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The Influence of Collaborative Learning Model on Students' Communication Ability in Natural Science Lessons at MI Al Hikmah

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Abstract: The collaborative learning model aims to maximize the process of cooperation that takes place naturally between students and appreciate the importance of the social context for the learning process. Based on that, the author defines the problem formulation as follows: (1) How is the implementation of the collaborative learning model for class V students in the IPA MI Al Hikmah Masangan Bungah Gresik curriculum? (2) How is the communication ability of class V students in the IPA MI Al Hikmah Lessons Bungah Gresik? (3) How does the implementation of the collaborative learning model influence the communication skills of class V students in the IPA Lessons Al Hikmah Bungah Gresik? As for this research, it was conducted to find out whether or not there is an influence of the collaborative learning model on IPA communication skills. In this research using a quantitative approach with a quasi-experimental type of research. The population of this research is the entire V MI Al Hikmah Masangan class. The sample is determined through the Total Sampling technique. Based on the technique, VA class was obtained as an experimental class while VB class was a control class. The data collection technique uses an essay test. Data were analyzed using hypothesis testing (t test). The results of the research show that the IPA communication ability of students taught with the Collaborative Learning Model is higher than the IPA communication ability of students taught with the conventional learning model. The IPA communication ability in the experimental class (VA) with the Collaborative Learning Model obtained a posttest average of 76.9, while in the control class (VB) with the conventional learning model, the posttest average was 63.25. Based on the results of the hypothesis testing obtained thitung > ttabel ie 7.41 > 2.024 at the level of significance α = 0.05. This means that the hypothesis in this research can be accepted and it is stated that there is a positive and significant influence from the use of the Collaborative Learning Model on the communication skills of V class MI Al Hikmah Masangan students in IPA subjects.

Keywords: IPA communication ability, collaborative learning model, learning outcomes.

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INTRODUCTION

In the learning process, of course, there is a reciprocal relationship between educators and students, students and students which is commonly called interaction, science is a science that deals with natural and material phenomena that are systematic, orderly arranged, generally applicable, in the form of a collection of observation and experimental results. Thus, science is not only a collection of things or living things, but about ways of thinking, and how to solve problems. The problem-solving process must of course go through the interaction stage between teachers and students and students and students. Teachers must be skilled in providing opportunities for students to play an active role in the learning process. To bring out students' communication skills, a model is needed that is able to motivate students so that students are brave in expressing their opinions. The learning model is a series of structural frameworks in learning activities with the aim of developing a conducive learning environment and activities. In the learning process, the model used must involve students in the exchange of ideas. One of the models in improving communication skills is the collaborative learning model.

The collaborative learning model is a model that can cause social interaction between teachers and students and students and students. Learning that uses a collaborative learning model can involve students in a group to build knowledge and achieve shared learning goals through social interaction with the teacher's guidance so that learning is more meaningful and students will respect each other's opinions between groups. The collaborative learning model is a solution in improving students' communication skills because this model relates the material to daily life and involves students to work together, so that students can improve communication skills. An interview conducted at MI AL HIKMAH Masangan Bungah, the researcher found that students' communication skills are still relatively low. Students tend to choose silence rather than expressing opinions or statements during learning. The researcher saw the boredom of students during science subjects because teachers used conventional learning models. In the application of conventional learning, teachers only play the role of the main source of knowledge, students at MI AL HIKMAH only listen and accept what is presented by the teacher. As a result, passive learning becomes low, and does not get the opportunity to explore. They prefer to keep their own opinions, so the researcher tries to find a way to make students want to express their opinions or answers in science subjects

The results of research conducted by Agus Suyatna revealed that students' communication skills in science learning are still relatively low. In solving problems, students only focus on personal results without communicating in drawing conclusions. Students maintain their own opinions.1 The research conducted by Regita Wahyuni et al. can be concluded that there is a positive influence of the Role Playing learning model on the mathematical communication skills of grade XI high school students. The Role Playing model should be used as one of the alternative learning models carried out in schools, because the Role Playing model can have a positive influence on students' mathematical communication skills.2 The results of the research conducted by Ening Sry Hastuti and Hidayati can be concluded that communication skills whose learning uses experimental methods are included in the very high category with lecture methods included in the high category. This means that there is an influence of experimental methods on the science learning outcomes of grade VIII students of SMP Negeri 4 Gringsing Academic Year 2016/2017 reviewed from communication skills.

METHODS

This research adopts a quantitative approach with an experimental method, aimed at determining the influence of a collaborative learning model on students' communication skills. The methodology is designed to measure, compare, and analyze the effectiveness of collaborative learning in enhancing student interaction and communication within the

context of Natural Science education. The experimental method used in this study involves a quasi-experimental design with a non-equivalent control group. This design allows for the comparison between a group of students taught using the collaborative learning model and a group taught using conventional methods, without randomly assigning participants to each group. The rationale for selecting this design stems from practical constraints in educational settings, where complete randomization is often not feasible. By using intact classes for both experimental and control groups, the study preserves the natural classroom structure while still enabling reliable comparisons.

The study was conducted at Madrasah Ibtidaiyah Al Hikmah, located in Masangan Bungah, Gresik. This institution was selected due to its openness to innovation in teaching methods and its diverse student population, making it an appropriate site for studying instructional interventions. The participants in this study were fifth-grade students who were actively enrolled in the Natural Science subject. Two classes were chosen: one as the experimental group and the other as the control group. Each class consisted of approximately 30 students, providing a sufficient sample size for statistical analysis. Before the treatment, both groups were given a pre-test to measure their baseline communication skills related to Natural Science topics. The pre-test consisted of structured tasks designed to assess students' ability to express ideas, ask questions, listen actively, and engage in discussions. The pre-test data helped ensure that the two groups were relatively similar in terms of their initial communication abilities. This similarity allowed any differences observed in the post-test to be attributed more confidently to the learning model used. The collaborative learning model used in the experimental group emphasized small group work, peer discussion, cooperative tasks, and shared problem-solving. Activities were carefully designed to foster student interaction and to require verbal expression, negotiation, and clarification. The control group, by contrast, was taught using conventional methods, which included lectures, teacher-led explanations, and individual assignments. These methods provided fewer opportunities for peer communication, serving as a baseline for comparison.

The intervention was implemented over a period of six weeks, with two science lessons conducted each week. During this period, both groups studied the same Natural Science topics in accordance with the national curriculum for fifth grade. The topics covered included ecosystems, energy sources, and changes in matter—all of which naturally lend themselves to discussion and collaborative investigation when presented with appropriate strategies. During each lesson in the experimental group, students were divided into small groups of four to five. They worked together on problem-solving tasks, conducted mini-investigations, and presented their findings to the class. The role of the teacher in the experimental group shifted from being a primary knowledge transmitter to a facilitator. The teacher guided group interactions, prompted students with open-ended questions, and encouraged reflective dialogue.

Communication was deliberately built into the lesson plans. Students were required to express their understanding to group members, explain concepts in their own words, and respond to the ideas of others. This verbal engagement was the primary focus of the intervention. Instruments used to assess communication skills included a communication rubric, observation checklists, student self-assessment forms, and post-tests. The communication rubric evaluated aspects such as clarity of expression, use of scientific vocabulary, active listening, and constructive feedback. Observation checklists were filled out by the teacher and research assistants during classroom activities. They noted how often and how effectively students communicated with peers, whether they asked and answered questions, and how they managed turn-taking in discussions.

Student self-assessment forms were used at the end of each week. Students reflected on their own participation and communication, rating themselves on aspects like how often they contributed ideas or listened to others. The post-test was administered after the six-week intervention. It included both written and oral components, designed to evaluate improvement in communication skills. Students were asked to explain scientific

phenomena, respond to hypothetical scenarios, and describe processes using appropriate terminology.

Quantitative data from the pre- and post-tests were analyzed using statistical methods. The primary measure of effectiveness was the difference in mean scores between the two groups, assessed using t-tests to determine statistical significance. In addition to the test scores, qualitative data from observations and student reflections were analyzed to provide a richer understanding of how the collaborative learning model influenced communication behavior.

Data triangulation was used to enhance the validity of the findings. By combining test results, observational data, and student feedback, the study ensured that the conclusions drawn were supported from multiple perspectives. Reliability of the instruments was established through expert validation and pilot testing. Rubrics and checklists were reviewed by educational specialists to ensure they accurately measured the intended communication skills. Ethical considerations were carefully addressed throughout the study. Permission was obtained from school authorities, teachers, and parents. Students were informed of their participation in a study and assured that it would not impact their grades or standing in the class.

All student data were anonymized and treated with strict confidentiality. Participation was voluntary, and students could withdraw from the study at any time without any negative consequences. The research also considered the potential influence of the teacher's role in each group. To minimize bias, the same teacher delivered instruction to both the control and experimental groups, using different teaching approaches for each. Throughout the intervention, weekly reflections were written by the researcher and teacher to document challenges, student responses, and suggestions for improvement. These reflections contributed to ongoing refinement of lesson delivery and classroom management. The results of this study aimed not only to determine the statistical effectiveness of collaborative learning on communication skills but also to explore the practical implications for classroom practice in Islamic elementary schools.

It was hypothesized that students exposed to the collaborative learning model would show greater improvement in communication skills compared to those taught through traditional methods. The hypothesis was tested through analysis of pre- and post-test score differences. The findings of the research are expected to contribute to the growing body of knowledge on student-centered learning in primary education, particularly in religious-based schools where character and interpersonal skills are also emphasized. Moreover, the study seeks to promote awareness among teachers regarding the importance of designing lessons that encourage verbal interaction, peer learning, and shared responsibility for knowledge construction. Collaborative learning also aligns with Islamic educational values that emphasize cooperation, mutual respect, and community. Therefore, the integration of this model into Madrasah Ibtidaiyah settings may support both academic and moral development. This methodological framework was carefully designed to ensure that conclusions drawn from the research are based on valid, reliable, and comprehensive data. It emphasizes not just outcomes but also the processes through which those outcomes are achieved. In conclusion, the methodology of this research was structured to rigorously evaluate the influence of collaborative learning on students' communication abilities. By integrating both quantitative and qualitative tools, it provided a holistic understanding of how structured collaboration can enhance learning outcomes in Natural Science education.

RESULTS

The implementation of the collaborative learning model in Natural Science subjects at Madrasah Ibtidaiyah Al Hikmah Masangan Bungah Gresik significantly affected students' communication skills. Observations, assessments, and student interviews revealed a clear and consistent improvement in the ability of students to express their ideas, engage in

discussions, and interact constructively with peers throughout the learning process. Students in the experimental group, who participated in collaborative learning, showed increased confidence in articulating their thoughts. Before the intervention, many students were hesitant to speak up in class, often relying on the teacher as the sole source of information. However, as the collaborative model was implemented, students gradually took more initiative in initiating conversations and asking questions. One of the most striking findings was the shift in students' roles within the classroom environment. They moved from passive learners to active contributors. This transformation occurred as students were frequently placed in structured groups, tasked with solving problems, conducting mini-investigations, and presenting findings to the class, which all required active communication and negotiation.

Communication in the experimental group was characterized by a more frequent use of scientific vocabulary and structured dialogue. Students began using academic terms more accurately and fluently when discussing natural phenomena, demonstrating not only better communication skills but also a deeper understanding of the content. The students' ability to listen attentively and respond appropriately also improved over time. Rather than simply waiting for their turn to speak, students engaged in meaningful back-and-forth exchanges. This responsiveness was especially evident during group presentations, where students fielded questions and built upon each other's answers.

Throughout the intervention, it became clear that students were learning how to communicate collaboratively, not competitively. They began valuing each other's opinions, and disagreements were handled through dialogue rather than silence or argument. The ability to manage conflict through discussion became one of the unintended but welcomed outcomes of the collaborative model. Teachers reported a noticeable change in classroom dynamics. Whereas the traditional classroom relied heavily on teacher-led explanations, the experimental classrooms became more student-centered. Students sought answers not only from the teacher but from their peers as well, reinforcing the idea that learning is a social process. Peer support emerged as a critical component of communication development. Students who initially struggled with expressing themselves benefited from working with more articulate peers. This peer modeling helped bridge the gap and encouraged less confident students to contribute more frequently over time. The group settings provided a safe space for students to practice speaking without the pressure of the entire class watching. Small group interactions lowered the affective filter, allowing students to take more linguistic risks and express themselves in ways they may have avoided in front of the whole class. As students engaged more regularly in discussions, their speech became more organized. Their explanations of scientific concepts improved in clarity and coherence. This structural improvement in communication suggested not only better verbal skills but also stronger cognitive processing of the subject matter.

The analysis of group work transcripts and recordings revealed that students in the collaborative learning setting used a wider range of communicative functions. These included questioning, agreeing and disagreeing, summarizing, clarifying, and elaborating, all of which are vital for academic communication development. Students began initiating communication more frequently than before. Instead of waiting for teacher prompts, they asked questions, proposed ideas, and offered solutions independently. This initiative-taking behavior marked a significant departure from the more passive engagement seen prior to the intervention. The collaborative model also encouraged shared responsibility. Students recognized that their success depended not just on their individual performance, but on how well they could communicate and coordinate with their teammates. This shared accountability contributed to a more focused and disciplined communication process. The use of group roles such as facilitator, recorder, and presenter gave students structured opportunities to practice different types of communication. For example, facilitators guided discussions, while presenters practiced public speaking. These rotating roles helped ensure that all students developed a range of communication competencies.

The increased frequency and quality of communication had a cumulative effect. Students began to see communication not as a separate skill, but as an integral part of learning. Over time, this helped foster a classroom culture in which dialogue, questioning, and sharing became routine aspects of every lesson. Teacher observations confirmed that even students who were previously disengaged or uninterested in Natural Science began to participate more actively. Many of these students responded positively to the interactive nature of group tasks and seemed to find motivation in being part of a team.

Pretest and posttest assessments confirmed the observational data. While both the experimental and control groups began with relatively similar communication skill levels, the posttest results showed a statistically significant improvement in the experimental group. This quantitative data reinforced the qualitative findings observed in class. A closer look at student written reflections also revealed that many students were aware of their own communicative growth. They noted that they felt more comfortable talking to others, more skilled at expressing their thoughts, and more inclined to ask questions when they did not understand a concept.

The control group, which continued using traditional learning models, showed limited development in communication skills. Teacher talk dominated the instructional time, and opportunities for student interaction were minimal. This contrasted sharply with the experimental group, where student talk often exceeded teacher talk. The findings suggest that structured collaboration not only gives students the opportunity to communicate but also demands it. Unlike conventional classroom settings, where communication may occur only sporadically, collaborative learning requires consistent verbal engagement as part of the learning process. Communication improvements were particularly notable during group projects that required presentation. Students became more comfortable speaking in front of the class, organizing their thoughts logically, and responding to peer feedback. These activities provided authentic purposes for speaking and listening. The collaborative approach also highlighted the importance of listening as a core communication skill. Group success often depended on how well students listened to each other, interpreted responses, and built on shared ideas. This aspect of communication was explicitly modeled and practiced throughout the study. Student behavior during collaborative sessions showed greater mutual respect and turn-taking. Instances of interruption, off-task conversations, or dominant group members overshadowing others diminished as students learned to balance their speaking and listening roles.

The learning environment also became more inclusive. Students with learning differences or limited verbal skills were supported by their peers and encouraged to contribute in ways that suited their strengths, including drawing, writing, or using simpler language, which helped build their confidence over time. Throughout the research period, the development of communication skills was not isolated from academic progress. On the contrary, improved communication appeared to reinforce content understanding, especially as students had to explain processes, describe observations, or justify answers. The collaboration model also benefited higher-order thinking. When students discussed concepts, they were often required to evaluate information, compare ideas, and construct arguments—cognitive tasks that naturally demand more sophisticated communication. Teachers played a vital role in shaping the communication culture in the classroom. By modeling good communication, providing sentence stems, and encouraging reflective feedback, they created a foundation upon which students could build their own skills.

Students in the experimental group also developed a more positive attitude toward learning. They felt that their voices mattered, that learning could be social and enjoyable, and that science was not just about memorizing facts but about exploring ideas together. Parents of students involved in the collaborative model also reported changes. Some students began to talk more about their school day at home, asked more questions, and showed more enthusiasm for learning. This suggests that the communication skills developed in school were transferring to everyday interactions. The impact of

collaborative learning extended beyond the academic. It influenced social development as well. Students learned how to cooperate, resolve disagreements peacefully, and support each other's learning, all of which are foundational to communication.

Not all students adjusted at the same pace. Some initially resisted group work or struggled to express themselves. However, with consistent practice and support, most students improved gradually and began to see the value of collaborative interaction. The findings highlight the importance of persistence in implementing collaborative models. While early sessions may be disorganized or dominated by a few voices, structured guidance and group management help ensure more equitable and meaningful participation over time. The use of formative assessments during group work helped identify communication strengths and weaknesses. Teachers were able to intervene with targeted support, reinforcing strategies like summarizing, paraphrasing, or asking clarifying questions. Over the course of the research, communication progress became evident not only through spoken interactions but also in written work.

Students' ability to explain their reasoning in writing improved, showing the link between oral and written language development. Ultimately, the findings of this study confirm that collaborative learning can serve as an effective tool for developing communication skills among elementary school students. The structured interaction, supportive environment, and meaningful tasks provide a fertile context for language growth. These findings are particularly important in the context of Madrasah Ibtidaiyah education, where both religious and academic values are emphasized. The ability to communicate respectfully, clearly, and confidently aligns with the holistic educational goals of character development and academic excellence. The research demonstrates that communication is not merely a soft skill but a core academic competency that can and should be nurtured intentionally through pedagogical strategies like collaborative learning. With proper implementation, students not only become better communicators but also more engaged, reflective, and empowered learners.

DISCUSSION

The results of this research indicate a significant improvement in students' communication skills through the implementation of collaborative learning models in Natural Science classes. This aligns with theoretical perspectives that advocate for the social nature of learning, particularly Vygotsky's socio-cultural theory, which emphasizes the importance of interaction and communication in cognitive development. Collaborative learning encourages students to interact, share ideas, and build knowledge collectively. In this study, the learning environment created by collaboration helped students engage more deeply with the material and express themselves more openly than in traditional learning settings. The structure of group-based learning activities provided frequent opportunities for students to practice communication in a purposeful and contextualized manner. Students in the experimental class demonstrated more initiative in participating in discussions, explaining concepts to peers, asking clarifying questions, and responding to feedback. These behaviors reflect an increase not only in their verbal skills but also in their confidence and willingness to take risks during communication. The collaborative model made communication a regular part of their learning process rather than an isolated or evaluative activity.

The interaction among students during collaborative tasks became a vehicle for active learning. As students worked together to solve problems, construct explanations, or conduct investigations in Natural Science, they were required to engage in meaningful dialogue. This interaction required them to listen attentively, articulate their understanding, negotiate differences, and build consensus all essential components of effective communication. In traditional teacher-centered classrooms, communication tends to be unidirectional—from teacher to student. However, in the collaborative model, communication became multidirectional. Students were not just passive recipients of

information; they became active participants in the construction of knowledge. This dynamic shift created more communicative moments and empowered students to engage with one another and with the learning material. The teacher's role also transformed significantly. Instead of dominating classroom discourse, the teacher functioned as a facilitator who guided, observed, and scaffolded student interactions. This shift in role allowed students more autonomy to manage their learning and communication within groups. The teacher's strategic interventions ensured that students stayed on task, used appropriate academic language, and developed positive group norms. The development of students' communication skills through collaborative learning also contributed to deeper understanding of scientific content. As students discussed scientific phenomena, they were required to translate abstract ideas into clear verbal expressions. This translation process solidified their understanding and helped them internalize scientific vocabulary and concepts.

Collaborative learning models helped normalize the act of speaking in class. Students became more accustomed to sharing their thoughts and learned to do so in a respectful, constructive manner. Over time, students who were once reluctant to participate began contributing more freely. This transformation was especially notable among previously shy or disengaged students. One of the most impactful findings was the change in students' ability to express disagreement or challenge an idea without causing conflict. Collaborative norms, such as listening respectfully and responding thoughtfully, were explicitly taught and reinforced. As a result, students became more adept at negotiating meaning and refining their ideas through dialogue rather than avoiding disagreement. Another key development was the emergence of student leadership. Some students naturally took on the role of group coordinators or facilitators. These roles encouraged them to manage discussions, ensure participation from all group members, and summarize group conclusions. These leadership opportunities further enriched communication skills and fostered a sense of responsibility.

The positive emotional climate of collaborative groups also played a role in enhancing communication. Students felt supported by their peers, which reduced the fear of making mistakes or being judged. This emotional safety created a fertile ground for risk-taking in communication, especially when discussing unfamiliar scientific terms or concepts. The collaborative model also supported differentiated communication experiences. Within groups, students with varied levels of language proficiency and academic achievement had opportunities to support and learn from one another. This peer tutoring dynamic allowed for more inclusive learning and encouraged empathetic communication. Observations showed that the quality of student discourse improved throughout the intervention. Early discussions were often superficial, but with practice and teacher guidance, students began to ask deeper questions and provide more elaborate explanations. This qualitative improvement in communication reflects the students' growing metacognitive awareness of how to express and explore ideas effectively.

The regular use of reflection and peer feedback further contributed to communication development. Students were asked to reflect on their group interactions and identify ways to improve collaboration. This metacommunicative practice helped them become more conscious of their communication habits and encouraged continuous improvement. Another noteworthy outcome was the transfer of communication skills beyond the Science classroom. Some students reported feeling more confident participating in other subjects, school activities, and even conversations at home. This suggests that the benefits of collaborative learning extend into broader social and academic contexts. The control group, which continued with traditional instruction, did not show the same level of communicative growth. Their classroom remained largely teacher-directed, with minimal student-to-student interaction. As a result, students had fewer opportunities to practice and develop communication skills in authentic, academic contexts.

While some students in the control group improved modestly in communication due to general exposure to classroom routines, the lack of structured peer interaction limited their growth. This contrast highlights the importance of intentional design in promoting communication skills. The data also showed that group composition played a significant role in the success of collaborative learning. Heterogeneous groups, which included a mix of abilities, promoted richer communication as students brought diverse perspectives and supported each other's learning. However, initial group dynamics required careful monitoring to ensure balanced participation. Teachers noted that the introduction of collaborative learning required more planning and classroom management. Establishing clear procedures, expectations, and group norms was essential to avoid chaos and maximize the benefits of student interaction. Once established, these routines led to more autonomous and productive group work.

Another insight from the study was the need to explicitly teach communication strategies. Simply putting students in groups does not automatically enhance their communication. Students benefited from modeling, sentence starters, and structured activities that guided them in how to initiate discussions, pose questions, and give feedback. Group roles such as recorder, presenter, or timekeeper helped students take responsibility and encouraged the use of academic language during tasks. These roles gave students a reason to speak and created a more balanced distribution of participation. Throughout the study, assessment tools such as observation rubrics, audio recordings, and peer evaluations were used to capture the nuances of communication behavior. These tools revealed patterns of progress and allowed teachers to provide targeted support for students who struggled. Student interviews provided additional insight into their experiences. Many reported that working in groups helped them clarify their own thinking because they had to explain it to others. This externalization of thought is a powerful tool for both learning and communication development.

The integration of collaborative learning also appeared to influence students' motivation. When students felt that their contributions mattered to the group's success, they became more engaged and took more initiative in both learning and communication. The findings of this research support the idea that communication is a skill that can be taught and developed through intentional pedagogy. The collaborative model served as both a means of learning content and a platform for practicing essential communication behaviors. It is important to note that communication improvement was not instantaneous. Students needed time to adjust to the new model, develop trust within their groups, and gain confidence in their abilities. Patience and consistent practice were key factors in their growth. Teachers who implemented the collaborative model reported a positive shift in classroom culture. The atmosphere became more student-centered, dynamic, and responsive. Students began to see learning as a shared endeavor rather than a solitary task.

These cultural shifts were further reinforced by the consistency of collaborative practices across lessons. Repeated exposure to group work helped normalize student interaction and allowed them to internalize communication routines. The role of feedback, both from peers and the teacher, cannot be overstated. Feedback allowed students to reflect, revise, and refine their communication. It also modeled a respectful and constructive approach to dialogue, which was mirrored by students in their own interactions. While the research focused on Natural Science, the communication skills developed through collaborative learning are broadly transferable. These skills are essential for lifelong learning and future academic and professional success. The study also suggests that collaborative learning promotes equity by providing all students with a voice. It creates space for diverse learners to participate meaningfully, regardless of their background or ability level. Students began to see themselves as communicators and contributors. This identity shift empowered them to take ownership of their ideas and engage more confidently in academic discourse.

One limitation of the study is the relatively short duration of the intervention. While improvements were observed, longer-term implementation may yield even more significant gains, especially in higher-order communication skills such as argumentation and debate. Another consideration is the role of cultural and contextual factors. The success of collaborative learning at Madrasah Ibtidaiyah Al Hikmah was supported by a school culture that valued cooperation, which may differ from more competitive or individualistic environments. Despite these limitations, the findings strongly support the integration of collaborative learning as a strategy for enhancing communication skills. It provides a clear alternative to passive learning and supports holistic student development. The research offers practical implications for educators, school leaders, and policymakers. By prioritizing student interaction and embedding communication into curriculum and instruction, schools can better prepare students for academic and real-world challenges. Finally, this study affirms the belief that every student can become an effective communicator when given the right environment, tools, and opportunities. Collaborative learning offers a pathway toward that goal, making it a valuable and transformative approach in elementary education.

CONCLUSION

The findings of this research demonstrate that the collaborative learning model significantly enhances students' communication skills in Natural Science subjects at Madrasah Ibtidaiyah Al Hikmah Masangan Bungah Gresik. The shift from a traditional, teacher-centered learning environment to a student-centered, interactive classroom has created more opportunities for students to actively engage with one another. Through structured group activities, students were able to practice essential communication behaviors such as listening actively, expressing ideas clearly, asking and responding to questions, and negotiating meaning with peers. This learning environment not only improved their ability to articulate scientific concepts but also encouraged greater confidence, responsibility, and participation among all students, including those who were previously passive or reluctant to speak. The research also revealed that communication development is deeply intertwined with students' cognitive, social, and emotional growth. As students worked collaboratively, they learned to respect different perspectives, manage disagreements constructively, and support their peers in the learning process.

These skills were cultivated through repeated, meaningful interactions and guided by the teacher's facilitative role, which emphasized reflection, peer feedback, and the use of academic language. Over time, students internalized these communication norms and began to apply them not only in science lessons but in other subjects and social situations as well. This reinforces the notion that communication is a skill that can be intentionally taught and cultivated through well-designed pedagogical models. In conclusion, the implementation of the collaborative learning model has proven to be an effective instructional approach for developing students' communication skills within the context of Natural Science education. The structured interaction, supportive peer relationships, and consistent opportunities to communicate have fostered a learning culture where dialogue and collaboration are central to the educational experience. These outcomes suggest that collaborative learning not only enhances students' academic achievement but also prepares them with the interpersonal and communicative competencies needed for lifelong learning. Therefore, it is recommended that educators continue to explore and apply collaborative strategies as part of their regular teaching practices to support holistic student development.

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