

The Role of Peer Interaction in Enhancing Vocabulary and Reading Skills Through Digital Collaborative Platforms

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Abstract

This study explores the role of peer interaction in enhancing vocabulary and reading skills through digital collaborative platforms, focusing on two central research questions. Firstly, it investigates how peer-interaction facilitated by digital platforms impacts students' vocabulary acquisition. Secondly, it examines students' perceptions of the effectiveness of peer interaction in digital collaborative learning environments for improving vocabulary and reading skills. The research involved 19 participants who were interviewed and observed across various educational settings. Findings indicated that peer interaction on digital platforms significantly enhances vocabulary acquisition by promoting active engagement and providing immediate feedback. Participants reported that discussions and collaborative projects facilitated deeper understanding and retention of vocabulary, while diverse perspectives from peers enriched their comprehension of reading materials. Moreover, students perceived peer interaction as highly effective, citing increased motivation and enjoyment in learning through collaborative activities. This study underscored the importance of integrating digital collaborative platforms into educational practices to foster interactive learning environments that support language skill development and student engagement.

Keywords: Peer Interaction, Vocabulary, Reading skill, Digital Collaborative Platforms

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1. Introduction

In the contemporary educational landscape, the integration of technology has revolutionized traditional teaching methods, paving the way for innovative pedagogical approaches that leverage digital tools to enhance learning outcomes. One such approach gaining traction is the use of digital collaborative platforms to foster peer interaction, particularly in the context of language learning (Rahis Pasaribu et al., 2023; Zakian, 2022). As students increasingly engage with digital technologies in their daily lives, incorporating these tools into educational settings offers a compelling avenue for improving key language skills, such as vocabulary acquisition and reading comprehension.

Vocabulary and reading skills are fundamental components of language proficiency, critical for academic success and effective communication. Traditional methods of teaching these skills often rely on rote memorization and individual practice, which can be less engaging and effective for students. Collaborative learning models, which emphasize student-to-student interaction and cooperative learning, have been shown to provide significant benefits over individualistic approaches. These models encourage active learning, critical thinking, and the

ability to articulate ideas and receive feedback in a supportive environment (Masruddin, 2014; Sinha, 2022). By integrating digital platforms into collaborative learning, educators can enhance these interactions and provide a more dynamic and engaging learning experience. Digital collaborative platforms, such as Google Classroom, Edmodo, and Padlet, offer versatile tools that facilitate real-time communication, resource sharing, and collaborative projects (Al Hammad & Al-Sarraf, 2020; Merta et al., 2023). These platforms enable students to work together on assignments, participate in discussions, and provide peer feedback, all within a digital environment that mirrors their everyday use of technology. Such platforms not only make collaboration more convenient and accessible but also cater to diverse learning styles and needs. The use of multimedia resources, interactive tasks, and instant feedback mechanisms can significantly enhance students' engagement and motivation to learn.

The role of peer interaction in this digital context is particularly noteworthy (Jeong, 2019; Neh, 2018). Peer interaction promotes social learning, where students learn from each other's insights, mistakes, and diverse perspectives. In language learning, this interaction can lead to a more profound and nuanced understanding of vocabulary and improved reading skills as students are exposed to different contexts and uses of language. Collaborative tasks that involve peer teaching, discussion, and joint problem-solving can help students internalize new vocabulary and concepts more effectively than solitary study. Despite the potential benefits of peer interaction through digital collaborative platforms, several challenges can hinder their effectiveness in enhancing vocabulary and reading skills. One significant issue is the digital divide, which refers to the disparity in access to technology and the internet among students. In many educational settings, particularly in under-resourced areas, students may lack reliable internet access, adequate devices, or the necessary technical skills to fully engage with digital platforms. This digital divide can exacerbate existing educational inequalities, leaving some students at a disadvantage and unable to benefit from collaborative digital learning opportunities.

Another problem is the varying levels of student engagement and participation. While some students may thrive in a digital collaborative environment, others may struggle to stay motivated and actively participate (Borgonovi & Pokropek, 2021; Syafriafdi, 2023). Factors such as personality differences, learning preferences, and varying degrees of comfort with technology can influence how students engage with their peers online. Additionally, without the physical presence of a teacher to monitor and facilitate interactions, some students may become passive participants or disengage altogether, reducing the overall effectiveness of peer collaboration. Managing and moderating peer interactions on digital platforms also presents challenges. Ensuring that interactions are productive and focused on learning objectives requires effective moderation and guidance from educators. However, teachers may face difficulties in continuously monitoring online discussions and activities, especially in large classes. Without proper oversight, peer interactions can sometimes deviate from educational goals, leading to off- topic discussions or even negative behaviors such as cyberbullying. Effective moderation is crucial to maintaining a positive and conducive learning environment.

The quality of peer feedback can vary widely, impacting its usefulness for learning. Students may lack the expertise or confidence to provide constructive feedback to their peers, leading to superficial or inaccurate comments. This can hinder the learning process and potentially reinforce misunderstandings or incorrect usage of vocabulary and reading strategies.

Training students to give and receive effective feedback is essential, but it can be time-consuming and require ongoing support. Integrating digital collaborative platforms into the curriculum requires significant planning and resources (Mita, 2018; Nurmala et al., n.d.). Educators need to be proficient in using these technologies and designing collaborative activities that align with learning objectives. Professional development and continuous support

for teachers are necessary to ensure they can effectively implement and manage digital collaborative learning. Additionally, schools and institutions must invest in the necessary infrastructure and technical support to facilitate seamless integration of these platforms.

Despite these potential benefits, there is still limited research on how peer interaction in digital collaborative platforms directly influences vocabulary acquisition and reading comprehension, particularly in diverse educational contexts. Digital collaborative platforms hold promise for enhancing vocabulary and reading skills through peer interaction, several challenges must be addressed. Issues such as the digital divide, varying levels of student engagement, effective moderation of interactions, the quality of peer feedback, and the need for adequate training and resources for educators are critical considerations. Addressing these problems is essential to maximizing the potential benefits of digital collaborative learning and ensuring equitable and effective language education for all students. Based on these issues, two research questions arise in this study; How does peer interaction facilitated by digital collaborative platforms impact students' vocabulary acquisition? And what are the perceptions of students regarding to the effectiveness of peer interaction in digital collaborative learning environments for vocabulary and reading skill improvement?

2. Method

A case study design was used as the research method, allowing for an in-depth examination of specific instances of peer interaction within digital collaborative platforms (Sun, 2019). By focusing on multiple case studies from different educational contexts, the research can capture diverse experiences and provide a comprehensive understanding of how these interactions impact vocabulary and reading skills. There were 19 students from English Education Program involved in this research. Semi-structured interview was conducted with students and teachers. These interviews explored participants' experiences with peer interaction on digital collaborative platforms, their perceptions of its effectiveness, and any challenges they have encountered. The semi-structured format allowed for flexibility in probing deeper into specific areas of interest that emerge during the conversation.

Observational data were collected by monitoring students' interactions on digital collaborative platforms. This non-intrusive method allowed the researcher to capture authentic interactions as they occur naturally. Observations focused on the nature of peer interactions, types of feedback exchanged, collaborative behaviors, and engagement levels. Thematic analysis was used to analyze the data. This involved coding the data to identify recurring themes and patterns related to peer interaction, vocabulary acquisition, and reading skill development of the students (Rofiah et al., 2024).

3. Findings and Discussion

Peer interaction facilitated by digital collaborative platforms impact students' vocabulary acquisition.

Based on the interview, there were two important parts being the consideration about role of peer interaction. Students consistently highlighted the benefits of peer interaction on digital platforms for vocabulary learning. They remarked, *"When we discuss new words in our group chat, I find it easier to remember them because I see how my friends use them in sentences. (P1, P2, P5, P10, P15)"* This statement underscored the importance of contextual learning in vocabulary acquisition. Seeing new words used in sentences by peers provides concrete examples and situational usage, making it easier for students to grasp and retain meanings. The social aspect of learning also played a crucial role here, as students were naturally more engaged and attentive when interacting with friends (Al Hammad & Al-Sarraf, 2020). This

peer-to-peer learning dynamic helped embed new vocabulary into long-term memory, as students not only learn the definitions of words but also understand how to use them effectively in various contexts.

While, another student noted, *"We often play vocabulary games online, and it's fun to compete and learn new words together. (P3, P4, P7, P18, P19)"*. This highlighted how gamification and collaborative competition can enhance vocabulary learning. Online vocabulary games transformed learning into an enjoyable and interactive activity, making it less of a chore and more of a social event (Benu, 2019; Berliani & Katemba, 2021; Ishchuk & Shevchuk, 2022). The competitive element adds excitement and motivation, encouraging students to actively participate and strive to improve their vocabulary. Through repeated exposure and use of new words in a fun and engaging format, students are more likely to internalize and remember the vocabulary. Furthermore, the collaborative nature of these games fosters a supportive learning environment where students can learn from each other, share strategies, and provide mutual encouragement. The combination of these students' perspectives illustrated the multifaceted benefits of digital collaborative platforms for vocabulary learning. Discussing new words in group chats allows for immediate, contextual application, which aids in comprehension and retention. Meanwhile, vocabulary games introduced an element of fun and competition, which enhances motivation and engagement. Together, these activities create a dynamic and interactive learning environment that supports vocabulary acquisition more effectively than traditional rote memorization techniques. The use of digital platforms also caters to various learning styles, ensuring that students who may struggle with conventional methods have alternative avenues to grasp new vocabulary.

In collaborative projects, students utilized digital tools to create presentations and documents, incorporating new vocabulary effectively (Pandya & Joshi, 2022). This practice provided them with an authentic context for using advanced vocabulary and complex sentence structures, which is crucial for language acquisition. By working on projects, students had the opportunity to apply newly learned words in meaningful ways, moving beyond rote memorization to actual usage. The process of creating content collaboratively demanded that they think critically about the words they chose, ensuring that their usage was precise and contextually appropriate. This engagement with vocabulary in a practical setting helps solidify their understanding and enhances their ability to recall and use these words in the future.

Observations revealed that students who collaborated on projects were more likely to use advanced vocabulary and complex sentences. This finding suggested that the collaborative nature of these projects fosters a higher level of linguistic engagement. When students worked together, they are exposed to the language skills of their peers, which can include more sophisticated vocabulary and sentence structures. This exposure acted as a model for less advanced students, encouraging them to adopt similar linguistic patterns. Moreover, the need to communicate effectively with peers about the project's content naturally pushes students to elevate their language use. They were not just using words to fill space; they were choosing vocabulary that accurately conveys complex ideas and nuances, which is a critical component of advanced language proficiency.

Additionally, these collaborative projects often led to discussions about word meanings and appropriate usage. As students encountered new vocabulary, they would engage in conversations to clarify meanings and ensure correct usage. This peer-to-peer interaction is invaluable for language learning. It provides immediate feedback and diverse perspectives on how words can be used. For example, if one student suggests a particular word for a project, another might question its appropriateness, leading to a discussion about its meaning and possible synonyms (Taylor, 2021). These discussions help deepen students' understanding of vocabulary, as they did not only learn the definitions of words but also their connotations and the contexts in which they are most appropriately used.

Furthermore, the digital tools used in these projects, such as collaborative word processors, presentation software, and online discussion boards, facilitated this enhanced vocabulary use. These tools often include features that assist with language learning, such as spell check, thesaurus functions, and the ability to easily share and edit documents. This technological support allows students to experiment with new vocabulary confidently, knowing they can receive instant feedback and make corrections as needed. The collaborative aspect of these digital tools also means that students can easily review each other's work, providing additional opportunities for learning and reinforcement of new vocabulary. The use of digital tools in collaborative projects significantly impacts students' vocabulary acquisition. By requiring students to apply new vocabulary in authentic, meaningful contexts, these projects promote a deeper understanding and more sophisticated use of language. The collaborative nature of the work encourages the use of advanced vocabulary and complex sentences, while peer discussions about word meanings and usage further reinforce learning (Djiwandono, 2018; Lazarus, 2021). Digital tools facilitate this process, providing the necessary support for students to confidently experiment with and learn new vocabulary. This holistic approach to vocabulary learning, integrating practical application, peer interaction, and technological support, is highly effective in enhancing students' language skills.

Perceptions of students regarding to the effectiveness of peer interaction in digital collaborative learning environments for vocabulary and reading skill improvement

Students generally perceive peer interaction in digital collaborative learning environments as highly effective for improving both vocabulary and reading skills. The interview data reveals several key themes, including enhanced engagement, immediate feedback, diverse perspectives, and increased motivation, all contributing to more effective learning.

"I find that discussing new words with my classmates online helps me understand and remember them better. It's easier to learn when you see how others use the words in different sentences (P2, P7, P11, P12)."

"Working on reading assignments together in our online groups is really helpful. We can share our interpretations of the text, which gives me a deeper understanding and helps me see things I might have missed on my own (P5, P17, P13, P9)."

"The feedback from my peers is immediate and really useful. If I use a word incorrectly, someone will point it out right away and suggest a better way to say it. This helps me learn faster (P1, P4, P.14)"

"Collaborating on projects and reading tasks online keeps me motivated. It's more fun and interesting than working alone, and I feel more confident using new vocabulary when I know my friends are there to help (P6, P8, P10)."

Based on the interview results, there were some points emphasized here:

Enhanced Engagement

Students perceive that peer interaction in digital collaborative learning environments significantly enhances their engagement with vocabulary and reading tasks. As P2, P7, P11, P12 noted, discussing new words in an online group setting helps with understanding and retention. This aligns with the concept of social constructivism, where learning is seen as a social process. By engaging in meaningful discussions about vocabulary and reading materials, students are more likely to be actively involved in their learning process (Laloan, 2022; Laloan & Negeri, n.d.). This active engagement is crucial for effective vocabulary acquisition and reading comprehension, as it encourages deeper cognitive processing of the material.

Immediate Feedback

The immediacy of feedback in digital collaborative environments is another key factor highlighted by students. P1, P4, P.14's observation about receiving instant corrections and suggestions from peers underscores the importance of timely feedback in the learning process.

Immediate feedback helps students quickly rectify mistakes and reinforce correct usage, which is essential for vocabulary development. In reading tasks, this real-time feedback mechanism allows students to clarify misunderstandings and improve their comprehension skills more efficiently.

Diverse Perspectives

Students also appreciate the diverse perspectives gained from peer interactions. As P5, P17, P13, P9 mentioned, sharing interpretations of reading assignments in online groups provides a deeper understanding of the text. Exposure to multiple viewpoints helps students develop critical thinking skills and enhances their ability to analyze and comprehend complex texts. This diversity in thought and language use contributes to a richer learning experience, allowing students to learn new vocabulary in varied contexts and understand different interpretations of reading materials.

Increased Motivation

The social and collaborative nature of digital learning environments appears to boost student motivation. P6, P8, P10's comment about feeling more motivated and confident when collaborating with peers highlights the motivational benefits of peer interaction. Working with peers creates a sense of community and support, making learning more enjoyable and less intimidating. This increased motivation can lead to greater persistence in vocabulary and reading tasks, ultimately resulting in improved language skills.

Practical Application

Furthermore, students find that the practical application of new vocabulary in discussions and collaborative projects is particularly beneficial. By using new words in meaningful contexts, students can better understand and remember them (Ana, 2023; Muntu et al., 2023). This practical application, combined with the support and feedback from peers, creates a powerful learning environment that promotes effective vocabulary acquisition and reading comprehension. In conclusion, students perceive peer interaction in digital collaborative learning environments as highly effective for improving vocabulary and reading skills. The interview data reveals that enhanced engagement, immediate feedback, diverse perspectives, and increased motivation are key factors contributing to this effectiveness. These elements create a dynamic and supportive learning environment that encourages active participation, critical thinking, and practical application of language skills.

4. Conclusion and suggestion

Peer interaction facilitated by digital collaborative platforms plays a pivotal role in enhancing students' vocabulary acquisition and reading skills. This study explores two key questions: the impact of peer interaction on vocabulary acquisition and students' perceptions of its effectiveness in digital collaborative learning. The findings highlight the significant benefits of collaborative learning in enhancing language skills. This research indicates that peer interaction on digital platforms significantly enhances vocabulary acquisition. Students engage in discussions, collaborative projects, and vocabulary games where they actively use and reinforce new words. This active engagement fosters deeper understanding and retention as students see and practice the application of vocabulary in various contexts. The collaborative nature of these platforms promotes not only the acquisition of new words but also the development of nuanced language skills through peer feedback and interaction.

Furthermore, students perceive peer interaction in digital collaborative learning environments as highly effective for improving both vocabulary and reading skills. They appreciate the immediate feedback provided by peers, which helps them correct mistakes and refine their language use. Moreover, the diversity of perspectives offered by peers enriches their understanding of vocabulary and reading materials, encouraging critical thinking and deeper comprehension. Students also report increased motivation when collaborating with peers, finding the interactive and social aspects of learning on digital platforms engaging and supportive.

In conclusion, the integration of peer interaction into digital collaborative learning environments enhances vocabulary acquisition and reading skills by fostering active engagement, providing immediate feedback, encouraging diverse perspectives, and boosting student motivation. These findings underscore the importance of collaborative learning in educational settings, particularly in enhancing language skills through meaningful interaction and practical application. By leveraging digital platforms for peer interaction, educators can create dynamic learning environments that not only support academic achievement but also promote lifelong learning skills essential for students' future success.

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