Readiness of Elementary Teachers in Minimum Competency Assessment: Teachers' Competence in Arranging Literature and Numeration Tests

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Keywords:	Abstract
literacy and numeracy; national assessment in Indonesia; elementary school; teacher readiness	*Minimum competency assessment is a new challenge for classroom teachers in implementing and integrating it in learning to maximize its diagnostic and curative function on the quality of Indonesian education. This is the background of this research to analyze the readiness of teachers in arranging literacy and numeracy tests in elementary schools. This study used a content analysis design to reveal a test prepared by elementary school teachers for minimum competency assessment involving 30 elementary school teachers. Data analysis results are presented in the form of percentage accuracy of items with quantitative descriptive and examples of items that are described qualitatively. The results showed that the competence of school teachers in compiling literacy and numeracy assessment questions in elementary schools was still not optimal in terms of form, content, context, and cognitive level, especially for reflect and evaluate levels for literacy assessments and reasoning levels for required numeracy assessments. Especially for literary content on literacy, scientific context on literacy and numeracy, and third-level literacy and numeracy. Based on the results of the study, it can be concluded that the competency of elementary school teachers in implementing a minimum competency assessment needs to be carried out to meet the standards and functions of the Indonesian national assessment. This study provides an overview of teacher readiness in carrying out minimum competency assessments in elementary schools related to their role as learning evaluators.*

INTRODUCTION

Background

Learning assessment occupies a trend of educational topics that are widely discussed, studied, and developed through the latest research results. The results of the study still

show the existence of learning assessment needs both in mastery and products from year to year (Dasmalinda & Hasrul, 2020; Mundia Sari & Setiawan, 2020; Rini & Cahyanto, 2020). If previously traditional assessments were more in the form of written tests in a summative framework, now assessments have developed with various types and formats offline and online in a formative framework for various functions. This development is a great opportunity for educational practitioners to determine and design the best assessment used according to learning needs.

In Indonesia, the latest topic in the development of an assessment is the abolition of the national exam to become a national assessment. Previously, the National Examination was a summative assessment carried out for the grading and selecting process in the graduation and acceptance of students (Nehru, 2019). After being evaluated and followed by the implementation of Merdeka Belajar policy, this assessment process is considered inappropriate because the assessment should be a step to improve the quality of education through its results. Based on the improvement in the quality of education, the National Assessment consists of a minimum competency assessment, a character survey, and an environmental survey which is planned to be implemented in 2021 (Muta'ali, 2020). In contrast to the previous assessment to evaluate student achievement individually, the national assessment is aimed at evaluating the mapping of inputs, processes, and learning outcomes (Sugiri & Priatmoko, 2020).

Specifically related to learning, the Competency Assessment carried out includes two competencies, namely literacy and numeration. These two competencies have an important role in improving qualifications and preparing students for the 21st-century generation (Grotlüschen et al., 2020). This fact is supported by the existence of various national and international surveys to measure the literacy level of students, such as PIRLS, PISA, TIMSS, or Alibaca (Wulandari & Azka, 2018). The survey results from PISA 2018 for example, show that the literacy level of Indonesian students is still low, reading ability is ranked 371 while mathematical ability is ranked 379 (Azizah, 2019). This condition underlies the implementation of a minimum competency assessment to measure, improve and increase the literacy level of Indonesian students.

Improvements can be made if the teacher also has good competence in the minimum competency assessment. Moreover, preparing literacy and numeracy tests related to the implementation of the minimum class competency assessment that is integrated with learning. In addition, the urgency of teacher competence in literacy and numeracy assessment is also related to their professionalism as an evaluator of student learning (Daud et al., 2020; Sulistyaningrum et al., 2021). As evaluators, teachers must have skills in the tests, measurements, and assessments that are included in them (Archana & Usha Rani, 2017; Megawati & Sutarto, 2021). Moreover, the assessment paradigm for diagnostics is implemented in a minimum competency assessment. To carry out diagnostics, the teacher must know the students' abilities correctly through test results from levels that have been achieved or have not been achieved. After that, the teacher must also follow up on the diagnostic results by integrating them into learning for example with training, strengthening, or enrichment to improve student competence in literacy and numeracy in elementary schools according to the objectives of the national assessment (Nurhikmah et al., 2021).

Problem of Study

The main problem that will be discussed in this study focuses on teacher readiness in minimum competency assessment as a new policy in the implementation of learning assessment in Indonesia. Furthermore, it was also revealed how the preparation of higher order thinking-based questions is still a challenge for elementary school teachers. In addition, generally, the questions that are arranged are also in the form of multiple-choice,

brief descriptions, and essays, as well as the lack of visual stimuli or contextual illustrations. The difference between the form and process of the test in the minimum competency assessment from the previous form and process of the test is what we want to reveal how the teacher's readiness to face and apply it in terms of competence in compiling literacy and numeracy tests in elementary schools.

State of the Art

As has been discussed in the background of the research, the minimum competency assessment is a new policy in the implementation of the national assessment which has been discussed since 2020 and will began to be implemented in 2021. Although new in education in Indonesia, the implementation of minimum competency assessment has been implemented in several countries despite differences in the process (Birenbaum et al., 2015; Nortvedt et al., 2016). As the results are widely revealed through international surveys such as PISA, PIRLS, or TIMSS which show the low ranking of Indonesian students when compared to other countries involved in the survey (Chamisah, 2017; Sukmayadi & Yahya, 2020). Based on this fact, the topic of teacher readiness as a learning evaluator in minimum competency assessment is interesting for discussion. Several research results that discuss minimum competency assessments starting from students' initial abilities, teacher competency development, and policy implementation have become new topics that are widely studied (Anas et al., 2021; Fauziah et al., 2021; Rohim, 2021). Digging further into the national assessment in Indonesia, especially the minimum competency assessment, will provide an opportunity to prepare, implement, and evaluate its best practices in the future.

Gap Study & Objective

Minimum competency assessment is a challenge for teachers for their readiness and competence in carrying out literacy and numeracy assessments in learning. Teachers as reform agents certainly need to have qualified knowledge and skills to implement these changes in learning assessments. The intended change relates to the difference between the minimum competency assessment and the previous assessment, both in terms of planning, form and application in learning. As stated in the problem of study, it is important to explore how the teacher's readiness in dealing with changes in learning assessments is related to the contribution of the results as a basis for the practice of minimum competency assessment in terms of teacher competence. Regarding the urgency of the importance of teacher competence in minimum competency assessments, this study aims to analyze teacher competencies in preparing literacy and numeracy tests for minimum competency assessments in learning in elementary schools.

METHOD

Type and Design

Following its objectives, this study uses content analysis to reveal the readiness of teachers in the assessment of minimum competencies in terms of their ability to prepare and analyze literacy and numeracy tests in elementary schools. Complementing the data, data on perceptions of teacher readiness and difficulties in dealing with minimum competency assessments were also explored. In more detail, the research procedure taken is described in Figure 1.

Data Source

In this study, the data sources obtained were 30 teachers who were involved in AKM in their schools from representatives of 7 elementary schools in Klojen District, Malang City. Klojen Subdistrict was chosen with the background of the school area in the city center so that several schools became model schools in the regulation of educational policies in

Malang City. . In addition, this number was obtained based on the willingness of teachers and principal referrals to be involved in this study who taught third and fifth grades in their schools who were indeed involved in the preparation of the 2021 National Assessment in their schools.
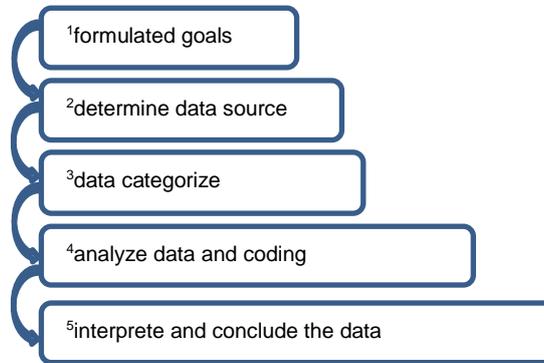
Figure 1: Research procedure

Data Collection Technique

The data was extracted based on test instruments for literacy and literacy assessments in elementary schools that had been compiled in August 2021 as outputs in AKM training activities. The data was also extracted using a questionnaire technique with an online form format which was distributed to participants to explore data on perceptions and difficulties of teachers in conducting literacy and numeracy assessments in elementary schools. The following is a grid of instruments for preparing literacy and numeracy tests according to the composition of the minimum competency assessment for elementary schools in Table 1. In addition to the grid in literacy and numeracy, an analysis is also carried out on the form of questions based on the minimum competency assessment standards for classes in elementary schools which are more diverse in proportion 20% multiple-choice, 40% complex multiple-choice, 10% matchmaking, 5% short fill, and 25% essay.

Table 1. Grid of Literacy and Numeration Tests in Elementary School

N	Content		Cognitive			Context	
	Sum	Description	Sum	Code	Description	Sum	Description
Literacy							
10	5	information text	5	L1	retrieve and access	6	personal
			4	L2	interpret and integrate	3	sosio-cultural
	5	literary text	1	L3	reflect and evaluate	1	scientific
Numeracy							
10	4	numeral	3	N1	knowing	6	personal
	3	measurement & geometry	5	N2	applying	3	sosio-cultural
	2	data and uncertainty	2	N3	reasoning	1	scientific
	1	algebra					

Data Analysis Technique

All data were analyzed descriptively both quantitatively and qualitatively. The results were validated by involving two research colleagues through a peer debriefing process. In the quantitative descriptive technique, the assessment criteria and qualifications are determined by referring to Arikunto (2013: 68) with the consideration that the score range is quite high for the categorization of teacher mastery levels in literacy and numeracy assessments with the information in Table 2 as follows.

Table 2. Criteria for Mastery Level

Scale	Percentage	Qualification
4	86-100	very good/skilled
3	71-85	good/skilled
2	56-70	good/skillful enough
1	<56	not good/unskilled

RESULT

Forms of Literacy and Numeracy Questions for Elementary Schools

From a total of 520 questions that were successfully compiled by 30 elementary school teachers, an analysis of the form of the questions was carried out according to the proportions required in the minimum competency assessment. The results of this analysis also show the form of questions that are widely used and mastered by teachers in preparing tests in elementary schools.
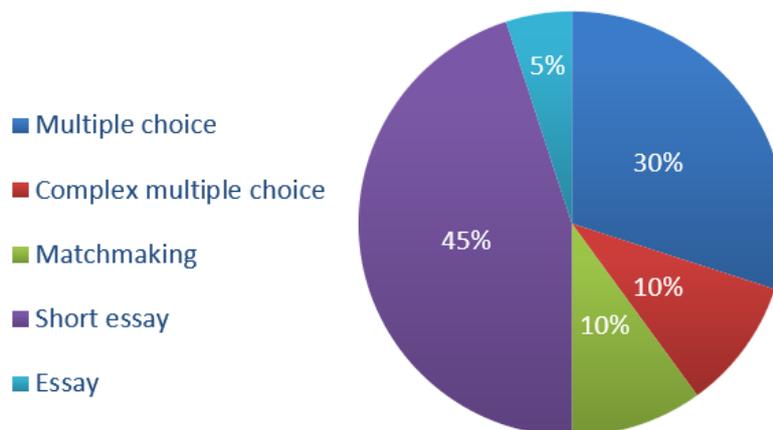
Figure 2: Percentage of question forms compiled for literacy and numeracy

In Figure 2, it can be observed that short essay questions are most widely used by teachers in the form of questions to determine true or false as in the examples in Figures 2, 5, and 3 before. From the results of this analysis, of course, the required proportions in the form of questions in the minimum competency assessment have not been met. Especially for complex multiple-choice which should occupy the largest portion of the number of questions among the others.

Analysis of Test Items for Literacy Assessment in Elementary Schools

The results of the analysis show that the readiness of teachers in the AKM in the classroom for the preparation of literacy tests is quite good or quite skilled with the achievement of a score scale at 42%-89%. In more detail, the mastery of each aspect in the literacy test for minimum competency assessment in elementary schools is described in Table 3. There's can be observed that in the content section of the literacy test, participants

used more informational texts than literary texts. The information text used is predominantly exposition, procedure, and explanatory texts, while in literary texts only story texts are used. This shows that the mastery of content from the literacy test itself is still not optimal in the type of literary text. In the cognitive aspect, it can be observed that the teacher's mastery in compiling questions at the retrieve and access (L1) level is very good, questions in the form of what, where, who, when are widely used appropriately in written and visual texts. Likewise, at the second level for interpret and integrate (L2), the accuracy of the preparation of questions on the criteria is quite good.

Table 3. Level of Accuracy of Preparation of Literacy Test for Each Aspect

Aspect	Criteria	Accuracy (%)	Qualification
Content	Information text	89%	very good
	Literary text	42%	not good
Cognitive	L1	80%	good
	L2	65%	good enough
	L3	45%	not good
Context	Personal	84%	very good
	Sosio-cultural	75%	good
	Scientific	58%	good enough

Based on the test grid, there were participants' misconceptions between the questions for each level. At level one, participants should be able to retrieve and access information that is explicit in a written or visual text. This level was mastered well by participants using what, where, when, who, or why questions extracted from the text. Although some participants still showed misconceptions from levels one and two in the literacy assessment, especially in the preparation of the test questions.

Take a look at the poster below!

Based on the information from the text, is the following statement true or false? Put a check mark in the true or false column for each appropriate statement.

Statement	True	False
1) Comparison of the third highest Omega 3 content, namely shrimp.		
2) Fish is high in vitamin D.		
3) The difference in Omega 3 content between shrimp and goat is 102.		
4) Unsaturated fats contained in fish are not very beneficial for the body		

Figure 3: Sample question of retrieve and access level

Figure 3 is an example of a question made by the teacher for the interpretation and integration level which should be at the retrieve and access level because the question that must be determined is in the form of explicit information in the poster. On the other hand, in the example questions in Figure 4, examples of questions made by participants for the interpret and integrate level in literacy are shown, namely interpreting how the characters in the story feel, which are shown through their attitudes or implicitly. This example is also one of the questions that use literary texts as its content, namely narrative. The narrative is a literary text that is widely used in the preparation of literacy tests, which should occupy a portion of 50% of the number of literacy tests using literary content.

Siti and Udin

Siti and Udin's names. Their faces were full of dust. Dressed in rags, they sing in the midst of the noise. From morning to night, they smiled in sweat, greeted uncle and aunt, hoping for some small change. n Thousands of Siti and Udin wandered the streets, hoarse and breathless with pollution. If you can eat today, thank God. Siti and Udin continue to pray that they can go to school and have a house with windows.

Which condition is in accordance with the content of the reading? Put a tick (√) in the column "True" or "False" for each statement.

Statement	True	False
Siti and Udin are always happy when they sing		
Uncle and Aunt were upset when Siti and Udin arrived		

Figure 4: Sample question of interpreting and integrating level

At the level of reflection and evaluation (L3), the level of accuracy of the compiled tests is still low. The majority of test questions that should be arranged at this level are at the interpret and integrate level, for example about converting text information into posters or using "how" questions but the answers are already in the text or explicit, for example, "how do I make banana chips last longer crispy?" through the text of the procedure for making banana chips. Here it can be seen that the use of "how" questions are considered to have represented literacy test questions at level 3. Even so, there were test questions that were appropriate and arranged both from the instructions and illustrations as in Figure 5.

Read the following text!
Amir is doing community service. The work is carried out in Amir's home environment. Residents help each other clean the environment. Some sweep, take out the trash, and clean the gutters. Cleaning the environment is beneficial for maintaining public health.

Put a cross (x) on the answer you think is correct! You can choose more than one answer. Attitudes that show social care include….

Figure 5: Sample question of evaluation level

In the example questions in Figure 5, reflection and evaluation of the content of the text about community service carried out by Amir is shown by assessing the illustration of similar behavior in the picture which also shows social concern. Illustrations are also important to support this problem as a characteristic in AKM as a form of visual text and the suitability of this illustration with real conditions from facial images, height, behavior, and others.

Furthermore, in terms of context, it can be observed that the majority of personal context accuracy is used very well in literacy tests in elementary schools. Likewise in the socio-cultural context, the average is used appropriately in the preparation of literacy tests such as about cultural diversity, social events, and others. However, in a scientific context, almost 50% of the participants did not use it even though it had been described in the grid. The personal context is more used than the socio-cultural or scientific context in the matter, even though the accuracy or accuracy is quite good.

Preparation of Tests for Numerical Assessment in Elementary Schools

The results of the analysis show that the readiness of teachers in the AKM in the classroom for the numeracy test shows the criteria are quite good or quite skilled with the achievement of a score scale of 32%-100%. In detail, the mastery of each aspect in the numeracy test for elementary schools is described in Table 4.

Table 4. Test accuracy levels for numeracy in elementary schools for each aspect

Aspect	Criteria	Accuracy (%)	Qualification
Content	numeral	90%	very good
	measurement & geometry	85%	very good
	data and uncertainty	68%	good enough
	algebra	45%	not good
Cognitif	N1	80%	good
	N2	58%	good enough
	N3	32%	not good
Context	Personal	100%	very good
	Sosio-cultural	40%	not good
	Scientific	38%	not good

Table 4 shows that in terms of content, the numeracy test is more diverse than literacy and the average is well mastered in the preparation of the questions, especially for numbers, measurements, and geometry. Counting operations questions, both integers, and fractions are arranged in questions with very good accuracy, as well as measurements and geometry such as calculating area, circumference, length, or weight which tend to be associated with personal contexts such as the example questions in Figure 6.

Look at the picture below!

Toko Permen Andi

Rp3000,00
Permen Jeruk

Rp3000,00
Permen Lolipop

Rp3000,00
Permen Anggur

Which statement is correct?
- The price of one orange candy is Rp. 600,00
- The price of two lollipops is IDR 5,000.00
- With IDR 6,000.00 you will get 6 grape candies.
- With IDR 6,000.00 will get 10 orange candies
- The price of three lollipops is IDR 6,000.00

Figure 6: Sample question of knowing the level

At the level of knowing (N1) in numeracy assessment in elementary schools, they are well mastered in preparing questions as exemplified in Figure 6. The content used at this level is generally numbers and measurements such as counting the number of objects, the area of objects, identifying the size of objects, and others with personal contexts. A quite striking difference from the questions that are arranged lies in the stimulus in the form of visual texts and contexts that are associated with everyday life, in contrast to the form of math test questions that directly present operations, for example in addition to fractions.

At the level of applying (N2) in numeracy assessment in elementary schools, they are mastered quite well in the preparation of questions, one of which is exemplified in Figure 7. At this level, the questions compiled should require students to apply mathematical concepts in real situations that are routine. The majority of the questions compiled are still in the form of counting, classifying, identifying various materials related to daily life such as the example questions in Figure 6. Here, misconceptions were found in the preparation for level applying, not only related to daily life such as calculating the price of goods sold. purchased or measured the area of the park but rather a question to measure students' ability to apply their knowledge (N1) in everyday life.

Look at the picture below!
We often encounter the following objects in our daily life. We can use these objects to measure length, weight, and time.

To measure our weight we use a measuring instrument!

Figure 7: Sample question of applying level

The example questions in Figure 7 show the application of mathematical concepts related to the use of tools in everyday life. This question is intended for low grades in measurement material. However, the inaccuracy lies in the questions that are not well structured. Notice the last sentence in the picture which should be edited as "*From the selection of these various tools, which one is used to measuring body weight?*". Similar errors were also found in almost 55% of the questions compiled. In addition to editorial errors, the selection of illustrations is also often not under real conditions as in Figure 8.

Edo, Ani, Dita and Rado are waiting at the elevator door to go up to the fifth floor. The elevator position is on the second floor leading to the third floor. In the elevator there are 5 people with a total chest weight of 340 kg. The weights of Edo, Ani, Dita and Rado are as follows:

Edo 30 kg   Ani 47 kg   Dita 55 kg   Rado 70 kg

While waiting for the lift to move, they read the information on the button next to the lift door, that the lift has a maximum capacity of 450 kg and can be climbed by 7 people. The total lift capacity is kg

a. 450   c. 400
b. 340   d. 600

Figure 8: Other sample question of applying level

The inaccuracy of the illustration shown in Figure 8 lies in the selection of figures and their weight. Edo is described as a child but weighs 30 kilograms, as well as Ani, who is described as a child but weighs 47 kg, which is only 8 kg apart from Dita, who is described as an adult woman weighing 55 kg. On the other hand, Rado weighing 70 kg is described as having a growth that is not too fat. Although only as a stimulus, this illustration shows a poor application of the concept in measurement. Especially for students who are critical so that the selection of illustrations needs special attention in preparing questions.

Next, at the N3 level, it is known that the accuracy of the questions compiled at the reasoning level is still low. Of the 30 participants, only 9 of them correctly arranged the numeration questions at this level. An example can be seen in Figure 9 which uses evaluation questions to reveal students' ability in reasoning based on the illustrations provided. In this problem, students may not have to include the results of their calculations in answering questions, but in the process, they still have to calculate to find solutions to the questions as evidence of their answers.

The elevator already contains 5 people with a total weight of 380 kg. Outside the elevator, Andi, Rosa, and Joni will enter the same elevator. As the three of them got into the elevator, the elevator beeped from being overloaded. Then, Joni got out but the elevator still couldn't work. Seeing that Andi decided to get out of the elevator and asked Joni to go back into the elevator. After that the elevator can operate.

Why the elevator can operate after Andi out?

Figure 9: Sample question for reasoning level

Common errors that are known from the preparation of this question are misconceptions with questions for level N2, applying. The majority of questions are used in the form of questions as shown in Figure 3 or 4, but the answers requested only require students to solve arithmetic operations in real life. The form of the question was also the majority using true and false questions, for example determining which statements are true and false without asking students to express their rationalization.

DISCUSSION

As has been revealed in the background of the research that the minimum competency assessment is different from the assessment practices that have been carried out so far in learning. This change demands the readiness of the government, teachers, students, and parents of students who are certainly involved in the process (Nehru, 2019). Of course, this change is aimed at increasing the competence of students as the nation's generation in the 21st century that is superior and competitive in the midst of the rapid development of science and technology (Sukmayadi & Yahya, 2020). More precisely, it is from this minimum competency that improvements should be made based on the diagnostic results of students' thinking and learning in literacy and numeracy. These two competencies were previously known as "*calistung*" or reading and writing arithmetic as a basic ability that must be mastered by students (Muliastrini, 2020). The importance of "*calistung*" is the same as the importance of literacy and numeracy for students in solving problems in their daily lives.

Teacher competence plays an important role so that the objectives and functions of this minimum competency assessment are achieved. The intended competence is included in the preparation of test questions for the literacy assessment and numeracy itself in the class assessment. The illustration from the results of the assessment carried out nationally will be mapped on how the ability of students in elementary schools will be (Novita et al., 2021). The teacher's task is to follow up on the results in learning starting from determining the competencies to be improved, preparing learning designs and learning instruments, providing treatment or further development, and evaluating through classroom assessments (DeLuca et al., 2018). This process certainly requires different literacy and numeracy test instruments at each grade level with the same proportions according to the specified standards.

According to the results of the analysis in this study, the competence of teachers in preparing literacy and numeracy tests still needs to be improved. From the form of the questions, it can be seen that the teacher's skills in preparing questions still need to be addressed, namely in complex multiple-choice questions and matchmaking. The form of this question is indeed very different from the previous question form used in learning assessments which tend to be multiple choice or essay (Osnal et al., 2016). However, it can be observed that from a large number of true-false short essay questions and the stimulus questions used, the teachers made good progress in following the changes in the assessment itself. Although in some of the contexts that have been discussed, such as the use of illustrations, editorials, and the appearance of questions, it needs to be improved again to meet the test criteria as a measurement tool, namely having good readability (content, font size, color), not depending on previous questions, logical answer choices and homogeneous, the test stimulus (text, pictures, graphics, tables) is clear and functional and does not have multiple and negative meanings (Rust et al., 2003).

In terms of mastery of content, context, and cognitive level, the literacy tests that were prepared also did not meet the specified standards. In terms of literacy content, information texts are more widely used in learning than literary texts. Literary texts themselves need to be varied according to the scope of the material in each class, such as poetry, rhymes, historical fiction, fables, or other types of literary texts (Khair, 2018; Machromah, 2021). As with numeracy content, general materials such as numbers, measurements, geometry, and data have better accuracy than other materials. Furthermore, in terms of context, the personal context is indeed more dominantly used, especially for the lower class who are still focused on recognizing themselves according to the specified proportions, but the use of this context does need to be explored again, especially for science (Rohim, 2021).

The misconceptions of each cognitive level, in particular, need to be clarified so that the function of the minimum competency assessment can run ideally even though it does reflect on previous changes, for example, the 2013 Curriculum in Indonesia in the past few years requires a long journey until these changes can be implemented ideally. In this

condition, the findings of this study should be able to provide an overview to evaluate the next step in improving the competence of teachers as learning evaluators. Efforts were initiated and documented in this early year through training, development, and other efforts in preparing qualified teacher competencies to conduct assessments (Anas et al., 2021; Andikayana et al., 2021; Handayani et al., 2015).

In line with literacy, the numeration tests that are prepared also still need to be improved in terms of content, context, and cognitive level. In numeration itself, it is considered more difficult to compile contextual math problems in everyday life, considering that so far math tests tend to be in the form of numbers and formulas only. This fact is also reflected in the findings of this study how the accuracy of the preparation of reasoning questions is low. Students are accustomed to learning mathematics in the form of numbers and often do not know how to apply it in everyday life such as algebraic material for example (Maulidina & Hartatik, 2019). Questions like "what do we study fractions for, ma'am?" or "why do we need to learn to count when we can use a calculator?", are examples of questions that have the potential to stimulate students to think critically and creatively in solving mathematical problems in everyday life (Kong, 2014).

CONCLUSION

In this study, it can be concluded that the readiness of teachers in minimum competency assessment in terms of their competence in compiling literacy and numeracy assessment questions in elementary schools still needs to be improved, especially for literacy assessment at the reflect and evaluate level and for numeracy assessment at the reasoning level. In terms of the accuracy of the form of the question, it can also be seen that the form of the questions that have been prepared does not meet the proportion of forms required in the minimum competency assessment so that it is also necessary to improve the competence of teachers in compiling the form of questions such as in the form of complex multiple choice.

Based on the results of this study, the improvement and development of teacher competencies in minimum competency assessments in elementary schools is urgently needed. Teachers have an important role in implementing, using and following up on the results of the minimum competency assessment in the National Assessment in improving the quality of Indonesian education in the future. This research is limited to the analysis of the minimum competency assessment questions compiled by elementary school teachers according to the research location. Differences in teacher competencies may be different in other locations that deserve to be investigated in preparing good teacher competencies for minimum competency assessments. Furthermore, the results of this study also open up opportunities to conduct research that can improve and develop teacher competence in the assessment.

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