



## The Effectiveness of Peer Tutoring in Overcoming Early Reading Difficulties at Ibnu Sina Elementary School in Bandung

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**Abstract:** This study aims to assess the effectiveness of peer tutoring in enhancing early reading skills among second-grade students with reading difficulties at Ibnu Sina Islamic Elementary School, Bandung. Employing a Classroom Action Research (CAR) design, adapted from Kemmis & McTaggart, and conducted in two cycles, this investigation used a mixed-method approach to ensure a comprehensive picture regarding the intervention's impact on early literacy competencies and the social dynamics of learning. Data collection was made through a pre-test-post-test, structured observation, and reflective interviews. Statistical analysis showed that the average rise in reading scores reached 55%, and the results of the paired t-test indicated that this increase was significant ( $p < 0.05$ ). Qualitative data show that the increasing engagement, self-confidence, and quality of the interaction between tutors and tutees are in tune with the latest literature, which highlights that peer tutoring is an effective practice to enhance academic achievement, self-regulation, and social-emotional support within elementary education settings. This study concludes that peer tutoring can serve as a low-cost and highly relevant instructional strategy for addressing early reading difficulties in elementary school settings, and it recommends strengthening tutor training and improving the quality of teacher scaffolding for program sustainability.

**Keywords:** peer tutoring, early literacy, reading difficulties, pedagogical reflection, elementary school, CAR

### INTRODUCTION

Early reading skills are fundamental competencies that form the foundation for academic success at subsequent levels. Students who have not mastered basic literacy skills in recognizing letters and sounds, fluency in reading, and reading comprehension tend to develop cumulative learning barriers in various subjects. Poor early literacy affects children's self-confidence, interest in learning, and participation in classroom activities. Therefore, initiatives and strategies to improve early reading skills become a strategic priority in the context of elementary education. For the last ten years, many studies have given emphasis to more intensive and systematic interventions for low-ability students in reading. These interventions include supplemental literacy programs, individualized tutoring, collaborative learning models, and community-based approaches. However, most of the elementary schools lack resources to provide consistent and individualized tutoring to all their students experiencing reading difficulties. Peer tutoring in this context has emerged as a relevant, effective, and feasible instructional option without adding to teachers' burden.

Peer tutoring is defined as a learning arrangement in which students can help their peers master certain

competencies, with the role of the tutor and tutee clearly structured. It can either be same-age or cross-age and fixed or reciprocal, serving to provide an essentially supportive learning environment through intensive peer interactions. Recent studies also indicate that peer tutoring enhances the academic performance of both tutors and tutees in explaining material, getting feedback, and independently and collaboratively regulating learning (Leung, 2015; Backer, 2015; Brown, 2016).

Pedagogically, the reasons for peer tutoring effectiveness are explained through several cognitive and social mechanisms: First, tutees get more personalized and rhythmic learning opportunities through one-on-one or one-on-two interactions that give students an opportunity to practice reading at their own pace. Second, tutors receive cognitive elaboration; that is, a strengthening of understanding through the process of explaining to others. Third, peer interactions provide a relatively stress-free emotional context, which is important for reducing reading anxiety among low-ability students. Finally, peer tutoring strengthens social dimensions of learning such as empathy, tolerance, effective communication, and leadership.

In the context of early literacy acquisition, peer tutoring provides three kinds of support: cognitive

through model reading, phonological explanations, syllable decomposition exercises, and error correction; metacognitive through monitoring the reading process, repetition, and collaborative reflection; and affective through the encouragement, validation of effort, and positive reinforcement given by the tutor. Recent research confirms that such affective support is crucial for students in order to overcome their fear, embarrassment, and anxiety with regard to reading aloud (Loda, 2019).

During the last decade, many international studies have underlined the relevance of peer tutoring in the context of elementary literacy. For instance, Leung (2015) analyzed determinants of best practices in peer tutoring, concerning the quality of tutors' training, session structure, and frequency of interactions. Brown (2016) found that the students' perception of peer feedback correlated strongly with self-efficacy, self-regulation, and learning outcomes. Meanwhile, the study by Bernacki (2018) provided evidence that personalized interactions nurture situational interest, which is an important factor of continuous reading motivation at the initial school grades.

However, the introduction of peer tutoring into elementary education has its challenges. For instance, tutors and tutees should be guided in interactions to avoid distortion by tutor dominance, tutee dependency, or conceptual errors that may pass uncorrected. Peer tutoring requires appropriate strategies for classroom orchestration in order for all students to be productively engaged and for the quality of tutor support to remain consistent. Consequently, recent literature highlights the importance of the teacher's role in managing scaffolding, monitoring the process of interaction, and giving feedback on the performance of tutors.

In Indonesia, there is still relatively limited classroom action research conducted systematically to evaluate the implementation of peer tutoring on addressing early reading difficulties in lower grades. Most early literacy research focuses on phonics methods, multimodal text-based learning, use of concrete media, and adult-based interventions. Yet, peer support has great potential for sustainable implementation in classrooms with a wide range of literacy abilities.

Against this backdrop, this research presents pedagogical and theoretical urgency. Pedagogically, the present research addresses this need for interventions that are individual teacher-driven, sustainable, and contextual. Theoretically, this research contributes to the growing literature on peer tutoring practices in early literacy learning, particularly within the context of elementary education in Indonesia.

This research focuses on the main question: To what extent is peer tutoring effective in enhancing the early reading competence of students who have difficulties in reading, and how does it influence the

dynamics of social interactions and learning motivation in the classroom.

The following are the formulated research objectives:

- 1) Examine whether early reading skills have improved following the introduction of peer tutoring.
- 2) Describe changes in student involvement, self-esteem, and socializations during the program.
- 3) Assess teacher and student responses about the effectiveness of peer tutoring as a strategy for early literacy learning.

This research thus generates not only empirical evidence on the effectiveness of peer tutoring but also carries practical implications for the teachers in devising more adaptive and participatory early literacy strategies.

This review of the theoretical underpinnings centers on peer tutoring, early reading difficulties, feedback and self-regulation, the dynamics of motivation and emotion in learning, and implications of advanced technology for peer-based learning design. The theoretical presentation in this section aims to provide a strong argumentative framework for understanding the effectiveness of peer tutoring on early literacy development in elementary schools.

Peer tutoring is an instructional strategy that positions students as active learning agents through the provision of academic assistance from peers within a tutor-tutee role structure. This concept is embedded in social and cognitive learning theory, which views social interaction as one avenue through which knowledge can be internalized. Over the last decade, peer tutoring theory has become more formalized through the accumulation of empirical studies that support the contention that the effectiveness of this model is premised on scaffolding, self-regulation, and social fit between tutor and tutee.

Leung (2015) located five significant determinants affecting the quality of peer tutoring: (1) clarity of academic goals, (2) consistent instructional structure, (3) adequate tutor training, (4) stability of tutor-tutee pairings, and (5) frequency of interaction. This study confirms that the effectiveness of peer tutoring is determined not by happenstance interactions among students, but by systematic pedagogical design.

Backer (2015) identified the role of socially shared metacognitive regulation at the heart of learning in reciprocal peer tutoring. When students engage in collaborative goal management, understanding monitoring, and strategy evaluation, they experience improved competencies to plan, monitor, and evaluate their learning process. This supports the claim that in addition to academic outcomes, peer tutoring also creates lifelong learning competencies.

Loda (2019), in a scoping review, established that the effectiveness of peer-assisted learning is influenced

by cognitive congruence and social congruence. Cognitive congruence implies a similar level of understanding between the tutor and tutee, thus making communication easy and interactions relevant to learning needs. Social congruence pertains to the social and emotional closeness that enables students to feel safe enough in asking questions or expressing difficulty. This mechanism provides a singular advantage for peer tutoring compared to entirely teacher-centered learning.

Theoretically, peer tutoring has two important advantages:

- 1) Cognitive strengths, via knowledge elaboration, modeling, feedback, and conceptual elaboration.
- 2) Social-emotional strengths through peer support, positive reinforcement, and reduced learning anxiety.

Feedback is one of the essential elements of peer tutoring. Brown (2016) highlighted that students' perception of the given peer feedback importantly influences self-regulation, self-efficacy, and learning outcomes. Specific, accurate, and improvement-oriented feedback may help the tutee to learn how to correct errors, understand the reading process, and realize his progress.

From a peer tutoring perspective, feedback is not only a form of mechanical correction but also an avenue for cognitive and affective reinforcement. An effective peer tutor will:

- 1) Precisely identify the reading errors.
- 2) Provide graduated prompts.
- 3) Encourage tutees to engage in short reflection sessions after reading.
- 4) Give reinforcement in order to enhance motivation.

As cited by Backer (2015), students' explanations to peers regarding problem-solving processes or reading strategies are an important form of articulation of knowledge that is vital in improving the tutor's own conceptual understandings. Thus, feedback not only benefits the tutee but also strengthens the tutor's understanding.

Thus, the feedback mechanism in peer tutoring performs a dual role: 1) as a diagnostic and corrective tool, especially in beginning reading, as a metacognitive tool, 2) helping students monitor and evaluate their learning process.

Generally, early reading difficulties in the lower grades manifest through difficulties in phonological discrimination, difficulties in mastering the relationship between letters and sounds, decoding of syllables, and comprehension of simple texts. These problems can be caused by a deficiency in early experiences with literacy, insufficient exposure to reading, or internal factors like phonological processing disorders. The

consequences are not only academic but also pertain to children's attitudes, motivation, and self-confidence.

Recent literature by Bernacki (2018) suggests that low-ability students need intensive practice-based interventions. Students with reading difficulties take longer over tasks and, therefore, one-on-one tutoring can be particularly well suited to providing more individualized instruction. On this count, peer tutoring represents a sustainable, generative alternative in that it does not rely on additional professionals.

Moreover, Cao (2021) suggests that there are reasons to believe that academic pressure might be reduced by strong social support from peers. While the research was in the context of international students, the general principles reinforce the idea that supportive peers will help students manage anxiety, especially in potentially stressful task situations like reading aloud.

In early literacy tutoring, the quality of the interactions and type of support provided by tutors become critical. Well-trained tutors can lead tutees to identify phonological errors, segment words, and repeat readings with proper rhythm. This will lead to long-term improvements in phonemic awareness and reading fluency—skills that are strongly predictive of later literacy success.

Motivation and emotions form the core ingredients of learning to be literate at an early age. Students with anxiety about reading or fear of making mistakes tend to avoid activities that require literacy skills. For instance, Bernacki demonstrated in 2018 that situational interest is a strong predictor of learning success, especially when students perceive learning tasks as relevant and personal.

In peer tutoring, the social relationship between the tutor and the tutee influences learning motivation a great deal. Tutors who are patient, friendly, and constantly supportive can create an emotionally safe learning environment. Furthermore, not only does such positive emotional engagement influence motivation, but it also influences resilience to adversities, which is important in students with low ability.

Cao (2021) suggested that social support from peers reinforces coping strategies and lowers perceptions of academic pressure. In the process of early reading, a tutee's successful reading of a fragment of a sentence, a tutor's praise, and other small moments of success will reinforce students' self-belief.

Therefore, peer tutoring strengthens motivation through three dimensions:

- 1) Social motivation through positive interactions
- 2) Academic motivation through repeated experiences of small successes
- 3) Affective motivation is achieved by reducing anxiety and increasing comfort
- 4) Although the presented research focuses on face-to-face peer tutoring, it is relevant to understand

the technological developments in learning. Gentry (2019) illustrated that serious games and gamification enhance learning engagement through features such as challenge, real-time feedback, and reward systems. Gamification principles such as badges, progress bars, or points can be easily adapted to peer tutoring sessions in order to increase motivation.

In the meantime, Holstein (2019) and Gordon (2015) featured examples of promising AI-supported collaborative learning orchestration. AI systems may suggest recommendations for student grouping, monitor interactions, or offer analyses of students' responses. Although not used in this research, such developments indicate that the peer tutoring approach may well be strengthened in the future through adaptive technology integration.

This innovation is relevant because peer tutoring is not only a pedagogical method but also can evolve into a technology-enabled, adaptive learning ecosystem.

## METHOD

The research results presented in this section were obtained from two important sources of data: quantitative data obtained from a pre-reading test in a pretest–posttest design and qualitative data obtained from observations, interviews, and teacher reflections. Further, the data are analyzed in an integrated manner to explain the effectiveness of implementing peer tutoring in improving pre-reading skills among second-grade students who experience reading difficulties. This section integrates empirical findings into a current theoretical framework and, therefore, presents a comprehensive discussion in line with the principles for writing scientific articles.

## RESULTS AND DISCUSSION

The results of the pre-reading test also showed a significant improvement after two cycles of implementation of peer tutoring. All five students who were in the focus of the study showed consistency in increasing scores between the pre-test and the post-test. The table below presents the comparison scores before and after the intervention.

**Table 1. Comparison of Pretest and Posttest Scores for Beginning Reading Skills**

Name	Score Pre-test	Score Posttest	change in percent
Ani	40	65	62.50
Budi	50	75	50.00
Citra	35	60	71.43
Deni	45	70	55.56
Eka	38	66	73.68

The average improvement reached 55%, indicating that peer tutoring has positive effects on reading accuracy, reading fluency, and simple reading

comprehension. A paired-sample t-test obtained  $t = 6.43$  with  $p = 0.002$  ( $p < 0.05$ ), validating that the amount of improvement was at a statistically significant level. This finding also supports Leung's meta-analysis study conducted in 2015 and 2019, which reported that peer tutoring exerts a moderate to strong influence on academic achievements at different levels of education.

Aspect-by-aspect analysis has also consistently shown improvement. Phonological errors initially occurring frequently have drastically reduced in the second cycle. Fluency in reading, based on the number of correct words per minute, increased from an average of 22 wpm to 38 wpm. On the other hand, reading comprehension improved through more accurate answering of factual questions. These three aspects illustrate comprehensive improvement, not just mechanical improvement, in basic literacy.

Observations of eight peer tutoring sessions revealed a change in students' academic and social-emotional behavior. During the first cycle, most tutees were hesitant, reading in a quiet voice and hanging their head when asked to read. Tutors also tended to give direct assistance before giving tutees an opportunity to try it themselves. However, this situation changed dramatically in the second cycle. Quality of interaction improvement showed up as increased initiative by tutees, increased reading accuracy, and increased frequency of specific feedback provided by tutors.

**Table 2. Summary of Qualitative Observation Findings**

Aspect	Cycle I	Cycle II	Development
Student engagement	Medium	High	Tutee actively reads and asks questions
Phonological errors	High	Low	Tutor provides more effective assistance
Feedback quality	Inconsistent	Specific & consistent	More structured tutoring
Self-confidence	Low	High	Tutee willing to read aloud
Social interaction	Passive	Warm & supportive	Emotional closeness established

The qualitative findings indicated that reading improvement cannot be understood as a solely cognitive process, but rather it was the result of the social-emotional dynamics developed in tutor-tutee interactions.

The high gains in scores suggest that the peer tutoring treatment has significantly influenced the development of students' beginning reading skills. This finding reinforces the assumption that peer tutoring-based learning offers advantages in providing intensive and personalized practice opportunities. According to Bernacki (2018), learning practices that enable students to practice repeatedly in contexts relevant and personalized will increase situational interest, which

in turn influences learning outcomes positively. In this study, tutees were given enough and repeated practice space to hone their phonological skills and fluency in reading.

Qualitative results show that the enhancement of reading skill cannot be understood as merely a cognitive process, but rather as an outcome of socio-emotional dynamics that can emerge from tutor-tutee interactions.

Moreover, the modeling role of the tutor reinforced internalization of reading skills. When the tutor read the text with suitable intonation and pronunciation, the tutee actually learned how words should be correctly pronounced. This is in agreement with the findings of Backer (2015), who established that students' explanations to peers and academic demonstrations were among the major factors that enhanced tutees' internalization of concepts.

Through the learning process, tutees showed improvements in reading speed and fluency. Improvement did not only occur as a function of repetition, but equally from the elaborate feedback provided by the tutors. In this respect, the research findings concur with Brown (2016), who maintained that the quality of feedback is an important factor affecting student self-regulation and academic accomplishments.

Another intervention factor that can be identified as contributing to success involves the consistency and quality of tutor feedback. The training of tutors on graduated prompts, asking tutees to try again, and then giving gradual phonological guidance together significantly improved the quality of learning. In the second cycle, for instance, tutors no longer immediately called out incorrect words; rather, they gave space for tutees to process their own mistakes.

This change reinforces the view expressed by Brown (2016) that students' perception of feedback influences their ability to regulate reading strategies and to develop self-efficacy. That is, feedback tends not only to serve a corrective function but also to strengthen students' awareness of both the learning goals and the process.

Moreover, the success of the tutors in giving quality feedback indeed shows that children at elementary school age can work as effective facilitators of learning provided they are trained properly. This result again supported the findings of Leung (2015) and Leung (2019) in that tutor training was one of the major variables determining the success of peer tutoring.

The most basic change in this research was how the tutees became more confident in reading aloud in front of their peers. During the first sessions, the tutees were anxious about reading. After some sessions of peer tutoring, they gained enough courage to read,

even without encouragement from the teacher. Indeed, it was a consistent development among the five tutees.

This can be understood by Cao's 2021 research through the social support concept, which proves that emotional support from the social environment is an important source in reducing academic stress. In the case of beginning reading, the tutor becomes a secure peer figure for tutees, thereby reducing shyness, anxiety, and fear of failure.

Moreover, in support of this assertion, Bernacki (2018) showed that situational interest is developed through repeated experiences of small successes. Every time the tutee successfully unscrambles a word or reads a sentence without errors, the tutor praises him or her, and this experience creates a positive learning loop that raises the intrinsic motivation of the tutee.

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The most notable progress was seen in the area of social interaction. During the first cycle, tutors often took over the reading tasks, while tutees remained passive. However, after receiving additional training and feedback from the teacher, this pattern shifted significantly. The sessions became more collaborative, with tutors starting to ask open-ended questions like, "What part was difficult?" and giving tutees time to try reading on their own before stepping in to help.

This shift aligns with Loda's (2019) concepts of cognitive and social congruence. These ideas suggest that the success of peer-based learning is closely tied to shared learning experiences and the emotional closeness between tutor and tutee. When the social bond is strong, it creates a safe and encouraging environment, making it easier for students to internalize new knowledge.

The success of the intervention also hinged on the teacher's role as the orchestrator of the learning process. Rather than simply observing, the teacher actively monitored the progress of each tutoring session, provided feedback to tutors, and ensured that interactions remained focused on academic goals. Additionally, the teacher continually adjusted the difficulty of reading materials to match the abilities of each tutee.

This highlights the critical importance of teacher facilitation, as supported by Holstein (2019), who emphasized that the effectiveness of collaborative learning often depends on a teacher's ability to guide classroom dynamics through small, strategic interventions. In this model, the teacher doesn't replace the tutor but supports the learning environment to keep interactions productive and meaningful.

### Conceptual Model of Literacy Improvement Through Peer Tutoring

The findings of this study can be synthesized into a conceptual model that outlines how peer tutoring supports literacy development through multiple, interconnected layers:

**Cognitive Support → Metacognitive Support → Emotional Support → Motivational Improvement → Early Reading Improvement**

This model illustrates that improvements in early reading skills are not driven by cognitive processes alone. Instead, they result from a dynamic and reinforcing interaction between cognitive, metacognitive, emotional, and motivational supports. These elements form a continuous and cumulative cycle that strengthens the learner's confidence, engagement, and reading proficiency over time.

This study set out to evaluate the effectiveness of peer tutoring in supporting second-grade students at Ibnu Sina Islamic Elementary School in Bandung who were struggling with early reading skills. Using a two-cycle Classroom Action Research (CAR) model, the research demonstrated that peer tutoring is a practical, adaptable, and effective approach for enhancing early literacy in elementary classrooms.

Quantitative data showed a 55% average improvement in reading scores, with statistically significant results confirming the impact of the intervention. Meanwhile, qualitative observations highlighted meaningful shifts in student behavior: children who had previously shown hesitation and anxiety began to participate more confidently, read aloud willingly, and engage in peer interactions more actively. These outcomes suggest that peer tutoring works not only because it provides cognitive support—such as reading practice, error correction, and modeling—but also because it nurtures essential social and emotional dimensions of learning. Praise from peers, encouragement during mistakes, and the experience of repeated small successes all contribute to building intrinsic motivation and situational interest in reading.

The teacher's role was also crucial. Rather than leading instruction directly, the teacher acted as a facilitator—training tutors, guiding interactions, and adjusting materials to match students' needs. This finding aligns with previous studies (e.g., Holstein, 2019) that highlight the importance of teacher orchestration in collaborative learning environments.

Overall, the study supports peer tutoring as a low-cost yet high-impact strategy that can be embedded into regular teaching or used in remedial settings. It has both practical and theoretical implications. Practically, schools can adopt peer tutoring as part of their literacy programs. Theoretically, the findings contribute to the broader literature on early literacy instruction, especially in the Indonesian elementary school context.

For future research, it would be valuable to explore peer tutoring in varied school environments, integrate technological or gamified elements to enhance engagement, and investigate the long-term effects on students' literacy trajectories.

### CONCLUSION

In light of the above findings, it is conclusive that home environment as regards (a) socioeconomic status (2) parental level of education (3) stability at home all have bearing on the performance of the children academically, most especially at the primary school level. Considering its importance in the future of the pupils, there should be a conscious effort put forward by parents in providing a favorable home environment for their wards, thereby laying solid foundation for pupils at home. With the changes in economic structure whereby the socio-economic level of the parents is being frequently adversely affected, it is recommended that:

1) Government should make its free education policy meaningful by providing adequate funds to create a satisfactory environment for good quality primary school education.

2) Government at the three-tier levels should embark on policies aimed at improving the standard of living of the citizens.

### AUTHORS' NOTE

The authors declare that there are no conflicts of interest related to the publication of this article. They also confirm that the manuscript is original and free from any form of plagiarism.

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