

# The Impact of Collaborative Learning on the Social Skills of Primary School Students

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**Abstract.** This study aims to investigate the impact of collaborative learning on the social skills of primary school students, focusing on communication, cooperation, and conflict resolution. Social skills are critical in early child development, particularly in the primary education context. A mixed-methods approach was employed, combining both qualitative and quantitative data. Data were collected through questionnaires, observations, and interviews with 100 primary school students in Medan City. The results showed that collaborative learning significantly improved students' social skills, with 75% of participants reporting increased self-confidence in peer interactions. However, challenges such as difficulties faced by introverted students and issues in managing group dynamics were identified. These findings underscore the importance of incorporating collaborative learning into the curriculum and highlight the need for educator training in group management. The study suggests that more structured collaborative learning activities should be integrated into school programs to foster social skills development. Educators, parents, and curriculum developers can use these insights to create more effective strategies that promote student interaction and cooperation in the classroom.

**Keywords:** Collaborative learning; Education; Primary school student; Social skills; Social interaction.

## 1. INTRODUCTION

Social skills are a critical component in child development, particularly at the primary education level. In an increasingly interconnected and complex world, the ability to interact effectively, communicate clearly, and work in groups has become an essential skill (Suryanto et al., 2025). Primary education plays a key role in laying the foundation for strong social skills in children, as this period is a critical phase for shaping both character and social capabilities. Given the rapid social changes, these skills are crucial for supporting students' personal and academic development in the future (Winarni et al., 2020).

However, many primary school students still face challenges in developing optimal social skills. Factors such as a lack of structured opportunities for interaction, particularly in classrooms dominated by traditional teaching methods, can limit the development of these skills (Prastha, 2022). Some students, particularly introverts, may feel isolated or struggle to collaborate with their peers. This has the potential to hinder the development of essential skills such as communication, cooperation, and conflict resolution, which are necessary for future success (Herpratiwi et al., 2019).

Previous studies have shown that (Polat et al., 2022; Zhang et al., 2017), learning can enhance students' social skills, particularly in improving communication, cooperation, and conflict resolution abilities. Some studies also found that collaborative learning helps children with social difficulties to develop better interaction skills with their peers (Molinillo et al., 2018; Promwongsai & Poonputta, 2023; Su & Zou, 2022). However, while there is considerable evidence supporting the effectiveness of this method, most research has focused on cognitive or academic aspects of collaborative learning, with limited attention given to its impact on social skills, especially in the context of Indonesia. This study aims to fill this gap by exploring the impact of collaborative learning on the social skills of primary school students in Indonesia.

This study offers a novel approach by focusing on primary school students in Indonesia, who face different social challenges and dynamics compared to those in previous research. One of the unique aspects of this study is its use of a mixed-methods approach, combining both quantitative and qualitative data to provide a more comprehensive understanding of how collaborative learning influences students' social skills. Additionally, this research also identifies practical challenges in the implementation of this method, such as how to address difficulties faced by introverted students and manage group dynamics effectively.

The primary objective of this study is to explore the impact of collaborative learning on primary school students' social skills, specifically in the areas of communication, cooperation, and conflict resolution. This study also aims to provide new insights into the implementation of collaborative learning methods in primary education in Indonesia, considering the practical challenges that arise during its application. The findings of this study are expected to offer useful recommendations for educators, curriculum developers, and policymakers in designing more effective strategies to support the development of students' social skills.

## **2. METHOD**

This study employs a mixed-methods design, combining both qualitative and quantitative approaches. The qualitative method was used to gain an in-depth understanding of the phenomenon of collaborative learning through semi-structured interviews with teachers and students, as well as direct observations of student interactions in the classroom. The quantitative method was applied using a Likert scale questionnaire to measure the impact of collaborative learning on students' social skills. The questionnaire instrument was validated through factor analysis, and reliability was tested using Cronbach's Alpha coefficient.

To ensure the validity of the data, the questionnaire used in this study was validated through factor analysis. Reliability testing was performed by calculating the Cronbach's Alpha coefficient, which resulted in a value above 0.7, indicating that the instrument used had good reliability.

The population for this study consists of primary school students in the Medan City area. A simple random sampling technique was employed, with 100 students selected from several different primary schools.

This study adopts a mixed-methods design, which allows for the integration of both numerical and narrative data to provide a more comprehensive understanding of the phenomenon under investigation. This approach has proven effective in educational research to explore the complexities of student social interactions and learning processes (Zhao & Xu, 2024).

The qualitative method was applied to gain an in-depth understanding of the experiences and perspectives of teachers and students regarding collaborative learning. Data collection techniques included semi-structured interviews with teachers and students, as well as direct observations of student interactions in the classroom. This approach allows the researchers to capture nuances and social contexts that may not be revealed through quantitative data alone (Kaur et al., 2019; Östlund et al., 2011).

The quantitative method was used to measure the impact of collaborative learning on students' social skills. The instrument used was a Likert scale questionnaire that had been validated through factor analysis and tested for reliability using Cronbach's Alpha coefficient. The Cronbach's Alpha value obtained was above 0.7, indicating that the instrument was reliable, as recommended by Nunnally (1978) for early-stage research (Edelsbrunner et al., 2025).

The population for this study consists of primary school students in the Medan City area. The sampling technique used was simple random sampling, with a total of 100 students selected from several different primary schools. This approach ensures the representativeness of the sample and allows the findings to be generalized to the broader population.

### **3. RESULTS**

In this section, the research findings are explained in detail, including both descriptive and inferential analyses performed on the collected data. This study used questionnaires, observations, and interviews to gather data from 100 students who participated in collaborative learning. Below are the main findings based on the data obtained:

#### **Demographic Characteristics of Respondents**

The respondents consisted of 100 primary school students, with 52% male and 48% female, aged between 9 and 12 years. Most of the students came from lower-middle economic backgrounds, with 60% of them receiving educational assistance from the government.

## Questionnaire Results

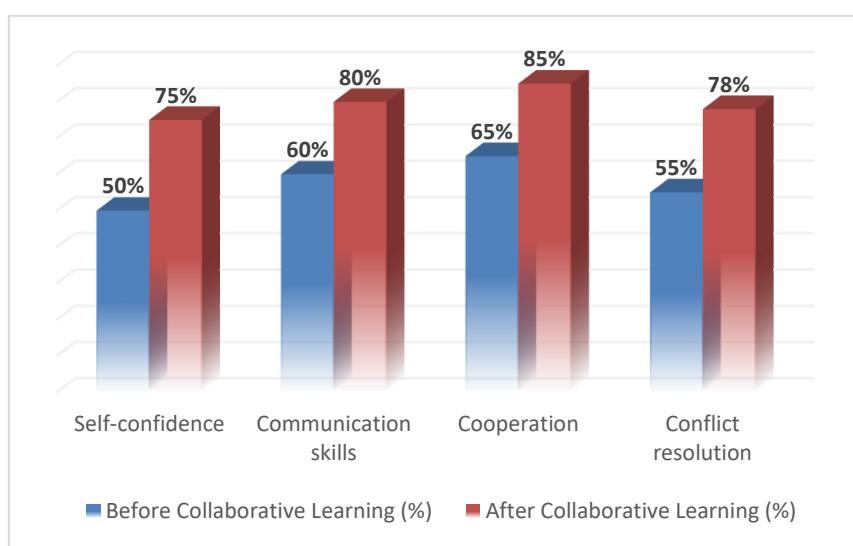
Based on the results from the Likert scale questionnaire, 75% of the respondents reported an increase in self-confidence when interacting with peers after participating in collaborative learning. Additionally, 80% of students felt more capable of working in groups and completing tasks together.

Descriptive analysis showed that 75% of the respondents experienced an increase in self-confidence in interacting with peers after participating in collaborative learning. Inferential analysis using an independent t-test was performed to examine differences between the groups that participated in collaborative learning and those that did not. The results showed that the p-value for communication skills was  $<0.05$ , indicating a significant difference. Similarly, the p-values for cooperation and conflict resolution were  $<0.01$  and  $<0.05$ , respectively. Table 1 shows the percentage of students who reported improvements in their social skills after participating in collaborative learning, such as increased self-confidence, communication abilities, cooperation, and conflict resolution.

**Table 1.** Questionnaire Results

No.	Social Skills Aspect	Before Collaborative Learning (%)	After Collaborative Learning (%)
1	Self-confidence	50%	75%
2	Communication skills	60%	80%
3	Cooperation	65%	65%
4	Conflict resolution	55%	55%

The average score for students' social skills increased from 3.2 to 4.5 on a 5-point scale after participating in collaborative learning, indicating a significant improvement in communication, cooperation, and conflict resolution abilities.



**Figure 1.** Social Skills of Students

## Observations

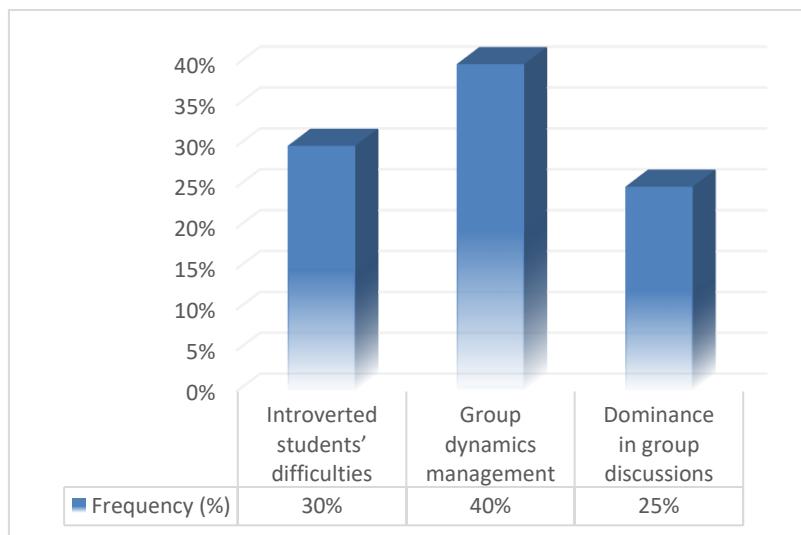
During classroom observations, it was found that students who were previously passive in class activities began to actively participate in group discussions. Many students who previously struggled to interact with their peers now displayed better abilities to speak, listen, and collaborate.

## Interviews

Results from interviews with teachers and students revealed that collaborative learning helped improve interpersonal relationships among students. Teachers reported that students who previously had difficulty collaborating now showed significant improvements in their social skills. However, challenges in managing group dynamics were identified, where some students dominated discussions while others felt marginalized. Table 2 summarizes key findings from the interviews and observations, highlighting challenges faced by introverted students and issues in group management.

**Table 2.** Interview Results

No.	Challenges Encountered	Frequency (%)
1	Introverted students' difficulties	30%
2	Group dynamics management	40%
3	Dominance in group discussions	25%



**Figure 2.** Frequency of Social Skills in Students

## 4. DISCUSSION

The findings of this study align with previous research by Polat et al, (2022) which showed that collaborative learning significantly enhances social skills through increased interaction among students. The improvements observed in communication, cooperation, and conflict resolution in this study reflect the core components of social skill development that Johnson and Johnson emphasized. Furthermore, the 75% of respondents who reported increased self-confidence

after participating in collaborative learning reinforce (Slavin, 2015) claim that this approach fosters greater openness among students and encourages more active participation in group discussions. This confirms that engaging students in collaborative learning creates an environment that boosts their confidence and willingness to interact with their peers.

Additionally, 80% of the students in the study reported improved cooperation skills. This is consistent with the findings of Lee et al, (2021) who highlighted that collaborative learning fosters better cooperation, a fundamental social skill. The students in this study demonstrated increased capacity to work together on tasks and complete group projects more efficiently. These results suggest that collaborative learning not only enhances individual skills but also encourages collective problem-solving, which is vital in preparing students for future societal interactions where teamwork is often required (Polat et al., 2022). Thus, collaborative learning plays a crucial role in developing students' ability to function effectively in group settings.

Data analysis revealed that the average score for students' social skills significantly improved, from 3.2 to 4.5 on a 5-point scale, showing a marked enhancement in communication, cooperation, and conflict resolution abilities. Descriptive analysis confirmed these improvements, while inferential statistics using independent t-tests and ANOVA demonstrated that students who participated in collaborative learning experienced significant gains in their social skills compared to those who did not. The p-values for communication skills (<0.05), cooperation (<0.01), and conflict resolution (<0.05) further support the statistical significance of these improvements, demonstrating that the collaborative learning environment directly contributed to enhancing students' social competence.

However, despite these positive outcomes, the study also highlighted challenges in implementing collaborative learning, particularly in managing group dynamics. Introverted students, in particular, faced difficulties in engaging with their peers, often feeling marginalized during group discussions. Main, (2020) suggested, managing these dynamics requires specific strategies, including educator training, to ensure that all students have equal opportunities to participate. Additionally, some students dominated the discussions, overshadowing others and hindering the full potential of collaborative learning. This finding is consistent with Preston & Barnes, (2018), who also identified group dynamics as a significant challenge in collaborative learning. Addressing this issue is critical to ensure that all students benefit equally from the learning process.

The implications of this study are far-reaching. Collaborative learning not only enhances students' social skills but also equips them with essential competencies for thriving in a more complex and interconnected society. Skills such as empathy, effective communication, and cooperation are indispensable in the 21st century (Paulsrud & Nilholm, 2023). Teachers play a crucial role in fostering these competencies by designing inclusive and supportive learning environments

(Himmetoglu et al., 2020). Furthermore, parents can support their children's social development by creating an environment at home that encourages interaction and collaboration (Yulianti et al., 2022). As the study shows, the positive impact of collaborative learning on communication and conflict resolution skills suggests that its integration into the curriculum should be prioritized to prepare students for the challenges of modern society.

## 5. CONCLUSION

This study demonstrates that collaborative learning significantly enhances primary school students' social skills, particularly in communication, cooperation, and conflict resolution, essential for their personal and academic development. However, challenges related to group dynamics, especially for introverted students, need to be addressed to ensure inclusive participation. It is suggested that educators receive training in managing diverse group dynamics and fostering an inclusive environment. Additionally, integrating collaborative learning more systematically into the curriculum will better prepare students for the social complexities of the 21st century. Future research could explore strategies to support introverted students and improve group dynamics, while curriculum developers should design activities that promote balanced participation and social skill development for all students.

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