Two-Year Evaluation of AKMI (Indonesian Madrasah Competency Assessment) Implementation at Islamic Elementary School (Madrasah Ibtidaiyah)

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ARTICLE INFO	ABSTRACT
Article History Received: 04 December 2023 Accepted: 19 December 2023 Published: 31 December 2023 **Keywords**: AKMI, Proficiency Level, Science Literacy, Socio-Cultural Literacy	The Indonesian Madrasah Competency Assessment/Asesmen Kompetensi Minimum Indonesia (AKMI) is a form of assessment developed in schools under the auspices of the Ministry of Religious Affairs which refers to PISA (Programme for International Student Assessment) and the National Assessment (AN) system. This research aims to examine the improvement in AKMI results for Madrasah Ibtidaiyah/Islamic Elementary School (MI) students in 2021 and 2022. The approach used is quantitative descriptive and analyzed in percentage form at each level of proficiency. The author also conducted a Focus Group Discussion (FGD) in 2022 with several teachers in the AKMI Follow-up Instructor Candidate class. The results showed a shift in higher proficiency levels in all types of literacy: reading literacy, scientific literacy, numeracy literacy, and socio-cultural literacy. The increase in proficiency levels in these four types of literacy is influenced by massive Continuous Professional Development/Pengembangan Kompetensi Keberlanjutan (PKB) carried out through teacher working groups (KKG–MGMP/MGBK), working groups of madrasah heads, Kriteria Kelulusan Minimum/Graduate Minimum Criteria (KKM) and supervisory working groups (Pokjawas). In addition, the increase occurred due to the Technical Guidance/Bimbingan Teknis (BIMTEK) follow-up of AKMI results for MI teachers. Through this activity, BIMTEK participants can increase their knowledge about literacy.

INTRODUCTION

The literacy ability of Indonesian students at the global level is still at a low level. According to data from the Progress International Reading Literacy Study (PIRLS) in 2011, a world literacy test institution, Indonesia ranks 45th out of 48 participating countries in reading literacies, with a score of 428 out of an average score of 500 (Mullis et al., 2012). Likewise, the

results of the Program for International Student Assessment (PISA) survey in 2018, placed Indonesian students in 73rd place out of 79 countries participating in the survey, with a score of 371 out of an average score of 487 (Belfali, 2019). Based on this data, literacy has not become a culture among Indonesian students. Parental behaviour and cultural values certainly greatly influence this condition, but the main thing that determines is education policy (Crehan, 2016). The quality of the learning process will increase optimally if learning is guided by appropriate assessment activities (Skulmowski & Xu, 2022). This role is believed to be able to boost the quality of the learning process that is more oriented towards developing the potential, attitude, or character of students to have optimal literacy habits.

The Indonesian Madrasah Competency Assessment (AKMI) is a form of assessment developed in schools under the auspices of the Ministry of Religious Affairs. AKMI refers to PISA organized by the OECD and the National Assessment (AN) developed by the Indonesian Ministry of Education and Culture and Technology. If PISA measures students' academic performance in the fields of mathematics, science, and reading ability (Sizmur et al., 2019) and the national assessment measures cognitive levels in reading literacy and mathematical literacy (numeracy) (Muhdar, 2023), AKMI elaborates the distinctiveness of madrasah by carrying out four types of literacy: Reading Literacy, Numeracy Literacy, Science Literacy, and Socio-Cultural Literacy (Millah et al., 2022)

PISA defines reading literacy as understanding, using, and reflecting on written texts, to achieve one's goals, develop one's knowledge and potential, and to participate in society (Frønes et al., 2021). This is in line with the meaning of reading literature in AKMI, which is the ability that a student needs to have to understand, use, and reflect on written reading to achieve goals as needed, develop knowledge and potential, and participate in society (Direktorat Jenderal Pendidikan Islam Kemenag RI, 2023). AKMI reading literacy is measured to: (a) variety/genre of reading: narrative, exposition, and argumentation and reading format: forms, tables, or charts, (b) cognitive domains in the reading process, and (c) context of citation content and purpose of citation selection (Hidayat et al., 2023).

The second is Numeracy Literacy, which is the ability that a student needs to have to analyze and understand the meaning of text using reasoning through the application of calculation and measurement concepts that involve basic mathematical numbers or symbols contextually, both abstract and real (Megawati & Sutarto, 2021). In this case, it is displayed in various representations (graphs/tables/charts, or other representations), so that it can be used to interpret, predict, and/or make decisions. Numeracy literacy skills are the foundations of

lifelong learning and full participation in society. Both reading literacy and numeracy literacy empower students to make meaning, think critically and creatively, and reach their full potential.

The third is Science Literacy, which is the ability that a learner needs to have to use science knowledge (content knowledge, procedural knowledge, epistemic knowledge) to explain natural phenomena scientifically, evaluate and design scientific investigations, and interpret data and evidence scientifically (Jufrida et al., 2019). Science literacy is measured about: (a) contexts related to personal, local/national, and global issues, both past and current, that require an understanding of science and technology, (b) knowledge related to an understanding of facts, concepts, theories that underlie scientific knowledge and knowledge of how ideas are generated, and (c) competence related to the ability to provide explanations of phenomena promptly. scientific, evaluating and designing scientific investigations, and interpreting data and evidence scientifically (Rabiudin et al., 2023). Science literacy is important because it plays an essential role in various spheres of life. It has significant implications not only for individuals but also for society at large

The last literacy in AKMI is Socio-Cultural Literacy is the ability that a student needs to have to understand, accept, respect, and think critically and reflexively in responding to social realities and different cultural realities, and using them to increase knowledge and participate in community life. There are four aspects measured in socio-cultural literacy: (a) cross-socio-cultural awareness in the sense of accepting and respecting other socio-cultural realities, (b) local cultural awareness in the sense of accepting and respecting local culture, (c) reflection and critical thinking, and (d) personal skills as agents of change (Hidayatullah et al., 2022).

The AKMI question form consists of objective question forms, namely Multiple Choice, Complex Multiple Choice, Matching and Short Fill-Ins, while the AKMI component consists of content, cognitive processes and context. Details of the components of each literacy can be seen in Table 1.

Table 1. AKMI Literacy Components

Aspects	Literasi Membaca	Numeracy Literacy	Science Literacy	Socio-Cultural Literacy
Content	1. Teks Sastra 2. Informational text	1. Numbers and algebra 2. Geometry and measurement 3. Statistics and opportunities	1. Knowledge of Physical, living, earth and Space systems, technological systems 2. Procedural knowledge 3. Epistemic knowledge	1. National Commitment 2. Tolerance 3. Nonviolence 4. Accommodating and Inclusive

Cognitive Process Competence	1. Find information 2. Interpretation and integration 3. Evaluation and reflection	1. Understanding (L1) 2. Application (L2) 3. Reasoning (L3)	1. Explain phenomena scientifically (K1) 2. Evaluate and design scientific investigations (K2) 3. Interpreting scientific data and evidence (K3)	1. Comprehension (L1) 2. Application (L2) 3. Reasoning (L3)
Context	1. Personal 2. Scientific 3. Socio-Cultural 4. Religius	1. Personal 2. Saintifik 3. Sosial Budaya 4. Pekerjaan	1. Personal 2. Local-National 3. GlobalPersonal 4. Local-National 5. Global	1. Personal 2. Community 3. Religius

Source: RI's Pendis Pendis Results on AKMI Maintenance Post 2021 and 2022

Science literacy and socio-cultural literacy does not exist in the AN, and are measured in AKMI because social-culture literacy and science literacy are intended to support reading literacy and mathematical literacy. This literacy is important in the context of education in MI to build the socio-cultural and scientific character of Islamic students (Marlina & Halidatunnisa, 2022). Furthermore, these four literacies are also following 21st-century skills that require students to be able to keep up with the times that are full of challenges. By mastering 21st-century skills, students will have learning and innovation skills, skills to use and utilize information technology/media, and be able to work and survive using life skills (González-pérez & Ramírez-montoya, 2022)

The Indonesian Madrasah Competency Assessment (AKMI) at the MI level is important to diagnose the strengths and weaknesses of students in the four types of literacy. The results of this assessment will later be used by teachers and madrasah as evaluation material for planning further learning activities to improve the quality of learning. In the future, it is hoped that if education at the MI level is good, then education at the next levels will also improve.

Data on AKMI 2021 and 2022 results has been announced nationally on the https://portal-akmi.kemenag.go.id/ portal. For 2023 itself, it can be accessed, but it is still limited to internal parties of the Ministry of Religious Affairs, namely students, parents, teachers, heads of madrassas, and the Ministry of Religion. The general public can get information related to AKMI results on the same portal at a time to be determined later. The results of AKMI at the MI (Madrasah Ibtidaiyah) level in 2021 and 2022 will be analyzed in this paper to get a comprehensive picture of the two-year evaluation of AKMI implementation in madrasah throughout Indonesia.

METHOD

This study uses a quantitative descriptive method, which is to describe quantitative about the level of proficiency of AKMI results. The data sources are document studies based on the data on AKMI results at the MI (Madrasah Ibtidaiyah) level in 2021 and 2022. These data were analyzed in percentage form based on five proficiency levels, namely Need Assistance, Basic, Capable, Skillful, and Need for Creation Space. The study also conducted focused interviews at an FGD (Focus Group Discussion) with several informants, namely teachers in the IDS-08 class, which is one of the classes of Follow-up Instructor Candidates for the results of AKMI Science Literacy in 2022. The result of the FGD is RTL (Follow-up Plan) mapping which will be carried out based on the results of AKMI in 2021 and 2022. The data validity technique uses triangulation.

RESULTS AND DISCUSSION

AKMI 2021 was held on November 8-20, 2021, and was attended by 325,506 5th-grade students from Madrasah Ibtidaiyah (MI) spread across 34 provinces. This number reaches 93% of the total 350,135 MI students who are targeted at 50% of the number of MI throughout Indonesia (*Portal Kemenag.Go.Id*, 2021). The total number of MI in Indonesia is about 700,000 madrasahs.

The results of AKMI for all types of MI-level literacy in 2021 can be seen in Table 2 below,

Table 2. Percentage proficiency level each literacy AKMI 2021 Results

Proficiency Level	Reading Literacy	Science Literacy	Numeracy Literacy	Socio-cultural Literacy
Need Assistance	24	32	72	38
Basic	59	51	27	35
Capable	12	11	0	17
Skillful	4	5	1	9
Need creation space	1	1	0	1

Source : (*Portal Pangkalan Data AKMI*, n.d.)

AKMI 2022 was held on September 19 – October 1, 2022, and was attended by 314,644 grade V students from 12,056 Madrasah Ibtidaiyah (MI). This number is another 50% of MI that have not implemented AKMI in the previous year, spread across 34 provinces (Portal Pendis.Kemenag.Go.Id, 2022). The total number of MI in Indonesia is about 700,000 madrasahs. The AKMI results for all types of MI-level literacy in 2022 can be seen in Table 3 below,

Table 3. Percentage Proficiency Level each Literacy AKMI 2022 Results

Proficiency Level	Reading Literacy	Science Literacy	Numeracy Literacy	Socio-cultural Literacy
Need Assistance	6	5	5	5
Basic	45	26	25	33
Capable	42	59	62	55
Skillful	7	10	8	7
Need creation space	0	0	0	0

Source: (*Portal Pangkalan Data AKMI*, n.d.)

For scoring each level of proficiency is as follows,

Table 4. Proficiency and Scoring Level at AKMI

No.	Proficiency Level	Skor
1	Need Assistance	≤ 30 %
2	Basic	31 – 60 %
3	Clever	61 – 80 %
4	Skilled	81 – 90 %
5	Need creation space	91 – 100 %

Sumber : FRAMEWORK Asesmen Kompetensi Madrasah Indonesia (AKMI) 2022 (Hidayatullah et al., 2022)

Reading Literacy

From Table 2 and Table 3, the bar cluster charts for Reading Literacy at each proficiency level are as follows,
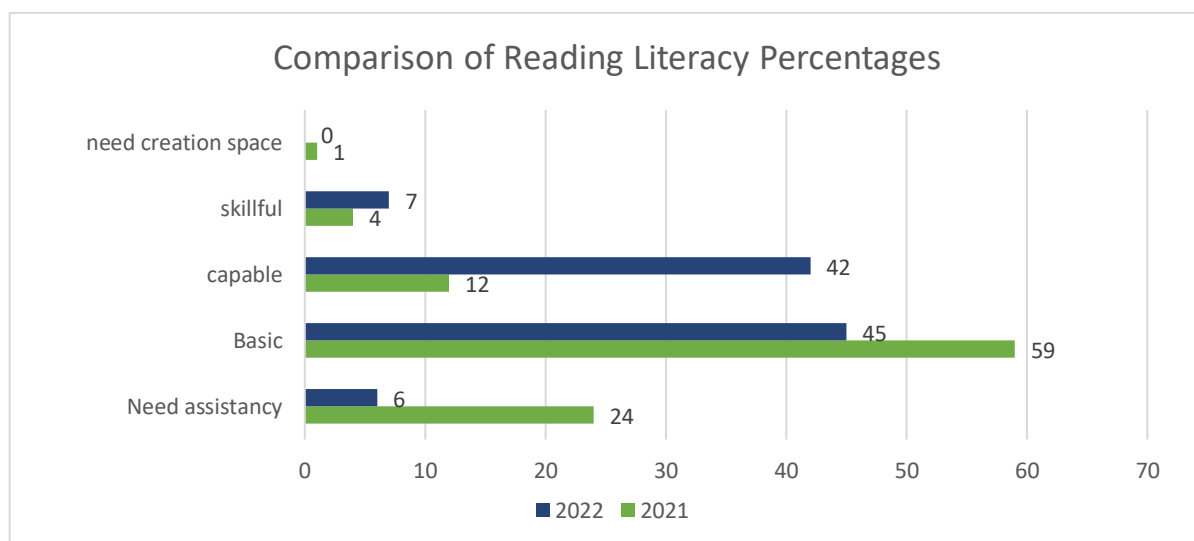

Figure 1. Bar Chart Comparison of Percentage Level of Reading Proficiency of MI Students 2021-2022

In reading literacy in both 2021 and 2022, it can be seen that the largest number of student proficiency levels are at the basic level of 59% (2021) and 45% (2022). The basic level means that the score obtained is in the range of 31–60%. This shows that most students can retrieve information from the text, but have not been able to fully understand the content of the text with a simple language level (Smith et al., 2021). For the MI level, informational texts contain a maximum of 200 words, and literary texts a maximum of 250 words. The number of test packages is 3 with text per package of about 5-6 texts. The questions were done for 75 minutes and totaled 27 questions in the form of Short Fill, Multiple Choice, Complex Multiple Choice, True False, and Matchmaking.

With this information, teachers are recommended to guide students to understand the content (Harmon et al., 2016). Teachers must be able to guide students to have resilience, reading interest, find implicit information to conclude the overall content, simple interpretation, how to compare, make connections between parts of the text, evaluate/reflect on the content of information texts (50-200 words) and literary texts (100-250 words) with content coverage and language level according to level.
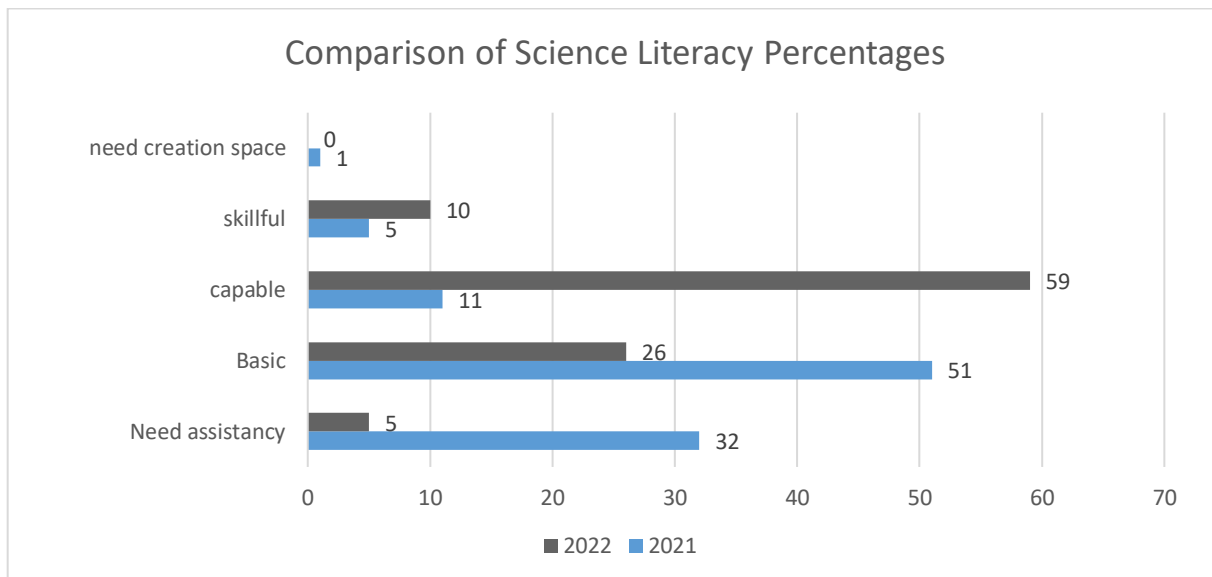
The trend of the second curve of reading literacy data, both in 2021 and 2022, includes the normal curve as shown in Figure 2.
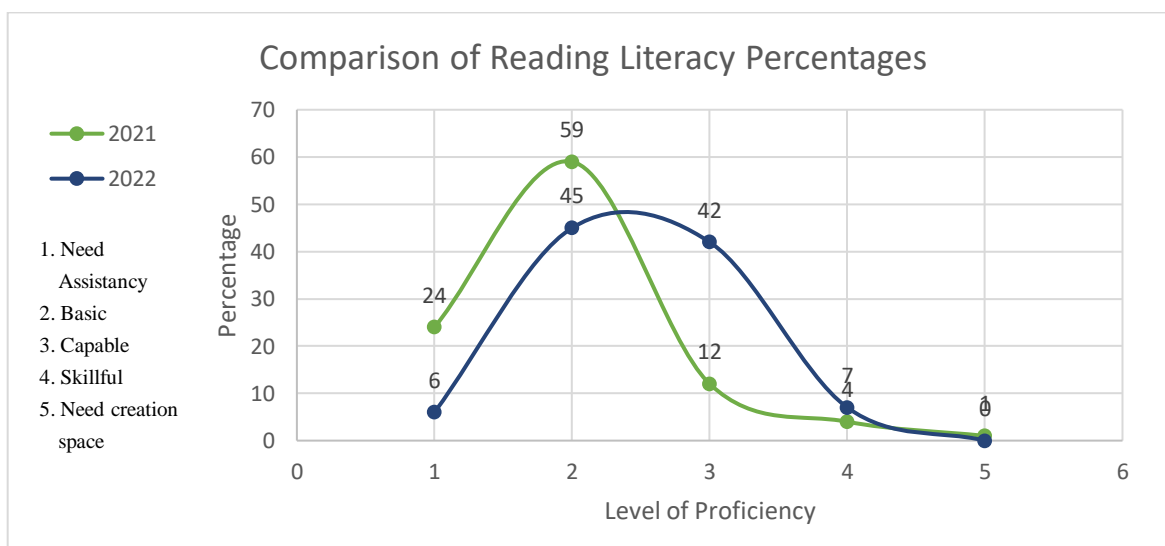
Figure 2. Normal Curve Percentage Comparison of MI Student Reading Proficiency Level 2021-2022

Science Literacy

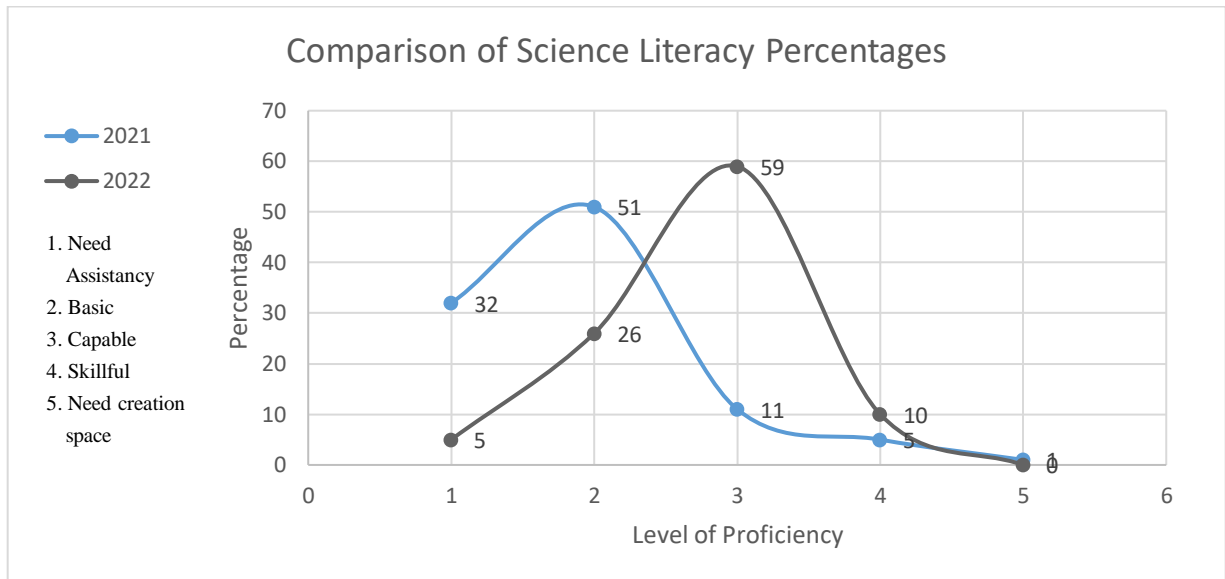From Table 2 and Table 3 can be created a bar cluster diagram as follows.

Figure 3. MI Student Science Literacy Level Percentage Comparison Bar Chart 2021-2022

In science literacy, the largest number of students' proficiency levels in 2021 was at the basic level at 51% while in 2022 the largest number was at the proficiency level at 59%. Basic level means that students have been able to make, justify predictions, and initiate hypotheses about science content knowledge but have not been able to identify and distinguish questions investigated scientifically. In 2022, the ability that has not been achieved 2021, namely the ability to identify and distinguish questions investigated scientifically, is reflected in 59% of scientific literacy skills.

The basic level means that the students' score is in the range of 31–60% while the capable level is in the range of 31–60%. This shows that there is a jump in proficiency level from the basic level in 2021 to the capable level in 2022. This is following those mentioned by Nurlaili et al., 2023 who said that the proficiency level of science literacy in MI students at 5th grade increased to medium level (capable) from low level (basic). Capable means that most students can identify and distinguish questions that are investigated scientifically in a 50% personal and 50% local-national context. The questions were done for 75 minutes with a total of 36 items containing knowledge about facts, concepts, and principles in science.

With this information, in 2022 teachers are recommended to train students to ask scientific questions based on observed facts, as well as be trained to make simple investigations. The trend of the second curve of science literacy data, both in 2021 and 2022 including the normal curve as shown in Figure 4.
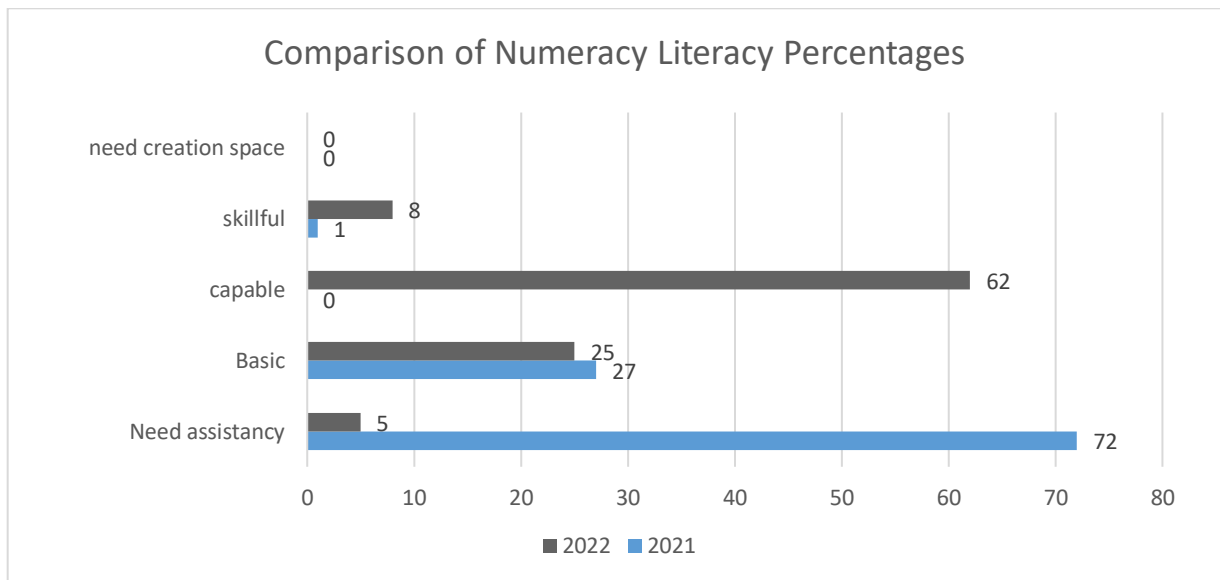
Figure 4. Normal Curve Percentage Comparison of Science Literacy Proficiency Level of MI Students 2021-2022

Numeracy Literacy

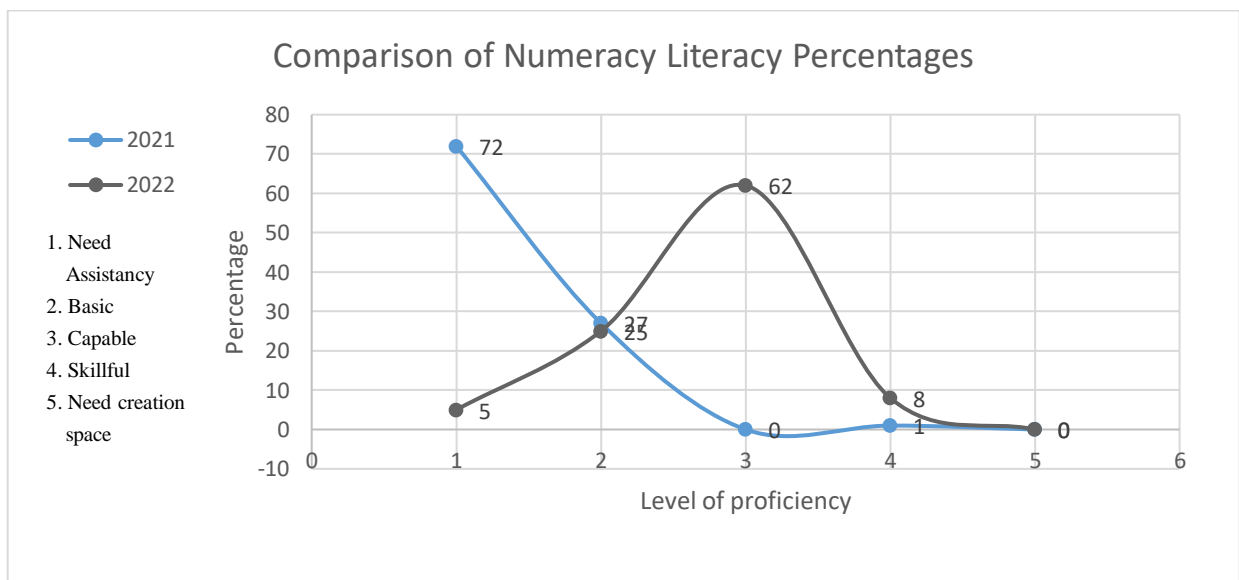From Table 2 and Table 3 can be created a bar cluster diagram as follows,

Figure 5. Percentage Comparison of Numeration Literacy Proficiency Level of MI Students 2021-2022

In numeracy literacy, the largest number of student proficiency levels in 2021 is at the level of needing assistance as much as 72% while in 2022 at the proficiency level as much as 59%. The level of proficiency needs assistance, meaning that students have not been able to

represent mathematical objects or situations on the scope of simple material. Being able to show that students have been able to represent mathematical objects or situations with a moderate level of difficulty in the scope of simple material.

The level of need assistance is in the range of 0-31% while the level of capability is in the range of 61-80%. This shows that there is a jump in the level of proficiency from the level of needing assistance in 2021 to being capable in 2022. This is following what Baharuddin, 2022 mentioned that the competency increase of students is in line with increasing teacher competency in several aspects: literacy AKM knowledge, numeracy, preparation of article-based AKM questions, and preparation of HOTS questions. The AKMI questions are done for 90 minutes with a total of 36 items containing scientific knowledge in the form of tables, diagrams, infographics, or geometry illustrations. With this information, in 2022 teachers are recommended to assist students to be better able to apply mathematical knowledge, analyze and solve problems in more diverse contexts.

Different from the curves in reading literacy and science literacy which form normal curves in the two years of data collection, the curve trend in numeracy literacy in 2021 does not look like a normal curve, but in 2022 the curve is normal. This may happen because of learning loss in a pandemic situation. The curve is shown in the following figure 6.

Figure 6. Normal Curve Percentage Comparison of Numeration Literacy Proficiency Level of MI Students 2021-2022

Socio-Cultural Literacy

From Table 2 and Table 3 can be created a bar cluster diagram as follows in Figure 7.
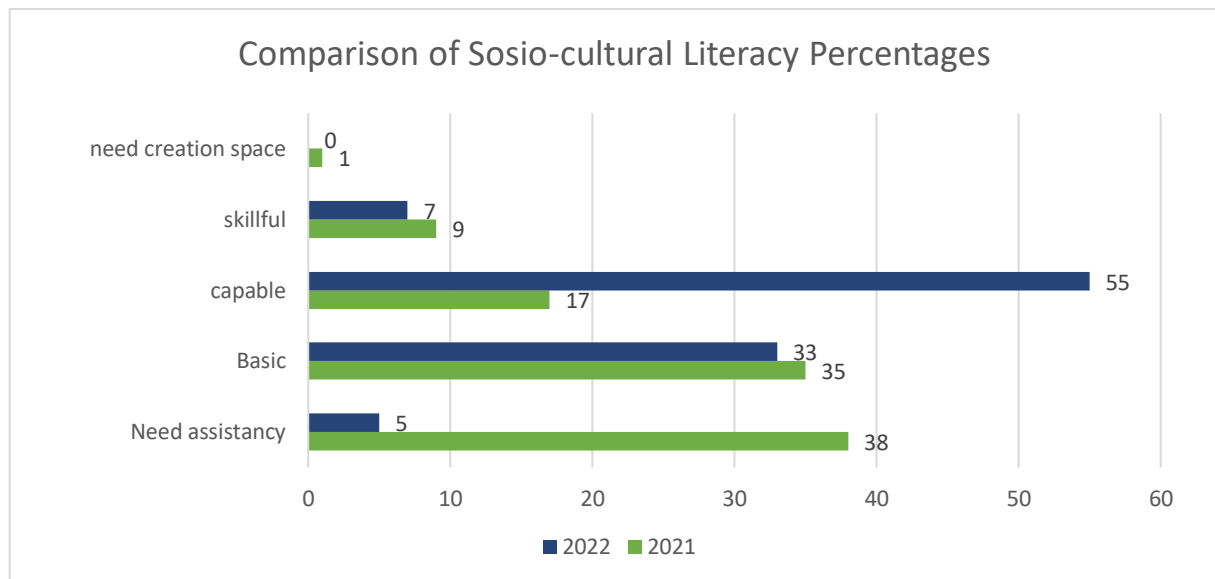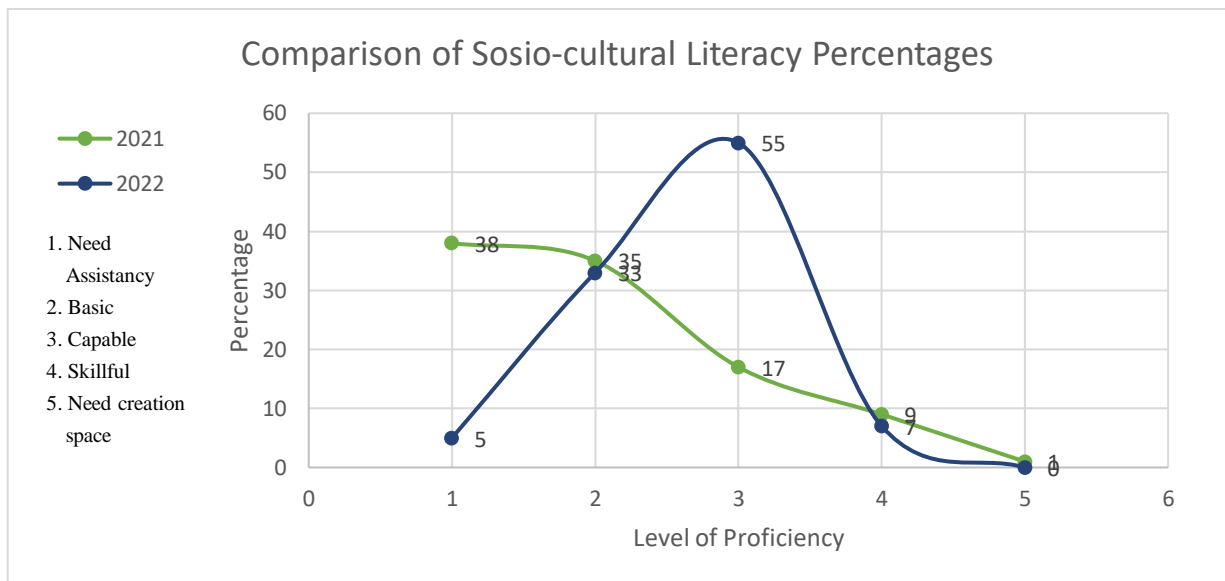

Figure 7. Bar Chart Comparison of Percentage of Socio-Cultural Literacy Proficiency Level of MI Students 2021-2022

In socio-cultural literacy, the largest number of student proficiency levels in 2021 are at the level of needing assistance as much as 38%, and the basic level as much as 35%, while in 2022 the largest number is at the proficiency level as much as 55%. The level of proficiency that needs assistance means that the score obtained is in the range of 0-30%, the basic level means 31-60% and the proficient 61-80%. This shows that there is a jump in proficiency level from the level of need for mentoring and elementary level in 2021 to proficient in 2022. Being proficient in socio-cultural literacy means that students have been able to find and understand, apply, analyze, evaluate, and create procedural knowledge about religious moderation and the life of the nation and state within the scope of neighbors.

With this information, in 2022 teachers are recommended to plan contextual learning, meaningful learning directly on learning resources and involve students actively, demonstration, and role play. Teachers must develop innovative and contextual learning media. Teachers also need to develop LKPD and literacy-based assessment instruments. The scope of learning is emphasized on families, neighbors, and madrasah. Much learning is associated with topics related to national commitment, tolerance, and inclusion accommodation. Teachers also need to make competency progress reports.

Just like the numeracy literacy curve, the curve in socio-cultural literacy in 2021 does not

look like a normal curve, but in 2022 the curve is normal just like in numeracy literacy caused by learning loss in the pandemic situation. The curve is shown in Figure 8.

Figure 8. Normal Curve Percentage Comparison of Socio-Cultural Literacy Proficiency Level of MI Students 2021-2022

From the discussion above, it can be concluded that in general, the level of proficiency in AKMI results in all literacy fields increased in 2022 compared to those in the previous year. Some increased by 1 level of higher proficiency level (such as in reading literacy and science literacy) and some increased by 2 levels of higher proficiency level (such as in numeracy literacy and socio-cultural literacy). This significant difference is influenced by several factors. Since 2021, Continuous Professional Development (PKB) for Teachers, Madrasah Heads, Supervisors, Librarians, Laboratory Assistants, candidates for Madrasah Heads, and prospective Supervisors in public and private madrassas, spread across 34 massive provinces, has been carried out. This activity cannot be separated from the cooperation between the Ministry of Religion and the World Bank (World Bank). This project is called MEQR (Madrasah Education Quality Reform) which is aimed to develop the quality of madrasah in the digital era (Isnaniah & Islahuddin, 2022). This activity is carried out by providing strengthening and development through working groups (KKG – MGMP / MGBK – KKM, and Pokjawas). Development of learning resources for teachers, assessment of teacher competencies, and strengthening teacher capacity through tiered training.

In continuous professional development activities (PKB), teachers listen to the delivery of material from resource persons who have been trained, and then mentored by tutors who

have been selected in certain maple fields. For example, in Indonesian subjects, the tutor delivers teaching materials in the form of modules. After delivering the material and practicing a learning model, teachers are scheduled to practice it directly in their respective schools with a mentoring period (Ali Sofyan et al., 2022)

This teacher PKB activity also goes through several stages of monitoring and evaluation, namely the evaluation carried out by madrasah supervisors through a report submitted by the KKG to the City Ministry of Religion at the end of the year. Evaluation is also carried out by madrasah heads and supervisors by looking at teacher competence after participating in the KKG. In general, teachers after participating in the KKG already know the educational foundation and educational regulations, can master and develop teaching materials, can compile teaching programs, and can evaluate learning (Kamaliah, 2023).

Another factor that affects AKMI results is the existence of Technical Guidance (BIMTEK) follow-up AKMI results for madrasah teachers. Through this activity, BIMTEK participants can increase their knowledge about literacy. Participants know the definition of literacy, and evaluation of learning as a follow-up to the results of AKMI, especially those related to the four types of literacy tested in AKMI. Participants were also provided with examples of literacy learning videos, examples of each literacy question in AKMI and its discussion, as well as the preparation of learning scenarios involving literacy. Through this BIMTEK activity, participants can improve their skills in planning, implementing, and evaluating literacy learning in the classroom. Thus, this activity can improve the competence of four types of participant literacy that can be applied in classroom learning (Lessy, 2022).

Unfortunately, the data in this study was only limited to 2021 and 2022. It is a good idea to wait for the release of 2023 data and the implementation of AKMI in 2024 as the last year of cooperation between the Ministry of Religious Affairs (Kemenag) and the World Bank. If the data is complete we may get more comprehensive data.

CONCLUSION

The proficiency level of MI students in the Indonesian Madrasah Competency Assessment/Asesmen Kompetensi Madrasah Indonesia (AKMI) in 2021 has increased in 2022. In reading literacy, students' proficiency levels shifted from the level of need for assistance and elementary level in 2021 to elementary and proficient levels in 2022. This shows that most students can retrieve information from the text, but have not been able to fully understand the

content of the text with a simple language level. Teachers are recommended to guide students to understand the content and find implicit information to conclude the overall content, simple interpretation, compare, make connections between parts of the text, and evaluate/reflect on the content of informational texts and literary texts according to level.

In science literacy, students' proficiency levels shifted from basic level (2021) to proficiency level (2022). This means that students already can identify and distinguish questions that are investigated scientifically. For this reason, teachers are recommended to train students to ask scientific questions based on observed facts, as well as be trained to make simple investigations.

In numeracy literacy, students' proficiency level shifts from the level of needing assistance (2021) to the level of proficiency (2022), meaning that students have been able to represent mathematical objects or situations with a moderate level of difficulty in the scope of simple material. Teachers are recommended to assist students to be better able to apply mathematical knowledge, and and analyze and solve problems in more diverse contexts.

In socio-cultural literacy, students' proficiency levels shift from the level of need for assistance and basic (2021) to the level of proficiency (2022). This means that students have been able to find and understand, apply, analyze, evaluate, and create knowledge about religious moderation and the life of the nation and state within the scope of neighbors. Teachers are recommended to plan contextual learning, and meaningful learning directly on learning resources and involve students actively, through demonstration and role play. The scope of learning is emphasized on families, neighbors, and madrasah and is linked to topics related to national commitment, tolerance, and inclusive accommodation.

The increase in proficiency levels in the four types of literacy is influenced by Continuous Professional Development (PKB) for Teachers, Madrasah Heads, Supervisors, Librarians, Laboratory Assistants, prospective Madrasah Heads, and prospective Supervisors which is carried out through working groups (KKG – MGMP / MGBK – KKM, and Pokjawas). Another factor that affects the results of AKMI is the existence of Technical Guidance (BIMTEK) follow-up of AKMI results for madrasah teachers participating in AKMI. Through this activity, BIMTEK participants can increase their knowledge about literacy.

Unfortunately, the data in this study was limited to 2021 and 2022. It's a good idea to wait for the release of 2023 data and the implementation of AKMI in 2024 as the last year of cooperation between the Ministry of Religious Affairs and the World Bank. By gaining the whole data from 2021 until 2024 we will get more comprehensive data.

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