MINIMUM COMPETENCY ASSESSMENT (AKM) IN KAMPUS MENGAJAR 5 ACTIVITIES THROUGH COMPUTER-BASED SCHOOL ASSESSMENT

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Abstract

Computer-based school evaluation is the method of evaluating and analyzing the performance of schools utilizing technology. In the post covid era, the Ministry of Education and Culture created a new rule in the form of a computer-based national assessment (ANBK). This research was a survey research. The participant of this research was the students of the fifth grade students at SDN Bumirejo Bojonegoro Regency. Minimum Competency Assessment or AKM evaluated two skills: reading comprehension (literacy) and numeracy. The result showed that the literacy and numeracy of the students were still low. The students' understanding of AKM material is felt to be challenging.

Keywords: Minimum Competency Assessment (AKM), Computer-based School Evaluation

Introduction

The goal of education is to support students' full growth in accordance with their potential, skills, and values (Letina, 2020). High academic achievement could be used to identify an ideal self-potential (Khan et al., 2013). High academic accomplishment has thus evolved into a measure of pupils' ability to comprehend the subject matter. That could be done by promoting innovative teaching strategies, learning media, and media for learning (Cimermanová, 2018; Surjanti et al., 2018).

One of the numerous industries impacted by the development of IT is Educational field. The growth of IT has also considerably enhanced the creation of IT-based learning material (Valverde- Berrocoso, et al., 2020). Several information technologists and academicians have created many alternatives to learning media. Yet, there have been no interesting advances in the creation of IT-based learning material, continuing the status quo in higher education. Due to the workload at their universities, some instructors continue to be hesitant to create instructional materials. However, many professors continue to use traditional lecturing models when teaching (Herman et at., 2014). The instructors'

skills in creating educational media are limited. Education is increasingly focusing on effective technological development (Ratheeswari, 2018). According to Rafi (2018), the improvement of IT is a crucial issues when it comes to the growth of economy of the nations. Every aspect of life, including education, would be impacted by the enormous progress of technology. Ahmadi et al (2020) stated that technology advancement benefits education by making it easier to offer instructional resources to the students.

Much with the rest of our daily lives, educational settings have altered. Modern technology advancements have made the change more pronounced and rapid. In order to study more effectively and efficiently, the students or learners have made use of a range of tools and strategies. A number of factors can have an impact on teaching in educational environments. Conducting current technologies in educational settings is one of these situations. According to Freiman (2014), Technology is the actual "hardware" (such as computers, phones, and other mobile devices) combined with "software" (such as applications) that act as user interfaces. Information and communication technologies (ICT) provide remarkable infrastructure for knowledge transmission to a variety of learners in a range of settings and in different ways. Information and communication technology (ICT) significantly affects human existence in a variety of ways. The consolidation of information and technology towards teaching process could raise student achievement levels. At both the national and international levels, numerous action plans were adopted, and ICT teacher development received significant financing. Most of the teacher education programs have updated their curricula to prepare future educators to be proficient users of modern technologies (Mellati&Khademi, 2014; Hartoyo, 2019).

Starting with the primary and secondary education evaluation system's final stage. There are growing issues with how the final stage of evaluation is being implemented. The Covid-19 pandemic (outbreak) has particularly affected Indonesia, making it necessary to conduct teaching and learning activities online. A computer-based national assessment will take the role of the National Examination as of 2020, based on the Ministry of Education and Culture. The National Assessment aspires to signal a paradigm shift in how elementary and

secondary education are evaluated. Little face-to-face instruction was implemented during the Covid-19 epidemic, so Education and Culture Ministry created latest rule through computer-based national assessment (ANBK).

Computer-based school evaluation is the method of evaluating and analyzing the performance of schools utilizing technology. Data on student accomplishment, teacher effectiveness, and school administration are collected, stored, and analyzed using a variety of software applications, tools, and approaches. The main objective of computer-based school evaluation is to deliver accurate and trustworthy data that may be used to raise the standard of instruction in classrooms. Theability to gather and evaluate data in real-time is one of the main benefits of computer-based school evaluation. This enables them to rapidly spot the areas in which the kids are having difficulty and develop solutions. Additionally, computer-based school evaluation enables teachers to monitor each student's development over time, enabling them to spot patterns and trends in the kids' performance..

In the classroom and in situations requiring extensive testing, modern computer technologies provide a large range of choices to enhance education evaluation, user involvement, sound, and dynamic audio. Beyond the restrictions of conventional exams using paper and pencil, computer-based assessment substantially widens testing options and offers adaptiveness to individual test-takers as well as virtually real-time score reporting. Because of the technological advancements, CBA provides the possibility for better characteristic formative evaluation that might closely resemble educational objectives and activities, build a significant classroom contribution, and possibly provide illuminating contrasts by extensive assessment. It would appear which technologies should be prepared to get benefits of these new opportunities for creative in evaluation by creating robust latest evaluation and procedures as the digital divide narrows.

Bennet (2011) stated that people frequently envision a procedure that involves meticulously compiling and examining data about kids when they hear the word "assessment." Assessment, however, also includes the interpretation and application of information regarding student performance and comprehension in relation to educational goals. There are two common types of assessment:

Summative and formative. Using assessment data for cumulative and/or high-stakes objectives, such as for value, promotions, and certificate, is known as summative assessment(Shute and Rahimi, 2016). Formative evaluation, on the other hand, is meant to assist in teaching and learning. Often, this assessment is given more frequently than summative form (Shute, Hansen, & Almond, 2008).

Exams that are administered electronically to students which referred to as "computer-based assessments" (CBA). The implementation of CBA aims to improve the effectiveness of administrating, grading and ensuring the consistency of evaluation methods. Moreover, Parshal, et. al. (2000) computer-based assessment have enabled test administration advancements not feasible with paper and pencil tests, including included modifications and adjustments and the paradigm of adaptive computer testing. Bull and McKenna (2004) define computer-based assessment, which includes all types of assessment—whether formative or summative—as a piece of software used to handle the process of establishing, gathering, scoring, and giving feedback for educational goals. Increased speed in Grading and evaluation because to computer-based evaluation in education is just one of many advantages. Grading and evaluation can be done more quickly and effectively with computer-based assessment, which saves teachers and instructors time and energy. This enables teachers to concentrate on other facets of instruction, like class planning and student involvement. Online students, instructors, and programs can also benefit greatly from computer-based testing, particularly in terms of administration and grading. Computer-based assessment can therefore help to speed up the evaluation process, saving time and increasing overall effectiveness.

A further advantage of computer-based assessment is increased objectivity and accuracy in judgments. Teachers can save time and grade data objectively through the aid of computer formative test, allowing the students more concentrate on teaching. Additionally, since it removes the possibility of bias and human mistake, computer-based assessment can enhance student performance on summative exams. Computer-based assessment can therefore result in assessments that are more accurate and objective, which can eventually improve learning outcomes.

Moreover, better feedback and chances for individualized learning are provided by computer-based assessment. Stakeholders can get a better comprehension of the students' strengths and weaknesses with the support of real-time reporting of results from technologically based formative assessments. This can assist teachers in giving pupils individualized feedback and support, which can result in better learning results. Moreover, formative evaluations can promote the systematic use of data, enhancing the knowledge that teachers and students have access to. Because of this, computer-based evaluation can offer individualized learning opportunities, improving student learning results.

Articles XVI, 57, 58, and 59 of Law Number 20 of 2003 dealing with educational system, which specifies the rules for Indonesia's basic and secondary education's final evaluation system (Education and Culture Ministry, 2013). "In order to hold education providers accountable to interested parties and control the quality of education nationally, an evaluation is conducted. Regular, fair, transparent, and systematic assessments that take into account the attainment of national learning criteria are conducted by impartial institutions (Novita, Mellyzar, & Herizal, 2021). Activities for evaluating student learning are conducted as an essential step in the educational process. Yet not all forms of assessment can be used to gauge academic performance. Education may be precisely quantified with the right measurement apparatus. At all educational levels and types, evaluation activities are conducted in student forums as well as formal and informal forums (Sari et al, 2021).

Little face-to-face instruction was implemented during the Covid-19 epidemic, Education and Culture Ministry created a latest rule in the form of a computer-based national assessment (ANBK). There will be benefits and drawbacks to modifying the policy depending on any argument. We are all aware that, prior to the creation of ANBK, the government created the National Examination as a means of student evaluation. In Indonesia, students in elementary through high school are measured and evaluated for their knowledge through the National Examination (Ghan and Zharfa, 2020). Education professionals disagree on and debate the National Examination. Before, during, and after the implementation process, issues develop with the National Exam (Sinambela, Suhada, and Susilo, 2020).

Complete assessment findings that could raise Indonesian education standards are not provided by the National Examination. For this reason, the National Examination was replaced with a National Assessment. The National Assessment is a quality evaluation program for every school, madrasah, and equity program at the primary and secondary education levels, according to Asesmen (2020). The effectiveness of the educational unit is assessed using the students' basic learning outcomes, the effectiveness of the educational and learning process, and the learning environment inside the educational unit. This data was gathered using three main tools, including the Minimum Competency Assessment (AKM), which evaluates two skills: reading comprehension and numeracy.

A person is considered to be literate if they possess the knowledge necessary for all tasks that require literacy in order to perform effectively in society, together with the skills learned via reading and writing that allow them to implement independently. In campaign of literacy motion, literacy defined as the capacity to gain access to, grasp, and apply information in intelligent ways by engaging in activities that involve reading, watching, listening, writing, and communicating. The government-sponsored literacy initiative aims to transform schools into learning institutions with lifelong readers as its members. The school literacy movement is a collaborative endeavor including stakeholders and students, and it is coordinated by the Primary and Secondary Education Directorate. Since literature enables learners to receive evidence, It is one of the literacy tasks that, during the learning level, cannot be separated from the world of education.

With National Assessment, Indonesia's primary and secondary schools are trying to completely document the manner and standard of learning results. The standard regarding the instructional process in institutes of learning is improved using a data from the national assessment. The effectiveness of student learning outcomes may be enhanced. National Assessment questions are distributed electronically rather than on paper. ANBK is only for students in grade V at the SD/MI education level, grade VIII at the SMP/MTs education level, and class XI at the SMA/MA/SMK level. ANBK is meant for a sample of students at each educational level.

Technology advancements undoubtedly make it very simple for educators to conduct remote exams and evaluations. Teachers can use a number of current systems to carry out online student assessments. Quizzes, individual assignments, and other online testing formats are all acceptable forms of assessment (Fadlilah, Budi, & Widodo, 2021). Yet, there are challenges for those who live far away and don't have access to the internet, making it challenging for them. One of Indonesia's widespread disparities is the difficulty accessing the internet for educators in rural and remote places. This is due to the fact that Indonesia still has a large number of places without appropriate internet access. As a result, there is a breakdown in the flow of information between parents, instructors, and pupils. In order to provide effective learning environments for distance learning, alternative assessments and evaluations are required (Azzahra, 2020).

Coordination between school administrators, teacher boards, parents/guardians, and education staff is necessary to guarantee that ANBK is carried out smoothly and to its fullest potential. Computers, servers, laptops/PCs, internet networks, and the hiring of supervisors and technicians are among the infrastructure tools needed to set up ANBK. Schools serve as official educational institutions that offer services to teachers and students in the form of specialized counseling and training as they get ready for the implementation of ANBK. The school and Education Office work closely together to collaborate.

Methodology

Participants in this study were elementary school children, specifically *Sekolah Dasar* (*SD*) *Negeri* Bumirejo Bojonegoro. One of the elementary schools using the MBKM curriculum program is this one. The location of the school's MBKM campus teaching program was taken into consideration when choosing the research participants. A test that incorporates components of observing, inquiring, reasoning, attempting, and communicating was the instrument employed in this study. All of the participants took this test. Test results for the pupils made up the data.

Research Findings

The result of pre-test AKM in literacy and numeracy at SDN Bumirejo can be shwon on the table 1 and 2 below.

Table 1. Table of the literacy result of the 5th students at SDN

Bumirejo

No	Competencies	Percentage of right choice
1	Finding the explicit information (who, when, where, why, and how) from the fictional text	75%
2	Finding the explicit information (who, when, where, why, and how) from the fictional text	38%
3	Finding the explicit information (who, when, where, why, and how) from the fictional text	50%
4	Finding the explicit information (who, when, where, why, and how) from the fictional text	100%
5	Finding the explicit information (who, when, where, why, and how) from the fictional text	50%
6	Finding the explicit information (who, when, where, why, and how) from the fictional text	13%
7	Assessing the suitability between the illustration and the content of fictional text.	13%
8	Summarizing feelings and character traits as well as other intrinsic elements such as story telling, events in the story based on detailed information in fictional texts	13%
9	Developing inferences regarding the content of the text to determine whether a comment/question/statement is relevant to the content of the text in a fictional text	100%
10	Associating the fictional text with personal experiences	88%
11	Identifying and explaining the problems of the characters in fictional text	13%
12	Finding the explicit information (who, when, where, why, and how) from the informational text	88%
13	Finding the explicit information (who, when, where, why, and how) from the informational text	88%
14	Finding the explicit information (who, when, where, why, and how) from the informational text	75%
15	Finding the explicit information (who, when, where, why, and how) from the informational text	0%
16	Finding the explicit information (who, when, where, why, and how) from the informational text	25%
17	Assessing the suitability between the illustration and the content of informaional text.	
18	Explaining the main idea and supporting details in informational text	63%
		50%
19	Explaining the main idea and supporting details in informational text	13%
20	Explaining the main idea and supporting details in informational text	88%

Based on the table above, the result of literacy skill pre-test in AKM from the 5th students at SDN Bumirejo showed that there were only two parts that all the students answered in right choice. The mean percentage was 52%, the mode was 13%, and the median was 50%. It indicates that students' reading levels are still low. Efforts are still needed to encourage more students to become proficient.

Table 2. Table of the numeracy result of the 5th students at SDN Bumirejo

No	Competencies	Percentage of right choice
1	Solving simple equations using multiplication/division operations only (in a child-friendly form)	13%
2	Solving simple equations using multiplication/division operations only (in a child-friendly form)	50%
3	Solving simple equations using multiplication/division operations only (in a child-friendly form)	63%
4	Solving simple equations using multiplication/division operations only (in a child-friendly form)	13%
5	Recognizing simple number patterns and continues those patterns	63%
6	Recognizing simple number patterns and continues those patterns	0%
7	Using addition/subtraction/multiplication/division of two whole numbers (max. Six digits), including calculating the square of a whole number (max. Three digits) (including estimating operating results)	25%
8	Using addition/subtraction/multiplication/division of two whole numbers (max. Six digits), including calculating the square of a whole number (max. Three digits) (including estimating operating results)	38%
9	Understanding fractions and positive mixed fractions with one or two digit denominators (e.g 5/12, 2⅗).	38%
10	Understanding fractions and positive mixed fractions with one or two digit denominators (e.g 5/12, 2⅗).	63%
11	Calculating the perimeter and area of a rectangle if you know the length and width, and calculating the length or width of you know the are/perimeter and one of its sides.	63%
12	Getting to know the standard units for length/distance (km, m, cm, mm), weigth (gr, kg), time (second, minute, hour)	50%
13	Using addition/subtraction/multiplication/division of two whole numbers (max. Six digits), including calculating the square of a whole number (max. Three digits) (including estimating operating results)	38%

No	Competencies	Percentage of right choice
14	Using addition/subtraction/multiplication/division of two whole numbers (max. Six digits), including calculating the square of a whole number (max. Three digits) (including estimating operating results)	50%
15	Understanding whole numers (max. Six digits) (includes number symbols, place value concepts-generalizations)	88%
16	Understanding whole numers (max. Six digits) (includes number symbols, place value concepts-generalizations)	50%
17	Comparing two fractins, including comparing fractions and whole numbers.	0%
18	Comparing two fractins, including comparing fractions and whole numbers.	13%
19	Calculating the perimeter and area of a rectangle if you know the length and width, and calculating the length or width of you know the are/perimeter and one of its sides.	25%
20	Calculating the perimeter and area of a rectangle if you know the length and width, and calculating the length or width of you know the are/perimeter and one of its sides.	63%

Based on the table above, the result of numeracy skill pre-test in AKM from the 5th students at SDN Bumirejo showed that there were only one parts that 7 students (88%) answered in right choice. The mean percentage was 40%, the mode was 63%, and the median was 44%. It indicates that students still have poor numeracy skills.

The result of post-test AKM in literacy and numeracy at SDN Bumirejo can be shwon on the table 3 and 4 below.

Tabel 3. Table of the literacy result in post-test of the 5th students at SDN Bumirejo

No	Competencies	Percentage of right choice
1	Finding the explicit information (who, when, where, why, and how) from the fictional text	100%
2	Finding the explicit information (who, when, where, why, and how) from the fictional text	100%
3	Finding the explicit information (who, when, where, why, and how) from the fictional text	88%
4	Finding the explicit information (who, when, where, why, and how) from the fictional text	88%
5	Finding the explicit information (who, when, where, why, and how) from the fictional text	100%
6	Finding the explicit information (who, when, where, why, and how) from the fictional text	38%
7	Assessing the suitability between the illustration and the content of fictional text.	100%
8	Summarizing feelings and character traits as well as other intrinsic elements such as story telling, events in the story based on detailed information in fictional texts	25%
9	Developing inferences regarding the content of the text to determine whether a comment/question/statement is relevant to the content of the text in a fictional text	100%
10	Associating the fictional text with personal experiences	100%
11	Identifying and explaining the problems of the characters in fictional text	88%
12	Finding the explicit information (who, when, where, why, and how) from the informational text	100%
13	Finding the explicit information (who, when, where, why, and how) from the informational text	100%
14	Finding the explicit information (who, when, where, why, and how) from the informational text	100%
15	Finding the explicit information (who, when, where, why, and how) from the informational text	88%
16	Finding the explicit information (who, when, where, why, and how) from the informational text	88%
17	Assessing the suitability between the illustration and the content of informaional text.	100%
18	Explaining the main idea and supporting details in informational text	100%
19	Explaining the main idea and supporting details in informational text	100%
20	Explaining the main idea and supporting details in informational text	0%

Based on the table 3 above, the result of literacy skill post-test in AKM from the 5th students at SDN Bumirejo showed that there were some parts that all the students answered in the right choice. The mean percentage was 85.15%, the mode was 100%, and the median was

100%. It indicates that the students' reading levels are high, eventhough it still one items that no one of the students choose the right choice.

Table 4. Table of the numeracy result of post-test of the 5th students at SDN Bumirejo

No	Competencies	Percentage of right choice
1	Solving simple equations using multiplication/division operations only (in a child-friendly form)	38%
2	Solving simple equations using multiplication/division operations only (in a child-friendly form)	38%
3	Solving simple equations using multiplication/division operations only (in a child-friendly form)	50%
4	Solving simple equations using multiplication/division operations only (in a child-friendly form)	63%
5	Recognizing simple number patterns and continues those patterns	63%
6	Recognizing simple number patterns and continues those patterns	63%
7	Using addition/subtraction/multiplication/division of two whole numbers (max. Six digits), including calculating the square of a whole number (max. Three digits) (including estimating operating results)	75%
8	Using addition/subtraction/multiplication/division of two whole numbers (max. Six digits), including calculating the square of a whole number (max. Three digits) (including estimating operating results)	50%
9	Understanding fractions and positive mixed fractions with one or two digit denominators (e.g 5/12, 2⅗).	88%
10	Understanding fractions and positive mixed fractions with one or two digit denominators (e.g 5/12, 2⅗).	63%
11	Calculating the perimeter and area of a rectangle if you know the length and width, and calculating the length or width of you know the are/perimeter and one of its sides.	63%
12	Getting to know the standard units for length/distance (km, m, cm, mm), weigth (gr, kg), time (second, minute, hour)	25%
13	Using addition/subtraction/multiplication/division of two whole numbers (max. Six digits), including calculating the square of a whole number (max. Three digits) (including estimating operating results)	63%
14	Using addition/subtraction/multiplication/division of two whole numbers (max. Six digits), including calculating the square of a whole number (max. Three digits) (including estimating operating results)	88%
15	Understanding whole numers (max. Six digits) (includes number symbols, place value concepts-generalizations)	75%
16	Understanding whole numers (max. Six digits) (includes number symbols, place value concepts-generalizations)	13%
17	Comparing two fractins, including comparing fractions and whole numbers.	100%
18	Comparing two fractins, including comparing fractions and whole numbers.	75%
19	Calculating the perimeter and area of a rectangle if you know the length and width, and calculating the length or width of you know the are/perimeter and one of its sides.	50%
20	Calculating the perimeter and area of a rectangle if you know the length and width, and calculating the length or width of you know the are/perimeter and one of its sides.	25%

Based on the table above, the result of numeracy skill post-test in AKM from the 5th students at SDN Bumirejo showed that there were only one parts that all the students (100%) answered in right choice. The mean percentage was 59%, the mode was 63%, and the median was 63%. It means that the numeracy skills of the students is enough.

The comparison from mean, median, mode in both before and after of literacy numeracy tests from the fifth grade students.

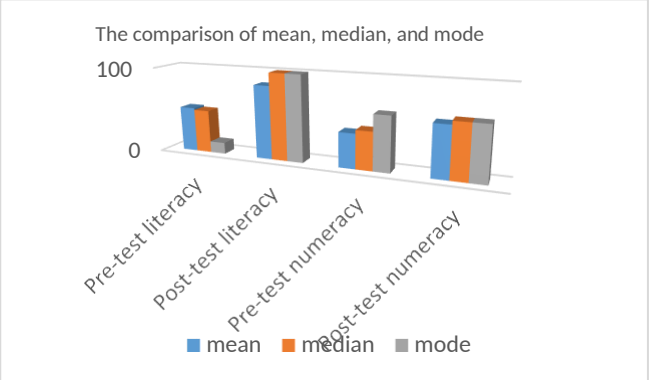

Chart 1. The mean, median, and mode comparison

Based on the chart 1, it can be concluded that there was an improvement in literacy of the fifth students at SDN Bumirejo in all aspects. But, in numeracy skill, there was a little improvement in the post test. Efforts are still needed to encourage more students to become proficient. There were some challenging when conducted the pre-test AKM such as the internet network. The proctor (students' of KM5) and the teacher frequently make adjustments to the laptop's setup so that it can connect to the AKM server, the lack of student laptop availability so they divided into two days, and the students' poor comprehension of the AKM questions

Gambar 1.1 Simulasi AKM

This picture showed about the preparation for pre-test AKM in SDN Bumirejo. Because of the lackness media, so the students of KM 5 brought their own laptop in order to do the AKM test.

Gambar 1.2 Mencetak Kartu siswa

The picture 1.2 was the sample of students test card that contains their identity.

Gambar 1.3 AKM sesi 1

Gambar 1.4 AKM Sesi 2

Gambar 1.5 Membantu siswa mengisi Username & Password

The picture 1.3 up to 1.5 were the process of conducting the pre-test of AKM in literacy and numeracy skills.

Conclusion

Computer-based assessment offers pupils additional options to advance their learning. Nonetheless, educators must approach cautiously, especially when formative and summative assessments are involved. Computer-based assessments use things that are generated at random from a pool of sources. With the advancement of computer technology in recent years, computers have become a part of our daily lives. The study of computer-

aided production and auxiliary teaching is becoming increasingly in-depth every day. Several schools and institutions have many multimedia language labs, and many researchers have worked hard to advance our understanding of computer-assisted English teaching. In contrast, participants in computer-assisted English language assessment don't accomplish anything. Although computers play a significant role in English language testing, there is little study in this area. This calls for our English teachers to continuously raise their computer proficiency levels, become proficient in the fundamentals of computer-assisted English teaching and testing as soon as possible, raise the caliber of our education and teaching, and establish enabling conditions for our higher education to interact with higher education around the globe.

The conclusion based on research evaluating the implementation of AKM in remote elementary schools, specifically at SDN Bumirejo, experienced a number of challenges faced by teachers, college students of KM 5, and students, including signal issues, students' abilities and skills in operating laptops, laptop facilities available in schools have not been able to meet students' needs, and the level of students' understanding of AKM material is felt to be challenging. Instructors in rural locations are far from internet signal networks, and students still don't have a strong understanding of IT (Information and Technology).

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