Journal of Educational Sciences

Effectiveness of Role-Playing Method and Interactive Video Media on Students' Speaking Ability in Class IV Elementary School

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ARTICLE INFO

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A B S T R A C T

The low speaking skills of elementary school students, such as difficulty composing sentences, limited vocabulary, and lack of confidence, are challenges in learning Indonesian. This study aims to determine the effect of the role playing method assisted by interactive video media on the speaking skills of grade IV students at SDN 32 Panggi Bima City. The method used is pre-experimental with a one group pretest-posttest design. The research sample amounted to 29 students who were selected through the total sampling technique. The instruments in the form of oral tests and observation sheets have been tested for validity and reliability with Cronbach's Alpha values of 0.928 (pretest) and 0.975 (posttest). The results of the analysis showed an increase in the average score from 55.48 to 79.14. The Wilcoxon Signed Ranks test yielded a value of $Z = -4.705$ and a significance of 0.000 ($p < 0.05$), which showed a significant difference between the pretest and the posttest. All students experienced improved speaking skills. Thus, the role playing method combined with interactive video media has proven to be effective in improving students' pronunciation skills, fluency, and confidence in speaking. This model is recommended as an innovative and fun Indonesian learning strategy.

1. Introduction

Education is the cornerstone in shaping the character and competitiveness of the nation's future generation. Through the educational process, students are not only equipped with knowledge but also critical thinking skills, social skills, and moral values that form the foundation for facing global challenges. Law No. 20 of 2003 states that education is a conscious and planned effort to create an active learning atmosphere and develop the potential of students optimally (Sari et al., 2021).

Language becomes one of the important aspects in the education process, especially Indonesian as the national language. Mastery of speaking skills in Indonesian is an

important indicator of students' communication abilities, which supports their success both in the learning process and in social life (Muthi'ah et al., 2022). In this context, speaking skills include the ability to convey ideas in a structured manner, clear pronunciation, appropriate vocabulary selection, and confidence when communicating (Vistasari & Patria, 2019)

However, the results of the observation conducted at SDN 32 Panggi in Bima City indicate that fourth-grade students experience several difficulties in speaking Indonesian well and correctly. Some students struggle in constructing sentences, showing limited vocabulary, and appear unsure of themselves when asked to speak in front of the class (Gazali et al., 2025). This suggests that students' speaking skills are still at a low level and require special attention from teachers and education practitioners.

This problem is exacerbated by the still conventional learning approach. Teachers tend to use one-way methods without active student involvement. The lack of variety in learning media also results in low student interest and limited opportunities for them to express themselves (Mahmud et al., 2021). This situation shows that there is a gap between the Indonesian learning objectives and their implementation in the field.

Based on the identification, the problems that arise in Indonesian language learning at SDN 32 Panggi can be detailed as follows: (1) students still struggle to speak due to language limitations, (2) low ability to construct sentences due to limited mastery of vocabulary, (3) lack of students' confidence in communication, (4) minimal interaction and feedback in the learning process, as well as (5) low interest and motivation due to unengaging learning (Azzahra et al., 2023).

The effort to address this problem one of them is by developing a more interactive and enjoyable learning model. Role-playing method becomes one of the alternatives considered able to increase student engagement. Through this method, students are trained to communicate in real situations with certain roles so that they can express their ideas more confidently (Dwi & Nurhaliza, 2024). Additionally, this approach also promotes collaboration, empathy, and social skills which are very important in community life (Musthofiyyah et al., 2025).

The use of interactive video media has also been proven to be effective in creating engaging learning (Firmansah et al., 2022). Interactive video presents visual and audio content that can enhance students' attention and provide real context in language use (Rahmawati et al., 2021). This video not only conveys material but also allows students to observe and imitate good ways of speaking according to the cultural and social context they understand (Setiawaty, 2024).

Several studies indicate that the combination of Role-playing and interactive video methods provides significant results in improving students' speaking skills. Dwiyanti and Lolita (2023) demonstrate that this approach enhances aspects of pronunciation, fluency, as well as students' courage to speak in public. This aligns with the findings of Jallad (2025), who state that simulation-based and visual

learning improves communication effectiveness and comprehensive language concept understanding. In Indonesian language learning, this method can be used to create an active and enjoyable learning environment, while strengthening the function of language as a communication medium (Pratiwi, 2024). Additionally, students are encouraged to understand materials in a more contextual and applied manner.

Based on the background, this research aims to determine the effect of role-playing methods with interactive video media on Indonesian language learning on the speaking skills of fourth-grade students at SDN 32 Panggi Bima City. This research is expected to provide positive contributions to the field of basic education, especially in the development of innovative and enjoyable learning approaches.

2. Methodology

This research uses a quantitative approach with a one-group pretest-posttest pre-experimental design, where one group of students is given an initial measurement (pretest), then provided with an intervention in the form of learning using the role-playing method and interactive video media, and concluded with a final measurement (posttest). This design was chosen because it allows the researcher to evaluate the effect of an intervention directly without involving a control group, as well as being suitable for the homogeneous characteristics of the subjects.

The variables in this research consist of two types, namely the independent variable (X) in the form of role-playing methods using interactive video media, and the dependent variable (Y) which is the students' speaking skills. The independent variable is the form of treatment in learning, while the dependent variable is the learning outcome aspect that is measured before and after the treatment (Kusmaryono et al., 2021). The research was conducted in the even semester of the 2024/2025 academic year, at SDN 32 Panggi Kota Bima, Nusa Tenggara Barat. The research subjects were 29 fourth-grade students. Because the population is limited, this research uses total sampling technique, where the entire population is made the sample. This technique provides comprehensive data and minimizes the risk of bias in sample selection.

The instruments used in this research include speaking skill tests and observation sheets for learning implementation. The tests are administered verbally and are designed to evaluate five speaking skill indicators: pronunciation, fluency, intonation, clarity, and language accuracy (Zhong et al., 2024). Meanwhile, the observation sheets are used to record students' engagement during the learning process, such as active participation, enthusiasm, focus, social interaction, and engagement with interactive video media (Fauzul et al., 2025). Observation scores are calculated based on a 1–4 scale and are averaged to obtain the final results in the form of percentages.

Before use, all instruments were tested for validity and reliability. Validity was tested using product moment correlation and showed that all items had a

significance value < 0.05, meaning they were valid. Reliability was tested using Cronbach's Alpha, with a result of $\alpha \geq 0.90$, indicating that the instruments have very high internal consistency.

Data analysis is conducted through several stages. First, a normality test is performed using the Kolmogorov-Smirnov test to determine whether the data is normally distributed. The analysis results show a significance value < 0.05, so the data is declared not normal. Therefore, the non-parametric Wilcoxon Signed Ranks Test is used to test the hypothesis. This test is used to see the statistical difference between pretest and posttest results. If the significance value < 0.05, then there is a significant effect of the method used on the improvement of students' speaking skills. With systematic design and analysis, this research can be replicated and relied upon as a scientific reference in evaluating the effectiveness of the active learning model based on simulation and multimedia in elementary school.

3.   Results and Discussion

The implementation of the role-playing method in this study is designed to observe student interaction in simulated situations. The initial stage starts with planning: defining objectives, choosing relevant topics, and crafting a scenario that contains clear roles, storylines, and instructions. Instruments such as observation sheets and assessment rubrics are also prepared. Students are introduced to the concept of role-playing, understand their roles, and practice in groups. During implementation, the classroom is arranged according to the context of the scenario to create a supportive atmosphere. The researcher acted as a facilitator and observer without much intervention. After the session ended, students were invited to discuss and reflect on their experiences and difficulties, then relate them to the learning materials. The observation results are analyzed as the final part of the research process. Two examples of screenshots of videos used in learning are presented in Figure 1 and Figure 2 are presented:

Figure 1. Videos used in Learning

Figure 2. Videos used in Learning

The use of interactive videos is carried out through systematic learning steps. The initial stage includes selecting videos that are appropriate to the material and basic competencies, with interactive elements such as questions or action choices. Learning begins with perception, followed by video playback. Students actively listen, answer questions, and respond to the content of the video. Teachers can pause the video at a certain point to explain or facilitate discussion. Students are also asked to imitate dialogue or role-play based on the situation in the video. At the end of the session, teachers and students reflect together, and can assign follow-up activities to strengthen understanding. This approach makes interactive video an active and meaningful learning medium.

Before conducting inferential analysis on the data, the researcher first tests the pretest and posttest questionnaires through validity and reliability tests to ensure that the questions can accurately and consistently measure speaking skills. Validity testing is conducted using the Product Moment Correlation technique, aimed at determining the extent to which each item is related to the total score. The validity test results indicate that all items in the pretest have a correlation coefficient > 0.800 and significance of 0.000, meaning they are valid with a very strong correlation. The validity test results for the posttest also show a high correlation, ranging between 0.821 and 0.950, with significance of 0.000. This indicates that all items in both instruments are valid and suitable for use.

Next, reliability testing is conducted using Cronbach's Alpha formula. The results show a reliability coefficient of 0.928 for the pretest and 0.975 for the posttest, both of which fall into the very high category. This indicates that the instruments have very good internal consistency and can be relied upon as measurement tools for students' speaking skills. When the instrument is considered valid, reliable to collect pre- and post-test data, it is used to collect pre-test and post-test. After that, we conducted a descriptive analysis of the score to observe the students' learning patterns. The examination of the average and standard deviation of the pretest and posttest shows that there is a significant difference between before and after the application of the learning method can be seen in Table 1.

Tabel 1. Rekapitulasi Statistik Deskriptif Pretes dan Posttest

Score	Average	Standard Deviation
Pretest	55.48	9.70
Posttest	79.14	7.85

Based on the data in Table 1, it can be seen that there is a quite significant increase in the average posttest scores compared to the pretest. This increase indicates that there is a positive development in the students' speaking skills after they received the treatment, which is learning using the role-playing method combined with interactive video media as a learning aid

Before testing the hypothesis, the normality of data was tested with the Kolmogorov-Smirnov Test which showed the amount of difference in pretest and posttest scores. This test is one of the requirements to select the right statistical test and it tries to determine whether or not you have a normally distributed residual data. The data are non-normal distributed according to the result of the normality test as shown in Table 2.

Table 2. Data Normality Test (Kolmogorov-Smirnov Test Statistic)

Parameter	Value	Interpretation
Number of Samples (N)	29	Number of students who are subjects of the test
Mean (Average)	0.000	Average residual from difference between pretest and posttest
Standard Deviation	9.710	Residual value distribution
Maximum D Value (Test Statistic)	0.228	Kolmogorov-Smirnov test statistic
Sig. Value (2.-Tailed)	0.000	$< 0.05 \rightarrow$ Data is not normally distribute
Decision	-	Use non-parametric test (Wilcoxon) for hypothesis analysis

Table 2 shows that the number of samples analyzed is 29 students with a mean residual of 0.000 and a standard deviation of 9.710. The obtained Kolmogorov-Smirnov (D) statistic is 0.228, with a significance value (Asymp. Sig. 2-tailed) of 0.000. Since the significance value is less than 0.05, it can be concluded that the residual data is not normally distributed. Therefore, hypothesis testing in this research cannot be conducted using parametric tests (such as t-test), but must use a non-parametric test, namely the Wilcoxon Signed Ranks Test, which is more suitable for non-normal and paired data.

The Wilcoxon Signed Ranks Test (non-parametric test) was then applied to further probe the question when normality of residuals was lost according to the Kolmogorov-Smirnov test. This test is used under non-normal distribution of data to test the significance of the differences between two dependent (twins) samples. Based on the data in Table 3, it is known that out of the 29 respondents analyzed, all experienced an improvement in speaking skill scores after receiving the treatment consisting of role-playing method with interactive video media. This is shown by the number of positive ranks totaling 29, which means none of the students experienced a decrease in scores (negative ranks) or unchanged scores (ties). Details of the Wilcoxon analysis results are presented in Table 3 below.

Table 3. Results of Wilcoxon Signed Ranks Test

Notes	Value	Explanation
Number of Samples (N)	29	Indicating that all 29 students who participated in the pretest and posttest were analyzed.
Positive Ranks (Posttest > Pretest	29	It means all students experienced an increase in their scores after the learning intervention. None had their scores decrease or remain the same. It is the average rank of each student's score
Average Positive Rank	15.00	It is the average rank of each student's score increase. The higher, the greater the effect of the treatment.
Number of Negative/Same Ranks	0/0	No student had a score that decreased or did not change after treatment.
Z-Score	4.705	Wilcoxon test statistic measuring the difference between two paired scores. The further from zero, the stronger the difference.
Sig. (Asymp. 2-tailed)	0.00	Significance value indicates that the indicates that the treatment provided has a significant effect on students' learning outcomes.

The average rank increase of 15.00 indicates that the improvement that occurred is not only consistent but also relatively high at the group level. In other words, all students experienced a uniform and meaningful improvement in speaking skills. The Wilcoxon statistical value is $Z = -4.705$, with a significance value (Asymp. Sig. 2-tailed) of 0.000, indicating a statistically significant difference between the pretest and posttest results. Since the significance value < 0.05, the null hypothesis (H_0), which states that there is no effect of the treatment, is rejected. Conversely, the alternative hypothesis (H_a) is accepted, which states that there is an effect of using the role-playing method with interactive video assistance on improving students' speaking skills.

Overall, this data provides strong evidence that the teaching method designed with a participatory and visual approach, such as role-playing and interactive video media, can effectively improve students' learning outcomes, especially in terms of speaking skills. This finding not only demonstrates the statistical effectiveness of the method but also supports the use of active and engaging learning strategies in Indonesian language learning at the elementary school level.

Discussion

The results of this research show that the role-playing method assisted by interactive video media has a significant impact on improving the speaking skills of fourth-grade students. All participants experienced an increase in posttest scores compared to pretest scores, without any scores decreasing or remaining the same. This indicates that the teaching approach applied in this research is able to provide a balanced and consistent impact on improving student performance.

Differences in the mean pre-and post- test means were used as a measure of the degree of student success. As Table 1 shows, the mean pretest during the first period

was 55.48, indicating that the students' speaking abilities fell into the moderate-low-level category at the outset of the experiment. The mean score was increased substantially to 79.14 in the post-test, after being subjected to role-playing and interactive video media combined-learning based therapy. This increase serves as evidence to the positive effects of applying the learning method used in the study that had a more active student participation and a more engaging way to present content. For an example on changes in the scores see Figure 3 in the Appendix, where the comparison between graph of the rata-rata scores of the pretest and posttest is displayed.
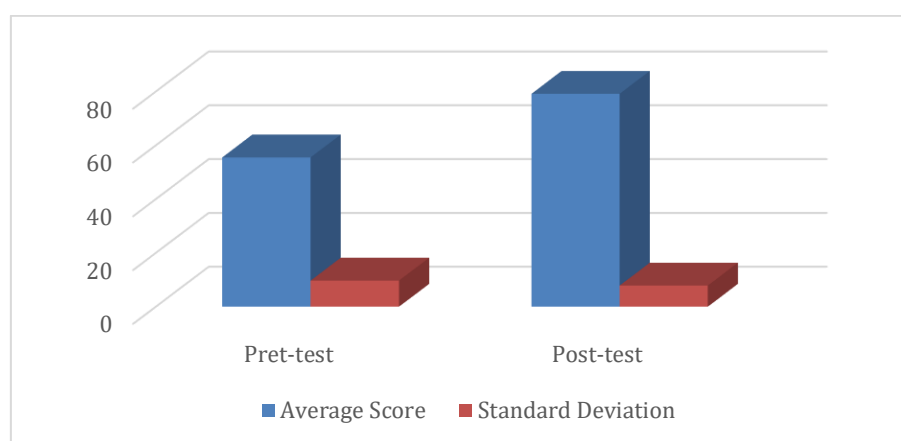

Figure 3. Comparison of Average Pretest and Posttest Scores

The above graphic clarifies that the score improvement occurred significantly and evenly. The standard deviation at the pretest was 9.70, which decreased to 7.85 at the posttest, indicating that students' learning outcomes became more focused and stable after the intervention. This supports the data in the Wilcoxon test, which shows that all students experienced improvement (positive ranks = 29), without any decline or stagnation in scores.

From a pedagogical perspective, the use of the role-playing method can create an active and contextual learning condition. Students are not just listening to or memorizing material, but are directly involved in communication situations similar to real life. Role-playing activities allow students to express their ideas and feelings, practice courage, and strengthen their ability to organize language orally. This aligns with the opinion (Hidayat & Abdul Karim, 2025) which emphasizes that role-playing can enhance students' communication skills and self-confidence through social simulation.

The enhancement of this method through interactive video media also provides significant contributions. Video media presents visual and auditory representations that facilitate students in comprehensively understanding the language context, including intonation, expression, and appropriate word choices. According to Kusumaningrum (2021), interactive video effectively increases language learning appeal because it presents concrete language usage models, especially in speaking skills. This is also supported by Anyan and Setyawan (2022), who found that

students become more motivated and active in language learning when interactive video media is used. An even increase in speaking skill scores also confirms that this method is inclusive and effectively applied to all students regardless of academic background or individual learning style. The absence of students who stagnate or experience score decline indicates this approach's potential to enhance overall learning quality.

This finding also supports constructivist learning theory, where meaningful learning occurs when students build knowledge through direct engagement and real-world experiences. Role-playing and interactive videos provide both: direct experience through role-taking and authentic context through visual presentations. Thus, this learning model not only improves cognitive aspects (vocabulary mastery, sentence structure) but also affective aspects (self-confidence, motivation) and psychomotor aspects (intonation, verbal expression).

Considering the results and implications above, the role-playing method assisted by interactive video media can be recommended as an effective and enjoyable alternative for Indonesian language learning, especially in the development of speaking skills for elementary school students. The use of this method also supports a more interactive, creative, and learner-centered learning transformation.

4.   Conclusion

This research aims to determine the effect of using the role-playing method assisted by interactive video media in improving the speaking skills of fourth-grade students at SDN 32 Panggi Bima City. Based on the analysis results, it can be concluded that the learning approach used has proven effective in enhancing students' speaking abilities. All participants showed score improvements after receiving the treatment, indicating that this method not only promotes academic improvement but also provides positive impacts on students' self-confidence and participation in learning. This success demonstrates that the application of the role-playing method can create an active and enjoyable learning atmosphere, while the use of interactive video is able to enhance students' understanding through contextual visual and auditory stimuli. The combination of both provides a richer, more engaging, and meaningful learning experience for students. This research makes an important contribution to the development of innovative Indonesian language learning strategies at the elementary school level. This model can be recommended for broader implementation, particularly in teaching speaking skills. For future research, it is suggested that similar methods be applied in more diverse classroom contexts, or combined with other learning techniques to measure broader and deeper effectiveness.

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