



MCA: It's Implementation Based on Teachers' Perspective

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ABSTRAK

Asesmen Kompetensi Minimum (AKM) merupakan salah satu instrumen Asesmen Nasional terbaru di Indonesia untuk kompetensi literasi dan numerasi siswa. Dalam implementasi kebijakan, guru merupakan ujung tombak dalam mempersiapkan siswa menghadapi AKM. Penelitian ini bertujuan menganalisis perspektif guru dalam menghadapi AKM. Fenomena ini dipelajari melalui penelitian kualitatif jenis fenomenologis. Pengumpulan data dilakukan melalui wawancara semi terstruktur. Partisipan penelitian ini adalah guru sekolah dasar kelas V. Sebanyak 11 peserta direkrut secara sukarela. Analisis data kualitatif dilakukan dengan menggunakan model Bodgan and Biklen, dengan langkah-langkah reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa kebingungan guru dalam mempersiapkan MCA disebabkan oleh pertama, pemahaman guru terhadap AKM masih kurang dan terkesan parsial. Kedua, kemampuan siswa menunjukkan ketidaksiapan dalam hal keterampilan dalam mengerjakan soal berbasis komputer. Ketiga, kondisi sarana dan prasarana di sekolah kurang memadai. Dapat disimpulkan bahwa dalam mempersiapkan pelaksanaan AKM, guru dihadapkan pada permasalahan yang berasal dari aspek guru, siswa serta sarana dan prasarana.

ABSTRACT

Minimum Competency Assessment (AKM) is one of Indonesia's newest National Assessment instruments for students' literacy and numeracy competencies. In policy implementation, the teacher is the spearhead in preparing students for AKM. This study aims to analyze the teacher's perspective in dealing with AKM. This phenomenon is studied through phenomenological-type qualitative research. Data collection was carried out through semi-structured interviews. The participants in this study were fifth-grade elementary school teachers. A total of 11 participants were recruited voluntarily. Qualitative data analysis was carried out using the Bodgan and Biklen model, with data reduction, data presentation, and conclusion. The study results show that teachers' confusion in preparing for MCA is caused by; first, teachers' understanding of AKM still needs to be improved and seems partial. Second, the ability of students to show unpreparedness in terms of skills in working on computer-based problems. Third, the condition of facilities and infrastructure in schools needs to be improved. In preparing for the implementation of AKM, teachers are faced with problems originating from aspects of teachers, students and facilities and infrastructure.

1. INTRODUCTION

An overview of student learning outcomes is important information for every country in order to prepare the younger generation to become a superior nation. This of course requires an instrument that can be a tool that can provide valid information regarding the thing to be measured. One of the well-known learning outcomes instruments is the Program for International Student Assessment (PISA) which was developed since 1997 which is implemented every three years to measure participants' literacy, numeracy and science abilities (Hidayah et al., 2021; Jiang et al., 2018). PISA is participated by several OECD and non-OECD countries, one of which is Indonesia. The latest PISA results show that in Indonesia the literacy, numeracy and science abilities of students have not increased significantly. As many as 600,000 world students took the test from 79 countries, Indonesia was ranked 72nd (Argina et al., 2017; Nugrahanto & Zuchdi, 2019). Not only that, the average score obtained by Indonesian students in 2018 showed almost the same results shown in 2000. This is of course a concern that the literacy level of Indonesian students is still relatively low. Apart from PISA, large-scale instruments have also been

developed by several major countries to measure students' abilities in their respective countries, such as the United States, Australia, Japan, Korea and also Indonesia (Beaton & Zwick, 1992; Huang et al., 2019).

The standardized instrument developed by Indonesia is the National Examination (UN). The scoring system used was the National Examination, where the test scores became one of the determinants of student graduation at each level so that cheating occurred in the process (Kurniawati & Sundawa, 2019; Suliyanah. et al., 2022). However, the national exam became a polemic and received opposition from various educational practitioners. This is because the implementation of the national exam experienced various problems in its implementation. In addition, the negative impact felt by students in facing the national exam is anxiety about the exam results which will be one of the determinants of their graduation (Anggarawati & Hakim, 2018; Sinambela et al., 2020). Various problems were encountered in the National Examination so that this policy was reviewed and evaluated and then replaced in 2020 to become a National Assessment.

The National Assessment is one of the independent learning programs launched by the ministry of education and culture to replace the National Examination. The National Assessment aims to comprehensively capture the quality of education, the process and learning outcomes of students at each primary and secondary education unit nationally (Handayani et al., 2021; Perdana, 2021). The National Assessment consists of three parts, namely 1) Learning Environmental Survey; 2) Character Surveys; 3) Minimum Competency Assessment (MCA) (Hussain et al., 2018; Widiyanti & Hidayati, 2021). Thus, the National Assessment functions as an assessment for learning for schools, teachers and students themselves. Assessment for learning provides a basis for direct feedback to find out weaknesses and strengths in learning. In the end, the MCA will provide feedback on program improvements that support the improvement of student competence.

Minimum Competency Assessment (MCA) is the determination of minimum competencies in achieving educational goals, in which the essence of these competencies is able to help students develop their capacities and make positive contributions to society (Coates & Wilson-Sadberry, 1994; Purnomo et al., 2022). MCA itself aims to support 21st century learning which includes 4C skills, namely critical thinking, communication, collaboration and creativity. There are two fundamental competencies that are measured at MCA, namely reading literacy and numerical literacy competence (numeracy) at every level of education (Andiani et al., 2020; Suri, 2020). These competencies are expected to be a solution to improve students' literacy and numeracy skills. It is because these two literacy and numeracy competencies include logical-mathematical thinking skills, reasoning skills using learned concepts and knowledge as well as skills in sorting and managing information (Dyah Worowirastrri Ekowati et al., 2019; Purwati et al., 2021). In addition, through literacy and numeracy-based assessments, it is believed to be able to measure students' cognitive abilities in a comprehensive and sustainable manner (Novita, Mellyzar, et al., 2021; Saß et al., 2017).

Literacy and numeracy are the foundations that students must have before mastering other types of literacy (Ross & Joseph, 2019; Shara et al., 2020). Literacy is a basic skill that must be possessed related to understanding printed information such as writing, pictures and symbols, understanding spoken language and also understanding phonology (Napoli, Amy R., Purpura, 2018; Purpura et al., 2011). Meanwhile, numeracy is a person's ability to formulate, interpret and apply mathematical contexts in everyday life using concepts, procedures, and facts that are described based on the phenomena that occur (D. W. Ekowati et al., 2019; Hornburg, C. B., Schmitt, S. A., & Purpura, 2018). In terms of MCA, literacy and numeracy are presented in a personal, socio-cultural and scientific context. Content and cognitive level in literacy and numeracy MCA questions whose level is at the Higher Order Thinking Skill level.

As the newest form of national assessment, the government provides independent training to teachers in theoretically understanding MCA in the form of online training (Herman et al., 2022; Yamtinah et al., 2022). So it is clear that the logical consequence of implementing MCA is that there is good readiness by teachers and supported by the availability of adequate facilities and infrastructure. Apart from teachers, the government also provides websites for students to practice working on literacy and numeracy questions. However, the facts on the ground show that not all teachers can have the same motivation to attend training independently. Limited facilities and infrastructure also have an impact on students to access practice questions on the pages that have been provided.

One of the levels with the most number of educational units in Indonesia compared to other levels is the Elementary School level. Of course this is one of the challenges in implementing this latest policy of National Assessment. Even though socialization has been carried out online, the facts in the field are that there are still many teachers who lack information regarding the implementation of the National Assessment. The difference with the previous assessment model was felt by the teacher as a result of socialization carried out online and based on independent learning. It is difficult for teachers who are in areas with minimal internet network stability to obtain information regarding this National Assessment.

In addition to problems with facilities and infrastructure, teachers' technological literacy skills are also not evenly distributed (Narasati et al., 2021; Novita, Mellyzar., et al., 2021). This causes teachers not to receive comprehensive information regarding the National Assessment.

Several experts have conducted research related to minimum competency assessment (Sari et al., 2020; Novita, Mellyzar, & Herizal, 2021; Mustofa, 2020; Nur, 2020). Previous study conducted a survey of the perceptions of high school teachers in Tebing Tinggi City regarding the implementation of the National Assessment policy (Sari et al., 2020). Similar research was also carried out by other researcher who conducted a survey of the knowledge and perspectives of prospective teachers in the Mathematics Education, Physics Education and Chemistry Education Studies Program, Malikussaleh University for the 2020/2020 academic year on the implementation of the National Assessment (Novita, Mellyzar, et al., 2021). Furthermore, a literature study conducted by previous study examines and analyzes the implementation of the minimum competency assessment policy and relates it to theories of policy implementation (Aisah, H., Zaqiah, Q., & Supiana, 2021). Previous study conducted research related to the numeracy competence of SMK students in terms of gender and various difficulties (Mustofa, 2020).

Based on these studies, there are differences that are novelty in this article. This article seeks to reveal the teacher's perspective on the factors that cause the turmoil felt by teachers and this research was carried out at the elementary school level, where not too many researchers have studied MCA at this level. Based on the description above, the general problem is the readiness of teachers in preparing schools and students to face the National Assessment. Teachers are required to be able to prepare students to master digital literacy and recognize MCA problem solving. the lack of information received by the teacher causes confusion in preparing themselves and students. This study aims to describe and analyze the causes of teacher confusion in implementing MCA.

2. METHOD

This research is a qualitative research type of phenomenology, in which this method is considered very relevant in uncovering the phenomenon of confusion that hit teachers in implementing the Minimum Competency Assessment based on their experience in preparing students to face the national assessment. Qualitative research involves studied concepts and contexts as well as a collection of empirical sources to describe phenomena experienced by individuals (Alagan et al., 2020; Aldegether, 2020; Herman, Purba et al., 2020; Renz et al., 2018). Specifically, phenomenology is a qualitative approach that aims to discover the essence of one's experience of a particular phenomenon (Creswell, JW; Poth, 2017). The findings disclosed in this study are intended to describe what factors cause teachers' confusion in dealing with the Minimum Competency Assessment.

The sampling technique in this study was purposive sampling. Purposive sampling is used to examine information in depth to informants so that they can reveal interesting symptoms of the facts that occur. In addition, purposive sampling was chosen because through this technique the researchers recruited informants based on criteria so that information could be obtained accurately and in depth. The criteria for the data source are elementary school teachers who teach class V (homeroom teacher) in Soppeng Regency and are considered capable of providing information regarding the factors that influence the causes of teacher confusion in implementing MCA. The Class V teachers come from different schools. There are 14 data sources in this study which were taken through a purposive sampling technique.

Data collection techniques used in this study were face-to-face and online interviews. The teachers who were met at their schools (9 teachers) were interviewed directly face to face, while teachers who could not be met in person because they were unable to attend when we visited their schools were interviewed directly via telephone. Interviews were conducted with a duration of 30-50 minutes for each participant. To maintain consistency in understanding each teacher's experience, one interview was scheduled per day. In addition, the first author was the main interviewer in the data collection process. Researchers recorded consistently and with the help of mobile phones so that interview recordings could be stored in the form of audio files for analysis purposes.

Data collection through interviews was carried out using interview guidelines. Interview guidelines are used to help researchers stay focused on uncovering facts and experiences of informants based on research problems. Even so, researchers still ask other related questions if it is difficult to gather information through the questions in the interview guide. The interview guide was developed based on three domains which are assumed to contribute to the existing problems, namely (1) teachers understanding, (2) student readiness, and (3) facilities and infrastructure supporting the implementation of the Minimum Competency Assessment. The interview guide was validated by the second researcher in this study who is an experienced professor in the field of research and assessment. The interview

guidelines which consist of domains and examples of questions asked during the interview can be seen in the following [Tabel 1](#).

Tabel 1. The Interview Guide

No	Domain	Question Example
1	Teachers understanding	Have you ever heard about minimum competency assessment? So far, what are your opinion about this metter?
2	Student readiness	What do you think about the readiness of students in dealing with computer-based MCA?
3	Facilities and infrastructure	MCA is carried out online so it requires an internet connected device. How do you prepare comfortable facilities for students to take the MCA test?

Data analysis techniques in this study focused thematically. Data from interviews in the form of voice recordings were made in the form of verbatim interviews to facilitate data analysis. Data in the form of interview transcripts were then analyzed using the Bogdan and Biklen model by analyzing the relationships between themes ([Bogdan & Biklen, 1982](#)). Initially, the interview transcript data was reduced, the results of the data reduction were then presented in tabular form to find sub-themes in small groups. From these small themes, a relationship is sought to determine the theme with the aim of knowing the factors causing the teacher's confusion in implementing MCA.

3. RESULT AND DISCUSSION

Result

Results are the main part of scientific articles, containing: net results without data analysis process and results of analysis based on data reduction. Results can be presented with a table to clarify the results verbally. The results of this research interview were grouped into three themes based on the interview guideline theme. Three themes were found to understand the factors causing teacher confusion in implementing the Minimum Competency Assessment, namely (1) teachers' understanding of the Minimum Competency Assessment, (2) student readiness in facing the Minimum Competency Assessment, and (3) facilities and infrastructure that support the implementation of the Minimum Competency Assessment.

The Minimum Competency Assessment (MCA) is an integral part of the National Assessment which is the latest computer-based and adaptive assessment system. In its implementation, this Minimum Competency Assessment, teachers have considerable control in determining the success of this national assessment. For this reason, the teacher must have a good understanding of the background, process, use of the results, and the objectives of implementing MCA. In building teachers' understanding of MCA, the government has conducted outreach through webinars that teachers can attend independently. However, most of the teachers who became informants in this study did not take part in the webinar due to limited information and skills constraints in accessing these online activities. Based on the results of data analysis, teachers' understanding of MCA is still limited and partial. There are several sub-themes found related to the theme of teacher knowledge about MCA which are presented in [Table 2](#).

Tabel 2. Teacher Understanding Data Reduction

No	Sub-themes	Relationships between sub-themes
1.	The teachers define MCA as a benchmark for the success of the National Assessment	The teacher's understanding of the Minimum Competency Assessment is not deep and is still partially
2.	The teacher describes MCA as an effort to improve the quality of Indonesian education	
3.	The teacher identifies the form of MCA questions at the HOTS level	
4.	The teacher thinks that MCA questions aim to train students in solving everyday life problems	
5.	The teacher thinks that MCA can only be carried out online	
6.	Teachers understand the MCA target at the elementary school level only in fifth grade	
7.	The teacher thinks that MCA is not just measuring students' cognitive abilities	

No	Sub-themes	Relationships between sub-themes
8.	The teacher understands that MCA literacy is a question in the form of informative text to process information such as Indonesian questions	content of MCA is still limited to literacy and numeracy without further understanding of content, context, and cognitive processes.
9.	The teacher understands that numeracy MCA is related to solving problems with numbers	
10.	Teachers are still wrong in understanding the context and content of MCA	
11.	Searching for yourself on the internet and reading books as there is no formal delivery and training	The lack of direct and intensive outreach made teachers look for information about MCA independently
12.	The teacher holds discussions with other teachers regarding the minimum Competency Assessment information	
13.	Teachers search for information related to MCA themselves because they do not get an official forum that can provide information about MCA	

The teacher's understanding of the concept and implementation of MCA is the key to the success of implementing MCA. Based on the information obtained in the field, most of the teachers were able to provide definitions and views on MCA, but it was still in the form of incomplete information when compared to the actual definition of MCA. Teachers define MCA as a benchmark for the success of the National Assessment, even though the National Assessment consists of MCA, character surveys and learning environment surveys. In addition, several informant teachers also considered that MCA was a government effort to improve the quality of education in Indonesia. In addition, the teacher's assumption is correct that the form of MCA questions is at the HOTS level. The opinion of some other teachers about MCA is that MCA questions aim to train students in solving everyday life. Some of the teachers' erroneous assumptions about MCA are that the mode of implementation is limited to online only, but in reality MCA can be implemented semi-online if the stability of the internet network is inadequate. Schools can also join other schools if the conditions of facilities and infrastructure are incomplete, for example the number of computers and laptops is insufficient for independent implementation.

The teacher's understanding that is no less important than defining MCA is to understand well the context and content of the MCA itself. The teacher's understanding of the context and content of MCA will affect the learning process. Teachers who understand the context and content of MCA will try to integrate it in the design of everyday learning processes. This can help students become more efficient in dealing with MCA, because daily learning will not be separated between curriculum demands and MCA preparation. However, in reality, one of the things that happened was the teacher's confusion in preparing MCA, one of which was triggered by the teacher's understanding of the context and content of the latest assessment. Based on the data obtained from the interviews, most of the teachers only understood that the MCA was only divided into two questions, namely literacy related to Indonesian subjects and numeracy related to mathematics. The lack of information obtained by teachers has made a number of teachers think that the reading questions contained in MCA are only the context of Indonesian language questions, even though the content of literacy questions integrates personal, socio-cultural and scientific contexts. Not much different from the teacher's view of numeracy problems. They see numeration questions as limited to the context of mathematical calculations, even though the context of numeration questions also includes personal, socio-cultural and scientific content and numeration content includes numbers, measurement and geometry, data and uncertainty and geometry. From these results it can be concluded that the teacher's understanding of the context and content of MCA is still not well established.

Teachers' lack of insight into the Minimum Competency Assessment policy is influenced by the factor of the ineffective way of conveying information. The existence of a social distancing policy due to COVID-19 also contributed to the MCA socialization strategy which had to be carried out through online classes. Unfortunately, the online strategy that was intensified through the SIMPKB page (<https://paspor-gtk.belajar.kemdikbud.go.id/>) was less effective according to informants in this study. This method requires teachers to seek information by participating in online classes with basic computer skills that most informant teachers do not have. Therefore, the teacher took the initiative to seek information through social media, electronic news, and print media to add relevant insights as knowledge capital in dealing with MCA implementation. Obtaining information independently certainly has the potential to cause errors in the interpretation of each individual and the acquisition of incomplete information usually occurs. To equalize perceptions, teachers usually discuss in several informal meetings to clarify information received independently. However, some teachers are also less active in seeking information

about this. One of the causes of teachers' confusion in dealing with MCA is the lack of direct face-to-face socialization and discussion forums specifically discussing MCA.

One of the determining factors for the success of the national assessment with the MCA format lies in the students themselves as the object of this policy. MCA is used as a tool to collect true information about students' abilities as measured from the aspects of literacy and numeracy abilities. From the perspective of the teacher informants in this study, one of their concerns was the students' unpreparedness in working on computer-based questions which were relatively new to students. The unpreparedness of students in facing MCA based on the results of data reduction is presented in [Tabel 2](#).

Tabel 2. Reduction Results Related to Student Readiness

No	Sub-themes	Relationships between sub-themes
1.	Teachers have limited time in teaching MCA questions because there are curriculum demands that must continue	The teacher's challenges in preparing students for MCA are time management, the availability of an internet network, and the lack of an MCA question bank.
2.	The practice questions are done offline due to limited internet access	
3.	Bought a book about MCA because of the limited examples of MCA questions on the internet	
4.	Students have difficulty using laptops and computers	Students' difficulties in dealing with MCA were the ability to use computers, how to do questions and understanding of MCA content.
5.	MCA materials are not in accordance with the abilities of students	
6.	Students' understanding of the assessment material is still lacking	
7.	Students are not used to working on several new forms of questions in MCA	

Teachers' awareness of the importance of preparing students for MCA makes them develop strategies that are efficient to implement. However, because of the demands of the curriculum that must also run, it is difficult for teachers to manage the time between teaching students about MCA and teaching the curriculum demands material. One of the solutions taken by the teacher is to use time outside class hours, such as extra hours after school to introduce the material content in MCA questions. However, of course this also becomes less effective, because the learning load of students also increases. Another obstacle in increasing student readiness is the limited sample questions and the MCA-based question bank. The school procured the MCA Detik-Detik book to address this problem. However, what is ambiguous in this case is that preparation is ineffective because these paper-based exercises should be done online and computer-based. Several informant teachers argued that paper-based practice questions were the alternative they had to choose because the internet network conditions in their schools were unstable. Based on the description of these results, it can be concluded that the teacher's challenges in preparing for MCA are related to time management issues, internet network stability, and the limitations of MCA sample questions.

The readiness of students in dealing with MCA also depends on the initial abilities possessed by students. The initial ability of students will certainly affect the results of the MCA. However, based on several teachers' narratives from the results of the interviews, the students' abilities were still inadequate in dealing with MCA. The low ability of students makes teachers worry about the results of the Minimum Competency Assessment later. The reasons for the teachers' concerns were none other than because they felt that the material, context and content on the MCA were too high-level to be tested on their students. In addition, students' abilities are not only related to problem solving and solving, but more than that students have to work extra because the forms of the questions are different from the questions students often work on in daily assessments or semester assessments. Teachers generally use multiple choice questions, short essays and essays, so matching type questions, complex multiple choice questions, and true-false questions should also be applied in daily assessments by the teacher. This is important because differences in the form of questions will also affect how students solve these problems and of course will have an impact on the results of the assessment.

On the other hand, the problem is also seen in students' ability to use technology. The teacher argued that students' technological abilities were also one of the inhibiting factors for students in solving problems. There are questions with essay types so students have to type the answers using the keyboard board. The more students do not know how to use the keyboard, the longer it takes students to solve the problem. Apart from typing skills, students are generally also constrained by the use of the mouse and

trackpad, which also will not affect students' concentration in working on the questions. Based on some of the explanations above, it can be concluded that students' difficulties in dealing with MCA are also influenced by factors such as the ability to use computers, problem solving skills, and understanding of the context and content of MCA. The success of MCA implementation cannot be separated from the support of adequate facilities and infrastructure. However, this problem of facilities and infrastructure is common in most informant schools. The results of data reduction regarding facilities and infrastructure are presented in [Tabel 3](#).

Tabel 3. Reduction Table Regarding Facilities and Infrastructure

No	Sub-Themes	Relationships Between Sub-Themes
1.	Computer devices or laptops are not in balance with the number of students	The facilities and infrastructure for implementing MCA are inadequate
2.	Unstable internet connection	
3.	Inadequate exam rooms	
4.	When practicing or simulating, the server is unstable	

The computer-based Minimum Competency Assessment indirectly requires schools to procure technological devices that are not insignificant. This becomes a problem when schools are unable to procure MCA supporting technology tools. Even though the school of choice is to board at another school if the computer equipment at the school is inadequate, in fact during the training and simulation process it still requires a computer. In addition to the inadequate number of computers, teachers also complain about the stability of the internet in their schools. The internet network is needed by teachers and students to access simulation questions provided by the Center for Assessment and Learning of the Ministry of Education, Culture, Research and Technology. This was complained by all informant teachers, even during the simulation day, network stability had an impact on the problem solving process which was felt by students. The teacher said that when students practice working on questions with unstable internet conditions, sometimes the question window appears by itself.

Apart from being constrained by computer equipment and internet networks, another problem that teachers feel is the condition of the exam room which is not conducive. Ideally, the exam room should meet computer laboratory standards. In reality, the school's unpreparedness for this matter has forced the implementation of MCA to be carried out in the classroom. Schools should prepare a comfortable and conducive room for carrying out exams. Classrooms that do not have air conditioning, tight seating arrangements are a problem related to the facilities and infrastructure for implementing this MCA.

Discussion

Minimum competency assessment is carried out in order to collect as much information as possible about students' competency mastery. Implementation of assessments in schools is very important to measure student competence and to become the basis for policy making in the world of education ([Danniels et al., 2020](#); [Scheopner Torres et al., 2018](#)). MCA does not only measure students' abilities but also the results of these measurements are used as a basis for improving the quality of education in Indonesia ([Rohim, 2021](#)). The success of this National Assessment policy lies in the targets of this policy, namely educators, education staff, and students ([Aisah, H., Zaqiah, Q., & Supiana, 2021](#); [Rohim et al., 2021](#)). Educators or teachers hold a great deal of control in preparing their students for MCA. There is teacher anxiety and confusion in the field which is influenced by the teacher's understanding, student readiness and also the condition of inadequate facilities and infrastructure.

Teacher understanding is an important factor because by having a good understanding, MCA implementation will also be carried out as expected. Teachers tend to have a limited understanding and still understand partially. The teacher's still lacking understanding is an indication of the lack of information and socialization obtained by the teacher. Previous study state the higher the knowledge of the policy target regarding the policy to be implemented, the lower the rejection and failure of the implementation of the policy ([Dzulfikris, 2021](#)). The teacher's understanding of MCA is not only able to define MCA, but ideally the teacher is able to identify the context and content of MCA so that in everyday learning they can integrate it into learning the demands of curriculum content.

The characteristics and support of the target group greatly influence the policy implementation process. The target of the Minimum Competency Assessment besides teachers is students. Students' understanding of the form of questions should also be a concern of the teacher. Several types of questions that appear in MCA such as complex multiple choice, matching and true-false questions are rarely

integrated in everyday assessments in class so that they become one of the problems students face. Different types of questions will of course also have different ways of solving them. This means that this MCA instrument may not collect information on students' actual competency abilities. In addition, students' ability to operate computers is one of the challenges in preparing students for MCA. This is in line with the findings in previous research that students' ability to use information technology is still at a low level (Majid et al., 2020).

Implementation failure can also be caused by inadequate implementation target environmental conditions, in this case facilities and infrastructure. Facilities and infrastructure are things that cannot be tolerated because computer-based assessments require technological devices to assist the assessment process. Computer-based assessment does provide advantages in terms of administration, time, cost, data collection and analysis, and can minimize fraud (Nissen et al., 2018; Tomasik MJ, 2018). But behind the advantages provided, computer-based assessments will give different results to participants who are used to working on questions using a computer (Hewson & Charlton, 2018; Jin & Yan, 2017). An unbalanced number of computers with the number of MCA participants will be one of the problems. Computers are not only used once on the day of the MCA implementation, but are also needed by students to practice working on computer-based and adaptive questions. The use of technology in daily learning activities will help students feel comfortable in learning and quickly adapt to using the latest technology (Boyd, 2019; Hewson & Charlton, 2018). In addition, for the success of MCA, schools should ideally prepare rooms that are comfortable to use during exams. Student discomfort due to the conditions of the exam room can result in students not working on the questions to the fullest.

The factors that influence teacher confusion in implementing MCA can actually be overcome. One of the ways to overcome the teacher's turmoil is communication. Communication between policy makers and policy targets must be carried out strategically so that the successful implementation of the policy requires the implementor to know what must be done, what the goals and objectives must be transmitted to the target. Good communication through programmed workshops can increase teachers' understanding of new policies, especially the minimum competency assessment. In addition, facilities and infrastructure are also needed that meet the requirements to be used as a computer-based test room (Ghavifekr et al., 2014; Har et al., 2019). Even though it is still not possible to procure it for each school, at least in every region or village there are at least schools that meet the standards for implementing MCA so that other schools that don't have a computer room can prepare themselves collaboratively in facing MCA. Ideally, the hope of implementing MCA is to produce information that triggers an increase in the quality of learning and students' abilities, so that it can improve learning outcomes, but cannot be used as a basis for selection to the next level (Herman et al., 2022; Purnomo et al., 2022).

Finally, the limitation in this study is that the disclosure of information provided by the teacher has not fully disclosed the causes of his confusion in preparing for the MCA. The fact is that there are still many other factors that can influence such as the Principal and other stakeholders. Furthermore, the limited number of informants who were only studied in grade 5 teachers was also a limitation in this study. For this reason, it is hoped that future researchers will be able to conduct a study of respondents who can provide information openly and courageously regarding the implementation of MCA in schools. In addition, information from other levels is also needed to strengthen the results of this study.

4. CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that the causes of teachers' confusion in preparing AKM come from teachers, students and infrastructure. First, the teacher's understanding is still lacking and seems partial regarding the definition of MCA. This happens due to the lack of complete and in-depth information obtained by the teacher coupled with a lack of motivation to study independently. Both are caused by students who are not ready in terms of mentality and abilities. Indicators of students' unpreparedness in dealing with MCA can be seen in the ability to operate computers that still need guidance, and the ability to solve questions on MCA questions is also still relatively low. The third is the condition of facilities and infrastructure that have not provided comfort to students in working on AKM. Inadequate numbers of computers and unstable conditions of internet network accessibility occurred in several schools that were the subject of the study. The support and attention of all stakeholders in this regard is very much needed in supporting the successful implementation of this computer-based minimal competency assessment.

5. REFERENCES

Aisah, H., Zaqiah, Q., & Supiana, A. (2021). Implementasi kebijakan asesmen kemampuan minimum

- (MCA): analisis implementasi kebijakan MCA. *Jurnal Pendidikan Islam Al-Affan*, 1(2), 128–135. <https://ejournal.stit-alquraniyah.ac.id/index.php/jpia/article/view/25/22>.
- Alagan, T., Shanmugam, S. K. S., & Veloo, A. (2020). Tamil primary school teachers understanding on constructing hot items in mathematics. *Humanities and Social Sciences Letters*, 8(2), 156–168. <https://doi.org/10.18488/journal.73.2020.82.156.168>.
- Aldegether, R. (2020). Predicting reflective thinking among Saudi elementary school teachers in Riyadh public schools. *International Journal of Education and Practice*, 8(3), 405–415. <https://doi.org/10.18488/journal.61.2020.83.405.415>.
- Andiani, D., Hajzah, M. N., & Dahlan, J. A. (2020). Analisis rancangan assesmen kompetensi minimum (MCA) numerasi program merdeka belajar. *Majamath: Jurnal Matematika Dan Pendidikan Matematika*, 4(1), 80–90. <https://doi.org/10.31004/basicedu.v6i3.2907>.
- Anggarawati, D., & Hakim, S. N. (2018). Kontrol Diri dan Kecemasan Siswa SMA dalam Menghadapi Ujian Nasional. *Briliant: Jurnal Riset Dan Konseptual*, 3(4), 476–482. <https://doi.org/10.28926/briliant.v3i4.249>.
- Argina, A. W., Mitra, D., Ijabah, N., & Setiawan, R. (2017). Indonesian PISA Result: What Factors and What Should be Fixed? *The 1st Education and Language International Conference Proceedings Center for International Language Development of Unissula*, 69–79. <http://lppm-unissula.com/jurnal.unissula.ac.id/index.php/ELIC/article/view/1212>.
- Beaton, A. E., & Zwick, R. (1992). Overview of the national assessment of educational progress. *Journal of Educational and Behavioral Statistics*, 17, 93–94. <https://doi.org/10.2307/1165164>.
- Bogdan, R., & Biklen, S. K. (1982). *Qualitative research for education: An introduction to theory and methods*. Allyn and Bacon, Inc.
- Boyd, L. (2019). Using technology-enabled learning networks to drive module improvements in the uk openuniversity. *Journal of Interactive Media in Education*, 1, 1–7. <https://doi.org/10.5334/jime.529>.
- Coates, R. D., & Wilson-Sadberry, K. R. (1994). Minimum Competency Testing: Assessing the Effects of Assessment. *Sociological Focus*, 27(2), 173–185. <https://doi.org/10.1080/00380237.1994.10571018>.
- Creswell, JW; Poth, C. (2017). *Qualitative Inquiry & Research Design: Choosing among Five Approaches* (4th ed.). Sage Publications.
- Danniels, E., Pyle, A., & DeLuca, C. (2020). The role of technology in supporting classroom assessment in play-based kindergarten. *Teaching and Teacher Education*, 88(1). <https://doi.org/10.1016/j.tate.2019.102966>.
- Dzulfikris, M. R. (2021). Implementasi kebijakan pemberlakuan pembatasan kegiatan masyarakat darurat covid - 19 di kota surabaya. *Dinamika Governance: Jurnal Ilmu Administrasi Negara*, 11(2), 294–310. <https://doi.org/10.33005/jdg.v11i2.2767>.
- Ekowati, D. W., Astuti, Y. P., Utami, I. W. P., Mukhlisina, I., & Suwandayani, B. I. (2019). Literasi Numerasi di SD Muhammadiyah. *ELSE (Elementary School Education Journal): Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, 3(1), 93. <https://doi.org/10.30651/else.v3i1.2541>.
- Ekowati, Dyah Worowirastri, Astuti, Y. P., Utami, I. W. P., Mukhlisina, I., & Suwandayani, B. I. (2019). Literasi Numerasi di SD Muhammadiyah. *ELSE (Elementary School Education Journal): Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, 3(1), 93. <https://doi.org/10.30651/else.v3i1.2541>.
- Ghavifekr, S., Razak, A., Ghani, M., Ran, N., Meixi, Y., & Tengyue, Z. (2014). ICT Integration in Education: Incorporation for Teaching & Learning Improvement. *Malaysian Online Journal of Educational Technology*, 2(2), 24–45. <https://eric.ed.gov/?id=EJ1086419>.
- Handayani, M., Perdana, N. S., & Ukhlumudin, I. (2021). Readiness of Teachers and Students to Take Minimum Competency Assessments. *Proceedings of the International Conference on Educational Assessment and Policy (ICEAP 2020)*, 545, 73–79. <https://doi.org/10.2991/assehr.k.210423.067>.
- Har, E., Khairi, A., & Roza, W. (2019). Teachers' skills and ICT facilities for science learning at senior high school in Padang city. *Australian Educational Computing*, 34(1). <http://journal.acce.edu.au/index.php/AEC/article/view/177>.
- Herman, Purba, R., Thao, N. V., & Purba, A. (2020). Using genre-based approach to overcome students' difficulties in writing. *Journal of Education and E-Learning Research*, 7(4), 464–470. <https://doi.org/10.20448/journal.509.2020.74.464.470>.
- Herman, S. A. M., Silalahi, T. F., & S, J. (2022). Teachers' attitude towards minimum competency assessment at sultan agung senior high school in pematangsiantar, indonesia. *Journal of Curriculum and Teaching*, 11(1), 1–14. <https://doi.org/10.5430/jct.v11n2p1>.
- Hewson, C., & Charlton, J. P. (2018). An investigation of the validity of course-based online assessment methods: The role of computer-related attitudes and assessment mode preferences. *Journal of*

- Computer Assisted Learning*, 35(1), 51–60. <https://doi.org/10.1111/jcal.12310>.
- Hidayah, I. R., Kusmayadi, T. A., & Fitriana, L. (2021). Minimum Competency Assessment (AKM): An Effort To Photograph Numeracy. *Journal of Mathematics and Mathematics Education*, 11(1), 14–20. <https://doi.org/10.20961/jmme.v11i1.52742>.
- Hornburg, C. B., Schmitt, S. A., & Purpura, D. J. (2018). Relations between preschoolers' mathematical language understanding and specific numeracy skills. *Journal of Experimental Child Psychology*, 176(10), 84–100. <https://doi.org/10.1016/j.jecp.2018.07.005>.
- Huang, T. C., Lin, W., & Yueh, H. P. (2019). How to cultivate an environmentally responsible maker? A CPS approach to a comprehensive maker education model. *International Journal of Science and Mathematics Education*, 17, 49–64. <https://doi.org/10.1007/s10763-019-09959-2>.
- Hussain, S., Kayani, M., & Akhtar, Z. (2018). A correlational study on teacher educators' assessment literacy and their students' academic achievement. *Pakistan Journal of Education*, 35(3), 59–76. <https://doi.org/10.30971/pje.v35i3.773>.
- Jiang, Y., Zhang, J., & Xin, T. (2018). Toward education quality improvement in china: a brief overview of the national assessment of education quality. *Journal of Educational and Behavioral Statistics*, 20(10), 733–751. <https://doi.org/10.3102/1076998618809677>.
- Jin, Y., & Yan, M. (2017). Computer literacy and the construct validity of a high-stakes computer-based writing assessment. *Language Assessment Quarterly*, 14(2), 101–119. <https://doi.org/10.1080/15434303.2016.1261293>.
- Kurniawati, S., & Sundawa, D. (2019). An Analysis of National Standard School Examination Items Based on the Characteristics of Hots (Higher Order Thinking Skills) Questions for the Main Items of K13-071 Academic Year 2016/2017 in Karawang Regency. *International Journal Pedagogy of Social Studies*, 3(2), 100–112. <https://doi.org/10.17509/ijposs.v3i2.15793>.
- Majid, S., Foo, S., & Chang, Y. K. (2020). Appraising information literacy skills of students in Singapore. *Aslib Journal of Information Management*, 72(3). <https://doi.org/10.1108/AJIM-01-2020-0006/full/html>.
- Mustofa, Z. (2020). Kompetensi numerasi siswa smk ditinjau dari gender dan berbagai kesulitannya. *Jurnal Pendidikan Matematika*, 8(4), 227–237. <https://doi.org/10.23960/mtk/v8i2.pp.227-237>.
- Napoli, Amy R., Purpura, D. J. (2018). The home literacy and numeracy environment in preschool: Cross-domain relations of parent-child practices and child outcomes. *Journal of Experimental Child Psychology*, 166(10), 581–603. <https://doi.org/10.1016/j.jecp.2017.10.002>.
- Narasati, N. A., Saleh, R., & Arthur, R. (2021). Pengembangan alat evaluasi berbasis hots menggunakan aplikasi quizizz pada mata pelajaran mekanika teknik dalam pembelajaran jarak jauh. *Jurnal Pendidikan Teknik Sipil*, 3(2), 169–180. <https://doi.org/10.21831/jpts.v3i2.43919>.
- Nissen, J. M., Jariwala, M., Close, E. W., & Dusen, B. V. (2018). Participation and performance on paperand computer-based low-stakes assessments. *International Journal of STEM Education*, 5(21), 1–17. <https://doi.org/10.1186/s40594-018-0117-4>.
- Novita, N., Mellyzar., & Herizal, H. (2021). National assessment (an): knowledge and perception of prospective teachers. *Journal of Social Sciences and Education*, 5(1), 172–179. <https://doi.org/10.36312/jisip.v5i1.1568>.
- Novita, N., Mellyzar, M., & Herizal, H. (2021). Asesmen Nasional (AN): Pengetahuan dan Persepsi Calon Guru. *JISIP (Jurnal Ilmu Sosial Dan Pendidikan)*, 5(1). <https://doi.org/10.36312/jisip.v5i1.1568>.
- Nugrahanto, S., & Zuchdi, D. (2019). *Indonesia PISA Result and Impact on The Reading Learning Program in Indonesia*. 297(Icille 2018), 373–377. <https://doi.org/10.2991/icille-18.2019.77>.
- Perdana, N. S. (2021). Analysis of student readiness in facing minimum competency assessment. *Mukadimah: Jurnal Pendidikan, Sejarah, Dan Ilmu-Ilmu Sosial*, 5(1), 15–20. <https://doi.org/10.30743/mkd.v5i1.3406>.
- Purnomo, H., Sa'dijah, C., Hidayanto, E., Sisworo, S., Permadi, H., & Anwar, L. (2022). Development of instrument numeracy skills test of minimum competency assessment (MCA) in Indonesia. *International Journal of Instruction*, 15(3), 635–648. <https://doi.org/10.29333/iji.2022.15335a>.
- Purpura, D. J., Hume, L. E., Sims, D. M., & Lonigan, C. J. (2011). Early literacy and early numeracy: The value of including early literacy skills in the prediction of numeracy development. *Journal of Experimental Child Psychology*, 110(4), 647–658. <https://doi.org/10.1016/j.jecp.2011.07.004>.
- Purwati, P. D., Faiz, A., Widyatmoko, A. N., & Maryatul, S. (2021). Asesmen kompetensi minimum (MCA) kelas jenjang sekolah dasar sarana pemacu peningkatan literasi peserta didik. *Sosio Religi: Jurnal Kajian Pendidikan Umum*, 19(1), 13–24. https://scholar.google.com/citations?view_op=view_citation&hl=id&user=_qt1IXYAAAAJ&citation_for_view=_qt1IXYAAAAJ:YsMSGLbcyi4C#:~:text=Panca Dewi Purwati-,%5BPDF%5D dari upi.edu,-Asesmen Kompetensi Minimum.

- Renz, S. M., Carrington, J. M., & Badger, T. A. (2018). Two strategies for qualitative content analysis: An intramethod approach to triangulation. *Qualitative Health Research*, 28(5), 824–831. <https://doi.org/10.1177/1049732317753586>.
- Rohim, D., Rahmawati, S., & Ganestri, I. D. (2021). Konsep asesmen kompetensi minimum untuk meningkatkan kemampuan literasi numerasi siswa sekolah dasar. *Jurnal Varidika*, 33(1), 54–62. <https://doi.org/10.23917/varidika.v33i1.14993>.
- Ross, K. M., & Joseph, L. M. (2019). Effects of word boxes on improving students' basic literacy skills: a literature review. *Preventing School Failure: Alternative Education for Children and Youth*, 63(1), 43–51. <https://doi.org/10.1080/1045988X.2018.1480006>.
- Sari, A., Daulay, S., Putri, Y. Y., & Epriani, P. (2020). Penghapusan ujian nasional tahun 2021 dalam perspektif guru sma di kota tebing tinggi. *Prosiding Seminar Nasional PBSI-III Tahun 2020*. <http://digilib.unimed.ac.id/41244/1/Fulltext.pdf>.
- Saß, S., Kampa, N., & Köller, O. (2017). The interplay of g and mathematical abilities in large-scale assessments across grades. *Intelligence*, 63(May), 33–44. <https://doi.org/10.1016/j.intell.2017.05.001>.
- Scheopner Torres, A., Brett, J., Cox, J., & Greller, S. (2018). Competency Education Implementation: Examining the Influence of Contextual Forces in Three New Hampshire Secondary Schools. *AERA Open*, 4(2). <https://doi.org/10.1177/2332858418782883>.
- Shara, A. M., Andriani, D., Ningsih, A. W., & Shinoda, K. (2020). Correlating reading literacy and writing literacy in junior high school Pematangsiantar. *Journal of English Education*, 5(2), 72–85. <https://doi.org/10.31327/jee.v5i2.1249>.
- Sinambela, P., Suhada, S., & Susilo, G. (2020). Analisis Mengenai Dampak Penghapusan Ujian Nasional Terhadap Kelulusan Peserta Didik Jenjang Smp Di Era Pandemi Covid-19 Jakarta, . *Prosiding Seminar Nasional Dan Diskusi Panel Pendidikan Matematika*, 281–290. <http://www.proceeding.unindra.ac.id/index.php/DPNPMunindra/article/view/4730>.
- Suliyannah, Adelia, B. D., Jauhariyah, M. N. R., Misbah, Mahtari, S., & Saregar, D. (2022). A bibliometric analysis of minimum competency assessment research with vosviewer related to the impact in physics education on 2019-2020. *Prosiding Seminar Nasional Fisika (SNF)*, 1–12. <https://doi.org/10.1088/1742-6596/2110/1/012022>.
- Suri, F. (2020). Learning in the independent Era of learning against the metacognitive ability of learners. *Paper Presented at the Proceedings of the LP3M National Seminar 2*, 21–25. <http://proceeding.semnaslp3m.unesa.ac.id/index.php/Artikel/article/view/68>.
- Tomasik MJ, B. S. and M. U. (2018). On the development of a computer-based tool for formative student assessment: epistemological, methodological, and practical issues. *Frontiers in Psychology*, 9(2245), 1–17. <https://doi.org/10.3389/fpsyg.2018.02245>.
- Widianti, W., & Hidayati, N. (2021). Analysis of the mathematical literacy ability of junior high school students on triangle and quadrilateral material. *Journal of Innovative Mathematics Learning*, 4(1), 27–38. <https://doi.org/10.22460/jpmi.v4i1.27-38>.
- Yamtinah, S., Utami, B., Masykuri, M., Mulyani, B., Ulfa, M., & Shidiq, A. S. (2022). Secondary School Science Teacher Response to Minimum Competency Assessment: Challenges and Opportunities. *Jurnal Penelitian Pendidikan IPA*, 8(1), 124–131. <https://doi.org/10.29303/jppipa.v8i1.1075>.