

Exploring the Barriers and Motivation of Vocational Students in Using the Wordwall Platform for Basic Reading Learning

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Abstract:

This study investigated the barriers and motivations of vocational students in using the Wordwall platform for basic reading learning. With the increasing integration of technology in education, the research aimed to examine how an interactive platform such as Wordwall influenced students' engagement and reading development in a vocational education context. A descriptive quantitative approach was employed, and a questionnaire was administered to 20 vocational students at Politeknik Negeri Bengkalis. The data explored students' frequency and duration of Wordwall use, preferred activity types, perceived effectiveness, motivational factors, and the barriers that limited its implementation. The findings revealed that most students used Wordwall on a weekly basis and engaged primarily in vocabulary-based activities such as flashcards and word search. The majority of students perceived the platform as effective for supporting basic reading learning. Motivational factors, including enjoyment, perceived usefulness, ease of use, autonomy, competence, and immediate feedback, were identified as key drivers of engagement, consistent with the principles of Self-Determination Theory and the Technology Acceptance Model. However, several barriers were reported, including slow loading times, unstable internet connectivity, and limited access to devices, which hindered optimal utilization. Limited teacher scaffolding was also identified as a secondary challenge. The study suggested that improving infrastructure, enhancing mobile and offline accessibility, and providing stronger instructional support would increase the effectiveness of Wordwall in vocational reading instruction. Overall, the findings indicated that Wordwall had strong potential to enhance basic reading learning when supported by adequate technological and pedagogical conditions.

Keywords: *Wordwall; Vocational Education; Barriers; Motivations; Reading Learning; Gamification.*

1. INTRODUCTION

Technology in the classroom is more vital than it has ever been due to the current state of the planet. When compared to their peers in academic settings, students who are enrolled in vocational education typically encounter a different set of problems. However, digital platforms hold a great deal of promise to transform the way in which students learn by increasing their level of engagement and assisting them in the acquisition of new abilities. The application of game mechanics in the study of the English language, which has been shown

to have positive effects on attention, engagement, and the acquisition of new information, particularly in the areas of grammar and vocabulary. The integration of digital technology into education has significantly transformed teaching and learning practices across different educational levels. In vocational education contexts, where students are prepared for practical and professional careers, the integration of digital tools becomes even more essential. Vocational students often require contextualized, skill-oriented learning environments that connect academic content with real-world applications. Therefore, technology-enhanced learning platforms can serve as powerful tools to support these objectives. The gadget known as Wordwall is one of these (Zahraa et al., 2025). It is an online platform that has been utilized to engage students in the process of learning through the utilization of interactive activities such as puzzles, flashcards, and quizzes. It has been discovered that platforms such as Wordwall and other interactive platforms can boost reading comprehension as well as overall learning results. On the other hand, a significant number of vocational students continue to struggle with utilizing these tools to their full potential.

There are a variety of contexts in which Wordwall has demonstrated successful outcomes. For instance, the research was conducted by (Fitria et al., 2025) and (Aqliyah et al., 2024) demonstrated that students in junior high school who utilized Wordwall as a means of practicing their reading comprehension performed significantly better on examinations than students who were assigned to a control group. A classroom-action research study with elementary school students found that Wordwall media improved reading fluency and comprehension (Susilo et al., 2025).

Even while these outcomes are encouraging, vocational students still confront a variety of hurdles that are not shared by other students when they attempt to make effective use of these platforms. As a result of these issues, which frequently involve both practical and motivational aspects, it is difficult for individuals to utilize these platforms for fundamental reading and other fundamental disciplines. The findings of the research on gamification highlight the fact that game aspects such as quick feedback, challenges, and interaction considerably boost engagement and motivation by catering to three fundamental human needs: autonomy, competence, and relatedness (Dewi et al., 2024). When it comes to teaching reading principles, Wordwall can be viewed as a convergence of technological education and motivated psychology approaches. This is one take on the platform.

Two primary theories serve as the foundation for this research: the first is concerned with the application of motivation theory to vocational education, and the second is concerned with the utilization of technology-enhanced learning (TEL) strategies, particularly gamification, to assist individuals in better comprehending the content that they read. Self-Determination Theory (SDT) was developed by (Deci & Ryan, 2000). This theory proposes that students' perceptions of their own autonomy, competence, and relatedness have a substantial impact on their intrinsic motivation to receive education. It is possible to boost students' motivation, engagement, and learning outcomes by addressing these three fundamental psychological demands. Students have a strong desire to perform to the best of their abilities because they believe that if they do well, they will receive higher grades or even more favorable employment opportunities. The use of theoretical frameworks such as these offers a strong basis for conducting an investigation into the influence that Wordwall has on the study habits and motivation of students.

Learners, in this view, are not just passive recipients of knowledge but active participants in a vast web of connections, using technology to engage with resources and peers in real time (Siemens, 2025). The emphasis is on the ability to navigate and filter

information from various sources and adaptively integrate new knowledge are the foundation upon which Wordwall and other technology-enhanced learning aids are built. Students benefit from the gamification components of Wordwall, which include puzzles, flashcards, and quizzes. These features provide students with opportunity to practice reading methods in a way that is both pleasant and participatory. It has been demonstrated through research conducted in the field of technology-enhanced learning (TEL) that these platforms produce an atmosphere that is superior to more conventional techniques in terms of offering active and individualized learning opportunities.

Within the realm of vocational education, possessing strong reading comprehension abilities is of utmost significance in order to achieve success in both academics and professional endeavors. In most cases, the first things that students are required to work on are reading comprehension, vocabulary development, and text analysis. This is despite the fact that these skills are essential for all other classes as well. In the beginning of their academic careers, students at Politeknik Negeri Bengkalis go through a basic reading course. After that, they continue their education by taking reading modules over the course of three semesters. The students will learn the fundamentals of comprehending what they read in this course, which will be beneficial to them as they advance in their jobs and are required to cope with increasingly complex technical texts.

However, students who are interested in working in a vocational field may find that more conventional methods of reading, such as learning from textbooks and attending lectures, are not sufficient. In order to make learning simpler and more enjoyable for these youngsters, it is frequently necessary to make use of resources that are more engaging, adaptable, and interactive. It's possible that Wordwall and other interactive systems could be of use in this regard. Even if you want to get the most out of these platforms, you still need to have an understanding of the reasons why people use them and the obstacles that prevent them from using them.

Furthermore, the Self-Determination Theory (SDT), which has been modified to function more effectively in online classes, will be investigated as part of this study. In light of the increasing prevalence of digital technologies in educational institutions, such as Wordwall, it is more important than ever before to satisfy the psychological requirements of relatedness, autonomy, and competence. In addition, the most recent iterations of the Technology Acceptance Model (TAM) emphasize how essential it is for students participating in vocational programs to have an understanding of how beneficial and simple it is to make use of educational technologies (Venkatesh & Bala, 2008). By integrating these theories, thus, this study aims to explore how Wordwall can be utilized to enhance reading skills in vocational education by addressing the key factors that influence its use, addressing the following critical questions: What motivates vocational students to use Wordwall for learning basic reading, and what obstacles prevent them from using it effectively.

2. METHOD

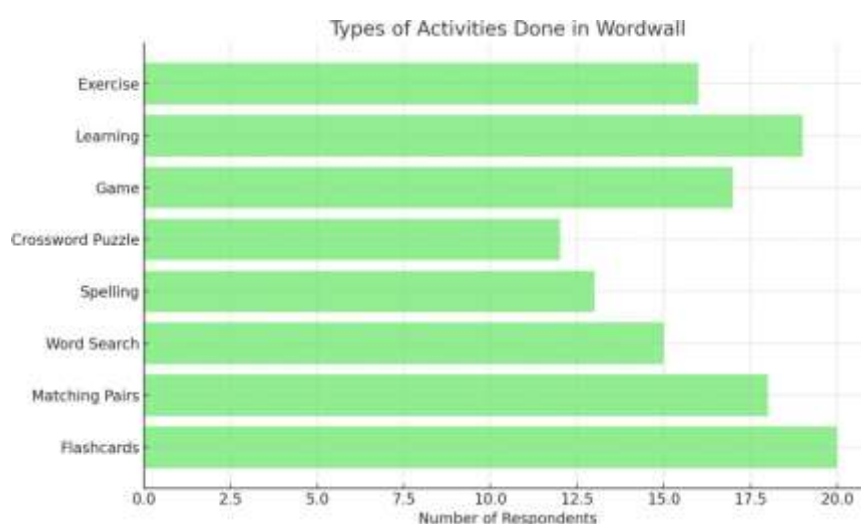
This study uses a descriptive quantitative, to explore the barriers and motivations of vocational students in using Wordwall for basic reading learning. A questionnaire was administered to 20 vocational students at Politeknik Negeri Bengkalis, which included a series of closed and open-ended questions aimed at understanding their usage patterns, motivations, and perceived challenges when using Wordwall for reading activities. Data from the questionnaire were analyzed to identify patterns in students' responses, including frequency of use, preferred activities, and the barriers they face.

The data collection technique used for this study was questionnaire which divided into several sections such as Frequency of Use: Students were asked about how often they used Wordwall, ranging from "Every day" to "Rarely." Types of Activities: Students indicated which activities they engaged with on Wordwall, such as flashcards, matching pairs, word search, spelling, and puzzles. Duration of Use: Students reported how long they typically used Wordwall in one session, with options ranging from "Less than 10 minutes" to "More than 30 minutes." Perceived Effectiveness: Students were asked whether they felt Wordwall was effective for basic reading learning. Motivational Factors: Several items related to intrinsic and extrinsic motivations were included, such as whether the platform is enjoyable, easy to use, and helps them learn more quickly. Barriers: Students identified challenges they faced in using Wordwall, including technical problems, limited access to devices, or time constraints. Feedback and Suggestions: Students provided open-ended feedback on how Wordwall could be improved to enhance their learning experience.

3. FINDINGS AND DISCUSSION

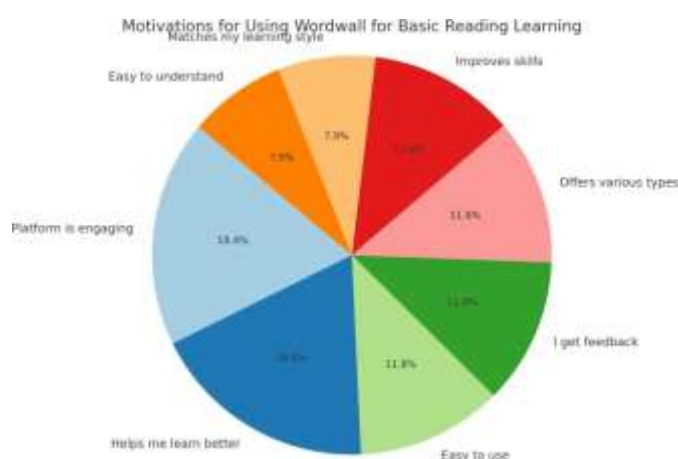
The research findings were obtained by analyzing students' responses to the questionnaires. These results provide valuable insights into students' perspectives about the Barriers and Motivation of Vocational Students in Using the Wordwall Platform for Basic Reading Learning. Related to the frequency of the use of wordwall, the results revealed that the majority of students (70%) use Wordwall on a weekly basis, while 30% reported using it less frequently. No students reported using the platform daily, suggesting that while Wordwall is popular, it has not yet been fully integrated into students' daily study routines. This finding indicates moderate engagement, where Wordwall is used regularly but not to the extent of daily practice. The findings show moderate integration of Wordwall, with 70% of students using it weekly (Ibrahim, 2017). This suggests partial adoption rather than habitual integration. The absence of daily users indicates that Wordwall functions primarily as a supplementary tool rather than a core instructional component. The following figure shows the item about several learning activities involved in Wordwall which is commonly used by vocational students during English classroom especially in reading class.

Figure 1. Types of Activities used in Wordwall



As shown at Figure 1 it reveals that the most common activities students engaged in were flashcards (35%) and word search (30%), both of which are critical for vocabulary building and reading comprehension practice. These activities are designed to improve foundational reading skills. Fewer students engaged in activities such as matching pairs (15%), puzzles (5%), or spelling exercises (0%), which indicates that some features are underutilized (Fitriani & Sunarti, 2024). This suggests that while Wordwall offers a variety of interactive activities, students tend to prefer certain types based on personal preferences or their perceived effectiveness for skill development. Flashcards and word searches dominate usage patterns. These activities emphasize vocabulary reinforcement, suggesting that students perceive vocabulary development as central to reading comprehension. The limited use of puzzles and spelling activities may indicate either unfamiliarity or perceived lower relevance. The majority of students (80%) reported using Wordwall for less than 10 minutes per session. This suggests that students tend to engage in brief, focused practice, which may limit the depth of engagement with the platform. Only 4 students (20%) used the platform for 10-20 minutes, highlighting a preference for shorter sessions that allow for more targeted learning. While this can be effective for reinforcing skills, longer sessions may be necessary to promote more comprehensive learning (Hakim et al., 2023).

Figure 2. Motivation for Using Wordwall for Basic Reading Learning



It can be seen that Figure 2 asked about the effectiveness of Wordwall for basic reading learning, 80% of students found the platform to be effective, while 4% felt it was occasionally helpful, and 20% were neutral. This positive feedback suggests that Wordwall is perceived as an engaging and effective tool for improving basic reading skills, aligning with research showing the effectiveness of interactive platforms in foundational learning (Fitria et al., 2025). Motivational factors were a significant driver in students' use of Wordwall. The strong responses toward enjoyment and faster learning reflect intrinsic motivation supported by autonomy and competence. Students feel capable when receiving immediate feedback, which strengthens competence satisfaction. However, relatedness appears underdeveloped. Wordwall's structure may require stronger collaborative features or teacher mediation to fully satisfy social learning needs.

The most common motivating factors included: The platform being engaging and enjoyable (70%), Helping students learn faster (70%), The ease of use (45%) and The ability to provide immediate feedback (45%) These motivational factors align with the tenets of Self-Determination Theory (SDT), developed by (Deci & Ryan, 2000). SDT emphasizes that motivation is driven by three basic psychological needs: autonomy, competence, and

relatedness: Autonomy: The students' feedback that Wordwall is fun, varied, and matches their learning style suggests they feel a sense of control and choice in their learning. This satisfies the need for autonomy. Competence: The motivations related to faster learning, immediate feedback, and reading skill improvement indicate that students feel competent and effective when using Wordwall (Ghina et al., 2022). This supports their sense of competence. Relatedness: While relatedness (the need to feel connected or supported) was less explicitly cited, the immediate feedback and variety of activities may still help foster engagement and a supportive learning environment. However, a lack of peer interaction or teacher scaffolding may mean this need is not fully met, which could limit deep, intrinsic motivation (Deci & Ryan, 2000).

Despite the positive motivational factors, students reported several barriers to using Wordwall: Technical issues (e.g., slow loading times) were the most common barrier, reported by 65% of students. Limited internet access (50%) and device access (10%) were also significant obstacles, highlighting first-order barriers (e.g., infrastructure issues). Other barriers included inexperience or unfamiliarity with the platform (2%) and a lack of teacher support (5%), which reflect second-order barriers (e.g., user familiarity, teacher engagement). These findings suggest that while students have the digital competence to use the platform, external factors such as internet connectivity, device availability, and a lack of adequate support structures are hindering full engagement with the platform. Previous research in vocational education (Bennett et al., 2012) also highlights the need to address these first-order and second-order barriers to ensure the successful integration of technology in learning environments.

Students also provided several suggestions to improve Wordwall such as More interactive and varied activities (70%), Improved mobile access (40%), Better teacher support (30%). These suggestions highlight the need for expanded content and enhanced accessibility, both of which would likely increase student engagement. Additionally, providing teacher scaffolding and support would help maximize the platform's effectiveness by addressing the technical and usability issues students face (Rahman et al., 2023).

Suggestions for improvement and integration emerged from the responses. The most common suggestion, highlighted by six respondents, was to incorporate more diverse and interactive activities on the platform. This recommendation reflects the need for varied learning methods to enhance student engagement. This aligns with a study that Effective use of digital platforms requires teachers to design appropriate tasks, integrate with curriculum and manage classroom dynamics (Sousa et al., 2023). Additionally, half of the respondents (10 out of 20) expressed the belief that integrating Wordwall into the curriculum would significantly improve their learning experience, demonstrating strong interest in incorporating digital tools into regular educational practices. Finally, most students (13 out of 20) would recommend Wordwall to their peers for learning basic reading, which indicates a positive overall perception of the platform's effectiveness and utility in enhancing learning (Suryani & Rifa'at, 2019).

The results of this study provide important insights into the use of Wordwall for basic reading learning in vocational education, particularly through the lens of Self-Determination Theory (SDT) and the Technology Acceptance Model (TAM). The findings indicate that Wordwall satisfies key motivational needs related to autonomy and competence, making it an effective tool for engaging students in reading practice. However, the limited mention of relatedness suggests that the platform may benefit from incorporating more social or collaborative features to further enhance student engagement and motivation.

From a TAM perspective, students' positive perceptions of Wordwall—particularly its ease of use and perceived usefulness—support the likelihood of its adoption in vocational education settings. The alignment of Wordwall with practical learning goals in vocational education further enhances its appeal, as digital tools in these contexts are often seen as more relevant and engaging than traditional methods (Amalia et al., 2021).

However, the technical barriers and limited access to devices highlighted in the results point to the need for improved infrastructure and support. First-order barriers, such as internet connectivity and device availability, must be addressed to ensure that Wordwall can be effectively used by all students (Hulu et al., 2026). Furthermore, second-order barriers related to user comfort and familiarity with the platform suggest that more training and guidance from educators could help students maximize their use of the platform. The findings of this study reveal that despite the positive perceptions of Wordwall, several significant barriers hinder its optimal implementation in vocational reading instruction. These barriers can be categorized into first-order and second-order barriers, following the framework commonly used in technology integration research (Gianssi et al., 2024).

First-order barriers refer to external or infrastructural constraints that limit access to and effective use of educational technology. In this study, unstable internet connectivity was reported by 50% of students, while 65% experienced slow loading times when accessing the platform. Additionally, 10% of students reported limited access to personal digital devices. These findings indicate that technological infrastructure remains a primary obstacle in maximizing the benefits of gamified learning platforms. Reliable internet access is particularly crucial for interactive web-based applications such as Wordwall, which require stable bandwidth to function efficiently. When students encounter technical interruptions, their engagement may decline, leading to frustration and reduced motivation. Research on digital learning environments consistently highlights that inadequate infrastructure significantly reduces the effectiveness of technology-enhanced learning initiatives (Sousa et al., 2023); OECD, 2023). In vocational contexts, where students may rely heavily on shared or mobile devices, these infrastructural limitations can further widen learning gaps.

Second-order barriers involve internal or pedagogical factors related to users' beliefs, competencies, and instructional practices. The present findings show that limited teacher scaffolding and students' inexperience with certain platform features also restrict effective implementation. Although Wordwall is generally perceived as user-friendly, insufficient instructional guidance may prevent students from fully exploring its advanced features or applying it strategically to improve reading comprehension. According to Self-Determination Theory, teacher support plays a critical role in fostering competence and relatedness (Deci & Ryan, 2000). Without adequate scaffolding, students may not feel sufficiently guided to maximize their learning experience. Furthermore, studies on digital pedagogy emphasize that teachers' instructional design and mediation significantly influence the success of gamification-based learning (Dewi et al., 2024); Redecker, 2022). When teachers integrate digital tools without structured guidance or alignment with learning

objectives, students may perceive them as supplementary rather than integral to academic development.

These findings align with previous research emphasizing that successful gamification integration depends not only on technological availability but also on pedagogical readiness and institutional support (Sousa et al., 2023). Addressing both first-order and second-order barriers is therefore essential to ensure that platforms such as Wordwall can function effectively in vocational education settings. Institutional investment in infrastructure, combined with professional development programs for educators, may significantly enhance the sustainability and impact of technology-enhanced reading instruction.

To improve the effectiveness of Wordwall in vocational education, the following recommendations are made based on the findings such as provide more variety and interactivity in activities to foster student engagement and ensure that the platform aligns with different learning styles (supports autonomy). Improve mobile and offline access to ensure students can use Wordwall anytime and anywhere, increasing flexibility and participation (addressing technical barriers). Enhance teacher support by providing clear guidance and scaffolding to help students maximize their use of Wordwall (addressing relatedness). Ensure reliable infrastructure by improving internet access and device availability, which will help minimize the first-order barriers to use (Marleni & Diana, 2024). By addressing these factors, Wordwall's potential as an effective tool for basic reading learning can be fully realized, improving student engagement and learning outcomes in vocational education. The findings of this study are consistent with previous research (Indrawan et al., 2025). This indicates that habitual reading practices alone may not guarantee improved comprehension outcomes. Instead, supporting factors such as vocabulary development, structured guidance, and motivational reinforcement appear to play a more crucial role. In this regard, Wordwall's interactive and feedback-oriented features may serve as an effective complementary strategy to enhance reading comprehension beyond traditional reading habits.

Based on the findings of this study, several instructional implications can be proposed to optimize the integration of Wordwall in vocational reading instruction. First, Wordwall should not be treated merely as an occasional supplementary tool but should be systematically integrated into lesson planning and curriculum design. Research on technology-enhanced learning emphasizes that digital platforms are most effective when aligned with instructional objectives and embedded within structured pedagogical frameworks rather than used sporadically (Sousa et al., 2023). Systematic integration ensures that interactive features such as quizzes, flashcards, and word-search activities directly support vocabulary development and reading comprehension skills, which are foundational in vocational education contexts.

Second, incorporating collaborative Wordwall activities may enhance students' sense of relatedness, one of the three basic psychological needs identified in Self-Determination Theory (Deci & Ryan, 2000). Activities such as group-based competitions, peer discussion following quizzes, or cooperative problem-solving tasks can strengthen social interaction and classroom engagement. Gamification research suggests that interactive and socially mediated digital activities significantly increase motivation and sustained engagement (Dewi et al., 2024). By integrating collaborative elements, Wordwall can move beyond individual practice toward a more socially enriched learning experience.

Third, institutional support is essential to ensure effective and equitable implementation. The findings revealed that technical issues and unstable internet connectivity remain significant barriers. According to (Sousa et al., 2023), first-order barriers such as infrastructure limitations can substantially hinder the successful adoption of educational technologies. Therefore, investment in reliable internet access, adequate digital devices, and technical support systems is crucial for maximizing the pedagogical benefits of Wordwall.

Finally, the implementation of blended learning strategies is recommended to enhance accessibility and flexibility. Blended learning environments allow students to engage with digital platforms both inside and outside the classroom, promoting autonomous learning while maintaining teacher guidance. From the perspective of the Technology Acceptance Model, students' continued use of educational technology is strongly influenced by perceived usefulness and ease of use (Venkatesh & Bala, 2008). When Wordwall is integrated into a structured blended framework, students are more likely to perceive it as both beneficial and manageable, thereby increasing sustained engagement. Collectively, these implications demonstrate that the effectiveness of Wordwall depends not only on its technological affordances but also on pedagogical alignment, motivational support, and institutional readiness.

4. CONCLUSION

This study demonstrates that Wordwall is a useful and motivating platform for supporting basic reading learning among vocational students. Its interactive features effectively enhance students' engagement by fostering autonomy and competence, which are key elements of learning motivation. However, technical constraints, limited device access, and insufficient teacher support remain significant barriers to its optimal use. Addressing these challenges through improved infrastructure, better instructional guidance, and more varied activities will allow Wordwall to be more effectively integrated into vocational reading instruction. Overall, when supported by adequate resources and pedagogical strategies, Wordwall has strong potential to enhance reading outcomes in vocational education contexts.

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