

ANALYSIS OF COLLABORATIVE LEARNING MODEL IN OPTIMIZING COMMUNICATION AND SOCIAL SKILLS OF PUBLIC ELEMENTARY SCHOOL STUDENTS 8 TANAH LUAS

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Abstract

This study aims to analyze the implementation of collaborative learning model in science learning in grade IV of SD Negeri 8 Tanah Luas, and examine its impact on improving students' communication and social skills. This study uses a qualitative approach with a descriptive research design. The study was conducted at SD Negeri 8 Tanah Luas with research subjects including grade IV teachers and grade IV students. Data sources were obtained from primary data and secondary data. Data collection techniques used were observation, interviews, and documentation with instruments in the form of observation guidelines, interview guidelines, and documentation sheets. Data analysis techniques were carried out through the stages of data reduction, data presentation, and drawing conclusions, with data validity testing using source and technique triangulation. The results of the study indicate that (1) the implementation of collaborative learning model in science learning in grade IV of SD Negeri 8 Tanah Luas has been carried out well and is able to increase student involvement in learning; (2) students' communication and social skills after the implementation of the collaborative learning model have increased, which is shown through the courage to express opinions, the ability to listen and respond to friends' opinions, as well as attitudes of cooperation and tolerance in groups; and (3) the success of collaborative learning is supported by student activity, good learning planning, the role of teachers as facilitators, a conducive classroom climate, and school support, but still faces obstacles in the form of limited time, differences in student abilities, and group dynamics. Based on these results, it can be concluded that the collaborative learning model is effective in optimizing students' communication skills and social skills, so it is recommended to be implemented sustainably with more optimal learning management.

Keywords: Collaborative Learning, Science, Communication Skills, Social Skills



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INTRODUCTION

Science learning in elementary school aims not only to develop students' cognitive abilities, but also social and communication skills as part of 21st century competencies. Communication and social skills are very important in shaping the character of students who are able to work together, convey ideas, and respect the opinions of others.¹ However, learning practices in the classroom are still dominated by conventional methods centered on teachers, so that interaction between students is not optimal.² The collaborative learning model is seen as a relevant approach to creating an active learning environment that encourages student communication and cooperation in science learning.³ Therefore, an analysis of the application of collaborative learning models in science learning is very important to optimize the communication and social skills of elementary school students.

Various studies show that collaborative learning is able to improve students' learning outcomes and social skills.⁴ However, most studies still focus on cognitive aspects and academic achievement, while studies that specifically analyse their influence on communication and social skills in the context of science learning in primary schools are limited. In addition, the implementation of collaborative learning in elementary schools often faces obstacles such as lack of teacher readiness, time constraints, and low understanding of effective collaborative strategies.⁵ The gap between the potential of collaborative learning models and learning practices in the field shows the need for more in-depth research on their application in science learning.

Conceptually, collaborative learning is a learning approach that emphasizes cooperation between students in small groups to achieve shared learning goals.⁶ In science learning, this model allows students to discuss, exchange ideas, experiment together, and solve problems collectively. The interaction process encourages the development of communication skills, such as the ability to express opinions, actively listen, and provide feedback.⁷ In addition, collaborative learning also strengthens students' social skills through habituating attitudes of responsibility, empathy,

¹ Bernie Trilling and Charles Fadel, *21st Century Skills: Learning for Life in Our Times* (John Wiley & Sons, 2009).

² Saiful Anwar and Jasiah Jasiah, "Pengembangan Media Pembelajaran Berbasis Game Educaplay Untuk Meningkatkan Keaktifan Siswa Pada Mata Pelajaran SKI," *Jurnal Budi Pekerti Agama Islam* 3, no. 1 (2024), <https://doi.org/10.61132/jbpai.v3i1.913>.

³ David W. Johnson and Frank Pierce Johnson, *Joining Together: Group Theory and Group Skills* (Pearson, 2013).

⁴ Robert E. Slavin, *Educational Psychology: Theory and Practice* (Pearson, 2018); Robyn Gillies, "Cooperative Learning: Review of Research and Practice," *Australian Journal of Teacher Education* 41, no. 3 (2016), <https://doi.org/10.14221/ajte.2016v41n3.3>.

⁵ Linda Darling-Hammond et al., *Effective Teacher Professional Development* (Learning Policy Institute, 2017), <https://doi.org/10.54300/122.311>.

⁶ Johnson and Johnson, *Joining Together*.

⁷ Gillies, "Cooperative Learning."

tolerance, and cooperation.⁸ Thus, the collaborative learning model theoretically has a strong relationship with improved communication and social skills in science learning.

Gillies' research shows that collaborative learning can improve the quality of student interaction and communication skills in science learning.⁹ Slavin found that structured group work is able to improve students' social skills and active participation. Chen's research also reports that technology-based collaborative learning can strengthen student communication and collaboration.¹⁰ Furthermore, a study by Hattie revealed that cooperative learning has a significant effect on students' social engagement. In Indonesia, research by Suryani and Sugiyono shows that the application of collaborative learning in science subjects can improve the communication and cooperation skills of elementary school students. The results of these studies indicate that collaborative learning has great potential in developing students' social and communication skills.

This research is relevant to the demands of 21st century education that emphasizes the mastery of communication, collaboration, and social skills as the main competencies of students.¹¹ In addition, this research supports national education policies that lead to active, participatory, and student-centered learning. In the context of science learning, a collaborative model can help students understand concepts more deeply through joint discussions and experiments. The results of this research are expected to be a reference for teachers in designing more interactive science learning and become a consideration for policy makers in curriculum development and teacher training. Thus, the question of this research is how to implement the collaborative learning model in science learning, as well as its impact on improving students' communication skills and social skills.

RESEARCH METHODS

The purpose of this study is to analyze the implementation of the collaborative learning model in science learning, as well as its impact on improving communication skills and social skills of students in grade IV of SD Negeri 8 Tanah Luas. This school was chosen as the research location because it has considerable attention to the development of students' potential, especially in aspects of communication learning and social skills. In addition, the school also supports the implementation of innovative learning strategies that can improve the quality of learning. This research uses a qualitative method, which is a research approach aimed at describing and

⁸ Paulina Maria Ekasari Wahyuningrum, "Analisis Penerapan Collaborative Learning Dalam Pembelajaran Pada Siswa Sekolah Dasar," *Journal on Education* 4, no. 4 (2022), <https://doi.org/10.31004/joe.v4i4.3060>.

⁹ Gillies, "Cooperative Learning."

¹⁰ Xiuling Chen et al., "Application and Theory Gaps During the Rise of Artificial Intelligence in Education," *Computers and Education: Artificial Intelligence* 1 (January 2020), <https://doi.org/10.1016/j.caeai.2020.100002>.

¹¹ Trilling and Fadel, *21st Century Skills*.

analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, and thoughts of people individually and in groups.

The determination of data sources in qualitative research is carried out purposively, which is determined by adjusting to certain research objectives or conditions. In qualitative research, we identify participants and places with *purposive sampling* that is based on the places and people that best help us understand our central phenomena.¹² The sample used consisted of students, principals and teachers as respondents. Data collection techniques with interview and observation guidelines. Interview guidelines are used as a guide when the interview is conducted, so that it is in accordance with the purpose and objectives to be achieved. Observations were made on the application of the collaborative learning model in science learning.

In this study, the author presents the data obtained related to the application of the collaborative learning model in science learning, applied to optimize communication and social skills and the obstacles faced by teachers. The brief description is used by the author in explaining the data that the author presents related to what the author gets in the field to be more detailed, such as the results of interviews and the results of observations obtained by the author. The validity test of qualitative data includes the test of credibility (credibility), transferability (transfer value), dependability and confirmability. Data analysis was carried out using qualitative descriptive, namely data reduction, data presentation and conclusions (Sugiyono, 2019).

RESULTS AND DISCUSSION

Based on the results of an interview with a grade IV teacher of SD Negeri 8 Tanah Luas, namely Mazidah, the application of the collaborative learning model in the learning of Indonesian language dialogue materials showed a positive response from students. The teacher said that during the learning the students seemed more enthusiastic and actively involved in group activities. Mazidah stated that *"Students show a positive response. They look more enthusiastic, enjoy working in groups, and don't feel bored because they can discuss and practice dialogue with their friends."* This statement shows that collaborative learning is able to create a more lively learning atmosphere and encourage students to actively interact in the learning process.

The same thing was also conveyed by Helma Putri who stated that *"I feel happy and excited because studying is not boring and I can discuss with friends."* The statement shows that collaborative learning makes the learning atmosphere more enjoyable and increases students' enthusiasm for learning. In addition, collaborative learning also has a positive impact on

¹² John W. Creswell, *Penelitian Kualitatif & Desain Riset: Memilih Di Antara Lima Pendekatan*, 3rd ed. (Pustaka Pelajar, 2015).

students' courage in communicating. Muhammad Rafi revealed that *"I didn't dare to speak before, now I'm starting to be brave."* This shows that group learning provides space for students to exercise courage in speaking and expressing opinions, especially in dialogue activities.

However, not all students immediately responded positively to the implementation of collaborative learning. Amar said that *"Actually, I don't like it a bit, but after a long time because I often get used to the teacher's mother, I finally like it."* This statement shows that some students need time and habituation to be able to adjust to the collaborative learning model. In addition, Junaidi also gave a response that tended to be neutral by stating that *"Happy but sometimes bored, prefer to do it yourself because it is done quickly."* This statement shows that there are still students who feel that collaborative learning is not fully in accordance with their learning preferences, especially in terms of time effectiveness and group work dynamics.

Furthermore, the implementation of the collaborative learning model can also be seen from the division of individual responsibilities in each group. Based on the results of interviews with grade IV teachers of SD Negeri 8 Tanah Luas, Mazidah, collaborative learning was carried out by dividing students into small groups and giving clear tasks to each group member. Mazidah stated that *"Learning is carried out by dividing students into small groups. Each group was given the task of composing and demonstrating the dialogue according to the theme. Students discuss, share ideas, and practice together before presenting the results in front of the class."* This statement shows that teachers seek to instill individual responsibility through a structured division of tasks in group activities.

The same thing was also conveyed by Fairus Zaki who stated that *"Yes, for example, there are duties from teachers and then we divide the duties into those who are the chairman, secretary and members."* This statement suggests that the division of duties is not only general, but also accompanied by a clear division of roles within the group. In addition, Fara Asyifa revealed that *"Yes, everyone gets assignments, some write and some read dialogues."* This statement shows that each group member has their own role in completing the dialogue assignment given by the teacher.

Kasmi Laila also said that *"Yes, we divide the tasks so that all group members feel fair and responsible."* This statement shows that the division of tasks in groups is perceived by students as an effort to create justice and shared responsibility, so that each member feels that they have an important role in completing group tasks.

However, there are still students who say that not all group members always carry out their duties well. Amar stated that *"Yes, but sometimes there are also those who do not want to do it."* This statement shows that even though the division of tasks has been carried out, there are still obstacles in the form of a lack of responsibility for some students in group work. The

findings are in line with the results of the researchers' observations which show that teachers facilitate group work by dividing the roles and responsibilities of students and directing the course of group discussions. During observation, the teacher was seen actively going around monitoring student activities, providing directions, and ensuring that each group member was involved in the discussion process and the completion of dialogue assignments. The results of these observations were strengthened by documentation of learning activities that showed teachers and students discussing in small groups. This documentation shows direct interaction between teachers and students as well as between students in groups, which reflects the practical application of collaborative learning in the classroom.

Based on the above findings, it can be concluded that individual responsibility in collaborative learning on dialogue materials in grade IV of SD Negeri 8 Tanah Luas has generally been carried out well. The majority of students have carried out the assigned tasks in groups, although there are still a small number of students who have not participated optimally. Therefore, the role of teachers is still needed to monitor, guide, and affirm the responsibilities of each student so that the implementation of collaborative learning can run more effectively. The implementation of collaborative learning in dialogue materials is also reflected in the pattern of student interaction in the group, especially in the attitude of mutual help, the level of participation, and the exchange of opinions during the learning process. The pattern of interaction appears in three main forms, namely prosocial attitudes, passive participation, and exchanging activities between students in groups

Based on the results of interviews with grade IV teachers of SD Negeri 8 Tanah Luas, Mazidah, efforts are made to encourage students to help each other and cooperate through the assignment of tasks that require cooperation, the establishment of discussion rules, and guidance for groups experiencing difficulties. Mazidah stated that *"I give assignments that require cooperation, set rules for discussion, and encourage students to respect each other's opinions. I also guide groups that are having difficulties."* This statement shows that teachers play an active role in creating a learning atmosphere that encourages social interaction, both in the form of mutual help and exchange opinions between students.

The findings are further supported by the results of student interviews that show variations in social interaction in group work. On the aspect of prosocial attitude, Ahmad Mubarak said that *"If there is a friend who does not understand, I help explain it slowly so that he understands."* This statement shows that there is a concern of students for friends who have difficulty understanding the material. The same thing was also conveyed by Fatia Humaira who stated that *"I immediately helped a friend who was in difficulty."* This statement shows that some students have the initiative to provide assistance directly without having to be asked.

The development of students' confidence was also strengthened by the results of interviews with grade IV teachers of SD Negeri 8 Tanah Luas. Mazidah said that "*Students have become more courageous to express their opinions. For example, students propose dialogue ideas, improve friends' sentences, and make suggestions during group discussions.*" The teacher's statement showed that collaborative learning provides space for students to practice their communication skills directly through group interaction. The students' communication skills are also reflected in their ability to understand and interpret the messages or instructions delivered by the teacher during the lesson. Based on the results of interviews with grade IV teachers of SD Negeri 8 Tanah Luas, Mazidah, most of the students have been able to understand the instructions well. Mazidah said that "*Most students are able to understand the instructions well. They can carry out tasks according to directions and ask questions if there are things that are not understood.*" This statement shows that collaborative learning helps students to focus more on receiving information, understanding directions, and having the courage to ask questions when experiencing difficulties.

Based on these findings, it can be concluded that the application of the collaborative learning model has had a positive impact on students' communication and social skills, especially in the attitude of listening and respecting the opinions of friends. Although most students have been able to respond to opinions politely, there are still students who show limited involvement and tend to be passive. Therefore, the role of teachers is still needed to continue to guide, provide stimulus, and create a safe discussion atmosphere so that all students dare to participate actively.

Discussion

The results of the study show that collaborative learning in science learning provides space for students to learn through meaningful social interaction. Through group work, students engage in discussions, exchange ideas, and problem-solving together. This process allows for the social construction of knowledge, as Vygotsky argues that effective learning occurs through social interaction.¹³ According to Barkley, collaborative learning is able to increase student involvement in understanding science concepts.¹⁴ In the context of elementary school, this approach helps students relate their learning experience to natural phenomena in a more concrete way, so that science learning becomes more meaningful.

¹³ Doni Irawan Saragih et al., "Perbedaan Kemampuan Pemecahan Masalah Dan Motivasi Belajar Yang Diajar Melalui Model Pembelajaran Kooperatif Dengan Kontekstual Berbantuan Software Geogebra," *Paradikma: Jurnal Pendidikan Matematika* 13, no. 2 (2020), <https://doi.org/10.24114/paradikma.v13i3.22915>.

¹⁴ Elizabeth F. Barkley et al., *Collaborative Learning Techniques: A Handbook for College Faculty* (John Wiley & Sons, 2012).

The results of the study show that collaborative learning contributes positively to the development of students' communication skills. In the study group, students are trained to express opinions, ask questions, and respond to friends' ideas.¹⁵ Group discussion and presentation activities in science learning encourage students to use language effectively and in a structured manner. According to Mercer and Howe, collaborative dialogue can improve the ability to think and speak reflectively.¹⁶ Thus, collaborative learning plays an important role in building students' interpersonal communication skills from an early age.

Collaborative learning also serves as a means of developing students' social skills, such as cooperation, empathy, responsibility, and tolerance. In groups, students learn to respect differences of opinion and resolve conflicts constructively (Wentzel & Miele, 2016). Science learning that requires experimentation and joint observation strengthens social interaction between students. According to UNESCO, collaboration-based education can form an adaptive and inclusive social character. Therefore, the application of the collaborative model is an effective strategy in fostering positive social attitudes in elementary school students.

The success of collaborative learning is largely determined by the role of teachers in designing, managing, and evaluating learning activities. Teachers must be able to form heterogeneous groups, assign clear assignments, and facilitate group discussions effectively.¹⁷ In science learning, teachers play the role of facilitators who direct students to conduct scientific investigations collaboratively. According to Darling-Hammond, teachers' pedagogic competence greatly affects the quality of students' learning interactions.¹⁸ Therefore, improving teacher professionalism is an important factor in optimizing collaborative learning.

Despite its many advantages, the implementation of collaborative learning in elementary schools still faces various challenges. Some of the obstacles that often arise include limited learning time, differences in students' abilities, and lack of experience of teachers in managing collaborative classrooms.¹⁹ In addition, there are students who tend to be passive or dependent on their group mates. According to the OECD, the implementation of active learning requires

¹⁵ Dima Syafa'a Nabila et al., "Studi Kasus Keterampilan Sosial: Komunikasi Siswa Dalam Pembelajaran Kooperatif Dan Kolaboratif," *Jurnal Integrasi Dan Harmoni Inovatif Ilmu-Ilmu Sosial* 4, no. 9 (2024), <https://doi.org/10.17977/um063v4i9p8>.

¹⁶ Neil Mercer and Christine Howe, "Explaining the Dialogic Processes of Teaching and Learning: The Value and Potential of Sociocultural Theory," *Learning, Culture and Social Interaction* 1, no. 1 (2012), <https://doi.org/10.1016/j.lcsi.2012.03.001>.

¹⁷ Raija Hämäläinen and Katja Vähäsantanen, "Theoretical and Pedagogical Perspectives on Orchestrating Creativity and Collaborative Learning," *Educational Research Review* 6, no. 3 (2011), <https://doi.org/10.1016/j.edurev.2011.08.001>.

¹⁸ Linda Darling-Hammond et al., "Implications for Educational Practice of the Science of Learning and Development," *Applied Developmental Science* 24, no. 2 (2020), <https://doi.org/10.1080/10888691.2018.1537791>.

¹⁹ Nanik Sulistyawati and Darmiyati Zuchdi, "Implementasi Teknik Pembelajaran Kolaboratif Dengan Variasi Media Untuk Peningkatan Hasil Belajar Di SMPN 2 Kalijambe," *Harmoni Sosial: Jurnal Pendidikan IPS* 3, no. 1 (2016), <https://doi.org/10.21831/hsjpi.v3i1.9694>.

systematic support in the form of teacher training and the provision of learning facilities. Therefore, a special strategy is needed so that collaborative learning can run optimally.

In line with the findings reported by Aqmarani, Magdalena and Ayudhiya, learning evaluations by teachers in primary schools are often carried out as part of the teaching process to measure student achievement and the effectiveness of learning strategies. The study showed that evaluation is carried out after learning and through direct observation of student activities, allowing teachers to see the development of students' abilities individually. However, these findings also indicate that the implementation of evaluation needs to be strengthened with a more systematic approach to individual evaluation so that the involvement of all students in learning can be monitored and improved consistently. These findings are in line with the results of research at the study site which shows that classroom supervision activities by teachers.

The results of the study are in line with the research conducted by Waruwu and Yova which found that students who engage in dialogue and collaborative interaction activities not only improve their understanding of the material but also show an increase in positive social attitudes through group work and active discussions.²⁰ These findings support the results of research at the study site that collaborative dialogue learning not only contributes to linguistic aspects but also to the holistic development of students' social attitudes, so this method is relevant to be used as part of learning strategies that strengthen students' social interaction and active participation in the classroom.

Students' social skills are also reflected in their attitude in responding to differences of opinion during collaborative learning. Research findings show that students tend to listen to the opinions of their peers, do not impose personal opinions, are willing to accept group decisions, and resolve differences through discussion and deliberation. This pattern shows that collaborative learning has helped students develop a tolerant and cooperative attitude.

The application of collaborative learning in science learning has positive implications for the overall quality of learning. Students not only understand science concepts more deeply, but also develop balanced social and communication skills. According to Beers, collaboration-based learning is able to improve students' critical thinking skills and active participation. In the long run, this approach can shape the profile of students who are independent, communicative, and able to work in a team. Therefore, collaborative learning needs to be used as one of the main strategies in the development of science learning in elementary schools.

²⁰ Ermina Waruwu and Yova Andriani Br Ginting, "Peningkatan Keterampilan Kolaborasi Dan Hasil Belajar Siswa Menggunakan Model Student Team Achievement Division," *SCHOOL EDUCATION JOURNAL PGSD FIP UNIMED* 14, no. 1 (2024), <https://doi.org/10.24114/sejpgsd.v14i1.58117>.

CONCLUSION

The conclusion of the results of this study is that based on the results of analysis and discussion, it can be concluded that the application of the collaborative learning model in science learning in elementary schools plays an important role in optimizing students' communication and social skills. Through group work activities, discussions, and joint problem-solving, students are able to develop the ability to express opinions, actively listen, and appreciate differences of view. In addition, collaborative learning also encourages the formation of cooperative attitudes, responsibility, empathy, and tolerance between students. Collaborative learning not only has an impact on social and communication aspects, but also contributes to a deeper and more meaningful understanding of science concepts. The social interactions that occur during the learning process help students actively construct knowledge through hands-on experience. However, the success of the implementation of this model is highly dependent on teacher readiness, careful learning planning, and the support of conducive learning facilities and environments. Therefore, collaborative learning needs to be managed systematically in order to provide optimal results. Teachers are advised to more intensively apply the collaborative learning model in science learning by designing structured group activities, clear goals, and balanced division of roles. Teachers also need to improve their ability to manage discussions and facilitate student interaction so that all group members can actively participate.

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