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Teachers in their perceptions and influences on LINU, positive or negative?

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ABSTRACT Changes and improvements for the progress of the current education sector are by encouraging the enthusiasm of teachers to continue to innovate and be creative. The current curriculum forces students to be more patient and painstaking when facing math problems that take longer to read and count in one race. The context is none other than literacy and numeracy. The purpose of this study was to find out how the perceptions and influences of teachers who teach at the senior high school (SMA) and vocational high school (SMK) levels as well as those who attend Madrasah Aliyah (MA) in mathematics on numeracy literacy. Survey research with a qualitative descriptive type is this type of research. The research flow, how the procedure, analysis, and techniques are discussed in detail in this article. The results showed that the teacher's response and influence showed a positive interpretation

1. INTRODUCTION

Changes and improvements for the progress of the current education sector are by encouraging the enthusiasm of teachers to continue to innovate and be creative. The current curriculum forces students to be more patient and painstaking when facing math problems that take longer to read and count in one race (Gamage, 2019; Puspitayani et al, 2020; Vanden Eng et al, 2015). The context is none other than because of si-LINU (literacy and numeracy). LINU is always intensified (Kerneža, 2016; Susilo et al, 2020), demonstrated by teachers in the learning process which must be continuously trained so that students can master it (Meliyanti et al, 2021). In view of the fact that the Organization for Economic Co-operation and Development (OECD) has issued the results of the quality of education from countries that are members of it through The Program for International Student Assessment (PISA) (Kelly, 2020; Yamaguchi et al, 2020). The results of the quality of education in Indonesia, especially on a world scale, show that from 2009 to 2018 it has not been able to provide maximum results.

The results that have not been maximized indicate that students' LINU abilities are also not optimal. By paying attention to the data above, as well as the facts in the field that show students' lack of interest in reading and counting, it is clearly shown that the quality of Indonesian education on the world stage has not been able to meet expectations for LINU abilities (Vidyastuti et al, 2018). LINU's ability, more specifically in the areas of literacy, reading, mathematics, and science, is the main thing that underlies this data. LINU's capabilities will be maximized not only by providing interesting teaching materials, designing fun learning, and project-based learning but also need to pay attention to how the evaluation is done . Achieved? Or not? Revision huh? Sometimes the teacher only focuses on creating and developing by focusing on learning activities, without any evaluation as an achievement of the results or even learning objectives. Therefore, to maximize LINU, teachers do not rely solely on students' understanding through the development of teaching materials or learning models but need to balance it with an assessment system.

Indonesia's current education assessment system often changes every year. This change is not due to no reason, but this is done as a form of government efforts to continue to improve the quality of education through the learning outcomes that students have achieved by continuing to pay attention to their cognitive aspects. In 2021 through the Minister of Education and Culture circular letter No. 1 of 2021 the National Assessment Examination will be abolished. The National Assessment (AN) is an assessment system that aims to measure cognitive learning outcomes, non-cognitive learning outcomes, and the quality of the learning environment in educational units (Handayanto et al, 2015; Jayanti&Jumroh, 2021). Then the assessment system used to measure non-cognitive learning outcomes is carried out through the student character survey data according to the Pancasila student profile. Furthermore, the assessment system for assessing the learning environment in schools is obtained from the results of the learning environment survey data. Furthermore, to measure learning outcomes in the cognitive aspects of students which include LINU (reading literacy and numeracy) through an assessment system that is manifested in the form of a Minimum Competency Assessment (AKM).

AKM is an assessment of the basic competencies needed by all students in order to be able to develop their own abilities (Colomé, 2019), and play an active role in so-

ciety in activities that have positive value (Ahmad et al, 2020; Martín-Caraballo, 2015). AKM is used to measure students' cognitive abilities which require students to be able to understand facts, procedures, and mathematical tools, be able to apply mathematical concepts in real situations that are routine, and be able to reason to solve non-routine problems (Hidayah et al, 2021; Mustagfiroh, 2020; Pusmenjar, 2020). Through the contents of AKM, namely BAPIL (Numbers, Statistics, Measurement, Geometry, and Algebra) (Mustagfiroh, 2020; Perdana, 2021; Puspitayani et al, 2020; Vanden Eng et al, 2015). In terms of context, AKM includes PUSINK (Personal, Cultural, Social, Scientific). Mathematics teachers are required to be able to present mathematics learning that can improve understanding, application (Sayekti, 2021; Vandervieren, 2020), and reasoning abilities related to personal, socio-cultural (Otero, 2021), and scientific contexts. This is in accordance with the goals of AKM in learning which contains three important components, namely curriculum (what is expected to be achieved), learning (how to achieve), and assessment (what has been achieved) (Hanson, 2021). As well as being able to produce information that triggers improvements in the quality of teaching and learning from the results of the Minimum Competency Assessment.

The research was carried out as an effort to explore how teachers' perceptions, especially mathematics teachers, have been carried out by (Hidayah et al, 2021; Novita et al, 2021), but in their research, it was limited to teachers' understanding of how AKM is, and how to make AKM questions, and how readiness for AKM is in 2021. The research carried out was (Ningrum, 2021) also limited to AKM which was only used as an evaluation tool for the education system without any detailed discussion of how the results of the evaluation tool were. Furthermore, the research conducted (Rohim et al, 2021) explained AKM with the results obtained to improve students' numeracy literacy skills. Of the six studies that have been carried out, in terms of the subjects that will be sampled, namely mathematics teachers who teach at the SMA/SMK/MA level, both private and public, who will later be given AKM evaluation tools that have been developed and tested for validity and reliability. So the difference between this study and previous research is that there has been no research on mathematics teacher's perceptions of AKM and its effect on learning in high school which has not been found by researchers and is a novelty in this study.

Based on the explanation above, this study aims to determine the perceptions of math teachers toward numeracy AKM in high school. Also, to find out the influence of mathematics teachers' perceptions of AKM numeracy in mathematics learning in high school.

2. METHOD

This research can be categorized as survey research because it uses a questionnaire as the main data. The method used in this research is through a questionnaire. This can be seen in Figure 1.

In Figure 1 it can be seen that in this study the population and sample were used, namely mathematics teachers who teach at the SMA/SMK/MA level, both private and public schools in Malang City, Sidoarjo City, and Pasuruan City. To make it easier to research, school identity is described by coding which can be seen in Table 1.

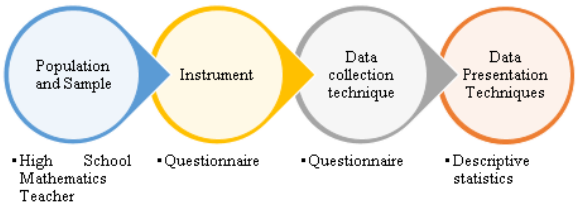

FIGURE 1. Description of Mathematics Teacher Perception Research Methods

Table 1 shows that the population used in this study totaled 100 teachers who taught mathematics at the SMA/SMK/MA level. The sample used in this study was 20 mathematics teachers using a purposive sampling technique (Cedar, 2021). The data collection technique used is in the form of a questionnaire that is distributed to students with Google Forms using a features survey. The questionnaire included students' opinions about the mathematics teacher's perception of numeracy literacy in learning and its influence on learning.

The instrument used to determine the perceptions and influence of mathematics teachers on literacy and numeracy in learning mathematics with a questionnaire has been validated and tested for reliability by three lecturers and three practitioners using the Q-Qochran test both from the AKM knowledge aspect and AKM aspects in learning. In considering the validity of the face, the consideration needed is the clarity of the teacher's knowledge of the AKM test questions related to language, expression, and the accuracy of images, symbols or illustrations, convenience. To validate the contents of the requested considerations regarding the suitability of the AKM questions used by teachers in learning mathematics, the suitability of aspects of AKM questions as learning evaluations, and the usefulness ofAKM as a literacy and numeracy learning process.

The test results on the instrument used to determine the mathematics teacher's perception of literacy and numeracy knowledge in learning mathematics and its effect have been validated with a score, of course, indicating that each validator in assessing the instrument is the same as the validity of the teacher's perception instrument. So

TABLE 1. The name of the school institution used as the research population and sample

No	Ownership Status	Code	Number of Mathematics Teachers
1	Public school	SK1	11
2	Public school	SK2	10
3	Private school	SK3	13
4	Public school	SK4	12
5	Private school	SK5	9
6	Private school	SK6	8
7	Private school	SK 7	7
8	Private school	SK 8	6
9	Public school	SK 9	9
10	Public school	SK 10	11
	Total Population		100

it can be concluded that the instrument for Mathematics teachers' perceptions of Numeral Literacy and its Effect on Learning in SMA is said to be valid in terms of advanced material and content material based on the results of the evaluator's evaluation analysis, it is also classified as very effective.

The next step is to try the instrument on 60 math teachers who already know and understand AKM both in terms of literacy and numeracy content. The questionnaire is in the form of multiple choice with "yes" or no" answers with a total of 30 questions. The purpose of this questionnaire is to determine the reliability level of the instrument by exploring mathematics teachers' perceptions of numeracy literacy and its effect on learning in high school using Cronbach Alpa The results show a confidence score of zero point seven one four, in other words, the questionnaire instrument is reliable (reliable).

After knowing the validity and reliability level of the instrument, the next step is to test the instrument on 20 math teachers using a Likert scale. which are ranked according to the scoring instructions as alternative answers that have been prepared. This research was conducted by analyzing questionnaires obtained from respondents' responses which can be accessed from Google Forms using assessment guidelines.

3. RESULT AND DISCUSSION

3.1 Perceptions of Mathematic on Mathematics Teachers

Mathematics teachers' perceptions of AKM Numeracy in SMA are based on knowledge of AKM Numeracy on indicators, basic AKM, a form of AKM Numeracy, and utilization of AKM results with research subjects on 20 Mathematics teachers in three cities. Based on the results of the analysis, shows that the mathematics teacher's perception of AKM on the basic indicators of AKM shows an average result of 75.34%. On the AKM form indicator, the perception of mathematics teachers is at an average yield of 60.1%. The results show that the mathematics teacher's AKM form indicator regarding LINU AKM content with a percentage of 69.3% and cognitive level in AKM with a percentage of 32.2%. Meanwhile, on the indicator of using AKM, the perception of mathematics teachers shows an average result of 51.6%. With a percentage of 51.2% when viewed from the level of interpretation in Table 2, it shows quite positive results on the aspect of the mathematics teacher's knowledge of the use of numeracy AKM. However, the results of Table 3 regarding the perceptions of mathematics teachers towards the Numerical AKM in SMA shows an overall average of 67.58%, it can be concluded that at the level of positive interpretation

3.2 Influence and Perceptions of Mathematics Teachers on AKM LINU

Before Mathematics teacher's perception of AKM Numeracy on its effect on learning in SMA/SMK/MA. The intended learning is based on aspects of the learning process and learning evaluation with the subject of research on 20 mathematics teachers in three cities. The results of the analysis show that the influence of mathematics teachers' perceptions of AKM Numeracy on learning in high school on the learning process indicator shows an average result of 74.1%. This is in line with the research (Gamage, 2019) that it is necessary to familiarize numeracy literacy for AKM in curricular activities at school. The learning process indicator shows that learning mathematics refers to the cognitive level of AKM with a result of 75.7%. Meanwhile, learning mathematics refers to the context of AKM at a yield of 81.1%. In line with (Indefenso&Yazon, 2020; Saal et al, 2020) states that providing material and integrating learning with an ethnomathematics approach, and using interactive learning games. On the results of practice questions during learning that use the AKM Numerical type of questions at 65.5%.

The influence of the mathematics teacher's perception of the numeracy AKM on learning in high school on the learning evaluation indicator shows an average of 75.6%. This is in line with research (Ningrum, 2021; Tugtekin, 2020) which states that AKM is an educational system evaluation tool. In the evaluation aspect of learning mathematics at school when PTS/PAS had inserted questions with the AKM cognitive level, the results of 90.1% of mathematics teachers had applied them. In line with research (Dallacqua, 2020; Herlanti et al, 2019; Junianto, 2019; Novita et al, 2021) knowledge about the AKM instrument used to measure students' cognitive abilities. Meanwhile, in the learning evaluation when PTS/PAS had inserted questions with the AKM context, the results showed that 71.2% of mathematics teachers had applied them. Also, in the learning evaluation when PTS/PAS inserted questions with the AKM question type at 70.3%. Thus, the influence of the mathematics teacher's perception of the numeracy AKM in learning in SMA shows an overall average result of 77.2%. This shows when referring to the level of positive interpretation.

4. CONCLUSION

Based on the results of data analysis and discussion of the mathematics teacher's perception of the LINU Minimum Competency Assessment (AKM) in SMA/SMK/MA shows an average of 67.58% with a positive interpretation level. Also, the influence of mathematics teachers' perceptions of AKM LINU on learning in SMA/SMK/MA shows an overall average result of 75.6% with a positive level of interpretation. The results of this study indicate that mathematics teachers get more information that can provide knowledge and preparation for learning at school to support the quality of learning according to the objectives of the Numeracy Minimum Competency Assessment (AKM) at the SMA/SMK/MA level.

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