Effectiveness of the Discussion Method in Enhancing Collaborative Skills in Fourth-Grade Indonesian Language Learning

Karmila India Yani [1*], Lukman Hakim [1], Susanti Faipri Seleg[1]

[1] Universitas PGRI Palembang, Ulu Palembang, Indonesia

ARTICLE INFO

ABSTRACT

This study examines the efficacy of the discussion approach in improving collaborative abilities among fourth-grade students in Indonesian Language education at SD Negeri 87 Palembang. The research utilized a quantitative methodology with a quasi-experimental design, specifically the Non-equivalent Control Group Design, involving all fourth-grade students. Class IVA served as the experimental group, while class IVB functioned as the control group, comprising a total of 58 participants selected via saturated sampling. Data were gathered via observation, assessments, surveys, and recordkeeping. The results indicate a notable enhancement in collaboration skills among students subjected to the discussion approach. The experimental class exhibited a rise in mean test scores from 58.03 (pretest) to 82.85 (post-test), whereas the control class demonstrated a lesser gain from 47.33 to 72.33. In the experimental class, questionnaire scores went from 55.07 to 79.17, whereas the control class had an increase from 53.93 to 67.80. The independent sample t-test revealed a significance value of 0.000 (p < 0.05), demonstrating a substantial difference between the two groups and affirming the efficacy of the discussion approach. The findings indicate that the discussion technique enhances students' collaboration abilities while fostering greater engagement and interest in studying the Indonesian Language at the primary school level.

1. Introduction

Improving the quality of primary education is a strategic objective in Indonesia's national education plan, particularly in response to the increasing demands of 21st-century learning(Fadli et al., 2025). A fundamental competency highlighted in the Curriculum Merdeka and international educational frameworks is cooperation, a skill seen crucial for enhancing social interaction, communication, critical thinking, and collective problem-solving among students(Nahar et al., 2022). As classrooms transform into active learning environments, instructional practices that foster significant student engagement have gained paramount importance(Priyambodo & Hasanah, 2021). The discussion technique possesses significant instructional value, as it promotes the interchange of ideas, articulation of reasoning, negotiation of meaning, and collaborative knowledge construction among students(Xu et al., 2023).

Indonesian Language (Bahasa Indonesia) as a fundamental subject in primary education functions not only as a means of communication but also as a basis for cultivating students' cognitive and social interaction abilities(Beigzadeh et al., 2024). The topic seeks to enhance students' proficiency in listening, speaking, reading, and writing—skills that are intrinsically connected to cooperation and collaborative learning methodologies(Hollander, 2024). Nonetheless, classroom methods frequently persist as teacher-centered and textbook-oriented, offering scant opportunity for students to participate in dialogic learning(Riaz & Din, 2023). Such settings impede students' ability to develop collaborative abilities that correspond with curricular standards and real-world competences(Joie Claire et al., 2025). Despite prior research emphasizing the advantages of student-centered learning, empirical information about the impact of discussion-based instruction on enhancing collaboration in elementary education in Indonesia, particularly in language learning situations, is inadequate(Abdigapbarova & Zhiyenbayeva, 2022).

Effectively promoting collaboration in elementary school mostly depends on teachers' capacity to implement instructional practices that encourage active student engagement(Dada et al., 2023). The discussion-based approach provides a pedagogically effective alternative to conventional lecture approaches by placing students as active co-constructors of knowledge instead of passive users(Altun, 2023). Structured discussion activities enable learners to cultivate essential communicative and interpersonal skills, including attentive listening, coherent articulation, respect for other viewpoints, and collaborative problem-solving, which are vital for effective collaborative learning(Kerimbayev et al., 2023).

This method closely corresponds with sociocultural learning theory, which asserts that cognitive development is facilitated through social interaction and discourse(Henderson & Cunningham, 2023). Discussion-based pedagogy facilitates knowledge internalization by positioning learning within collaborative exchanges and shared meaning-making processes(Saleem et al., 2021). When skilfully executed, it transforms classroom dynamics from a teacher-centered approach to a learner-centred engagement, consequently augmenting motivation, confidence, and continuous participation(De Felice et al., 2023). Ultimately, discussion-based instruction acts as a catalyst for developing both intellectual and social skills vital for lifetime learning(Bamicha & Drigas, 2022).

Notwithstanding these benefits, the degree to which discussion-based learning enhances collaborative abilities in Bahasa Indonesia acquisition necessitates empirical validation, especially in public elementary school environments where resource constraints and substantial class numbers may affect instructional results(Mishra, 2023). SD Negeri 87 Palembang serves as an appropriate research site for examining this topic, given the different learning needs of students, disparities in classroom engagement, and the institution's initiatives to implement interactive learning methodologies(Santoso et al., 2021). Determining if discussion-based methods may substantially improve students' collaboration skills will yield valuable insights for instructional innovation and evidence-based teaching practices(Putri et al., 2023).

This study is focused on evaluating the efficacy of the discussion method in enhancing the collaborative skills of fourth-grade students in Indonesian Language instruction at SD Negeri 87 Palembang. This study offers empirical evidence about the pedagogical efficacy of collaborative learning strategies in elementary school by contrasting the learning outcomes of children educated using discussion-based methods with those taught via conventional ways(Ilma et al., 2021). The results are anticipated to facilitate the incorporation of student-centered teaching methods in classroom practices, thus enhancing the coherence between curriculum goals and instructional execution. The project aims to enhance critical competencies—namely communication, cooperation, and reflective thinking—among young learners through the methodical implementation of interactive, discussion-based teaching methodologies.

2. Methodology

2.1 Research Design

This study utilized a quantitative research methodology, particularly a quasi-experimental design involving a nonequivalent control group. This approach was used due to the impracticality of random assignment of participants to treatment and control groups within the school environment, while still necessitating a comparison of instructional interventions to investigate causal effects. Two intact fourth-grade classes were designated as experimental and control groups to evaluate the efficacy of the discussion approach on students' collaborative skills in Indonesian Language education.

2.2 Research Site and Participants

The study was carried out at SD Negeri 87 Palembang, a public elementary institution located in Palembang, South Sumatra. The study population consisted of all fourth-grade pupils registered for the 2024/2025 school year. The saturated sampling technique encompassed the entire population, resulting in 58 student participants. The participants were categorized into two equal groups: class IVA (experimental group, n = 29) and class IVB (control group, n = 29). The experimental group was instructed using a discussion-based learning method, while the control group received conventional, teacher-centered education. This design facilitated a direct comparison of learning outcomes and the development of collaboration skills between the two instructional methods.

2.3 Variables of the Study

The independent variable in this study was the implementation of the discussion technique in Indonesian Language instruction, whereas the dependent variable was the students' collaboration skills. The dependent variable was operationally defined using four observable indicators: cooperation, communication, responsibility, and mutual respect among group members. These indicators represent critical aspects of collaborative competency, facilitating systematic assessment of students' interaction quality and engagement during group learning activities.

2.4 Instruments and Measurement

Assessment of Collaborative Abilities

An evaluative written examination measuring students' understanding and capacity to implement collaborative behaviors in Indonesian Language learning activities. The instrument was validated via expert assessment and pilot testing to guarantee clarity and suitability.

Questionnaire on Collaborative Skills

A Likert-scale survey assessing students' impressions of teamwork in learning activities. Indicators encompassed participation, cooperation, communication, and task accountability. The instrument exhibited satisfactory internal consistency, with a Cronbach's alpha score surpassing 0.70.

Observation Sheet and Documentation

Checklist-based observations were performed to corroborate quantitative findings and validate classroom procedures, augmented by documentation including lesson plans, student work, and school records.

2.5 Data Analysis Techniques

Quantitative data were examined by descriptive and inferential statistics. Descriptive statistics were employed to summarize the mean scores and standard deviations of pretest and post-test outcomes for both groups. An independent samples t-test was utilized to assess whether the discussion approach significantly enhanced collaborative skills by comparing post-test outcomes of the experimental and control groups. Normality and homogeneity assessments were performed prior to hypothesis testing to verify data appropriateness. Statistical significance was determined at $p < 0.05$, signifying the rejection of the null hypothesis and the acceptance of the alternative hypothesis provided the criteria were satisfied.

3. Results

The findings of this study demonstrate the effectiveness of the discussion method in enhancing the collaborative skills of fourth-grade pupils in Indonesian language learning at SD Negeri 87 Palembang. Data were collected via observations of student activity, assessments of learning outcomes (pretest and post-test), and a collaboration skills questionnaire administered to students in both the experimental and control groups.

Table.1. Pretest and Post-test Data on Learning Outcomes

No.	Aspects Observed	Yes	No
1.	Students actively participate in the learning process.	√	
2.	Students are listening to the teacher's explanation.	√	
3.	Students are enthusiastic about participating in learning activities.	√	
4.	Students are paying attention to the teacher as they explain the material.	√	
5.	Students are active in expressing their opinions during group discussions.	√	
6.	Students are diligent in completing their assignments from the teacher.	√	
7.	Students are active and punctual in completing their assignments.	√	
8.	The students enthusiastically answered the teacher's questions.	√	
9.	Students are brave enough to speak up and express their opinions in front of the class.	√	
10.	Students are watching their friend express their opinion in front of the class.	√	

3.1 Pretest and Post-test Results of Collaborative Skills Data

The results from the pretest and post-test analyses demonstrate a substantial enhancement in the collaborative skills of students instructed through the discussion method. In the experimental class, the mean pretest score was 58.03, which rose to 82.85 following the intervention. Meanwhile, the control group also showed an increase, albeit with a lower post-test mean, rising from 47.33 to 72.33. These findings indicate that while both instructional strategies facilitated student development, the discussion approach yielded a greater enhancement in collaborative skills. The rise in average scores within the experimental class indicates that structured discussion activities facilitated more active student engagement, meaning negotiation, and the enhancement of cooperative behaviours.

Table.2. Pretest and Post-test Data on Learning Outcomes

Class	Average *Pretest*	Average *Posttest*
Experimental	58,03	82,85
Control	47,33	72,33

Source: SPSS Data Processing, (2025)

3.2 *Observation of Collaborative Behaviours During Learning*

Observational data revealed that students in the experimental class consistently exhibited positive learning behaviours consistent with indicators of collaborative engagement. All ten observed aspects—including active engagement, attentiveness, enthusiasm for learning, the capacity to articulate opinions during discussions, timely completion of assignments, and confidence in presenting ideas—elicited positive responses. These observations demonstrate that the discussion method cultivated a conducive environment for student engagement, idea sharing, and collective responsibility. In contrast, the control group exhibited diminished levels of spontaneous engagement and decreased student participation in collaborative activities, with discussions infrequently arising as the primary mode of learning. This contrast indicates that structured discussion opportunities played a substantial role in promoting collaborative learning behaviours.

The significance values (Sig.) for all data sets exceed 0.05, suggesting that the score distributions do not significantly diverge from normality. The pretest scores for the control class produced a significance value of 0.119, but the posttest results gave 0.052. In the experimental group, the pretest and posttest scores yielded significance values of 0.055 and 0.159, respectively. The posttest control value (0.052) and pretest experimental value (0.055) are proximate to the 0.05 threshold but exceed it, so they are categorized as normally distributed.

Table. 3. Normality Test on Learning Outcomes Results

Tests of Normality

	Class	Kolmogorov-Smirnov[a]		
		Statistic	Df	Sig.
Results	Pretest Control	.148	28	.119
	Posttest Control	.164	28	.052
	Pretest Experimental	.163	28	.055
	Posttest Experimental	.142	28	.159

Source: SPSS Data Processing, (2025)

As all significant values exceed 0.05, the null hypothesis of normal distribution is upheld. The results validate that the learning outcome data from both the experimental and control groups have a normal distribution, satisfying a fundamental assumption for the use of the independent samples t-test. Thus, parametric statistical analysis can be performed without necessitating data processing or the application of non-parametric alternatives.

3.3 *Homogeneity of Variance Test*

The homogeneity of variance test was conducted using Levene's Test to determine whether the variance of learning outcome scores between the experimental and control classes was equal. Equal variance is an important assumption for applying the independent samples t-test. The results are presented in Table 4.5. The table shows four statistical approaches—Based on Mean, Based on Median, Based on Median and with adjusted df, and Based on trimmed mean—all of which produced Sig. (significance) values greater than 0.05. Specifically, the Sig. values ranged from .134 to .224, with .138 reported under the "Based on Mean" approach, which is the primary reference for parametric testing.

Table 4. Homogeneity Test Results

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Results	Based on Mean	2.269	1	54	.138
	Based on Median	1.516	1	54	.224
	Based on Median and with adjusted df	1.516	1	47.762	.224
	Based on trimmed mean	2.311	1	54	.134

Source: SPSS Data Processing, (2025)

The null hypothesis of equal variances cannot be rejected because all significance values surpass 0.05. This means the experimental and control groups have statistically similar score variances. The independent samples t-test can be done without adjustments for unequal variances because both groups' data exhibit comparable variability. Thus, the assumption of homogeneity is met, making the t-test hypothesis testing legitimate and reliable.

4. Conclusions

This study reveals that the discussion technique effectively enhances the collaboration skills of fourth-grade students in Indonesian Language education at SD Negeri 87 Palembang. Quantitative results indicate substantial enhancements in learning outcomes and collaborative attitudes among students engaged in discussion-based instruction relative to those instructed through traditional techniques. The organized chances for debate, idea sharing, and collaborative problem-solving allowed students to actively participate in the learning process, foster mutual understanding, and build critical interpersonal skills. These findings reinforce the pedagogical significance of student-centred approaches in language acquisition and align with national educational aims that highlight critical thinking, communication, and teamwork as essential competences of the Kurikulum Merdeka. The efficacy of the discussion approach suggests that classroom education can serve as a potent medium for enhancing social interaction and collaborative learning when educators deliberately promote substantive dialogue. Consequently, incorporating discussion-based activities into Indonesian Language education is both practical and essential for developing students' collaborative skills. Future research should investigate the long-term effects on student learning behavior and assess the methodology across many disciplines and grade levels to enhance empirical evidence. Ongoing professional development for teachers centered on dialogic pedagogy may facilitate wider implementation, guaranteeing that collaborative abilities are continually cultivated in elementary education.

References

Abdigapbarova, U., & Zhiyenbayeva, N. (2022). Organization of Student-Centered learning within the Professional Training of a future teacher in a Digital Environment. *Education and Information Technologies 2022 28:1*, *28*(1), 647–661. https://doi.org/10.1007/S10639-022-11159-5

Altun, M. (2023). The Ongoing Debate over Teacher Centered Education and Student Centered Education. *International Journal of Social Sciences & Educational Studies*, *10*(1), 106–110. https://doi.org/10.23918/IJSSES.V10I1P106

Bamicha, V. (Victoria), & Drigas, A. (Athanasios). (2022). ToM & ASD: the Interconnection of Theory of Mind with the Social-emotional, Cognitive Development of Children with Autism Spectrum Disorder. the Use of ICTs as an Alternative Form of Intervention in ASD. *Technium Social Sciences Journal*, *33*, 42–72. https://doi.org/10.47577/TSSJ.V33I1.6845

Beigzadeh, A., Bazyar, H., Delzendeh, M., Razmi, M. H., & Sharifi, N. (2024). Comparing the effect of lecture method and cooperative teaching method on the learning, communication skills, and attitudes of students: a quasi-experimental study. *Frontiers in Education*, *9*, 1449538. https://doi.org/10.3389/FEDUC.2024.1449538/BIBTEX

Dada, D., Laseinde, O. T., & Tartibu, L. (2023). Student-Centered Learning Tool for Cognitive Enhancement in the Learning Environment. *Procedia Computer Science*, *217*, 507–512. https://doi.org/10.1016/J.PROCS.2022.12.246

De Felice, S., Hamilton, A. F. D. C., Ponari, M., & Vigliocco, G. (2023). Learning from others is good, with others is better: The role of social interaction in human acquisition of new knowledge. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *378*(1870). https://doi.org/10.1098/RSTB.2021.0357/109103

Fadli, R. P., Konseling, J., & Pendidikan, D. (2025). Principal's strategy in improving superior education quality: a case study at muhammadiyah elementary school. *Jurnal Konseling Dan Pendidikan*, *13*(1), 239–250. https://doi.org/10.29210/1144200

Henderson, R. W., & Cunningham, L. (2023). Creating Interactive Sociocultural Environments for Self-Regulated Learning. *Self-Regulation of Learning and Performance Issues and Educational Applications*, 255–282. https://doi.org/10.4324/9780203763353-11/CREATING-INTERACTIVE-SOCIOCULTURAL-ENVIRONMENTS-SELF-REGULATED-LEARNING-RONALD-HENDERSON-LINDA-CUNNINGHAM

Hollander, J. A. (2024). The Effectiveness Of Focus Group Discussions (Collaborative Learning Techniques) To Teach English Is Viewed From The Students' Motivation. *Conference on English Language Teaching*, *33*(5), 259–268. https://doi.org/10.1177/0891241604266988

Ilma, S., Henie, M., Al-Muhdhar, I., Rohman, F., & Saptasari, M. (2021). Students Collaboration Skills in Science Learning. *Proceedings of the 2nd International Conference on Innovation in Education and Pedagogy (ICIEP 2020)*, *619*, 204–208. https://doi.org/10.2991/ASSEHR.K.211219.037

Joie Claire, M., Jacqueline, M., Prudence, N., Philogene, M., & Journal, E. (2025). INTEGRATING COLLABORATIVE LEARNING STRATEGIES IN THE CURRICULUM: ENHANCING CRITICAL THINKING AND COMMUNICATION SKILLS IN PRIMARY EDUCATION. *European Journal of Education Studies*, *12*(3). https://doi.org/10.46827/EJES.V12I3.5848

Kerimbayev, N., Umirzakova, Z., Shadiev, R., & Jotsov, V. (2023). A student-centered approach using modern technologies in distance learning: a systematic review of the literature. *Smart Learning Environments 2023 10:1*, *10*(1), 61-. https://doi.org/10.1186/S40561-023-00280-8

Mishra, N. R. (2023). Constructivist Approach to Learning: An Analysis of Pedagogical Models of Social Constructivist Learning Theory. *Journal of Research and Development*, *6*(01), 22–29. https://doi.org/10.3126/JRDN.V6I01.55227

Nahar, S., Suhendri, Zailani, & Hardivizon. (2022). Improving Students' Collaboration Thinking Skill under the Implementation of the Quantum Teaching Model. *International Journal of Instruction*, *15*(3), 451–464. https://doi.org/10.29333/iji.2022.15325a

Priyambodo, P., & Hasanah, E. (2021). Strategic Planning in Increasing Quality of Education. *Nidhomul Haq : Jurnal Manajemen Pendidikan Islam*, *6*(1), 109–126. https://doi.org/10.31538/NDH.V6I1.1138

Putri, C. N. D., Sedyati, R. N., & Zulianto, M. (2023). Students' collaboration and communication skills with problem-based learning model. *Jurnal Inovasi Dan Teknologi Pembelajaran*, *10*(3), 225–233. https://doi.org/10.17977/UM031V10I32023P225

Riaz, M., & Din, Dr. M. (2023). Collaboration as 21st Century Learning Skill at Undergraduate Level. *Sjesr*, *6*(1), 93–99. https://doi.org/10.36902/SJESR-VOL6-ISS1-2023(93-99)

Saleem, A., Kausar, H., & Deeba, F. (2021). Social Constructivism: A New Paradigm in Teaching and Learning Environment. *PERENNIAL JOURNAL OF HISTORY*, *2*(2), 403–421. https://doi.org/10.52700/PJH.V2I2.86

Santoso, A. M., Primandiri, P. R., Zubaidah, S., & Amin, M. (2021). Improving student collaboration and critical thinking skills through ASICC model learning. *Journal of Physics: Conference Series*, *1806*(1), 012174. https://doi.org/10.1088/1742-6596/1806/1/012174

Xu, E., Wang, W., & Wang, Q. (2023). The effectiveness of collaborative problem solving in promoting students' critical thinking: A meta-analysis based on empirical literature. *Humanities and Social Sciences Communications 2023 10:1*, *10*(1), 16-. https://doi.org/10.1057/s41599-023-01508-1