

Comparative Study of STAD and Role-Playing Learning Methods in Indonesian Language Classes

Niken Vioreza^{1*}, Renanda Sheila Selviani², Nur Hasanah³

¹Elementary School Teacher Education Study Program, STKIP Kusuma Negara, Jakarta, Indonesia

²Primary Teacher Education, SD Islam Teladan Yasmin, Indonesia

³Elementary School Teacher Education Study Program, STKIP Kusuma Negara, Jakarta, Indonesia

*niken@stkipkusumanegara.ac.id

Abstract

This study aims to compare students' learning outcomes using the STAD (*Student Teams Achievement Divisions*) model and the Role-Playing model in Grade III Indonesian language oral reading lessons at *Madrasah Ibtidaiyah* during the 2024/2025 academic year. A quasi-experimental design with a post-test-only control group was employed, involving two classes as samples: Grade III-A, taught using the STAD model, and Grade III-B, taught using the Role-Playing model, each consisting of 25 students selected through cluster random sampling. Data were analyzed using an independent sample *t*-test. The results revealed that the mean score of the STAD group was 83.28, while the Role-Playing group achieved a mean score of 78.44. The hypothesis test showed a significant difference between the two groups ($t_{\text{calculated}} = 3.09 > t_{\text{table}} = 2.01, \alpha = 0.05$), leading to the rejection of H_0 and acceptance of H_1 . These findings indicate that the STAD learning model is more effective than the Role-Playing model in enhancing students' oral reading performance. The implication of this study emphasizes the importance of cooperative learning strategies like STAD in fostering active participation, collaboration, and deeper comprehension in Indonesian language learning.

Keywords: Learning Outcomes, Role Playing model, STAD

INTRODUCTION

Basic literacy encompasses reading, writing, numeracy, scientific, digital, financial, cultural, and civic literacy—all of which are essential components of 21st-century learning competencies (Bravo et al., 2021; Martínez-Bravo et al., 2022; Mirra & Garcia, 2021). According to data from the *Programme for International Student Assessment* (PISA) in 2015, Indonesia ranked 61st out of 72 participating countries in literacy proficiency (Dalilan, 2021; Martínez-Bravo et al., 2022; Setiani & Barokah, 2021; Xiao, 2020). This

finding highlights that literacy remains a major challenge within Indonesia's education system. Each student possesses varying abilities, and their academic success is often influenced by school-related factors, particularly the extent to which schools are able to facilitate students in recognizing and developing their potential—especially in Indonesian language learning.

Reading ability has a significant impact on students' learning outcomes and academic success. Fluency and accuracy in reading are closely linked to the teacher's creativity and activeness in designing and managing classroom activities. Teachers play a pivotal role as facilitators, motivators, learning resources, and organizers in improving students' learning outcomes, especially in reading. They are the key agents in realizing the goals of national education because of their direct involvement in the pedagogical process at schools (Ayuningrum et al., 2020; Theresia et al., 2020; Utami & Vioeza, 2021). Consequently, teachers are not only required to master teaching materials but also to design learning activities using appropriate approaches and methods that engage students effectively.

In Indonesian language learning, literacy activities serve as a foundation for developing active listening, speaking, creative writing, and analytical reading skills. Among these, speaking is a particularly vital aspect of literacy development. However, Indonesian language instruction continues to face challenges in both oral and written communication, with speaking skills remaining one of the most persistent issues (Musthafa, 2001; Zein et al., 2020). Many students struggle to express their thoughts effectively, often experiencing anxiety or fear of making mistakes when speaking, which negatively impacts their overall learning outcomes. Learning outcomes are considered indicators of the success of the learning process and reflect students' competencies in utilizing knowledge, information, ideas, and tools acquired during learning (Lin et al., 2017; Malik, 2010; McQuiggan et al., 2008; Setyawan & Purwanto, 2019). Thus, learning outcomes represent the competencies and skills that students are expected to achieve after the instructional process.

One of the recurring issues in Indonesian language learning outcomes relates to students' oral reading abilities. Oral reading involves reading aloud while paying attention to word structure, pronunciation, pauses, intonation, and expression to develop fluency (Davidovitch & Gerkerova, 2023; Rhee Ock, 2001; Rodrigo et al., 2014; Satriani, 2019). Reading aloud helps students maintain focus, generate questions, and stimulate discussion (Davidovitch & Gerkerova, 2023; Hassan et al., 2021). Furthermore, reading comprehension is influenced by motivation, as motivated students are more likely to complete readings, recall content, and draw meaningful conclusions.

The use of the STAD (Student Teams Achievement Divisions) and Role-Playing learning models emphasizes understanding, critical thinking, and active participation in the learning process. The STAD model was developed to make learning more effective and meaningful through cooperative teamwork. It encourages peer support and collaboration, enabling students to help each other master challenging material while fostering social interaction and responsibility.

Conversely, the Role-Playing model engages students in interactive dramatization or simulation activities, allowing them to assume specific roles related to a topic or situation. Students act out characters based on previously studied texts, promoting

empathy, expression, and communication skills. This approach aligns well with the developmental characteristics of elementary school students, who naturally enjoy play and movement (Hakam et al., 2020; Selviani et al., 2024). Therefore, it is essential for teachers to create engaging and enjoyable classroom environments that allow students to learn through play.

Through the implementation of both STAD and Role-Playing learning models, students are expected to participate more actively in classroom activities, improve comprehension, strengthen speaking skills, and increase reading motivation—particularly in Indonesian language learning. Therefore, this study aims to compare the effectiveness of the STAD and Role-Playing models in improving students' learning outcomes in oral reading lessons in Indonesian language classes.

RESEARCH METHOD

This study employed an experimental research design, which is a type of research used to test hypotheses and determine causal relationships between variables (Atmazaki et al., 2023; Fellows & Liu, 2021). Specifically, a quasi-experimental design was implemented to examine the effect of different learning models on students' Indonesian language learning outcomes.

The study involved two experimental groups. Experimental Group I received treatment using the STAD (Student Teams Achievement Divisions) learning model, while Experimental Group II received treatment using the Role-Playing learning model. Each group consisted of 25 students, selected through cluster random sampling. Both groups were taught the same learning material, with the only difference being the instructional model applied.

Research instruments, developed and validated prior to data collection, were administered to the students to gather data on learning outcomes. The collected data were analyzed using descriptive and inferential statistics. Descriptive statistics included measures such as the mean and standard deviation to summarize students' learning performance.

Inferential statistical analysis was conducted to test the research hypothesis. The prerequisite tests included the Lilliefors test for normality and the F-test for homogeneity of variances. Upon confirming that the data were normally distributed and homogeneous, the hypothesis testing was carried out using an independent samples *t*-test. This test was applied to determine whether there was a statistically significant difference in learning outcomes between students taught using the STAD and Role-Playing learning models.

RESULT AND DISCUSSION

This research was conducted at SD Islam Teladan Suci, with the treatment being administered over three meetings. The sample used consisted of 50 students from Grade III A, which included 25 students in experimental group I using the STAD learning model,

and Grade III B, which included 25 students in experimental group II using the Role-Playing model. Before the final learning outcome test, the instrument was pilot tested on another sample that had already been taught the oral reading material, specifically on students from Grade III C, comprising 25 students.

This research was conducted at *SD Islam Teladan Suci* over three sessions. The study sample consisted of 50 Grade III students, divided into two groups: Grade III-A (Experimental Group I) taught using the STAD learning model, and Grade III-B (Experimental Group II) taught using the Role-Playing learning model, each comprising 25 students. Before administering the final learning outcome test, the instrument was pilot-tested on a separate group of 25 students from Grade III-C, who had previously been taught the same oral reading materials.

The pilot test results were analyzed for validity, reliability, item difficulty, and discrimination power. Only valid and reliable items were retained and used as the research instrument in both experimental groups. Data from the learning outcomes were analyzed descriptively using frequency distribution tables to categorize students' scores from the lowest to the highest interval.

3.1 Learning Outcomes

3.1.1 *Learning Outcomes of Indoneisan Language Students Taught Using the Student Teams Achievement Divisions (STAD) Learning Model*

The descriptive analysis of students' learning outcomes in the STAD group (25 students) showed a highest score of 91 and a lowest score of 73, with a mean of 83.28, median of 84, mode of 85, variance of 18.13, and standard deviation of 4.26. Fourteen students achieved scores above the group mean.

Table 1. Frequency Distribution of Student Learning Outcomes with STAD Learning

Interval	Frekuensi (Fi)	Midpoint (Xi)	Real Limits
73-78	4	75,5	72,5-77,5
79-84	10	81,5	78,5-83,5
85-90	9	87,5	84,5-89,5
91-96	2	93,5	90,5-95,5

Table 1 presents the frequency distribution of scores in the STAD group. The majority of students (10) obtained scores within the 79–84 interval, while two students achieved the highest interval range of 91–96. This indicates that most students performed consistently well, reflecting the effectiveness of the STAD model in supporting comprehension and collaboration in oral reading lessons.

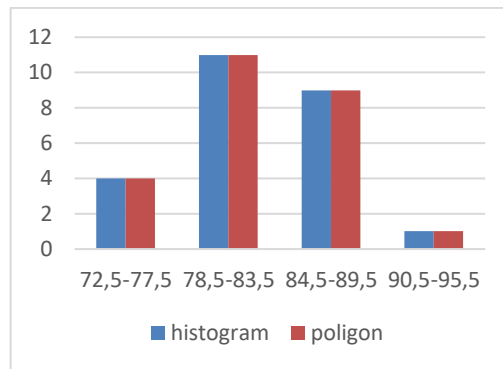


Figure 1 Histogram and Frequency Polygon of Indonesian Language Learning Outcomes

3.1.2 Learning Outcomes of Indonesian Language Students Taught using the Role-Playing Learning Model

In the Role-Playing group, the highest score was 89 and the lowest was 61, with a mean of 78.44, median of 79, mode of 72, variance of 43.26, and standard deviation of 6.57. Thirteen students scored above the group mean. The data can then be presented in a frequency distribution list, histogram, and polygon as shown in Table 2.

Table 2 Frequency Distribution of Student Learning Outcomes with Role Playing Learning

Interval	Frekuensi (Fi)	Midpoint (Xi)	Real Limits
61-65	1	63	60,5-64,5
66-70	1	68	65,5-69,5
71-75	6	73	70,5-74,5
76-80	7	78	75,5-79,5
81-85	6	83	80,5-84,5
86-90	4	88	85,5-89,5

Table 2 shows the frequency distribution for this group. The largest number of students (7) scored within the 76–80 interval, while four students achieved scores within the 86–90 range. Although the Role-Playing model encouraged active participation and engagement, the results indicate slightly lower consistency compared to the STAD group.

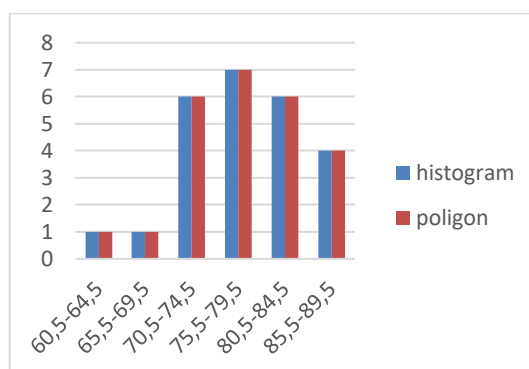


Figure 2 Histogram and Frequency Polygon of Indonesian Language Learning Outcomes

3.2 Data Analysis Prerequisite Testing

Before hypothesis testing, the data were examined for normality and homogeneity. The Lilliefors test was applied at a significance level of $\alpha = 0.05$. The results showed $L_{\text{calculated}} = 0.10$ for the STAD group and $L_{\text{calculated}} = 0.07$ for the Role-Playing group, both of which were lower than $L_{\text{table}} = 0.17$. Therefore, the data for both groups were normally distributed.

Homogeneity was tested using the F-test, yielding $F_{\text{calculated}} = 0.41 < F_{\text{table}} = 1.98$ ($\alpha = 0.05$), indicating that the variances were homogeneous. Given that both assumptions were met, a t-test was used for hypothesis testing.

The results showed $t_{\text{calculated}} = 3.09$ and $t_{\text{table}} = 2.01$ at $\alpha = 0.05$. Since $t_{\text{calculated}} > t_{\text{table}}$, the null hypothesis (H_0) was rejected, and the alternative hypothesis (H_1) was accepted. Thus, there was a significant difference in learning outcomes between students taught using the STAD model and those taught using the Role-Playing model in oral reading lessons.

The findings demonstrate that the STAD learning model produced higher learning outcomes compared to the Role-Playing learning model. The cooperative structure of STAD allows students to actively engage in discussions, exchange ideas, and support one another in mastering complex material. This peer collaboration enhances both cognitive understanding and social interaction, leading to improved performance.

These results are consistent with (Rattanatumma & Puncreobutr, 2016) who found that STAD was more effective than conventional learning in increasing student participation and socialization. Similarly, Nika (2021) reported that students taught through STAD demonstrated greater activeness during learning sessions. This is supported by (Vioreza, 2014, 2017) who stated that interest in learning is closely linked to feelings of enjoyment and engagement, which influence participation and achievement.

According to (Tiantong & Teemuangsai, 2013) STAD encourages mutual motivation among students, as they are collectively responsible for achieving the best group scores. The group dynamic fosters a sense of accountability and healthy competition, motivating each member to contribute actively to group success.

In contrast, the Role-Playing model provides valuable experiential learning opportunities by allowing students to express themselves creatively through dramatization. However, not all students possess the same level of confidence or expressiveness, leading to variations in outcomes. At the beginning of the study, many students felt hesitant to perform in front of the class. As the sessions progressed, they became more comfortable participating in discussions and role enactments, demonstrating improved confidence and communication skills.

Overall, both models positively influenced students' engagement and oral reading abilities. Nevertheless, the STAD model proved to be more effective in enhancing comprehension and learning outcomes due to its emphasis on collaboration, peer support, and structured teamwork.

The implications of this research highlight the importance of implementing cooperative learning strategies in Indonesian language instruction. By integrating STAD into classroom practice, teachers can foster not only academic achievement but also essential 21st-century skills such as communication, collaboration, and critical thinking.

CONCLUSION

The results of this study confirm that the use of cooperative learning strategies, particularly the STAD (Student Teams Achievement Divisions) model, provides a significant positive effect on students' Indonesian language learning outcomes,

especially in oral reading skills. The comparison between STAD and Role-Playing learning models demonstrates that structured collaboration and peer support play a crucial role in enhancing comprehension, confidence, and student engagement. This finding reinforces the idea that effective language learning requires not only individual effort but also collective participation that allows learners to construct meaning through social interaction. The success of the STAD model reflects the importance of cooperative structures that encourage accountability, motivation, and shared responsibility among students. The implications of this research suggest that teachers should adopt and adapt cooperative learning methods such as STAD in Indonesian language instruction to create more dynamic, interactive, and student-centered classrooms. Moreover, integrating such approaches can contribute to the development of 21st-century competencies, including communication, collaboration, and critical thinking, which are essential for lifelong learning.

REFERENCES

- Atmazaki, Vioreza, N., Nabila, J., & Brilliant, M. T. (2023). *Buku Ajar Metode Penelitian*. Pustaka Alur.
- Ayuningrum, K., Vioreza, N., & Ratnayanti, G. (2020). Upaya Meningkatkan Hasil Belajar IPS Materi Penjajahan Bangsa Indonesia melalui Model Giving Question Getting Answer. *Prosiding Seminar Nasional Pendidikan STKIP Kusuma Negara III*, 379–383.
- Bravo, M. C. M., Chalezquer, C. S., & Serrano-Puche, J. (2021). Meta-framework of digital literacy: A comparative analysis of 21st-century skills frameworks. *Revista Latina de Comunicacion Social*, 79, 76–109.
- Dalilan, D. (2021). Literasi mahasiswa: Studi kebiasaan dan sikap membaca mahasiswa Program Studi Ilmu Perpustakaan. *Pustakaloka*, 13(1), 1–21.
- Davidovitch, N., & Gerkerova, A. (2023). Social Factors Influencing Students' Reading Habits. *African Educational Research Journal*, 11(3), 351–359.
- Fellows, R. F., & Liu, A. M. M. (2021). *Research methods for construction*. John Wiley & Sons.
- Hakam, K. A., Adiwikarta, S., Ruyadi, Y., & others. (2020). Learning gurindam 12 as local wisdom through role playing assisted by audio visual to strengthen character of students. *Journal of Physics: Conference Series*, 1477(4), 42033.
- Hassan, I., Latiff Azmi, M. N., Muhamad, S. N., & Abdullah, A. T. H. (2021). Reading habits and their correlation with reading achievement among ESL learners in selected Malaysian secondary schools. *Arab World English Journal (AWEJ) Volume*, 12.
- Lin, M.-H., Chen, H., & others. (2017). A study of the effects of digital learning on learning motivation and learning outcome. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(7), 3553–3564.

- Malik, M. W. (2010). Factor effecting learner's satisfaction towards e-learning: A conceptual framework. *OIDA International Journal of Sustainable Development*, 2(3), 77–82.
- Martínez-Bravo, M. C., Sádaba Chalezquer, C., & Serrano-Puche, J. (2022). Dimensions of digital literacy in the 21st century competency frameworks. *Sustainability*, 14(3), 1867.
- McQuiggan, S. W., Rowe, J. P., Lee, S., & Lester, J. C. (2008). Story-based learning: The impact of narrative on learning experiences and outcomes. *International Conference on Intelligent Tutoring Systems*, 530–539.
- Mirra, N., & Garcia, A. (2021). In search of the meaning and purpose of 21st-century literacy learning: A critical review of research and practice. *Reading Research Quarterly*, 56(3), 463–496.
- Musthafa, B. (2001). *Communicative language teaching in Indonesia: Issues of theoretical assumptions and challenges in the classroom practice*.
- Rattatumma, T., & Puncreobutr, V. (2016). Assessing the Effectiveness of STAD Model and Problem Based Learning in Mathematics Learning Achievement and Problem Solving Ability. *Journal of Education and Practice*, 7(12), 194–199.
- Rhee Ock, A. M. S. (2001). Adult reading habits and patterns. *Reading Psychology*, 22(3), 175–203.
- Rodrigo, V., Greenberg, D., & Segal, D. (2014). *Changes in reading habits by low literate adults through extensive reading*.
- Satriani, E. (2019). Online Reading Resources Among EFL Students: Do They Promote Reading Habit? DO THEY PROMOTE READING HABIT? *J-SHMIC: Journal of English for Academic*, 6(1), 8–17.
- Selviani, R. S., Vioeza, N., & Hasanah, N. (2024). Differences In Indonesian Learning Outcomes Between Teams Achievement Division and Role-Playing Models. *Proceeding of International Conference on Education*, 3, 67–73.
- Setiani, N. N., & Barokah, N. (2021). Urgensi literasi digital dalam menyongsong siswa sekolah dasar menuju generasi emas tahun 2045. *SEMAI: Seminar Nasional PGMI*, 1(1), 411–427.
- Setyawan, R. I., & Purwanto, A. (2019). Model Pembelajaran Berbasis Proyek (Project Based Learning) Untuk Meningkatkan Hasil Belajar. *Jurnal Dikdas Bantara*, 2(2).
- Theresia, D., Syafi'i, M., & Vioeza, N. (2020). Pencapaian Kemampuan Low Order Thinking Siswa antara Pembelajaran Probing Prompting dan Matematika Realistik. *Journal of Instructional Mathematics*, 1(1), 31–37.
- Tiantong, M., & Teemuangsai, S. (2013). Student Team Achievement Divisions (STAD) Technique through the Moodle to Enhance Learning Achievement. *International Education Studies*, 6(4), 85–92.
- Utami, P. P., & Vioeza, N. (2021). Teacher Work Productivity in Senior High School. *International Journal of Instruction*, 14(1), 599–614.

- Vioreza, N. (2014). *Pengaruh Teknik Penilaian dan Kecerdasan Naturalis terhadap Hasil Belajar Geografi*. Universitas Negeri Jakarta.
- Vioreza, N. (2017). Pengaruh Pendekatan Penilaian dan Gaya Belajar Terhadap Motivasi Berprestasi Mahasiswa. *Visipena*, 8(1), 1–16.
- Xiao, J. J. (2020). Financial literacy in Asia: A scoping review. *Available at SSRN 3743345*.
- Zein, S., Sukyadi, D., Hamied, F. A., & Lengkanawati, N. S. (2020). English language education in Indonesia: A review of research (2011–2019). *Language Teaching*, 53(4), 491–523.