

The Effectiveness of Multimodal-Based Indonesian Language Learning on Class IV Literacy Reading Comprehension

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Abstract

Indonesian language learning requires an easy and effective learning model. This study aims to determine the effectiveness of multimodal-based Indonesian language learning on literacy reading comprehension. This type of research is quantitative research. The research sample was 73 fourth grade students in Manyaran sub-district public elementary schools. Data analysis was conducted using simple linear regression analysis technique. The results showed the correlation value (R) = 0.416, meaning that there is a positive linear relationship between variables; the coefficient of determination R Square = 0.871, meaning that multimodal-based learning gives 87.1% influence on literacy. The significant value is $0.000 < 0.05$ and the t value is $2.318 > t$ table 1.667, meaning that the alternative hypothesis is accepted. The conclusion of the research is that multimodal-based Indonesian language learning is effective on literacy in grade IV in Manyaran sub-district public elementary schools.

Keywords: Learning, multimodal, literacy.

Abstrak

Pelajaran bahasa Indonesia memerlukan model pembelajaran yang mudah dan efektif. Penelitian ini bertujuan untuk mengetahui efektivitas pembelajaran bahasa Indonesia berbasis multimodal terhadap literasi membaca pemahaman. Jenis penelitian ini adalah penelitian kuantitatif. Sampel penelitian adalah 73 peserta didik kelas IV di SD Negeri kecamatan Manyaran. Analisis data dilakukan dengan menggunakan teknik analisis regresi linier sederhana. Hasil penelitian menunjukkan nilai korelasi (R) = 0.416 artinya ada hubungan linear positif antar variabel; koefisien determinasi R Square = 0,871, artinya pembelajaran berbasis multimodal memberikan pengaruh 87,1% terhadap literasi membaca pemahaman. Nilai signifikan sebesar $0.000 < 0,05$ dan nilai t hitung $2,318 > t$ tabel 1.667, artinya menerima hipotesis alternatif. Kesimpulan penelitian adalah pembelajaran bahasa Indonesia berbasis multimodal efektif terhadap literasi membaca pemahaman kelas IV di SD Negeri kecamatan Manyaran.

Kata kunci: Pembelajaran, multimodal, literasi baca tulis.

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INTRODUCTION

The meaningfulness of each activity can be optimal if it involves all the senses owned by students. This is because the value of knowledge gained between hearing and seeing, of course, will be greater seeing. Because of the difference, teachers should understand the importance of learning using media that can optimize and activate the senses. According to Wardani (2019) in essence learning (learning and teaching) is a communication process between teachers and students. As communicants in the learning process are students while the communicators are teachers and students. If a group of students become communicators to other students and the teacher as a facilitator, there will be a process of interaction with high learning. Learning is a communication process between teachers and students. As communicants in the learning process are students while the communicators are teachers and students. If a group of students become communicators to other students and the teacher as a facilitator, there will be a process of interaction with high learning (Ahdar and Wardana, 2019).

According to Fariyatul *et al.* (2016) explain that learning is a systematic activity and there are components where each component of learning is not separate but must run regularly, interdependently, complementarily and continuously, while learning can be interpreted as a learning process that has an important aspect, namely how students can actively learn the subject matter presented so that it can be mastered properly. The learning process is the most important activity in the entire educational process, because the success or failure of education depends on how a person's learning process occurs after the end of learning activities (Supriyono, 2018). Based on the opinions of the experts above, it can be synthesized that learning is a process of interaction between educators and students in a learning environment where students are communicators and educators are communicators.

According to Abidin (2022), multimodality itself is the study of the reciprocal relationship and interdependence between different modes of communication in realizing complementary, extended, and/or conflicting meanings. Multimodality is also understood as an organized and ordered set of resources for meaning making, including, images, gaze, gestures, movement, music, speech and sound effects. Multimodality can be understood as an organized and ordered set of resources for meaning-making, including, image, gaze, movement, gesture, music, speech and sound effects. From this perspective, a full understanding of meaning is not possible without understanding and taking into account the other modal resources that play a role in the creation of meaning (Early *et al.*, 2015).

Indonesian language learning carried out in elementary schools (SD), from the results of observations, data obtained that the learning carried out tends towards conventional learning and uses printed media, namely student handbooks and student worksheets (LKPD). This is revealed from the data Where: 75% of teachers tend to position students as objects to imitate what the teacher says; 95% of teachers focus more on LKPD and less on providing Audio-visual facilities. This data is the focus of the research, because the results given do not support good learning outcomes. This condition is suspected because the media used by the teacher is not able to optimize the senses of students.

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The application of multimodality in Indonesian language learning is one of the breakthroughs to optimize the five senses. The application of multimodality has been

widely done in various forms and varieties of application. A case study research proved that learning supported by multimodal technology can improve students' higher order thinking skills and conceptual engagement during learning (Murcia, 2014). An exploratory study has successfully extracted six factors that have a significant contribution in influencing adolescents' marginalized access to digital content. These six factors can also be used to explain students' preferences and needs for digital content (Shariman *et al.*, 2014): 1) Preferred types of information in digital content, 2) Aspects that influence the use of digital content, 3) Preferred multimodal elements in digital content, 4) Reasons for accessing digital content, 5) Interactive elements in digital content and 6) Preferred types of digital content.

According to Effendy (2017), literacy is an activity of reading and then translating it with the brain the contents of the reading read and then implementing it. There are four skills that affect a person's literacy skills, namely: listening, speaking, reading skills, and writing skills (Hapsari, 2017). Literacy is knowledge, skills and abilities that result in the ability to think critically, be able to solve problems in various contexts, be able to communicate effectively, and be able to develop potential, and actively participate in social life (Masfufah, 2021). Ministry of Education and Culture (2017) literacy is the knowledge and skills to read, write, search, browse, process and understand information to analyze, respond to, and use written texts to participate in the social environment.

According to Muhajang and Pangestika (2018) literacy is defined as the knowledge and ability to read and write, process and understand information during the reading and writing process, and the ability to analyze, respond to, and use language. According to Joyo (2018) literacy is the knowledge and skills to read, write, search, browse, process and understand information to analyze, respond to, and use written texts to achieve goals, develop understanding and potential, and to participate in the social environment. The essence of literacy is reading-thinking-writing activities" (Warsihna, 2016). According to Hijjayati *et al.* (2022). There are two factors that cause low literacy skills, namely: internal factors and external factors. Internal factors include low student intelligence, low student interest in learning, and low student motivation to learn. External factors include lack of parental attention, the influence of television and cellphones, the influence of playmates, teacher ability, and inadequate facilities and infrastructure.

Based on the description above, this study formulates the problem formulation, namely: is multimodal-based Indonesian language learning effective on literacy in grade IV at Manyaran Subdistrict State Elementary School? This study aims to determine the effectiveness of multimodal-based Indonesian language learning on literacy.

METHODS

The type of research used is quantitative. Quantitative research is a process of searching for information that uses information in the form of numbers as a tool to analyze information about what you want to know (Kasiram, 2008). The research method is in the form of a real experiment (True Experimental) with the research population, namely all fourth grade students at SD Negeri Manyaran sub-district. The research sampling technique used Random Sampling technique which resulted in a sample of 73 fourth grade students in SD Negeri Manyaran sub-district. The data collection technique uses a description test which has been tested for validity, reliability, sizing level, and differentiating power first. The lattice of test instruments focuses on fluency in processing information. This study used simple linear regression analysis and Independent Sample t-test hypothesis testing to see the effectiveness of multimodal-based Indonesian language learning on literacy.

RESULTS AND DISCUSSION

The data obtained in the field were processed with the help of SPSS version 26 and adjusted to the needs of supporting research data. The processing stages are:

Validity Results

To test the validity of each item of description test material, it is done by comparing r count with r table. where if r count $>$ r table then it can be said that a statement item is declared valid. vice versa if if r count $<$ r table then a statement item is declared invalid. In this study, r count 0.761 and r table 0.230, where r count is more than r table and can be said to be valid.

Reliability Results

The reliability test is used to determine whether the description test material used is reliable or reliable as a measuring tool. The credibility of a questionnaire can be seen from the *Cronbach's Alpha* value, where if the *Cronbach's Alpha* value $>$ 0.60 then the questionnaire can be said to be reliable, but if the *Cronbach's Alpha* value $<$ 0.60 then the questionnaire is considered unreliable. In this study Cronbach's alpha 0.743 $>$ 0.60, so it can be said to be reliable.

Level of Difficulty Results

The difficulty test is used to determine the level of difficulty of a question item. In other words, the difficulty test will show how easy or difficult a question can be answered by students. Based on the difficulty test, there are 2 easy questions, 5 medium questions, and 3 difficult questions.

Distinguishing Power Result

Differentiating power is the ability of a question item to be able to distinguish between participants who have mastered the material in question and participants who are less or have not mastered the material in question. In this study, the composition of the question material is 2 easy, 5 medium and 3 difficult.

Simple Linear Regression Test

Based on a simple linear regression test using SPSS, the results of the correlation value (r) in the study were 0.416, and the coefficient of determination (R Square) was 0.871. This can be interpreted that there is a positive linear relationship between the two variables. Multimodal-based Indonesian language learning variables influence as much as 87.1% of grade IV literacy in Manyaran Subdistrict Public Elementary Schools.

Prerequisite t-test

Normality test

The normality test is carried out to determine whether the sample comes from a normally distributed population or not. This study uses the Shapiro-Wilk normality test because the sample in this study is less than 100 ($<$ 100). The results of the normality test in this study can be seen in the following table.

Table 1. Normality Test Results

		Unstandardized Residual
N		71
Normal Parameters ^a	Mean	.0000000
	Std. Deviation	1.58937713
Most Extreme Differences	Absolute	.172
	Positive	.172
	Negative	-.080

Kolmogorov-Smirnov Z	1.241
Asymp. Sig. (2-tailed)	.064

Based on the normality test results in Table 1. Using SPSS, it is known that the significance value is $0.064 > 0.05$, it can be concluded that the sample comes from a normally distributed population.

Homogeneity Test

Homogeneity test is a statistical method used to show that samples come from the same population (homogeneous). The results of the homogeneity test in this study can be seen in the following table.

Table 2. Homogeneity Test Results

Test of Homogeneity of Variance			
Levene Statistics	df1	df2	Sig.
3,841	1	3	0.084

Based on Table 2, it can be concluded that Sig. Based on Mean for multimodal learning variable $0.084 > 0.05$. So it can be concluded that the variation of multimodal learning data is homogeneous.

Balance Test

A balance test is a statistical procedure conducted before starting treatment on experimental and control groups in quantitative research, especially experiments. The purpose of the balance test is to ensure that both groups have the same or balanced initial characteristics. Based on SPSS, the balance test obtained a t_{count} value of 1.231 with a critical area of $t > -1.667$ or $t < 1.667$. This indicates that there is no significant difference between the groups, so that the difference in learning outcomes obtained after treatment can be better believed to be caused by differences in learning models.

Hypothesis testing

This study uses a paired sample t-test to assess whether there is an influence between two samples that are paired or related to each other. The results of the homogeneity test can be seen in the following table.

Table 3 T-Test Result

	Paired Samples Test					t	df	Sig. (2-tailed)
	Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
			Lower	Upper				
multimodal Indonesian language learning	12,087	10,879	3,319	20,134	5,678	2,318	5	,000

Based on Table 3, it can be seen that the significant value is $0.000 < 0.05$ and the t value is $2.318 > t$ table 1.667. This means that the variable accepts the alternative hypothesis

Discussion

The results showed a positive relationship between the implementation of multimodal-based learning and the improvement of students' literacy. The correlation value (r) of 0.416 indicates a fairly strong relationship between the two variables. It can be interpreted that the more often students participate in multimodal-based learning, the better their reading and writing skills. This supports the notion that multimodal learning can be an effective approach to improve learners' literacy. The coefficient of

determination (R-Square) of 0.871 indicates that 87.1% of the variation in learners' literacy can be explained by the implementation of multimodal learning. This value is quite high, indicating that the multimodal-based learning variable contributes greatly to the improvement of learners' literacy. In other words, almost 87% of the improvement in learners' literacy can be attributed to the use of multimodal learning approach.

The significance test results reinforce the above findings. The significance value (0.000) is much smaller than the significance level (0.05), and the calculated t value (2.318) is greater than the t table (1.667) which means rejecting the null hypothesis and accepting the alternative hypothesis. It can be seen that, the difference studied between the experimental group and the control group is statistically significant. Thus, it can be concluded that multimodal-based learning is indeed effective in improving the literacy of grade IV students in public primary schools in Manyaran sub-district. In line with Dewi *et al.*'s research, (2023), explained that the application of multimodal methods in teaching reading comprehension skills has a positive impact on students' reading skills. Learners' ability to read comprehension increases in terms of speed in analyzing reading material, understanding vocabulary, and understanding the text. Emerson *et al.*'s (2020) research findings show that multimodal learning approaches are analytically capable of correctly estimating learners' post-test learning outcomes and interests during game-based learning, and have important potential in directing the use of realistically customized learning aids. In addition, multimodal learning often involves group projects or discussions that can encourage learners to think critically, improve communication skills and allow learners to learn from each other. Multimodal technology can also help learners learn to use digital tools that are essential for modern literacy (Sahidah *et al.*, 2021). Learners who are actively involved in the learning process tend to be more motivated to read and write, as interactive and diverse learning, such as discussions, group projects make learning more enjoyable compared to conventional learning models. This is also confirmed by the definition of media that everything that is used as an intermediary or connector from the information provider, namely the teacher to the recipient of information or students, which aims to stimulate students to be motivated and able to follow the learning process in a complete and meaningful way (Emerson, 2020).

CONCLUSION

Based on the results of the study, it can be concluded that multimodal-based Indonesian language learning on literacy is effectively applied in learning. Proven by the correlation value (R) = 0.416, meaning that there is a positive linear relationship between variables; the coefficient of determination R Square = 0.871, meaning that multimodal-based learning gives 87.1% influence on literacy. The significant value is $0.000 < 0.05$ and the t value is $2.318 > t \text{ table } 1.667$, meaning that the alternative hypothesis is accepted. This shows a positive impact after the implementation of multimodal-based learning. Implikasi penelitian ini adalah penggunaan berbagai media dalam pembelajaran memberikan kemudahan dalam membangun pengetahuan. Rekomendasi penelitian ini adalah perlunya pengembangan berbagai media untuk memudahkan peserta didik belajar secara mandiri.

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