



Social Interaction and Collaborative Learning toward Better Academic Achievement

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Abstract

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This study aims to examine the influence of social interaction and collaborative learning on students' academic achievement. Academic achievement serves as a key indicator of educational success, reflecting the attainment of learning objectives and students' readiness to face higher academic challenges. Social interaction plays a vital role in fostering communication skills, cooperation, and self-confidence, which support active engagement in the learning process. Collaborative learning positions students as active participants through group work, discussion, and joint problem-solving, thereby enhancing both critical thinking and social competence. Nevertheless, unequal participation within groups may hinder its overall effectiveness. This research employs a library research method, analyzing recent academic literature to explore relevant theoretical and empirical findings. The review results indicate that positive social interaction and well-structured collaborative learning contribute significantly to improving academic achievement. Therefore, effective pedagogical strategies are required to promote balanced participation and provide continuous support for the development of students' social and interpersonal skills.



1. Introduction

Modern education no longer focuses solely on the mastery of cognitive knowledge, but also emphasizes the development of social, communication, and collaboration skills as an integral part of the learning process. Students academic achievement serves as the main indicator in assessing educational success, both from the intellectual and affective aspects (Anggreani et al., 2023). Achieving high academic grades not only reflects success in understanding subject matter, but also functions as a benchmark for assessing the effectiveness of the education system as a whole. Moreover, academic achievement is often used as a reference in determining opportunities to obtain scholarships and continue studies to a higher level. However, academic success cannot be separated from the social factors that influence how students interact, cooperate, and build interpersonal relationships in the learning environment (Dalgaard et al., 2022).

Social interaction plays a crucial role in developing communication skills, empathy, and cooperation among individuals. In the context of learning, social interaction encourages students to exchange ideas, share perspectives, and understand the viewpoints of others. Through this process, students gain more meaningful learning experiences because the focus is not only on achieving academic results but also on character building and social skills. Positive social interaction can increase self-confidence, strengthen learning motivation, and foster an attitude of mutual respect among students (Kaliisa et al., 2022). Thus, the social dimension in the learning process acts as an important foundation for forming individuals who are intellectually intelligent and emotionally mature.

Along with the development of the 21st-century education paradigm, collaborative learning emerges as one approach that places social interaction at the core of the learning process. In this model, students work in small groups to solve problems, discuss concepts, and complete tasks together. This collaborative process allows students to develop critical thinking skills, interpersonal communication skills, and a sense of shared responsibility for group results. Through such activities, students get the opportunity to support each other in understanding the subject matter, which ultimately has a direct impact on improving academic achievement (Almanafi et al., 2024).

Social interdependence theory explains that the success of group learning is highly determined by the existence of positive interdependence among members. Each group member has a responsibility for the collective success, so the awareness of the importance of individual contribution encourages more effective cooperation. Thus, collaborative learning focuses not only on academic results but also on forming healthy social relationships, a sense of collective responsibility, and the ability to work in a team (Xiaodi et al., 2024). Nevertheless, the implementation of collaborative learning also faces various challenges. One of the problems that often arises is the imbalance of participation among group members. Some students may show dominance in discussions, while others are passive or less involved. This condition can lead to an imbalance in workload and reduce the effectiveness of collaboration. Therefore, the role of educators is very important in managing group dynamics, ensuring fairness of participation, and creating a conducive learning environment for all students (Limna et al., 2021).

Various empirical studies support the positive relationship between the application of collaborative learning and the improvement of students' academic outcomes. Ahmad et al. (2023) found that the implementation of peer instruction significantly improved the learning outcomes of secondary school students. Furthermore, Suharli et al. (2024) proved that the cooperative learning approach is effective in increasing the understanding of mathematical concepts. In addition, other research shows that the quality of social interaction in groups also mediates the relationship between collaborative learning strategies and academic achievement (Firdaus et al., 2024). Based on these findings, it can be concluded that collaborative learning and constructive social interaction play an important role in improving students' academic achievement. However, the success of implementing this model is highly dependent on the ability of communication among members, balanced participation management, and the support of educators in building an inclusive, participatory, and mutually respectful learning environment.

2. Methods

This research uses the library research method or literature review, which is a research approach that focuses on the analysis of published scientific sources, without involving the direct data collection process in the field. This method was chosen to gain an in-depth understanding of the relationship between social interaction, collaborative learning, and academic achievement by referring to the results of the latest research published within the last five years. The initial stage of the research was carried out by identifying a number of relevant main keywords,

namely academic achievement, social interaction, collaborative learning, cooperation, and learning motivation. These keywords were used in the literature search process through the Google Scholar, ResearchGate or Elsevier database, with a publication time limit in last five years. This step aims to ensure that the sources used reflect the latest findings and views in the field of education.

The next stage was the selection of literature sources based on the established criteria. The criteria included: (1) the article must examine the relationship between at least two of the three main research variables; (2) the research can use quantitative, qualitative, or mixed-methods approaches; and (3) the article was published by a journal with a good academic reputation. Based on these criteria, thirteen articles were obtained and deemed relevant for further analysis. The third stage included the data analysis process using a thematic approach. Each selected article was reviewed in depth to identify similarities, differences, and the direction of the research findings.

The analysis results were then classified into three large groups: (1) the influence of social interaction on academic achievement, (2) the influence of collaborative learning on academic achievement, and (3) the role of student participation in the effectiveness of collaborative learning. The final stage was synthesis and conclusion drawing. At this stage, the researcher compiled a summary of the analysis results, linked them to relevant theories, and identified general trends, research gaps, and practical implications for the development of learning strategies. This literature review approach allows for the formation of a comprehensive picture

of the relationship between variables without requiring direct experimentation or intervention in the field.

3. Results

The results of the literature analysis indicate that social interaction and collaborative learning have a significant relationship with students' academic achievement. Various research results over the last five years confirm that high social involvement in the group learning process contributes positively to increasing conceptual understanding, strengthening learning motivation, and achieving more optimal academic grades. According to Amholt et al. (2020), academic success is not only influenced by internal factors such as intelligence and motivation, but also by the social dynamics created within the learning group. Social interaction allows students to share knowledge, provide feedback, and practice critical thinking skills through two-way communication. This aligns with Kaliisa's (2022) view which asserts that healthy social relationships among students are the foundation for creating an active and meaningful learning process.

Furthermore, Concepcion (2022) adds that social skills, such as empathy and listening ability, are an important part of academic success in the modern education era. Students who can interact positively tend to have high self-confidence and the ability to adapt to various learning situations. Almanafi et al. (2022) states that collaborative learning is an ideal forum for developing these aspects through cooperation, group discussion, and shared reflection activities. Collaborative

learning is essentially designed to facilitate the exchange of ideas and shared responsibility among students. Valiantien (2022) suggests that collaborative activities help students develop analytical and interpersonal thinking skills, both of which have a direct correlation with improving academic achievement. Through group work, students learn to coordinate ideas, negotiate roles, and build shared solutions that strengthen conceptual understanding. Suharli's (2024) research results show that the implementation of the cooperative learning model has a significant influence on increasing learning outcomes, especially when groups are formed heterogeneously based on academic ability and learning style.

In a similar context, Khatri (2024) asserts that the success of collaborative learning is highly influenced by clear task structure and the presence of individual responsibility within the group. The active involvement of every member is key to creating a productive and inclusive learning atmosphere. In the field of science, Ahmad et al. (2023) found that the application of the peer instruction strategy can deepen the understanding of scientific concepts through constructive discussion and argumentation among students. This method not only improves academic attainment but also fosters logical and scientific thinking skills. Adeleke's (2024) research supports these findings by showing that collaboration-based learning can strengthen material mastery and long-term memory. According to Xiaodi et al. (2024), the important elements in collaborative learning consist of positive interdependence, promotive interaction, and individual accountability. These three aspects have a direct relationship with the increase in academic achievement.

When students feel that the group's success depends on the contribution of each member, they tend to work more effectively and responsibly. Quirap (2024) adds that emotional involvement in the group also strengthens students' commitment to the tasks given. Meanwhile, Firdaus et al. (2024) shows that social interaction functions as the main mediator between collaborative strategies and academic achievement. This means that the success of collaborative learning is not only determined by task design or teaching methods but also by the quality of social relationships among students. When interactions take place openly and supportively, academic results tend to increase significantly. In addition to impacting academic results, collaborative learning is also proven to increase learning satisfaction and intrinsic motivation of students. Limna et al. (2021) found that students' perception of fairness and social support in the group influences their level of satisfaction with the learning process.

Erragcha (2023) reinforces these findings by showing that satisfaction with the online learning system mediates between group collaboration and improved academic achievement. Thus, quality social interaction not only strengthens academic results but also builds students' psychological well-being in the learning context. However, some studies also highlight the challenges that arise in the implementation of collaborative learning. Sharma et al. (2024) highlights the imbalance of participation in groups, where some students dominate the discussion process, while others are passive. This condition can lead to an imbalance of contribution and reduce the effectiveness of collaboration. Concepcion (2022) explains that differences in communication styles, confidence levels, and motivation

are the main factors causing this disparity. Therefore, the role of the teacher as a facilitator becomes important to regulate group dynamics and ensure equal participation. In addition, Darmawan et al. (2020) asserts that teachers need to develop process-based evaluation strategies, not just final results, so that all group members feel valued for their contributions. Thus, collaborative learning is not just a platform for joint task completion, but also a forum for character development and social responsibility. Valiantien (2022) also adds that the success of this approach is highly dependent on the teacher's ability to create a supportive, communicative, and stress-free classroom climate.

Other research reveals that the effectiveness of collaborative learning is also influenced by individual student characteristics. Suharli et al. (2024) shows that students with high confidence levels and good communication skills tend to be more active in group interaction and achieve higher academic results. Conversely, Khatri (2024) found that students who are less confident need greater social support from peers to be optimally involved. Personality factors, adaptability, and social empathy are important elements that determine the extent to which students can gain maximum benefit from collaborative learning. From the psychological side, Amholt et al. (2020) highlights that positive social interaction can strengthen self-regulation in learning. Students who are accustomed to discussing and collaborating show better time management and emotional control abilities. This impacts the increase in focus and persistence in completing academic tasks. Sharma et al. (2024) adds that social support from peers functions as a protective factor against academic stress, especially in a competitive learning environment.

On the other hand, Singh et al. (2024) explains that social involvement can also increase students' extrinsic motivation. When they feel valued and recognized in the group, a drive emerges to contribute more for the collective success. This kind of interaction plays a role in building a sense of belonging to the group and strengthening commitment to shared academic goals. A number of studies also underscore the importance of teacher support in ensuring the success of collaborative learning. Erragcha (2023) states that teacher supervision and feedback function as guidance for group dynamics to remain focused on learning objectives. Meanwhile, Xiaodi et al. (2024) emphasizes the need for training for teachers to understand the principles of positive interdependence so that they can foster a healthy culture of cooperation in the classroom. The findings reviewed show that social interaction and collaborative learning not only improve academic results but also strengthen the affective, social, and moral aspects of students. Through collaboration, students learn to appreciate differences, build empathy, and foster a sense of responsibility for collective success.

Firdaus et al. (2024) concludes that collaborative learning is an effective strategy for creating a comprehensive learning experience, where cognitive, affective, and social aspects develop in a balanced way. The results of the literature review over the last five years strengthen the conclusion that collaborative learning based on social interaction is effective in improving students academic achievement. The success of implementing this approach highly depends on several key factors, namely fairness of participation, emotional support among students, and the teacher's ability to manage group dynamics (Amon & Anggal, 2021). In addition, adapting the

collaborative model to student characteristics and the learning context is crucial to ensure its effectiveness. Thus, it can be emphasized that constructive social interaction and well-planned collaborative learning not only strengthen academic results but also play a role in shaping the personality and social competencies needed to face the challenges of 21st-century education.

4. Conclusion

The results of the literature review indicate that social interaction and collaborative learning have a positive influence on students' academic achievement. Social interaction encourages the development of communication skills, empathy, and social responsibility that are important in the learning process. Collaborative learning strengthens critical thinking skills, cooperation, and a sense of mutual respect among students. However, the effectiveness of collaborative learning is highly influenced by the fairness of participation in the group. Imbalances in contribution and lack of communication can reduce learning outcomes and cause internal conflicts.

Therefore, teachers need to create a learning environment that supports positive interaction, establishes clear roles, and encourages the active participation of all members. With good management, collaborative learning not only improves academic achievement but also shapes the social skills essential for students' future lives. Further research is suggested to explore concrete strategies in overcoming participation challenges so that the effectiveness of collaboration can be optimized.

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