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Research Article

Evaluation in Assessment of Student Competence: Application of the Indonesian Student Competency Assessment (AKSI) in Elementary Schools

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Abstract: The purpose of the study was to determine the application of the Indonesian Student Competency Assessment application at the elementary school level, to assess the readiness of teachers, to find out the ease of guidance and the suitability of literacy and numeracy learning modules with assessment questions, and to find out the obstacles experienced by teachers during the process of using the Indonesian Student Competency Assessment (AKSI) application. The total population is 188, with 170 students and 18 teachers teaching literacy and numeracy lessons using the purposive sampling technique—data collection using questionnaires and documentation. Data analysis in this study used descriptive statistics. The results showed that the Indonesian Student Competency Assessment application at the elementary school level had been implemented well. Research with sub-variables of the Indonesian Student Competency Assessment application at three elementary schools for students showed that 44.67% were in the excellent category. The readiness of teachers to apply the AKSI application obtained data that 84.80% were in the ready and very ready category and the very ready category was balanced with the ready category. The ease of guidance and the suitability of the literacy and numeracy learning modules with the assessment questions provided by the Indonesian Student Competency Assessment (AKSI) application for teachers obtained data that showed 38.98% were in the excellent category. Teachers who experienced obstacles when using the AKSI application showed that 35.71% were in the high category.

Keywords: Assessment Questions; Literacy; Numeracy; Learning Modules.

1. Introduction

In today's world, globalization and the advancement of science and technology are not optional. This is a form of changing times that affect people's lives. One of the effects felt by the world of education is required to improve the quality of quality graduates continuously along with the times. In this regard, the rapid development of information technology is a challenge the world of education must face [1], [2]. Every nation needs to take anticipatory steps by preparing graduates of every level of education to create a golden Indonesian generation as nation-building workers. Indonesia is in the information age, identical to the literacy era. The literacy era refers to the ability to engage, communicate, and actualize communication orally and in writing [3]. The term literacy is explained in the Dictionary of Problem Words and Expressions that literacy is related to letters [4]. Therefore, it can be said that people who have literacy skills are people who can read and write.

The current era, which is the era of the industrial revolution 4.0, is experiencing rapid development in science and technology, and people are continuously

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improving their abilities in the world of education. Education is a form of progress. An advanced society is usually indicated by the advancement of a quality education zone. One of the characteristics of this quality education is the literate community resources. The literate society must be supported by the ability to use language skills consisting of four aspects: listening, speaking, reading, and writing. The younger generation's success can be improved by their literacy level, which is a key indicator [5].

The ability to read and write has a significant impact on the success of the younger generation. Good reading abilities will help the younger generation comprehend spoken and written information. In life, mastery of literacy in the younger generation is crucial in supporting their competencies. Competencies can support each other if the younger generation can master literacy, or it can be interpreted that the younger generation is literate and can sort out information that can support their success in life.

Reading and writing skills are only one aspect of literacy; they can also refer to knowledge of politics, technology, critical thinking, and environmental sensitivity. According to Kirsch & Jungeblut [6], in the book Literacy: Profile of America's Young Adult, the ability to use the information to acquire knowledge that will benefit society is known as literacy. This can make someone literate that the nation needs so that Indonesia can rise from adversity and even compete and live on par with other nations. The significance of literacy knowledge considerably enhances the likelihood of successfully resolving various issues. Through literacy skills, a person not only gains knowledge but can also document a piece of experience that will become a reference in the future.

Indonesia is faced with the Asean Economic Community (AEC). In realizing the AEC, the Indonesian people, especially young intellectuals as agents of change, must improve themselves so that they become the correct answer to answer global challenges. One way is to improve self-quality to respond to global challenges by establishing a quality development parameter following the dynamics of the times. Self-quality can be formed through a piece of information by understanding, using, analyzing, and transforming it.

Learning is a fundamental process for forming children's character [7]. It does not only involve the role of the teacher as a party providing information. Students must also be required to be more active and contribute to their teachers and schoolmates so that the knowledge conveyed is perfectly absorbed. In the teaching and learning process, the teacher plays a vital role as an evaluator to determine the quality of the teacher. Education has now become a necessity for humans, where education plays a vital role in this modern-day life to live life. Education is a conscious effort to develop humans and society based on specific thoughts. The conscious effort is to develop the potential in everyone as much as possible. This can be done by the family, community, and government, which can be carried out through guidance, exercises, and teaching activities that can be carried out at school and outside school.

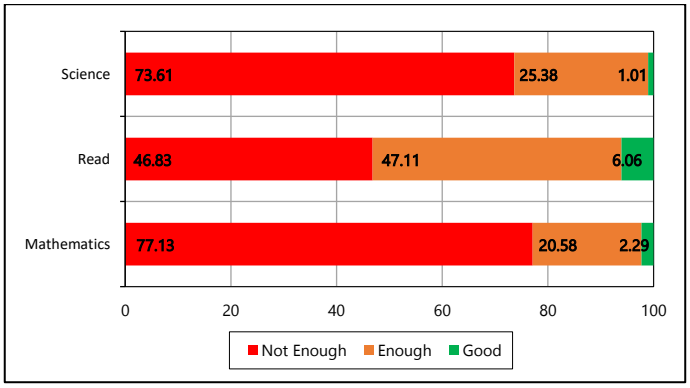

Figure 1. Indonesian Student Competency Assessment Results (AKSI) [8].

The Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia in the Indonesian National Assessment Program (INAP) or the Indonesian Student Competency Assessment (AKSI) tests the reading, math, and science skills of fourth-grade elementary school students. Specifically, in reading, the results were 46.83% in the poor category, 47.11% in the enough category, and only 6.06% in the good category [8]. The Indonesian Student Competency Assessment (AKSI) results show that students' reading skills are still relatively low. This shows that the educational process has not been maximally able to develop the competence and interest of students in knowledge.

The Indonesian Student Competency Assessment Application (AKSI) contains reading and numeracy modules, which help diagnose student competency attainment quickly. This application uses a formative assessment to determine students' strengths and weaknesses. Assessment can help teachers analyze students' abilities on essential topics and enrich school formative assessment [9], [10]. According to Black and William, formative assessment is the overall activity of teachers and students to provide information as feedback to improve the quality of teaching and to learn in the classroom [11].

The AKSI application has two types: school ACTION and survey AKSI. The tools provided for school ACTION are in the form of a formative assessment module by the Educational Standards, Curriculum and Assessment Agency, Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia. These tools are

used to determine students' abilities in Mathematics, Science, and Language. AKSI survey, mapping educational attainment programs to monitor the quality of education regionally/nationally through a longitudinal survey. Android has become a prevalent technology that makes it easy for users to do their work. Many smartphone users are the most significant challenge and opportunity in the world of education. Smartphones are becoming a trend nowadays, so AKSI applies them to smartphones. Utilizing smartphones makes it easier for teachers to give Android-based exams and can be involved in classroom learning [12]–[14].

In general, assessment or evaluation is a systematic system to determine the level of success and efficiency of a program. Evaluation in the education system is one of the most important activities carried out regularly at specific periods, among others, to monitor the quality of education and assist the teaching and learning process in the classroom [15]. Therefore, measuring tools are needed. Students' understanding of the subject matter can be known by someone based on the evaluation results. Therefore, we need an assessment model that is not only based on the exam process in achieving student success in the learning process, but it is essential to have an evaluation that can determine the level of student success in the learning process [16]. For this reason, it is necessary to have an assessment model that can measure and assess student learning abilities in the learning process.

In his capacity as an evaluator, the teacher gathers data or information about the degree to which students are successful in the learning process that has been carried out. The teacher also has the authority to judge the degree to which students can comprehend the curriculum's subject matter based on data on student learning outcomes. To determine the success level, it is necessary to have a media that can provide an actual assessment according to the facts. Therefore, in the learning process, a media is needed that does not only assess the test process in achieving student success in the learning process. Each assessment model certainly has the characteristics of each assessment and can be applied to specific subjects.

2. Research Methods

2.1. Location and Research Approach

The implementation was carried out for two months, from January 2022 to February 2022. The research location was at three elementary, North Galesong, Takalar, and South Sulawesi Province. This research uses descriptive and quantitative methods. Explanatory aims to describe the problem, picture, or painting in a systematic, factual, accurate technique [17], [18].

2.2. Population and Sample

The population of this study used all students in three elementary schools. The total population is 188, with 170 students and 18 teachers teaching literacy and numeracy lessons.

The sampling method is done through the purposive sampling technique. This technique is used because it is more accessible and practical and helps researchers obtain samples per the study's objectives [19], [20].

Sampling was done with the criteria of schools, teachers, and students, namely:

a. Schools that have or have applied the Indonesian Student Competency Assessment application;
b. Teachers who teach literacy and numeracy lessons;
c. Students who fall into the top 5 categories in the class;
d. Students who are fluent in reading;
e. Those who are willing to be involved in this research.

2.3. Data Collection Technique

This stage contains data collected from research. The collection techniques used are as follows:

2.3.1. Questionnaire

Data collection uses a questionnaire in the form of questions and is equipped with answers. The questionnaire in this study was aimed at high-level students in the top 5 (five) categories in the class. The data was collected using descriptive statistical analysis techniques. Through this analysis, the validity, and students' responses to the application for schools were obtained. In using this questionnaire, the scale starts from (Strongly Agree/Very Good) score 5, (Agree/Good) score 4, (Doubtful/Good Enough) score 3, (Disagree/Not Good) score 2, and (Strongly Disagree/Very Not Good) score 1.

2.3.2. Documentation

To ensure the questionnaire data used documentation method to reveal the truth of the data. The documentation contains document searches. The document starts from the data of students in grade 4, grade 5, and grade 6, as well as a list of teachers who teach literacy and numeracy lessons.

2.4. Research Instruments

An instrument for research is any tool used in conducting research, most commonly for measurement and data collection. It can take the shape of a questionnaire, a set of test questions, or an observation sheet [21]. This stage uses observation sheets and questionnaire sheets. The content of the questions relates to the variables of the study. The instrument grid is as follows:

Table 1. The Instrument Content Grid, Observation Sheet, and Questionnaire Sheet, As Well As the Contents of The Questions Related to The Research Variables

Variables	Indicator	Item
1. Application of the Indonesian Student Competency Assessment application at the elementary school level	1. Program Aspect	• AKSI app view • AKSI app features
	2. Communication Aspect	• Encouragement from the school • The importance of implementing the AKSI application in school
	3. Function Aspect	• Availability of question coverage offered by the AKSI application • Ease of use of the AKSI app
2. Preparation of teachers in the teaching process by applying the Indonesian Student Competency Assessment application at the elementary school level	1. User Aspect	• Knowledge and preparation for using the AKSI application
	2. System Aspect	• Specification and convenience of the AKSI application system
3. Ease of guidance and suitability of learning modules with assessment questions provided by the Indonesian Student Competency Assessment Application at the elementary school level	1. Program Aspect	• AKSI app view • Facilities provided by the AKSI Application
	2. Function Aspect	• Availability of appropriate modules and question • Student learning abilities after using the AKSI application
4. Problem or obstacles experienced during the process of using the Indonesian Student Competency Assessment application at the elementary school level	1. Program Aspect	• Use of the AKSI app • Device requirements • Student ability
	2. User Aspect	• How much quota is needed • Large AKSI app storage space • Difficulties experienced by teachers

2.5. Data Analysis Technique

The employed method of analysis is descriptive statistical analysis. Using descriptive statistical analysis, the data were analyzed by describing the obtained information. This analysis consists of the mean, median, mode, standard deviation, and frequency distribution.

3. Result and Discussions

3.1. Application of Indonesian Student Competency Assessment (AKSI)

Data on the application aspects of ACTION were taken through a questionnaire of 10 (ten) statement items. The results of data processing on aspects of the application of the Indonesian Student Competency Assessment application are in Table 2.

Table 2. Descriptive Analysis Test Data on The Application of The Indonesian Student Competency Assessment.

N	Min	Max	Mean	Median	Modus	STD
450	10.00	50.00	4.00	4.00	4.00	0.900

Based on the results of the descriptive analysis test data on the application of the Indonesian Student Competency Assessment in Table 2, the minimum score is 10. The maximum value is 50.00, the average value is 4.00, the median value is 4.00, the mode value is 4.00, and the standard deviation is 0.900. The distribution of the implementation of AKSI can be seen in Figure 2.

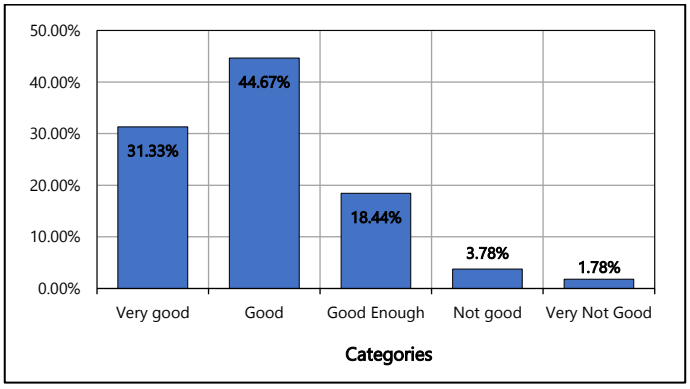

Figure 2. Distribution of Aspects of the Application of the Indonesian Student Competency Assessment (N=450)

Based on the data on the distribution of the application of the Indonesian Student Competency Assessment in Figure 2, a total of 31.33% (141 respondents) in the very good category, 44.67% (201 respondents) in the good category, 18.44% (83 respondents) in the good enough category, 3.78% (17 respondents) in the not good

category and 1.78% (8 respondents) with very not good category. It can be concluded that the Indonesian Student Competency Assessment application at the elementary school level is in a good category.

3.2. Teacher Readiness to Apply the Indonesian Student Competency Assessment (AKSI).

Data on teacher readiness to implement the AKSI application were collected through a questionnaire of 5 (five) statement items. The data processing results on teacher readiness to apply the AKSI application are shown in Table 3.

Table 3. Descriptive Statistics Aspects of Teacher Readiness Applying the AKSI Application

N	Min	Max	Mean	Median	Modus	STD
85	5.00	25.00	4.20	4.00	4.00	0.897

Based on the results of the descriptive analysis test data on the teacher readiness to apply the AKSI application in Table 3, the minimum score is 5.00, The maximum value is 25.00, the average value is 4.20, the median value is 4.00, the mode value is 4.00, and the standard deviation is 0.897. The distribution of the frequency of teacher readiness can be seen in Figure 3.

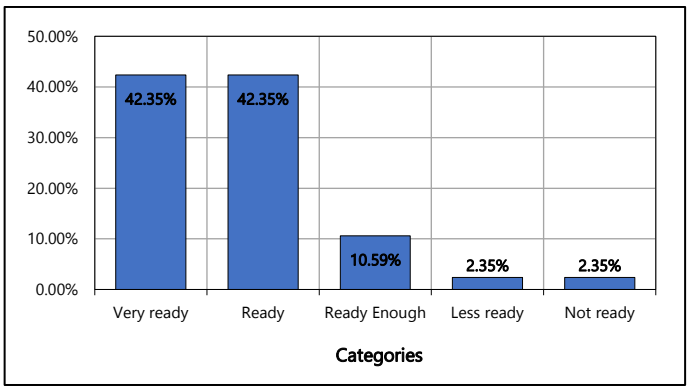

Figure 3. Distribution of Teacher Readiness Frequency Applying the AKSI Application (N=85).

Based on the data on the distribution of the application of the Indonesian Student Competency Assessment in Figure 3, a total of 42.35% (36 respondents) in the very ready category, 42.35% (36 respondents) in the ready category, 10.59% (9 respondents) in the ready enough category, 2.35% (2 respondents) in the less ready category and 2.35% (2 respondents) with not ready category. It can be concluded that the teacher's readiness to apply the Indonesian Student Competency Assessment application at the elementary school level in the ready and very ready category where the percentage of the very ready category is balanced with the ready category percentage of 42.35% (36 respondents).

3.3. Ease of Guidance and Compatibility of Modules with Assessment Questions

The data on the aspects of the ease of guidance and the suitability of the module with the assessment questions were taken through a questionnaire of 7 (seven) statement items. The data processing results in the ease of guidance and the module's suitability with the assessment questions can be seen in Table 4.

Table 4. Descriptive Statistics Ease of Guidance and Suitability of Modules with Assessment Questions

N	Min	Max	Mean	Median	Modus	STD
180	7.00	35.00	4.08	4.00	4.00	0.948

Based on the results of the descriptive analysis test data processing of the sub-variable ease of guidance and the module's suitability with the assessment questions in Table 4, the minimum value is 7.00. The maximum value is 35.00, the average value is 4.08, the median value is 4.00, the mode value is 5.00, and the standard deviation is 0.948. The frequency distribution of the ease of guidance and the suitability of the module can be seen in Figure 4.

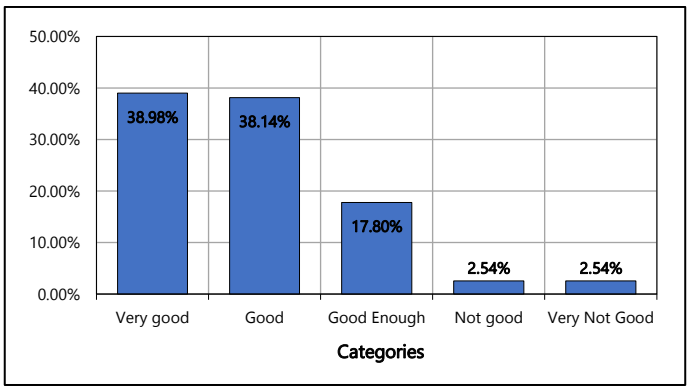

Figure 4. Distribution of the Ease of Guidance and The Suitability of The Module with The Assessment Questions (N=180).

Based on the distribution data for the ease of guidance and the conformity of the module with the assessment questions in Figure 4, a total of 38.98% (46 respondents) in the very good category, 38.14% (45 respondents) in the good category, 17.80% (21 respondents) in the good enough category, 2.54% (3 respondents) in the not good category and 2.54% (3 respondents) with very not good category. It can be concluded that the ease of guidance and the suitability of the learning module with the assessment questions provided by the Indonesian Student Competency

Assessment application at the elementary school level are in the very good category.

3.4. Problems or Obstacles experienced by Teachers

Data on aspects of problems or obstacles experienced by teachers were taken through a questionnaire of 10 (ten) statement items. The results of data processing on aspects of problems or obstacles experienced by teachers can be seen in Table 5.

Table 5. Descriptive Statistics Aspects of Problems or Barriers experienced by Teachers

N	Min	Max	Mean	Median	Modus	STD
168	10.00	50.00	3.41	3.00	3.00	0.981

Based on the results of the descriptive analysis test data on the problems or obstacles experienced by the teacher in Table 5, the minimum score is 10.00. The maximum value is 50.00, the average value is 3.41, the median value is 3.00, the mode value is 3.00, and the standard deviation is 0.981. The distribution of problems or obstacles can be seen in Figure 5.

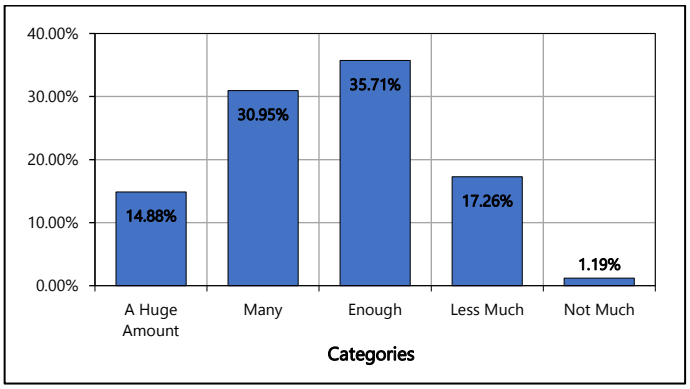

Figure 5. Distribution of Problems or Barriers Experienced by Teachers (N=168).

Based on the data on the distribution of problems or obstacles experienced by teachers in Figure 5, a total of 14.88% (25 respondents) in a huge amount category, 30.95 % (52 respondents) in the many categories, 35.71% (60 respondents) in the enough category, 17.26% (29 respondents) in the less much category and 1.19% (2 respondents) with very not much category. It can be concluded that the problems or obstacles experienced by teachers during the use of the Indonesian Student Competency Assessment application at the elementary school level are in an enough (35.71%) category. This can be said because the AKSI application is new, so teachers and students have not encountered many problems or obstacles experienced while using the AKSI application for schools.

Assessment is an essential part of today's education system. Assessment serves as an individual evaluation system to compare performance between individuals. The purpose of assessment is to collect relevant information about student performance or progress or determine students' interest in making judgments about their learning process [22], [23]. After receiving this information, the teacher or teacher can reflect on the level of achievement of each student, as well as the specific tendencies of a group, and then adjust it according to the teaching plan they will make [24], [25].

A systematic process in collecting data on a child that serves to see the abilities and difficulties faced by a person at that time as material to determine what is needed. Based on this information, the teacher can develop a realistic learning program following the objective reality [26]. According to Lidz [27], collecting information to obtain a child's psychological profile includes symptoms and intensity, the constraints experienced by their strengths and weaknesses, and the vital role children need.

Assessment can strengthen the effectiveness of teaching and learning systems [28]. It also promotes understanding of teaching as a formative process that develops over time with student feedback and input. A good assessment can create a good classroom environment as well. Assessment and related feedback are very important in the student learning process. However, it is possible to find that in the learning process, more time is spent in the areas of assessment related to quality assurance rather than its potential to support student learning.

A well-designed assessment has many benefits besides being used to measure student progress because assessment can also be a means to involve students in the learning process they are undergoing. Ideally, teachers should aim to support active learning rather than assess learning to ensure that the assessment process is an integral part of students' education.

4. Conclusion

Based on the research that has been done, the following conclusions can be drawn:

a. The Indonesian Student Competency Assessment application at the elementary school level in Takalar Regency has been implemented well. In addition, some students feel that the difficulty level of the questions offered by the AKSI application is higher than what they know.
b. The readiness of teachers at three elementary schools in the teaching and learning process by applying the Indonesian Student Competency Assessment application has been very well prepared.

c. The ease of guidance and the suitability of the literacy and numeracy learning module with the assessment questions provided by the Indonesian Student Competency Assessment application are accessible and very appropriate.
d. The problems or obstacles teachers experienced at three elementary schools during the Indonesian Student Competency Assessment application were quite large.

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