The Effectiveness of Traditional Game Methods Assisted by Augmented Reality in Improving Students' Literacy Abilities

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ABSTRACT

This research aims to determine the effectiveness of implementing the Mallogo learning method assisted by Augmented Reality in creating an optimal literacy cultural climate for students at UPT SMP Negeri 2 Salomekko. This research is a type of quantitative descriptive research using a research design, namely a quasi-experimental non equivalent control group design, using a purposive sampling technique (teacher consideration). The population in this study included 60 students in class VIII A and VIII B. The sample in this study was divided into two classes, with 30 students in class VIII A as the experimental class and 30 students in class VIII B as the control class. The focus of this research is the application of the Mallogo learning method assisted by Augmented Reality in creating an optimal literacy cultural climate for students which is applied in the experimental class. The data analysis used in this research is the gain score test to determine how much the students' reasoning abilities have increased before and after implementing the learning process. The results of this research show that there is an increase in students' literacy skills before using learning methods Mallogo is assisted by Augmented Reality and after using learning methods Mallogo assisted by Augmented Reality with average pretest results 47 become 79 on the posttest with gain score for the experimental class of 82% while the control class is equal to 72%.

Keywords: *Learning methods, Mallogo Games, Augmented Reality, Literacy Ability*

1.   INTRODUCTION

The low literacy skills of Indonesian students are generally caused by learning activities that are not yet oriented towards literacy development (Zaenudin, 2022; Styawan and Arty, 2021), and students tend to receive more rote lessons than practice, including composing (Muteti, et al. , 2021; Larsen and Jang, 2021). Meanwhile, literacy skills are an important ability that every student must have to master various subjects (Astuti Rusilowati and Subali, 2021). This is in line with the independent curriculum which focuses on essential material for each subject to provide space/time for developing competencies, especially fundamental competencies such as literacy and numeracy in more depth.

Therefore, seeing the importance of literacy skills in the learning process is not in line with the facts in the field. Literacy skills in Indonesia in general are still very low, students are still unable to decipher the content of reading and usually students just read without knowing the content of the reading (Mirizon, et al., 2021; Damanik and Herman, 2021). Low literacy skills can also be seen in the results of the National Examination for Indonesian language subjects in Bone Regency which obtained a score of 60.94% and 65.69% nationally (Puspendik, 2019). This is in accordance with the AKM results obtained from the 2022 Public Education Report Card which shows that the literacy skills of Bone Regency Middle Schools/Equivalents are still below the minimum competency with the learning quality index still at the disorientation level. One of the factors is that there is no cognitive activation support provided (Pusmendik, 2022). This was also seen in class VIII students at SMPN 2 Salomekko, where as a result of interviews with the class VIII Indonesian teacher, Mrs. Rosniati, S.Pd, information was obtained that students experienced difficulties in collecting information, processing information and communicating information. Apart from the results of interviews with Indonesian language teachers, weak literacy skills can also be seen from the results of the summative assessment of students in discussion text subjects showing an average score below the AKM (60%). Therefore, learning innovation is very necessary (Hendrayana, et al., 2022) to create a cultural climate of literacy. In order to create a positive literacy culture climate among students, a creative and innovative approach is needed. One approach that can be used is to utilize traditional games as a means of increasing students' interest in reading and literacy culture.

Traditional games have high cultural values, such as cooperation, dexterity and honesty, which can be integrated into literacy activities. One of the traditional games that has high cultural values is the traditional game Mallogo. The traditional Mallogo game has several stages including mappassadia (preparation), makkareso (investigation), masseddi (discussion) and massangnging (delivery of results). These four stages can be integrated into the learning process in detail, by describing each stage and applying the concepts contained therein to the learning context.

However, to optimize the potential of traditional games in creating a positive literacy cultural climate, creative and innovative technology is needed (Pasaribu, 2023), so in this research, we will combine learning with the use of learning media such as Augmented Reality to increase student motivation and learning outcomes. . Augmented Reality allows users to interact with very realistic digital environments (Setyawan and Fatirul 2019; Kanti et.al., 2022). The use of Augmented Reality technology can be an interesting and effective way to introduce traditional games to students and increase interest and motivation to learn local culture. Augmented Reality and local wisdom can be combined to improve literacy skills through interactive and fun learning. Augmented Reality can help visualize abstract concepts, making it easier for students to understand them. Meanwhile, local wisdom can help introduce and maintain local culture and traditions while providing a positive impact on learning. The combination of Augmented Reality and local wisdom in learning has great potential to help solve the problem of low literacy skills and make learning more fun and efficient. Therefore, the integration of local wisdom and Augmented Reality in learning is

an alternative solution that can be used to overcome the problem of students' literacy skills. Augmented Reality can help visualize abstract concepts, making it easier for students to understand them. Meanwhile, local wisdom can help introduce and maintain local culture and traditions while providing a positive impact on learning. The combination of Augmented Reality and local wisdom in learning has great potential to help solve the problem of low literacy skills and make learning more fun and efficient. Therefore, the integration of local wisdom and Augmented Reality in learning is an alternative solution that can be used to overcome the problem of students' literacy skills. Augmented Reality can help visualize abstract concepts, making it easier for students to understand them. Meanwhile, local wisdom can help introduce and maintain local culture and traditions while providing a positive impact on learning. The combination of Augmented Reality and local wisdom in learning has great potential to help solve the problem of low literacy skills and make learning more fun and efficient. Therefore, the integration of local wisdom and Augmented Reality in learning is an alternative solution that can be used to overcome the problem of students' literacy skills. Local wisdom can help introduce and maintain local culture and traditions while providing a positive impact on learning. The combination of Augmented Reality and local wisdom in learning has great potential to help solve the problem of low literacy skills and make learning more fun and efficient. Therefore, the integration of local wisdom and Augmented Reality in learning is an alternative solution that can be used to overcome the problem of students' literacy skills. Local wisdom can help introduce and maintain local culture and traditions while providing a positive impact on learning. The combination of Augmented Reality and local wisdom in learning has great potential to help solve the problem of low literacy skills and make learning more fun and efficient. Therefore, the integration of local wisdom and Augmented Reality in learning is an alternative solution that can be used to overcome the problem of students' literacy skills.

2. RESEARCH METHODS

This research is a type of quantitative descriptive research using a research design, namely a quasi-experimental nonequivalent control group design, using a purposive sampling technique (teacher consideration). This research was conducted for approximately three months with the research location at SMPN 1 Salomekko, Patimpeng District, Bone Regency. The population in this study included 60 students in class VIII A and VIII B. The sample in this study was divided into two classes, with 30 students in class VIII A as the experimental class and 30 students in class VIII B as the control class. The focus of this research is the application of the Mallogo learning method assisted by Augmented Reality in creating an optimal literacy cultural climate for students which is applied in the experimental class. Math and equations.

3. RESULTS AND DISCUSSION

This research was conducted at SMPN 1 Kahu in order to improve students' literacy skills in Indonesian language subject discussion text material by applying the Mallogo learning method assisted by Augmented Reality for class VII B students as an experimental

class. As a comparison, the application of the learning model usually used by teachers for class VII A students is classified as a control class.

The results of the research show that students' literacy skills have increased after implementing the Mallogo learning method assisted by Augmented Reality.

The Mallogo learning method assisted by Augmented Reality in the learning process refers to 4 learning stages, namely.

a. *Mappassadia* is the first stage of the learning method. At this stage, the teacher prepares the lesson, first of allTeachers provide motivation to arouse students' interest in learning, provide positive energy regarding upcoming learning experiences, so that students are better prepared to receive the lesson material. Then the teacher conveys the learning objectives. The teacher divides students into several groups, 4-5 members in each group using Group Maker;

b. *Makkareso* namely the stage of working on a project given by the teacher, where the teacher givesmaterial to students. Then provide direction to students to find new subject matter independently, fun and relevant;

c. *Masseddi* namely a discussion process to solve HOTS-based problems that emphasizes literacy skills.Teachers guide students to integrate and absorb new knowledge and skills using Augmented Reality;

d. *Massangnging* namely the presentation stage which is carried out to convey the results of the discussion and share perceptions with other groups regarding the results presented.

Based on the learning stages of the Mallogo learning method assisted by Augmented Reality, students' literacy abilities were proven to have increased through a series of tests in the control group and experimental group.

The increase that occurred can be seen from the data from the analysis of students' gain scores which are presented in Figure 1 for comparison in the control class and in the experimental class. The data on the gain score results is based on the results of the students' pre-test and post-test.
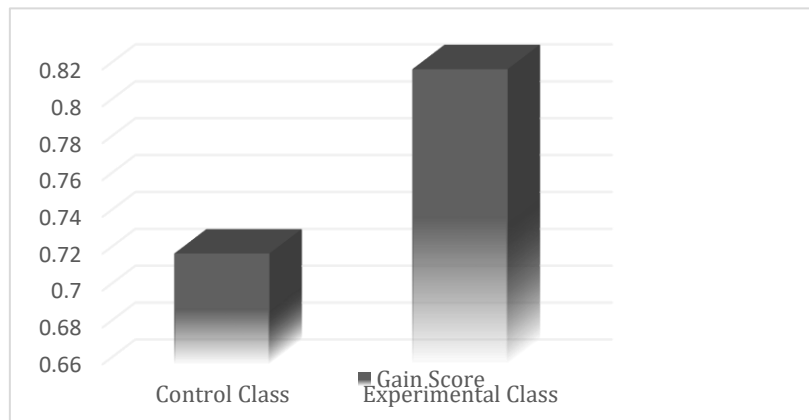

Figure 1. Comparison of Gain Score of Control Class and Experimental Class

Based on the results of the gain score test above, it can be concluded that an increase occurred after implementation The Mallogo learning method assisted by Augmented Reality is in the high category of 0.82 (82%), while the control class with the application of conventional learning methods is in the high category of 0.72 (72%). This indicates that both research classes, both the control class and the experimental class, experienced an increase. However, the increase that occurred in the experimental class was higher than in the control class.

1. Normality test

The normality test is a test carried out with the aim of assessing the distribution of data in a group of data or variables, whether the data distribution is normally distributed or not normally distributed (Ashari and Tripena, 2022). The results of the data normality test for the pre-test and post-test values for the control and experimental classes using the Kolmogrov-Smirnov test can be seen in Table 1 below

Table 1. SPSS Pre-Test and Post-Test Normality Test Control Class and Experimental Class

Class	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Control Class Pretest	0.090	30	0.200	0.972	30	0.606
Control Class Posttest	0.137	30	0.159	0.971	30	0.556
Experimental Class Pretest	0.142	30	0.029	0.960	30	0.318
Experimental Class Posttest	0.139	30	0.146	0.927	30	0.041

Based on the normality analysis of the pre-test and post-test results of the experimental class using the Kolmogrov-Smirnov test, a significance value of 0.146 was obtained, which means the data was normally distributed in the post-test and 0.129 which means the data is normally distributed in the pre-test. As for the normality analysis of the pre-test and post-test results of the control class using the Kolmogrov-Smirnov test, a significance value of 0.159 in the post-test which means the data is normally distributed and 0.200 in the pre-test which means the data is normally distributed. This shows that the pre-test and post-test score data for the control and experimental classes are parametric.

2. Homogeneity Test

The data homogeneity test was carried out at SMP Negeri 2 Salomekko in class VII to prove whether the two samples had the same variance or not. Homogeneity test in this study with a significance level (α) = 0.05 with testing criteria, namely if F count < F table then the data from both samples are homogeneous or have the same variance.

Table 2. Homogeneity Test of Experimental Class and Control Class

Test of Homogeneity of Variance				
	Levene Statistic	**df1**	**df2**	**Sig.**
Mean	7.252	3	116	0.000
Median	6.380	3	116	0.000
Median and with adjusted df	6.380	3	85.016	0.001

Trimmed mean	7.285	3	116	0.000

Based on the output above, it is known that the significance value (Sig.) Based on Mean is equal to 0,000 > 0.05, so it can be concluded that the variance of the experimental class posttest and control class posttest data is not the same or heterogeneous.

4. CONCLUSIONS AND SUGGESTIONS

Based on the results of research data analysis, it can be concluded that the application of the Mallogo learning method assisted by Augmented Reality is effectively applied to Indonesian language learning, especially discussion text material in improving students' literacy skills. Increasing students' reasoning abilities with the Mallogo learning method assisted by Augmented Reality is in the high category, namely0.82 (82%). This indicates that the application of the Mallogo learning method assisted by Augmented Reality has a big effect in improving students' reasoning abilities. Therefore, this research can be an alternative solution in creating a learning innovation based on local literacy learning that can be applied in Indonesian language learning.

5. ACKNOWLEDGMENTS

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