



Instructional support for reading literacy and social skills through group investigation: A multiple case study in an elementary school

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Article Info

Article history:

Received Jun 16th, 2025

Revised Dec 16th, 2025

Accepted Jul 18th, 2026

Keyword:

Group Investigation; instructional support; reading literacy; social skills; multiple case study.

ABSTRACT

Students' diverse learning needs require teachers to provide instructional support that is responsive to individual learner characteristics. Although *Group Investigation* has been widely recognized as an effective cooperative learning model, little is known about how teachers adapt instructional support for students with different learning needs during its implementation. This study explored how teachers provided instructional support through *Group Investigation* for elementary school students with contrasting learning needs. A qualitative multiple case study was conducted in a fifth-grade classroom at an elementary school in Palembang, Indonesia. Two purposively selected participants represented contrasting cases: Student A, who experienced reading literacy difficulties, and Student B, who demonstrated challenges in social skills. Data were collected through classroom observations, semi-structured interviews, and document analysis and analyzed using the interactive model of Miles, Huberman, and Saldaña, including within-case and cross-case analyses. The findings revealed that instructional support was adapted to each student's learning needs while maintaining the same collaborative learning environment. Student A received support emphasizing guided reading, comprehension of written information, and peer-assisted learning, whereas Student B received support focused on communication, participation, and collaborative interaction. Cross-case analysis showed that *Group Investigation* enabled teachers to provide individualized instructional support without altering the instructional structure. These findings demonstrate that *Group Investigation* functions not only as a cooperative learning model but also as an adaptive instructional support strategy for addressing diverse learning needs in elementary classrooms.



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INTRODUCTION

Reading literacy and social skills are widely recognized as two fundamental competencies that support students' academic success and personal development in the twenty-first century (Ruslan & Lyesmaya, 2026). Reading literacy extends beyond the ability to decode written texts; it encompasses the capacity to comprehend, interpret, evaluate, and use information to solve problems and participate effectively in society (Vernucci et al., 2026). Likewise, social skills enable students to communicate, collaborate, negotiate, and build positive interpersonal relationships that are essential for meaningful learning experiences. Contemporary educational frameworks, including the Sustainable Development Goal 4 (SDG 4), emphasize the importance of developing these competencies to ensure inclusive and equitable quality education for all learners (Lee & Liu, 2025). Consequently, elementary schools are expected not only to improve students' academic achievement but also to cultivate the social competencies required for lifelong learning.

Reading literacy plays a pivotal role in elementary education because it forms the foundation for learning across all subject areas (Buđevac, 2019). Students with adequate reading literacy are better able to understand instructions, identify relevant information, construct meaning from texts, and engage in higher-order thinking processes. Conversely, limited reading literacy often restricts students' participation in classroom activities and negatively affects their academic performance (Iskakova et al.,

2025). Previous studies have consistently demonstrated that early reading difficulties are associated with lower academic achievement, reduced learning motivation, and limited opportunities for independent learning. Therefore, providing appropriate instructional support for students experiencing reading literacy difficulties remains an important responsibility for elementary school teachers.

In addition to reading literacy, social skills represent another essential component of successful learning. Classroom learning increasingly requires students to participate in collaborative activities, exchange ideas, solve problems collectively, and communicate effectively with peers (Yennita et al., 2024). Students who experience difficulties in social interaction frequently encounter challenges in participating in discussions, expressing opinions, and building productive relationships within collaborative learning environments (Abdelrazek et al., 2025). These difficulties may reduce learning engagement and limit opportunities to benefit from peer interaction. Consequently, teachers need to provide learning environments that facilitate not only cognitive development but also the development of students' interpersonal competencies.

The diversity of students' learning needs presents a significant challenge for teachers in elementary classrooms (Blignaut & Toit-Brits, 2024). Students differ considerably in their academic abilities, learning preferences, communication styles, and social characteristics. While some students require support to improve reading comprehension, others may need assistance in developing confidence, participation, and collaborative behaviors. Such diversity indicates that uniform instructional approaches may not adequately address the needs of every learner. Instead, teachers are expected to provide adaptive instructional support that accommodates individual differences while maintaining meaningful classroom interaction. This perspective aligns with contemporary views of inclusive education, which emphasize responsiveness to students' diverse learning needs rather than standardized instructional practices.

One instructional model that has the potential to accommodate such diversity is *Group Investigation* (Rosfiani et al., 2021). Developed as a cooperative learning model, *Group Investigation* emphasizes collaborative inquiry, student autonomy, shared responsibility, and active participation throughout the learning process. Rather than positioning students as passive recipients of information, the model encourages them to investigate authentic problems, discuss findings, construct knowledge collectively, and present their conclusions. These characteristics create opportunities for teachers to provide individualized instructional support while simultaneously promoting peer learning. Within heterogeneous groups, students with different abilities can support one another through discussion, explanation, and collaborative problem solving, making *Group Investigation* particularly relevant for students with diverse academic and social needs.

Previous research has reported numerous positive outcomes associated with *Group Investigation*. Studies have demonstrated its effectiveness in improving academic achievement, critical thinking, collaboration, communication, learning motivation, and social interaction (Karim & Wibawa, 2025). Other studies have shown that collaborative inquiry encourages students to become more actively engaged in learning while developing responsibility for their own learning processes (Chen & Chen, 2025). However, the majority of these studies have primarily evaluated the effectiveness of *Group Investigation* using quantitative or quasi-experimental designs that focus on overall classroom outcomes. Consequently, relatively little attention has been given to understanding how teachers actually provide instructional support for individual students with different learning needs during the implementation of *Group Investigation*.

This limitation highlights an important research gap. Although previous studies acknowledge that cooperative learning benefits diverse learners, little is known about the instructional processes through which teachers adapt their support to students experiencing different learning challenges. Existing studies rarely examine how teachers respond to individual needs within collaborative learning environments, particularly when students experience different types of learning difficulties simultaneously. Furthermore, qualitative investigations employing a *multiple case study* design remain limited, despite their potential to provide an in-depth understanding of classroom interactions, teacher decision-making, and students' learning experiences.

To address this gap, the present study adopts a qualitative *multiple case study* design to explore instructional support provided through *Group Investigation* for two elementary school students with contrasting learning needs. The first case focuses on a student experiencing reading literacy difficulties, whereas the second examines a student demonstrating challenges in social skills. By comparing these

two cases within the same instructional context, this study seeks to identify how teachers adapt their instructional support according to students' individual characteristics and how such support facilitates participation in collaborative learning activities.

This study contributes to the literature in three important ways. First, it shifts the focus from evaluating the effectiveness of *Group Investigation* toward understanding the instructional support processes that occur during its implementation. Second, it provides a comparative perspective by examining two contrasting cases representing different learning needs within the same classroom. Third, it demonstrates how *Group Investigation* can function not only as a cooperative learning model but also as an adaptive instructional support strategy capable of accommodating learner diversity in elementary education. The findings are expected to enrich the literature on inclusive and collaborative learning while offering practical implications for teachers seeking to support students with diverse academic and social needs.

RESEARCH METHODS

Research Design

This study employed a qualitative approach using a multiple case study design. A qualitative approach was considered appropriate because the study sought to obtain an in-depth understanding of how teachers provided instructional support for students with different learning needs during the implementation of the Group Investigation model. Rather than measuring learning outcomes, this study focused on exploring participants' experiences, classroom interactions, and instructional processes occurring throughout collaborative learning activities.

A multiple case study design was selected because it enables researchers to investigate several bounded cases within the same educational context while identifying similarities and differences across cases. In this study, each student represented a distinct case characterized by different learning needs. Examining the two cases simultaneously provided opportunities to understand how instructional support was adapted according to students' characteristics while maintaining the same classroom learning environment. The comparison between cases also facilitated a deeper understanding of how Group Investigation functioned as an adaptive instructional support strategy rather than merely a cooperative learning model.

Research Setting and Participants

The study was conducted in a fifth-grade classroom at SD Negeri 017 Palembang, Indonesia. The classroom implemented Group Investigation as the primary instructional model during the learning activities observed in this study. Although all students participated in classroom learning, the research focused on two purposively selected participants who represented contrasting learning needs.

Student A was selected because the student consistently demonstrated difficulties in reading literacy. Initial classroom observations and teacher interviews indicated that the student experienced problems in reading fluently, understanding written instructions, identifying important information, and comprehending learning materials. These difficulties frequently limited the student's participation in classroom learning activities.

Student B was selected because of persistent challenges related to social skills. Classroom observations revealed limited participation in collaborative discussions, minimal communication with peers, reluctance to express opinions, and low involvement in group activities. According to the classroom teacher, these characteristics had been consistently observed during classroom instruction.

Purposive sampling was employed because the study aimed to obtain rich and information-intensive cases capable of illustrating different forms of instructional support within the same instructional context. Rather than representing the classroom population, these participants were selected because they provided opportunities to explore instructional support for contrasting learning needs.

Instructional Procedures

Learning activities were conducted using the Group Investigation model, which consists of six sequential stages: (1) topic identification and group formation, (2) investigation planning, (3) investigation, (4) report preparation, (5) presentation of findings, and (6) evaluation. All students

participated in the same instructional sequence, while instructional support provided by the teacher varied according to each participant's learning needs.

For Student A, instructional support focused on improving reading literacy. During the investigation process, the teacher guided the student in understanding written instructions, interpreting learning resources, identifying essential information, and comprehending reading materials required to complete the investigation tasks. The amount of teacher assistance was gradually reduced as the student's confidence and reading ability improved. Peer assistance was also encouraged to facilitate collaborative learning.

For Student B, instructional support emphasized the development of social skills. The teacher encouraged active participation during group discussions, facilitated communication among group members, promoted collaborative problem solving, and provided positive reinforcement whenever the student contributed to group activities. Opportunities for peer interaction were intentionally created to strengthen the student's confidence and engagement in collaborative learning.

Although instructional support differed across participants, both students experienced identical learning activities within the same Group Investigation framework. This consistency enabled meaningful comparisons regarding how instructional support was adapted for different learning needs.

Data Collection

Data were collected through classroom observations, semi-structured interviews, and document analysis to obtain a comprehensive understanding of instructional support during the implementation of Group Investigation. Classroom observations served as the primary source of data. The researcher observed teacher-student interactions, students' participation in collaborative learning, forms of instructional support, and behavioral changes demonstrated by Student A and Student B throughout the learning process. Field notes were prepared immediately after each observation to document significant classroom events.

Semi-structured interviews were conducted with the classroom teacher and both participants. Interviews with the teacher explored instructional considerations, strategies used to support individual students, and perceptions regarding students' progress. Interviews with Student A and Student B focused on their learning experiences, perceived difficulties, and responses to the instructional support received during Group Investigation.

Document analysis complemented observational and interview data. Supporting documents included students' learning products, teacher notes, photographs of classroom activities, and other relevant instructional documents. These materials were used to corroborate findings emerging from observations and interviews.

Data Analysis

Data analysis followed the interactive model proposed by Miles, Huberman, and Saldaña (2014), involving data condensation, data display, and conclusion drawing and verification. Analysis began concurrently with data collection, allowing emerging patterns to guide subsequent observations and interviews.

The first analytical stage consisted of within-case analysis. Each participant was analyzed independently to develop a comprehensive understanding of the student's initial learning characteristics, instructional support received, classroom participation, and observed changes during the implementation of Group Investigation.

The second stage involved cross-case analysis. Findings from Student A and Student B were systematically compared to identify similarities and differences in instructional support, classroom interactions, students' responses, and learning experiences. Cross-case comparison enabled the identification of broader patterns illustrating how teachers adapted instructional support to accommodate different learning needs while implementing the same instructional model.

Trustworthiness

The trustworthiness of the findings was established through methodological triangulation and source triangulation. Methodological triangulation was achieved by comparing information obtained from classroom observations, interviews, and documentary evidence. Source triangulation involved comparing perspectives obtained from the classroom teacher, Student A, and Student B.

To further enhance the credibility of the findings, data from different sources were continuously compared throughout the analysis process to ensure consistency of interpretations. The researcher also maintained detailed field notes documenting classroom events and analytical decisions, thereby providing an audit trail that supported the dependability and confirmability of the study. Transferability was strengthened through rich descriptions of the research context, participants, instructional procedures, and classroom interactions, enabling readers to determine the applicability of the findings to similar educational settings.

RESULTS

Instructional Support for Student A: Developing Reading Literacy

Student A was identified as experiencing persistent difficulties in reading literacy prior to the implementation of Group Investigation. Initial classroom observations indicated that the student frequently read by sounding out individual words, experienced difficulty understanding written instructions, and struggled to identify important information from learning materials. These limitations affected the student's participation during classroom activities because reading comprehension was required throughout the investigation process.

Interviews with the classroom teacher confirmed these observations. According to the teacher, Student A demonstrated reading abilities below the expected level for fifth-grade students, particularly when learning activities required independent reading and interpretation of written information. Consequently, the student often depended on teacher explanations before participating in classroom discussions.

To address these challenges, the teacher implemented instructional support within the Group Investigation learning environment. Student A was intentionally assigned to a heterogeneous group in which peers with stronger reading abilities could provide academic assistance during collaborative inquiry. Throughout the investigation process, the teacher guided the student in understanding written instructions, identifying essential information from learning resources, and interpreting the content of texts relevant to the investigation topic. Teacher support was provided gradually, allowing Student A increasing opportunities to complete reading tasks independently while receiving assistance only when necessary.

Classroom observations demonstrated progressive changes throughout the learning process. During the initial learning sessions, Student A relied heavily on teacher guidance and peer explanations before contributing to group activities. However, subsequent observations showed that the student became increasingly willing to read learning materials, participate in discussions, and respond to questions raised by peers. As reading confidence improved, the frequency of teacher intervention gradually decreased, indicating greater independence during collaborative learning activities.

Another important finding concerned the role of peer interaction. Members of Student A's investigation group frequently assisted by explaining unfamiliar vocabulary, discussing the meaning of texts, and encouraging participation in group discussions. This collaborative support complemented teacher guidance and created opportunities for Student A to engage actively in the investigation process rather than remaining a passive learner. These observations suggest that instructional support during Group Investigation extended beyond teacher-student interaction and was strengthened through peer collaboration within heterogeneous learning groups.

Instructional Support for Student B: Developing Social Skills

Student B presented a contrasting learning profile. Unlike Student A, whose primary challenge involved reading literacy, Student B experienced difficulties related to social participation during classroom learning. Initial observations showed limited interaction with classmates, reluctance to communicate during group discussions, and minimal involvement in collaborative activities. The student frequently preferred working individually despite participating in group-based learning tasks.

The classroom teacher further explained that Student B's participation was also influenced by relatively low classroom attendance, reducing opportunities to establish consistent interactions with both teachers and classmates. Interviews suggested that limited social engagement was associated not only with classroom behavior but also with reduced opportunities for social interaction outside school. These circumstances contributed to the student's hesitation in expressing ideas and participating in collaborative learning.

Instructional support during Group Investigation therefore emphasized social participation rather than academic assistance. Student B was placed in a heterogeneous investigation group where collaborative interaction naturally occurred throughout the inquiry process. The teacher consistently encouraged the student to communicate with peers, contribute ideas during discussions, and participate in completing group assignments. Positive reinforcement was provided whenever Student B initiated communication or became actively involved in collaborative activities.

Observational data indicated gradual improvements in classroom participation. Although Student B remained relatively quiet during the initial investigation sessions, the student progressively became more responsive to peers' questions and suggestions. The student also demonstrated increased willingness to contribute during discussions and participated more actively in preparing and presenting group findings. These behavioral changes suggest growing confidence in interacting within collaborative learning situations.

Peer support emerged as another important component of instructional support. Rather than allowing Student B to remain isolated, group members actively invited participation, distributed responsibilities fairly, and encouraged the student to contribute according to individual abilities. Such collaborative interactions appeared to reduce communication barriers while strengthening the student's sense of belonging within the learning group.

Despite continuing challenges in social interaction, the findings demonstrate that Group Investigation provided meaningful opportunities for Student B to develop social participation through authentic collaborative experiences. Instructional support therefore extended beyond teacher facilitation and involved continuous interaction between the student and peers throughout the investigation process.

Cross-case Analysis

Cross-case analysis revealed both similarities and differences in instructional support provided to Student A and Student B during the implementation of Group Investigation. The primary difference concerned the focus of instructional support. Student A required academic support aimed at improving reading literacy, particularly in understanding written instructions, interpreting learning resources, and identifying important information during collaborative inquiry. In contrast, Student B required social support designed to increase communication, classroom participation, peer interaction, and collaborative engagement. These contrasting needs required the teacher to adopt different instructional strategies while maintaining the same instructional framework.

Despite these differences, several common patterns emerged across both cases. First, instructional support was adaptive rather than standardized. The teacher continuously adjusted assistance according to each student's learning needs without modifying the overall structure of Group Investigation. Second, peer collaboration functioned as an important source of support in both cases. Students benefited not only from teacher guidance but also from interactions with peers during investigation activities. Third, both participants demonstrated progressively greater participation throughout the learning process, although the nature of improvement differed according to their individual learning characteristics.

The comparison also illustrates that Group Investigation provided a flexible learning environment capable of accommodating diverse instructional needs simultaneously. Because collaborative inquiry encouraged interaction among students, teachers were able to provide individualized support without separating students from regular classroom activities. Consequently, instructional support became integrated into everyday classroom learning rather than being delivered through separate remedial interventions.

DISCUSSION

Group Investigation as an Adaptive Instructional Support Strategy

The findings demonstrate that *Group Investigation* functioned not only as a cooperative learning model but also as an adaptive instructional support strategy capable of accommodating diverse learning needs within the same classroom. Although Student A and Student B experienced different learning challenges, both participated in identical instructional activities while receiving individualized support from the classroom teacher. This finding suggests that the effectiveness of *Group Investigation* extends beyond its procedural stages and depends on teachers' ability to adapt instructional support according to students' characteristics (Fitriani, 2021).

The adaptive nature of instructional support observed in this study reflects the principle that meaningful learning occurs when teachers respond to learners' individual needs rather than applying identical instructional practices to all students (Supraptono et al., 2024). Instead of modifying the overall learning model, the teacher adjusted the type, intensity, and timing of support provided to each participant. Such flexibility enabled students with different learning profiles to remain fully engaged in collaborative learning activities while receiving assistance appropriate to their specific challenges.

This finding supports the social constructivist perspective, which views learning as a socially mediated process in which knowledge is constructed through interaction with more knowledgeable others (Kampouri et al., 2019). Within *Group Investigation*, instructional support emerged not only from teacher guidance but also through collaborative interactions among peers. Consequently, learning became a shared process in which students actively contributed to one another's understanding while the teacher facilitated participation according to individual needs.

The present findings also reinforce previous studies reporting that *Group Investigation* promotes active participation, collaborative inquiry, and student engagement. However, unlike many previous investigations that primarily evaluated academic outcomes, this study demonstrates how the instructional processes occurring during *Group Investigation* provide opportunities for teachers to deliver differentiated support without disrupting collaborative classroom learning. Therefore, the contribution of *Group Investigation* should not be viewed solely in terms of learning outcomes but also in terms of its capacity to accommodate learner diversity through adaptive instructional practices.

Contrasting Forms of Instructional Support for Reading Literacy and Social Skills

An important contribution of this study lies in illustrating how instructional support differed according to students' learning characteristics despite being implemented within the same instructional environment. Student A required support primarily related to reading literacy, whereas Student B required support aimed at strengthening social participation. These contrasting cases demonstrate that effective instructional support cannot be standardized because different learning difficulties require different pedagogical responses.

For Student A, instructional support emphasized cognitive assistance through guided reading, interpretation of written information, and gradual reduction of teacher assistance. This pattern resembles the educational concept of scaffolding, whereby temporary support is provided until learners become increasingly capable of completing tasks independently. The progressive reduction of teacher assistance observed throughout the study suggests that instructional support should not foster dependency but instead encourage greater learner autonomy.

By contrast, Student B required support directed toward interpersonal participation rather than academic comprehension. The teacher intentionally created opportunities for communication, encouraged interaction among group members, and reinforced participation during collaborative activities. Rather than directly teaching social skills, the learning environment itself became the context in which social competencies could develop naturally through authentic interaction. This finding indicates that cooperative learning environments can serve as meaningful contexts for strengthening students' confidence, communication, and collaborative behaviors (Sukamto et al., 2024).

Although the focus of instructional support differed substantially between the two cases, both students demonstrated increased participation during collaborative learning. This common pattern suggests that adaptive instructional support does not necessarily require different instructional models for different students (Ginting et al., 2024). Instead, teachers can maintain a common learning structure while varying the nature of support according to individual learning needs. Such an approach aligns with contemporary perspectives on inclusive education, which emphasize equitable learning opportunities through responsive instructional practices rather than separate educational interventions.

Implications for Inclusive Elementary Education

The findings provide several important implications for elementary school teaching practice. First, teachers should recognize learner diversity as a normal characteristic of classroom learning rather than as an instructional obstacle. Students differ not only in academic achievement but also in learning readiness, communication abilities, participation patterns, and social interaction. Consequently, instructional decisions should be informed by careful identification of students' individual learning needs.

Second, the findings suggest that cooperative learning models such as *Group Investigation* can facilitate inclusive instructional practices when accompanied by adaptive teacher support. Rather than separating students experiencing learning difficulties from their classmates, teachers can integrate individualized assistance into collaborative classroom activities. Such an approach allows students to benefit simultaneously from teacher guidance and peer interaction while maintaining active participation in regular classroom instruction.

Third, peer collaboration emerged as an important component of instructional support in both cases. This finding highlights the importance of organizing heterogeneous learning groups in which students can contribute according to their individual strengths while supporting classmates experiencing different learning challenges. Teachers therefore play a crucial role not only in facilitating academic learning but also in cultivating classroom environments characterized by mutual assistance, respect, and shared responsibility.

Finally, this study contributes to the growing discussion regarding inclusive and differentiated instruction in elementary education. Rather than conceptualizing *Group Investigation* solely as a cooperative learning model, the findings suggest that it may also function as a pedagogical framework through which teachers provide adaptive instructional support for students with diverse learning needs. Such a perspective expands current understanding of *Group Investigation* by emphasizing its instructional flexibility in addition to its collaborative characteristics.

Limitations and Future Research

Several limitations should be considered when interpreting the findings of this study. First, the study involved only two participants within a single elementary school classroom. Although the multiple case study design enabled in-depth exploration of instructional support, the findings are not intended to be statistically generalized to broader educational contexts. Instead, they provide contextualized insights into how adaptive instructional support was implemented during collaborative learning.

Second, the study focused primarily on observable instructional processes occurring during the implementation of *Group Investigation*. Other factors that may influence students' reading literacy and social skills, including family background, prior learning experiences, and individual psychological characteristics, were beyond the scope of the present investigation. Future studies may incorporate additional sources of evidence to examine how these contextual factors interact with instructional support provided in classroom settings.

Finally, future research could extend the present findings by involving larger numbers of cases across different schools and grade levels. Comparative investigations involving students with diverse learning characteristics may provide a more comprehensive understanding of how adaptive instructional support can be integrated into various cooperative learning models. Longitudinal qualitative studies may also contribute to understanding how instructional support influences students' academic and social development over extended periods.

CONCLUSION

This study explored how teachers provided instructional support for elementary school students with different learning needs during the implementation of the *Group Investigation* model. Using a qualitative multiple case study design, the findings demonstrated that instructional support was adapted according to the specific characteristics of each student while maintaining the same collaborative learning environment. Student A primarily received support to strengthen reading literacy through guided reading, comprehension of written instructions, and peer-assisted learning. In contrast, Student B received instructional support emphasizing communication, participation, and interaction within collaborative group activities to foster social skills.

The findings indicate that *Group Investigation* extends beyond its role as a cooperative learning model by providing a flexible instructional environment in which teachers can respond to learner diversity through adaptive instructional support. Rather than requiring different instructional models for different students, teachers were able to modify the type and intensity of support according to individual learning needs while preserving the collaborative nature of classroom learning. These findings highlight the importance of teacher responsiveness in maximizing the educational potential of cooperative learning.

From a theoretical perspective, this study contributes to the literature by demonstrating how instructional support is enacted within collaborative learning rather than merely evaluating the effectiveness of *Group Investigation*. The use of a multiple case study design also provides a deeper understanding of how contrasting learning needs can be accommodated through differentiated instructional practices within the same classroom context.

Practically, the findings suggest that elementary school teachers should identify students' individual learning needs before determining appropriate instructional support strategies. Cooperative learning environments can become effective contexts for providing individualized assistance while simultaneously promoting collaboration, participation, and inclusion among students with diverse academic and social characteristics.

This study was limited to two cases in a single elementary school classroom. Therefore, the findings should be interpreted as context-specific rather than statistically generalizable. Future studies are encouraged to involve a larger number of participants, multiple school settings, and different cooperative learning models to further examine how adaptive instructional support contributes to students' academic and social development across diverse educational contexts.

Declaration on the Use of AI Statement

During the preparation of this work, the authors used AI tools to improve the readability and language of the manuscript. After using this tool, the authors carefully reviewed and edited the content as needed and take full responsibility for the content of the published article.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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