learning tools arranged based on the criteria for developing learning tools of HOTS Literacy in Mathematics Lessons. The results showed the quality of the HOTS Literacy Numeracy learning tools made by teachers of SMPN MEDAN was good in a grade where the RPP, Teaching Materials, and LKPD HOTS LITERACY Numeration were declared valid also the level of use was good. There is an increase in the effective use of HOTS Literacy learning tools for students of SMPN Medan. The ability of students to complete HOTS items in Numerical Literacy tends to the first decrease in the SPECIALS category, the second decrease in the ELEMENTARY category, the third increase in the COMPETENT category, and the fourth increase in the PROFICIENT category.

Keywords:- *Learning Tools, Literacy HOTS (Higher Order Thinking Skills), Numeration.*

I. INTRODUCTION

Setiawan (2014) argues that the results of learning mathematics are knowledge obtained from regular patterns of studying mathematics. Sholihin (2013) states that mathematics learning outcomes are abilities possessed by students after they receive their mathematics learning experiences. Based on the above, it concluded mathematics learning outcomes are the level of success or mastery of a student in mathematics lessons after receiving learning experiences or after taking the teaching and learning process which, seen is in the values obtained (in the form of numbers or letters) from the learning outcomes test.

In particular, the purpose of learning mathematics in junior high school is to solve problems related to mathematics by thinking critically, logically, and carefully and to take education to the next level. The ability to solve problems through critical, logical, and careful thinking in solving mathematical problems is called Higher Order Thinking Skills. This HOTS ability is needed because mathematics is a science related to abstract concepts that students will use in understanding, studying, reasoning, and applying these concepts in solving problems in everyday life. Thus, it ascertained High Order Thinking Skills (HOTS) is the ability to connect, manipulate, and change the knowledge and experience already possessed critically and creatively in determining decisions to solve problems in new situations.

HOTS is a thinking process at a higher cognitive level that includes problem-solving skills, creative thinking skills, critical thinking, argumentation skills, and decision-making abilities. Vui (Kurniati, 2014:62) states that HOTS will occur when someone relates new information with information already stored in memory and connect it or rearrange and develop the output to achieve a goal or find a solution to a difficult situation to solve.

HOTS and Literacy are the results of learning mathematics that intersect each other. HOTS developed through problem-solving activities that explore the ability to argue, compare, evaluate, make decisions and draw conclusions (Forster, 2004), and Literacy (called mathematical literacy) is a person's ability to formulate, use and interpret mathematics in various contexts (Setiawan, 2014:245). In this case, it is manifested in understanding and applying the basics of mathematics in everyday life as reasoning the results of solutions for making a decision. In PISA, mathematical literacy defines as: “Mathematical literacy is an indivudual’s capacity to formulate, employ, and interpret mathematics in a variety of contexts. It includes reasoning mathematically and using mathematical concepts, procedures, facts and tools to describe, explain and predict phenomena. It assists individuals to recognizes the role that mathematics plays in the world and to make the well-founded judgments and decisions needed by constructive, engaged and reflective citizens”. Mathematical literacy is an individual's ability to formulate, use and explain mathematics in various contexts, including mathematical reasoning and using mathematical concepts, procedures, facts, and tools to describe, explain and predict events. Mathematical literacy is what guides individuals to recognize the role of mathematics in life and make proper judgments and make constructive and reflective decisions.

The importance of mathematical literacy has not matched the quality of learning in Indonesia. It sees from the various types of international-scale tests that Indonesia participates in, one of which involves the Program for International Student Assessment (PISA) that measures the literacy, math, and science literacy skills of 15-year-old students or equivalent to the junior high school level. The results of the PISA show that Indonesian students' mathematical literacy skills are not yet optimal. Whereas mathematical literacy is in line with the content standards of mathematics subjects in the Indonesian curriculum, which means that the ability to be achieved in the content standards of mathematics learning objectives is mathematical literacy. The percentage score of Indonesian students' mathematical literacy skills at PISA 2009 in

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answering level five questions is very small when compared to other countries (Stacey, 2011).

There are several findings regarding this mathematical literacy ability. One of them is mathematics learning by Turmudi (2008) that says mathematics learning is conveyed by the teacher in an informative manner so the degree of attachment can also be said low. Students consider as subjects so they are less involved in finding the concepts of mathematics lessons that must be mastered. It results in the concepts given not imprinting on students' memories, so they are easy to forget and often confused in solving problems that are different from those exemplified by the teacher. Slettenhaar (2000) states mathematics learning does not involve students in active learning, less emphasis on student understanding, and students only accept teacher explanations. This learning weakness resulted in five student weaknesses: lack of good knowledge of prerequisite material, lack of ability to understand and recognize basic mathematical concepts (axioms, definitions, rules, theorems), lack of capability, and thoroughness in listening or confessing math problems related to mathematics, specific subjects, cannot notice back to an answer obtained and lack the ability to logical reasoning in solving math problems. These five things lead to the weakness of students' mathematical literacy and students' high-order thinking skills.

Learning mathematics aims to (a) understand and apply mathematical concepts or algorithms, (b) reason about the pattern of properties of mathematics, (c) solve mathematical problems correctly, and (d) communicate solutions with diagrams, tables, symbols, or media, etc. In learning mathematics, students are accustomed to gaining understanding through experience about the properties owned and not owned by a set of objects (abstraction). Students give the experience of using mathematics as a tool to understand or convey information, for example through equations, or tables in mathematical models that are simplifications of story questions or other mathematical description questions (Inayati, 2012). Students also give the experience of solving daily life problems that have mathematical concepts in them.

In teaching mathematics in the classroom, teachers need learning tools. According to Nazarudin (2007: 111), learning tools are everything or several preparations prepared by teachers both individually and in groups, in-class evaluation of learning can be carried out systematically and obtain results as expected. The learning tools in question consist of Effective Week Analysis, Annual Programs, Semester Programs, Syllabus, Learning Implementation Plans, Minimum Completeness Criteria, Teaching Materials, Student Worksheets (LKS-LPKD), and Learning Outcomes Assessment. The learning tools developed by the teacher and assessed in this study were the Lesson Plan (RPP), Teaching Materials, and Student Worksheet (LKPD).

Lickona (1992) says learning tool material says to be of quality if it meets the following criteria: validity, practicality, and effectiveness. So it can say that a tool is said to be of quality if the tool is valid, practical, and effective. Furthermore, it states that the validity aspect is related to two things, namely (1) whether the developed tool is based on a strong theoretical rationale, and (2) whether internal consistency is obtained related to the 2013 curriculum, the subject matter of Mathematics, Core Competencies, Basic Competencies and Indicators HOTS Literacy, and Mathematics Subject Matter Indicators.

The practical aspect is also related to two things, namely (1) whether the experts and practitioners state that the developed learning tools can apply, (2) actually in the field, the developed learning tools can apply with proper criteria.

While the criteria for the effectiveness of a model are related to four things, namely: (1) complete learning outcomes, (2) student and teacher activities that show good categories, (3) teacher's ability to manage good learning, and (4) positive responses from students.

Based on the explanation above, in this study, a learning tool says to be of high quality if the tool meets the aspects of validity, practicality, and effectiveness. The validity aspect based on the assessment of three expert validators state they are valid. While the practicality of a learning tool refers to the results of the readability test and trial. In addition, a learning tool in this study says to be effective if 75% of students complete the test questions and get a score above or equal to 40 for the characters carried out by students. Concerning this mathematics learning tool, the interesting questions formulated in this study are (1) how is the quality of the HOTS Literacy learning tool developed by the teacher and applied in teaching mathematics in junior high schools in Medan City and (2) how effective is the learning tool used in teaching mathematics? Numerical Literacy HOTS for Mathematics in the classroom.

II. METHOD

This study conducted in Medan city takes time from August to November 2021. The subjects were teachers and students of SMPN 2, 3, and 14 Medan. And the object of this study is the quality of the learning tools developed by the teacher. The quality indicators were assessed from the validity, practicality, and effectiveness of learning tools used in the classroom and tested in HOTS learning of Numerical Literacy for Mathematics.

This study uses a descriptive research method that describes the characteristics of the sample or the phenomenon of the object of study. So the main focus of this study method is to explain the object of the study. So that it answers what events or phenomena occur, this method focuses more on discussing why an event or phenomenon occurs, where the events and phenomena referred to here are the objects of this research, namely the validity, practicality, and effectiveness of the learning tools developed by the teacher. The research results, of course, describe the object of research in detail.

In this study, three objects of analysis which are indicators of the quality of learning tools, namely the validity, practicality, and effectiveness of learning tools (RPP, Teaching Materials, LKPD, and HOTS Literacy Tests) developed by teachers to be used in HOTS Literacy learning in the classroom. Instruments This study consists of 1) Instruments to measure the validity of learning tools including, (a) RPP validation sheet, (b) Teaching Material validation sheet, (c) LKS Validation Sheet, and (d) HOTS Literacy test

of validation sheet; 2) Instruments to measure the practicality of learning tools include, (a) a questionnaire on the practicality of learning tools according to the teacher and (b) a questionnaire on the practicality of learning tools according to students; and 3) Instruments to measure the effectiveness of learning tools include the Literacy HOTS test.

Learning tools are included in the legitimate category if the material contained in the learning tool is by state-of-the-art scientific knowledge and all components in the learning tool are connected consistently. Practicality is a quality criterion for learning tools in terms of the level of ease of teachers and students in using the developed learning tools. The practical aspects measured include clarity of content, the elegance of appearance, lighten of use, ease of language to understand, explication of information, conformity with curriculum, the correctness of subject matter content, usefulness for learning. In this study, the effectiveness of learning tools in terms of the learning objectives of HOTS Literacy, namely students' cognitive processes in the form of abilities: (1) understanding, (2) application, and (3) reasoning.

To analyze the object learning of this research analysis, namely the quality of learning tools (RPP, Teaching Materials, LKPD, and Numerical Literacy HOTS Tests) based on the criteria, namely (a) validity, (b) practicality, and (c) effectiveness of the learning tools developed by the teacher in the following:

- To analyze the validity of the learning tools that include RPP validation, Teaching Material validation, LKS validation, and HOTS Literacy test validation, the average of the developed questionnaires with the average score criteria are 1: very invalid; 2: invalid; 3: quite valid; 4: valid; and 5: Very valid.
- To analyze the practicality of learning tools, which include a questionnaire on the practicality of learning tools (RPP, Teaching Materials, and LKPD) based on educational experts, the average of the questionnaires developed with the criteria for the average score is 1: very impractical; 2: impractical; 3: quite practical; 4: practical; and 5: Very practical.
- To analyze the effectiveness of learning tools using the HOTS Literacy ability test, the following assessment rubric is used.

SCORE	CRITERIA
0	• The question is not done or the paper is blank • The data is written incorrectly and is not used • Answer is not correct
1	• Data is written back but not used • There is a correct strategy but it is not applied to the questions • Unable to achieve correct results
2	• There is a strategy, it is done but the answer is wrong • The work is not good enough to reach an answer • Correct answer but no work
3	• The strategy is quite correct but there is a calculation error
4	• Correct strategy and correct calculation

Table 3: Criteria for scoring the HOTS LITERATURE test

III. ANALYSIS AND EVALUATION

A. Results

The results show the quality of learning tools made by SMPN Medan teachers state to be good and can uses in HOTS learning of Numerical Literacy for Mathematics Lessons. It bases on the data on the quality indicators of the HOTS Literacy Numerical Literacy learning tool, namely the validity, practicality, and effectiveness of learning tools.

a) Learning Tool Validity

The validity of learning tools (RPP, Teaching Materials, LKPD) is measured by internal consistency indicators related to the 2013 Curriculum, Mathematics subject matter, Core Competencies, Basic Competencies, and Literacy HOTS Indicators and Mathematics Subject Material Indicators.

Based on data from 3 mathematics education experts, the following results obtain:

- Level of validity in general

  In general, the validity of the RPP, Teaching Materials, and LKPD are declared valid and can uses in HOTS learning of Numerical Literacy with minor revisions.

- RPP Validity

  Based on the average score obtained, it states the lesson plans developed by the teacher are valid (validity criteria: 1: very invalid; 2: invalid; 3: quite valid; 4: valid; and 5: very valid) and can be used in HOTS learning Numerical Literais for Mathematics Lessons. By using the categorization of the level of validity of the lesson plans as below, it concludes that expert 1 gave a score of 60 (very valid); expert 2 gave a score of 57 (very valid), and expert 3 gave a score of 54 (valid).

- The validity of the Numerical Literacy HOTS items

In determining the content validity of the HOTS Literacy items, this study uses a validation categorization based on the scores given by three expert reviewers.

Based on the average score obtained, it states that the Numerical Literacy HOTS items developed by the teacher are valid (validity criteria: 1: very invalid; 2: invalid; 3: quite valid; 4: valid; and 5: very valid) and can use in learning Numerical Literacy HOTS for Mathematics Lessons. By using the categorization of the level of validity of the Numerical Literacy HOTS items as shown below, it concludes that expert 1 gave a score of 45 (valid); expert 2 gave a score of 51 (very valid), and expert 3 gave a score of 48 (valid).

- Validity of Teaching Materials

In determining the content validity of the HOTS Literacy items, this study uses a validation categorization based on the scores given by three expert reviewers.

Based on the average score obtained, it states that the Numerical Literacy HOTS items developed by the teacher are valid (validity criteria: 1: very invalid; 2: invalid; 3: quite valid; 4: valid; and 5: very valid) and can use in learning Numerical Literacy HOTS for Mathematics Lessons. By using the categorization of the level of validity of the Numerical Literacy HOTS items as shown below, it concludes that expert 1 gave a score of 45 (valid); expert 2 gave a score of 51 (very valid) and expert 3 gave a score of 48 (valid).

- LKPD Validity

Based on the average score obtained, it states that the Numerical Literacy HOTS items developed by the teacher are valid (validity criteria: 1: very invalid; 2: invalid; 3: quite valid; 4: valid; and 5: very valid) and can use in learning Numerical Literacy HOTS for Mathematics Lessons. By using the categorization of the level of validity of the Numerical Literacy HOTS items as shown below, it concludes that expert 1 gave a score of 45 (valid); expert 2 gave a score of 51 (very valid), and expert 3 gave a score of 48 (valid).

b) Practicality of Learning Tools

To assess and analyze the practicality of learning tools, an Expert Response Questionnaire on the Practicality of Learning Tools uses. Expert response questionnaire is to measure the practicality of the developed product. The use of expert response questionnaires was used to obtain data on expert responses to learning held using lesson plans, teaching materials, and LKPD.

Based on data from mathematics education experts, the following results obtain:

- General level of practicality

In general, the level of practicality of lesson plans, teaching materials, and LKPD state to be practical and can be used in HOTS learning of numeracy literacy with minor revisions according to the advice of experts.

- Practicality of RPP

In determining the level of practicality of the contents of the lesson plans, this study uses validation categorization based on scores given by three expert reviewers. Based on the average score obtained, it states that the Numerical Literacy HOTS RPP developed by the teacher is practical (practical criteria: 1: very impractical; 2: impractical; 3: quite practical; 4: practical; and 5: very practical) and can be used in learning Numerical Literacy HOTS for Mathematics Lessons. By using the categorization of the level of practicality of the Numerical Literacy HOTS items as shown below, it concludes that expert 1 gave a score of 113 (very practical); expert 2 gave a score of 107 (very practical) and expert 3 gave a score of 102 (practical).

- Practicality of Teaching Materials

In determining the level of practicality of the contents of the teaching materials, this study uses a practicality categorization based on scores given by three expert reviewers. Based on the average score obtained, it states that the TEACHING MATERIAL developed by the teacher is practical (practical criteria: 1: very impractical; 2: impractical; 3: quite practical; 4: practical; and 5: very practical) and can be used in learning Numerical Literacy HOTS for Mathematics Lessons. By using the practical level categorization of HOTS TEACHING MATERIALS in Numerical Literacy as below, it concludes that expert 1 gave a score of 76 (very practical); expert 2 gave a score of 70 (very practical), and expert 3 gave a score of 66 (practical).

- Practicality Level of LKPD

In determining the level of practicality of the contents of the teaching materials, this study uses a practicality categorization based on scores given by three expert reviewers. Based on the average score obtained, it states that the LKPD developed by the teacher is practical (practical criteria: 1: very impractical; 2: impractical; 3: quite practical; 4: practical; and 5: very practical) and can be used in HOTS learning Numerical Literacy for Mathematics Lessons. By using the categorization of the practicality level of the HOTS LKPD Numerical Literacy as below, it concludes that expert 1 gave a score of 114 (very practical); expert 2 gave a score of 105 (practical), and expert 3 gave a score of 102 (practical).

c) Effectiveness of the Implementation of the Use of Learning

In this study, the effectiveness of the use of HOTS Literacy learning tools in terms of the HOTS Literacy learning objectives, namely the ability of students' cognitive processes in the form of (1) understanding, (2) application, and (3) reasoning. The three aspects of cognitive processes measure by the scores and the results of the completion of the Numeral Literacy HOTS questions. In addition, it also analyzed the weaknesses of students' HOTS Numerical Literacy learning for Mathematics lessons by giving examples of student work.

Based on the data on the results of student work in completing the HOTS Numerical Literacy questions during classroom learning, the following data generates.

However, it also concludes several other things based on the diagram above and the summary table below, taking into account the cognitive processes of HOTS Numerical Literacy in terms of the ability to understand HOTS Numerical Literacy, it states that:

- for A PROFICIENT rank:
  - in week 1, there were 19 students for comprehension questions, 18 students for

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application questions, and only three students for reasoning questions.
- in week 2, there were nine students for comprehension questions, 11 students for application questions, and no students for reasoning questions.
- in week 3, there are 0 students for questions of understanding, 16 students for questions of application and reasoning.
- in week 4, there are 14 students for comprehension questions, one student for application questions, and 20 students for reasoning questions.

Based on the data above, it concludes that there has increased in the HOTS ability of Numerical Literacy since the start of learning in week 1 to week 4. The increase in the number of students at the PROFICIENT level occurred in the completion of comprehension questions (19, 9, 0, and 14); on the questions of reasoning (3, 14, 16, 20). Advanced students mean students can reason to solve complex and non-routine problems based on their mathematical concepts.

However, a decrease occurred in the completion of the application questions, namely 18, 11, 16, and 1 student, this happened because many students (11 students) were at the COMPETENT level when solving questions about the application. Proficient students are defined as students who can apply their mathematical knowledge in more diverse contexts.

- for COMPETENT rating:
  - in week 1, there is 1 student for understanding questions, 2 students for application questions, and 11 students for reasoning questions.
  - in week 2, there were no correct students for the comprehension questions, 4 students for the application questions, and there were 4 students for the reasoning questions.
  - in week 3, there are 10 students for questions of understanding, 2 students for questions of application and reasoning.
  - in week 4, there is one student for understanding questions, 11 students for application questions, and no students for reasoning questions.

Thus, it states that students in the COMPETENT category tend to go up and down based on the items, namely for questions of understanding (1, 0, 10, and 1); students tend to rise for the questions of application (2, 4, 2, 11); and students tend to go down to solve reasoning problems (11, 4, 2, 0). Proficient students define students who can apply their mathematical knowledge in more diverse contexts.

- For ELEMENTARY rating:
  - in week 1, there were no students for comprehension questions, no students for application questions, and five students for reasoning questions.
  - in week 2, there was 4 students for the application question, and there are 2 students for the reasoning question.
  - in week 3, there are 8 students for questions of understanding, 1 student for questions of application and reasoning.
  - in week 4, there are 5 students for understanding questions, 6 students for application questions, and no students are correct for reasoning questions.

Thus, it states that students in the ELEMENTARY category tend to go up and down based on the items, namely for questions of understanding (0, 1, 8, and 5); students tend to rise for the questions of application (0, 4, 1, 6); and students tend to fall for the reasoning questions (5, 2, 1, 0). ELEMENTARY rated students define as students who have basic math skills; basic computing in the form of direct equations, basic concepts related to powers and roots, scientific notation – standard forms, and quadratic equations, as well as solving simple routine math problems.

- For SPECIALS rating:
  - in week 1, there were no students for comprehension questions, no students for application questions, and 1 student for reasoning questions.
  - in week 2, there were no students who were correct for the comprehension questions, 1 student for the application questions, and there were no students for the reasoning questions.
  - in week 3, there are 2 students for questions of understanding, 1 student for questions of application and reasoning.
  - in week 4, there were no students for understanding questions, 2 students for application questions, and no students were correct for reasoning questions.

Thus, it states that students in the SPECIALS category tend to go up and down based on the items, namely for questions of understanding (0, 0, 2, and 0); students tend to rise for the questions of application (0, 1, 1, 2); and students tend to fall for the reasoning questions (1, 0, 1, 0). Students with special categories define as students who have limited knowledge of Mathematics. Students demonstrate partial mastery of concepts and limited computational skills.

B. Discussions

The results showed that the quality of learning tools made by SMPN Medan teachers was stated to be at a proper level and can use in HOTS learning of Numerical Literacy for Mathematics Lessons. It bases on the data on the quality indicators of the HOTS Literacy Numerical Literacy learning tool, namely the validity, practicality, and effectiveness of learning tools.

a) Learning Tool Validity

The results of this study indicate that the HOTS Numerical Literacy learning tool developed and compiled by SMPN Medan teachers is valid and can use to teach HOTS Numerical Literacy from Mathematics lessons in the classroom. It indicates by the approval of 3 validators, namely expert lecturers that agree to state that the Numeral Literacy HOTS learning tool is declared valid. For the validation of the RPP (including the test items for the HOTS Numerical Literacy assessment instrument), the Teaching Materials, and

the LKPD were each declared to be in a proper category of validity.

It means that the valid criteria for the RPP HOTS Numerical Literacy in terms of (1) the formulation of learning objectives, (2) the content of the subject matter, including the HOTS Numerical Literacy assessment test items, (3) aspects of language and (4) time, have met the validity requirements. Valid criteria for teaching materials are seen from (1) the structure of teaching materials, (2) the organization of writing teaching materials, and (3) the language has met and can declare as valid. The validity criteria for the LKPD are (1) the content presented, (2) the language, it declares to fulfill and the validity is good.

However, the aspect of formulating learning objectives related to indicators is the main factor that must be improved. It means that aspects of the cognitive process of HOTS Numerical Literacy (understanding, application, and reasoning) must always be the focus of the teacher's attention writing in RPP, Teaching Materials, and LKPD. Learning tools and their assessments must focus on sequential steps that lead to learning understanding, application, and reasoning of the Numerical Literacy HOTS material for Mathematics Lesson material. For this reason, operational verbs for every aspect of the Numerical Literacy HOTS cognitive process recommends to always use in developing indicators, learning objectives, and in compiling the Numerical Literacy HOTS test items.

b) Level of Practicality of Learning Tools

The results of this study indicate that the HOTS Numerical Literacy learning tool developed by SMPN Medan teachers is practical and uses in teaching Mathematics subject matter which orient to the cognitive process of HOTS Numerical Literacy. It indicates by the statements of 3 validators, namely expert lecturers who agree to state that the Numeral Literacy HOTS learning tool states to be practical for use in learning.

It means that the practical criteria in terms of (1) the formulation of learning objectives, (2) the content of the subject matter-oriented to HOTS Numerical Literacy, (3) the language aspect, and (4) time, have fulfilled the validity requirements. However, the aspect of formulating learning objectives related to indicators is the main factor that must improve, which means that aspects of the cognitive process of HOTS Numerical Literacy (understanding, application, and reasoning) must always be the focus of the teacher's attention to be written in RPP, Teaching Materials, and LKPD. Learning tools and their assessments must focus on sequential steps aimed at learning cognitive processes (understanding, applying, and reasoning) for HOTS Numeral Literacy materials for Mathematics Lessons.

c) Effective Use of Learning Tools

The results show an increase in the numeracy literacy HOTS ability of the students of SMPN Medan. Its view is from the ability of students to complete the Numeral Literacy HOTS questions contained in the LKPD. Based on the study, it states that there is a tendency (1) the number of students in the SPECIALS category tends to decrease (none), (2) the number of students in the ELEMENTARY category tends to decrease, (2) the number of COMPETENT student's increases, and (3) the number of PROFICIENT students also increases. It happens after the HOTS Numeracy Literacy learning in Mathematics at SMPN Medan was carried out for four consecutive weeks.

The study shows an increase in the HOTS ability of Numerical Literacy since the start of learning in week 1 to week 4. The increase in the number of students at the COMPETENT level occurs in solving comprehension questions, in reasoning questions. The proficient of students is those who can reason to solve complex and non-routine problems based on their mathematical concepts. For the category of students at the COMPETENT level, it tends to increase, which is reviewed based on the item, namely to solve understanding questions, students tend to go up to solve application questions, and COMPETENT students tend to go down to solve reasoning questions. Proficient students define as students who can apply their mathematical knowledge in more diverse contexts. For students in the ELEMENTARY category, it tends to go up and down based on the items, namely for questions of understanding students tend to go up for questions of application, and students tend to go down for questions of reasoning. ELEMENTARY-rated students define students who have basic math skills; basic computing in the form of direct equations, basic concepts related to powers and roots, scientific notation – standard forms, and quadratic equations, as well as solving simple routine math problems. For students in the SPECIALS category, it tends to go down based on the items namely for questions of understanding students tend to go up for questions of application, and students tend to go down for questions of reasoning. It means that there is a tendency that there are no special categories of students in the HOTS of Numerical Literacy. Special category students are students who have limited knowledge of Mathematics. Students demonstrate partial mastery of concepts and limited computational skills.

Based on the data on student work in completing the LKPD HOTS Numerical Literacy questions, it shows that some students experienced difficulties and errors in solving each of these items.

IV. CONCLUSION

The results show that the quality of learning tools made by SMPN Medan teachers declare good and use in HOTS learning of Numerical Literacy for Mathematics Lessons. This statement bases on the indicators of the HOTS Numerical Literacy learning tools, namely the validity, practicality, and effectiveness of learning tools. The validity of the Numerical Literacy HOTS learning tool developed and compiled by Medan Middle School teachers (RPP, Teaching Materials, and LKPD) declare valid and practical and can use to teach Numerical Literacy HOTS from Mathematics lessons in the classroom.

The results show an increase in the numeracy literacy HOTS ability of the students of SMPN Medan. Its view is from the ability of students to complete the Numeral Literacy HOTS questions contained in the LKPD. The research data

shows that there is a tendency (1) the number of students in the SPECIALS category tends to decrease (none), (2) the number of students in the ELEMENTARY category tends to decrease, (2) the number of COMPETENT student's increases, and (3) the number of PROFICIENT students also increases.

The results of this study indicate that the learning of HOTS in Numerical Literacy for Mathematics lessons must carry out properly and correctly. The main focus of learning aims at the cognitive processes of HOTS Numerical Literacy, namely the ability to understand (able to understand facts, procedures, and mathematical tools), application (able to apply mathematical concepts in real situations that are routine), and reasoning (able to reason with mathematical concepts to solve complex problems non-routine). Learning HOTS Literacy of numeracy must use quality learning tools in the form of lesson plans (including assessment assessments), teaching materials, and LKPD. Teachers expect to help, motivate, and educate students to learn, discuss, think, and reason to improve HOTS Numerical Literacy skills from the Special, Elementary, Competent, and Proficient levels.

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