ENGAGING INDONESIAN ELEMENTARY SCHOOL STUDENTS IN READING ACTIVITIES THROUGH WEB-BASED EDUCATIONAL GAMES

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ARTICLE INFO	ABSTRACT
	Reading interest among elementary school students is a critical factor in fostering literacy and academic success. However, traditional methods often struggle to capture student's attention in increasingly digital learning environments. This study examines the impact of Wordwall, an online educational game, on increasing Indonesian elementary school students' interest in reading. Using a qualitative case study approach, the research investigates how interactive digital technologies, such as Wordwall, affect student motivation and vocabulary acquisition. Data were collected through classroom observations, interviews, and student feedback, focusing on a group of 5th-grade students. The results show that Wordwall transformed standard reading sessions into engaging, game-like experiences, making learning enjoyable and effective. The platform's use of immediate feedback and visual aids helped improve student enthusiasm and vocabulary retention. This study highlights the potential of web-based educational games to create dynamic learning environments, improve student engagement, and address common challenges in Indonesian education, such as overcrowded classrooms and limited resources. *This is an open access article under the CC BY-SA license.*

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INTRODUCTION

Reading serves as a cornerstone of education, essential for the cognitive and social development of children. Early reading habits, as emphasized by (Snow et al., 2022), play a pivotal role not only in enhancing literacy and comprehension but also in fostering a lifelong passion for learning. Strong reading skills are closely tied to improved academic performance and critical thinking abilities, which are fundamental for thriving in the 21st century. However, in the digital era, where interactive and visual content dominates children's

attention, nurturing a reading habit has become increasingly challenging. This difficulty is particularly evident in Indonesia, where despite ongoing educational initiatives, elementary students often struggle to engage in reading activities (Global & Report, 2015). A significant contributing factor is the limited access to age-appropriate and engaging reading materials, particularly in rural and under-resourced regions (Abidin, 2021).

To address these issues, the Indonesian government and educational institutions have implemented programs to promote literacy, yet infrastructural and logistical barriers persist. Integrating digital tools into the education system has emerged as a promising solution for enhancing reading engagement. (Kristiawan et al., 2022) highlight that today's students, as digital natives, are naturally inclined toward using digital tools. By strategically incorporating technology, including social media and educational games, educators can effectively bolster vocabulary building and literacy. Among these tools, web-based educational platforms like Wordwall have gained recognition for creating interactive and engaging learning environments.

Wordwall offers a gamified approach to learning, focusing on key aspects of literacy such as vocabulary development, comprehension, and critical thinking. According to (Li & Chu, 2018), web-based educational games promote personalized learning experiences by providing immediate feedback, allowing students to progress at their own pace. This is particularly valuable in overcrowded Indonesian classrooms, where individualized teacher attention is often limited. Interactive games help maintain students' interest and motivation, which are crucial for long-term learning. Wordwall is an interactive tool in the classroom designed to support the learning of listening, speaking, reading, and writing. By utilizing the Wordwall method, students can enhance their understanding of English vocabulary without relying on a dictionary or teacher-provided definitions, encouraging them to actively use the language (Zaen & Fauzi Miftakh, 2022).

In Indonesia's diverse educational landscape, characterized by disparities in resources and student backgrounds, web-based educational games offer a scalable solution to improve literacy. Observations and qualitative research reveal that such tools can significantly enhance reading skills, particularly in settings with limited traditional resources. According to (Afriani, 2021), Technological advancements significantly influence all areas of life, including education. Consequently, transitioning from a non-technological to a technological way of living necessitates a framework or bridge to ensure smooth adaptation. Furthermore, these games integrate gamification elements such as points, badges, and leaderboards to foster motivation and engagement (Hamari et al., 2014). This interactive approach helps maintain students' focus and encourages repeated practice, crucial for mastering foundational skills.

Mobile Assisted Language Learning (MALL) extends the benefits of digital tools by enabling language acquisition through mobile. According to (Hashim et al., 2017) Mobile-Assisted Language Learning (MALL) is designed to address students' learning needs and help them meet the objectives of their English language courses. In recent years, the widespread use of mobile devices as educational tools has prompted a growing number of educational institutions to explore how students can utilize these readily available devices both inside and outside the classroom. For Indonesian students, who often have limited exposure to diverse reading materials, these tools provide an opportunity to integrate learning seamlessly into their daily routines. Studies consistently affirm the effectiveness of digital tools in improving literacy and motivation. (Sulistyanto et al., 2023) demonstrated that Indonesian students using educational games achieved better reading comprehension and engagement than those relying on traditional methods. Platforms like Wordwall present contextualized and interactive content, enabling students to better understand and retain information.

Through a combination of innovative digital tools, strategic gamification, and tailored instruction, Indonesia can address the persistent challenges in literacy education. By leveraging platforms like Wordwall and Mobile Assisted Language Learning, researchers are interested in exploring whether using a game website like Wordwall can increase the reading motivation of 5th grade students in Indonesia. Therefore, this study attempts to answer the following question:

1. How do Indonesian elementary school students express their interest when participating in reading activities through a web-based educational game?
2. What is the student's perspective on the Wordwall as a tool for their learning experience that has been carried out?

RESEARCH METHOD

The researcher utilized a case study research design, a qualitative method that provides in-depth insights into the perceptions and experiences of individuals or groups within specific contexts (Hamidah et al., 2023). This study focused on 18 fifth-grade students, aged 10-11, from SDN 1 Pakistaji in Banyuwangi, Indonesia, and examined how they interacted with Wordwall, an educational gamification tool, during English lessons. The students attended English classes twice a week, each lasting 90 minutes. Through informal interviews and classroom observations, the researcher found that students primarily relied on textbooks and dictionaries, which did not effectively engage them or motivate them to learn English. This observation led to the study's qualitative goal: to explore how Wordwall could enhance vocabulary acquisition and boost students' motivation to learn English. By adopting a qualitative case study approach, the researcher aimed to gain rich insights into students' perceptions of using Wordwall in their learning activities. The study provided a detailed

examination of how the integration of this gamification tool influenced students' engagement and attitudes toward learning English.

The researchers conducted a five-week study with ten sessions to investigate the impact of Wordwall, an educational gamification tool, on vocabulary learning and student engagement in Indonesian elementary schools. In the first week, they gathered student feedback through surveys and interviews to understand initial perceptions of gamified learning. Over the next three weeks, Wordwall games, including Word Search, Match Up, Unjumble, Complete the Sentence, and Quiz Game, were integrated into lessons. These games, accessed via laptops and phones, promoted collaborative learning and vocabulary building in a group setting. The final week focused on consolidating these skills through a 15–20-minute vocabulary practice session using Wordwall.net.

The study used multiple data collection methods, such as group interviews, reflective journals, classroom observations, and performance tracking. Reflective journals, as suggested by (Agustin, 2019) is an effective tool for self-reflection, not only enabling teachers to document and transform their reflections into a concrete and measurable format but also allowed students to document their experiences, challenges, and progress, offering insights into their learning journeys. Classroom observations recorded engagement levels, group dynamics, and motivation shifts, while systematic performance tracking assessed students' response accuracy and speed during Wordwall activities. By cross-referencing data from these sources, the researchers ensured a comprehensive understanding of the impact of Wordwall on learning outcomes and motivation.

The researchers also employed multimodal transcription to analyze classroom interactions, aligning with (Zhang, 2024) framework for capturing audiovisual records. This approach provided a nuanced view of student behavior, engagement, and the effectiveness of Wordwall in fostering learning. To enhance the credibility of their findings, the researchers used triangulation (Carter et al., 2014), combining data from interviews, journals, and observations.

RESULT AND DISCUSSION

In line with the research question, will be divided into two sections: Students express their interest when participating in a web-based educational game, and students' perspective on the Wordwall as a tool for their learning experience.

Students express their interest when participating in a web-based educational game.

The use of web-based educational games, such as Wordwall, is gaining traction as an effective tool in modern classrooms, particularly in language learning. When students are introduced to such tools, their initial responses can provide valuable insights into the impact these games

have on their engagement, motivation, and learning outcomes. Based on students' reflections during their first experience with Wordwall, it becomes clear that educational games have a significant role in enhancing their interest in learning English.

In one reflective journal entry, a student shared,

> *"I like to play and learn like this. Playing Wordwall games is more interesting to do in learning English because besides learning new vocabulary, we also find it easier to remember the words with the existing pictures."*

This statement reflects how the interactive nature of Wordwall engages students in a way that traditional classroom activities might not. The student highlights two key aspects: the ability to learn new vocabulary and the visual aid provided by the accompanying pictures, both of which aid in memory retention (See Figure 1 below). This is a crucial insight, as vocabulary acquisition is fundamental in language learning, and the student's enjoyment of the process suggests that Wordwall makes learning more accessible and less of a chore.
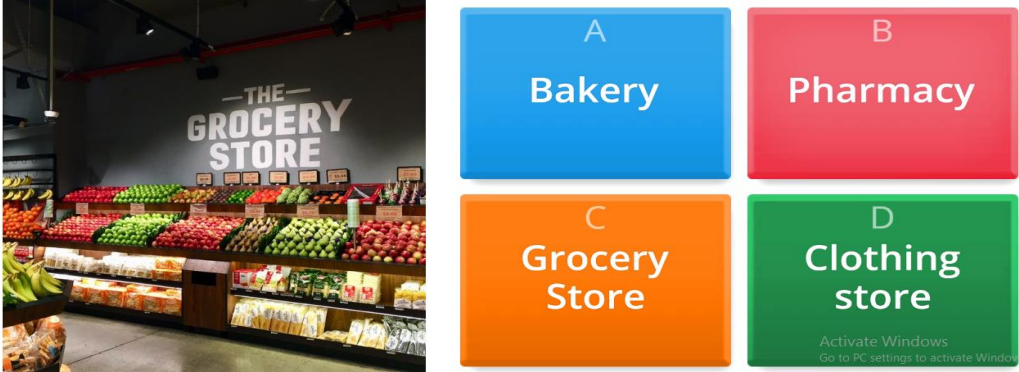

Figure 1

The picture in the task assists students in understanding the words. For example, students can relate the image to the question and identify the correct answer ("Grocery Store") by matching the description in the text with the visual clue. This combination of text, images, and interactive questions helps reinforce vocabulary comprehension, making the learning process more intuitive and memorable. The integration of images allows students to connect words with real-life scenarios, which is particularly effective for younger learners or those who benefit from visual learning.

This issue is also supported by another student statement:

"Wordwall is suitable for use in learning English because the Wordwall game is very fun and makes you more enthusiastic about learning English because the game is not boring."

This feedback underscores the role of fun and enthusiasm in the learning process. When students describe an educational tool as "fun" and "not boring," it signifies a shift from passive learning to active engagement. (See Figure 2 below)
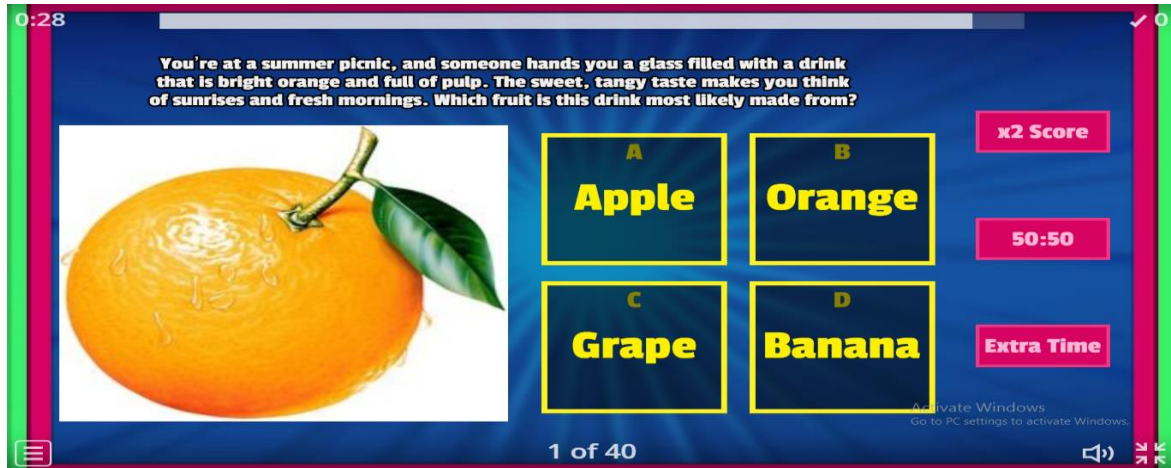
The student also connects this enthusiasm directly to improved learning outcomes, noting how the enjoyable nature of the game fosters a greater willingness to participate in the learning process. These reflections illustrate a web-based educational games like Wordwall make learning more dynamic and interactive. Games offer immediate feedback, which helps students track their progress, while also incorporating visual and auditory elements that can cater to different learning styles. For visual learners, for instance, the images associated with vocabulary words in Wordwall can be especially beneficial in solidifying understanding.

Furthermore, web-based games foster a sense of competition and accomplishment, which are powerful motivators for young learners. In Wordwall, for example, students may compete to answer questions quickly and accurately, which encourages them to stay focused and engaged. The gamification of learning turns otherwise mundane tasks—like memorizing vocabulary—into challenges that students want to overcome. This competitiveness increases student participation and enthusiasm. (See Figure 3 below) These positive student responses indicate that Wordwall not only aids in improving English language skills but also nurtures a more positive attitude toward learning.

Another student stated that:

I like learning using Wordwall, because besides we know we are wrong we can repeat until we are right and when we finish the name of the fastest group can be listed in the Wordwall game so we can see who is faster and has the most correct words.

Leaderboard

Rank	Name	Score	Time
1st	Cacaa	24	2:58
2nd	Ibrahimmovic	22	3:04
3rd	Ayun	22	5:43
4th	Indika	21	3:37
5th	Rara	21	6:32

Figure 3

Students' perspective on the Wordwall as a tool for their learning experience.
The students worked on 5 Wordwall games to complete the project. This is their perspective on Wordwall through their interview.
I: How did you react after playing Wordwall to learn English?
S1: It's fun, Sis! I like learning English now.
I: Wow, why do you like it?
S2: Because learning with Wordwall is like playing a game. Sometimes I forget that I'm studying, but as a result, I learn new words.
I: Is there anything that you find difficult or easy when playing Wordwall?
S3: The difficult part is when all the words are new, so you have to think. But if you already know the meaning, playing becomes faster and easier.
(Group Interview #1 00:44.54)

This interview extract shows how Wordwall positively impacts students' attitudes toward learning English by blending education with fun. **S1** reveals that learning through Wordwall makes English enjoyable, changing their perspective on the subject. **S2** supports this by comparing Wordwall to playing a game, noting that its engaging format helps them forget they're studying while also helping them learn new words effortlessly. When the interviewer asks about challenges, **S3** highlights that encountering unfamiliar words can be

tough since it requires extra thought. However, once they understand the words, the game becomes quicker and simpler to play. The responses suggest that Wordwall's game-like approach makes learning English more accessible and enjoyable for students while providing just enough challenge to support vocabulary retention.

I: Do you feel better at English after playing Wordwall?
S1: Yes, Sis. Now it's easier to memorize words.
S2: I know more new words. Now I can understand the meaning. Like sweet, bitter, and salt in English.
I: Do you want to continue learning English this way?
S3: Yes! Because it's fun and makes you excited to learn.
S4: I want to too. So if there is an English question, I'm not afraid of being wrong.
S1: Yes, because you can immediately know whether the answer is right or wrong. Then if you're wrong, you can try again until you get it right.
(Group Interview #2 00:39.74)

This interview extract shows how using Wordwall boosts students' confidence and enthusiasm in learning English vocabulary. **S1** shares that memorizing English words has become easier through Wordwall, highlighting the effectiveness of this method. **S2** adds that they have expanded their vocabulary, now understanding specific words like "sweet," "bitter," and "salt," which indicates the tangible progress Wordwall provides in vocabulary building. When asked if they would like to continue learning this way, **S3** eagerly agrees, mentioning that Wordwall makes learning enjoyable and motivating. **S4** echoes this enthusiasm, saying that learning with Wordwall reduces their fear of making mistakes in English, as the game allows immediate feedback. **S1** reinforces this point, appreciating the instant correction feature, which allows for repeated practice until they answer correctly. Overall, this exchange suggests that Wordwall makes English learning both effective and fun, helping students overcome their fears, build confidence, and stay engaged with the learning process.

I: Hi! You just played a Wordwall quiz about food in English, right?
S1: Yes, Sis. It was really fun!
I: What did you learn about food in the Wordwall game?
S2: I learned the names of food in English, like "apel" is apple, "roti" is bread, and "ayam" is chicken. So I learned more new words.
I: How does it feel to learn English about food by playing Wordwall?
S3: It's easier and more fun, Sis. If I just read a book or memorize it, I often forget. But if I play a game, I remember it quickly because I also see the pictures.

I: In your opinion, is learning with Wordwall helpful or not?

S4: It helps, Sis. Because every time I make a mistake, I can try again, so I'm not afraid of making a mistake. Over time, I can memorize it myself.

I: Do you feel more confident when you have to say the names of food in English?

S5: <u>Yes, now I am more confident when I have to speak or answer questions. Because I've pretty much memorized the names of the foods.</u>

I: Do you want to continue learning English with Wordwall?

S1: Absolutely, Sis! I'm more enthusiastic about learning when I use Wordwall.

I: Thank you for sharing your experience learning with Wordwall!

S2: You're welcome, Sis!

(Group Interview #3 01:23.95)

This interview extract shows how Wordwall effectively enhances students' enthusiasm and confidence in learning English vocabulary about food. **S1** starts by expressing how much fun they had with the quiz, setting a positive tone for engagingly learning English. When asked about what they learned, **S2** explains that they gained new vocabulary, identifying English words for foods like "apple," "bread," and "chicken." This suggests that Wordwall is an effective tool for building vocabulary on a specific topic. **S3** elaborates that learning through a game is more memorable than traditional methods, such as reading or memorization. The interactive format, especially the use of images, helps them retain words more quickly.

This is echoed by **S4**, who feels Wordwall's immediate feedback allows them to practice repeatedly without the fear of making mistakes, building natural confidence over time. **S5** shares that they now feel more confident speaking or answering questions about food in English, as Wordwall has helped them memorize these terms comfortably. Finally, **S1** reinforces the enthusiasm for continuing to learn English this way, emphasizing that Wordwall makes learning more enjoyable. The students' responses indicate that Wordwall's game-based format not only makes learning enjoyable but also improves memory retention, provides supportive error correction, and boosts confidence in using English vocabulary.

(Figure 4)

(Figure 5)

Figure 4 appears to show a group of students closely gathered around a smartphone. The scene looks lively, with everyone focused on the device, suggesting that they might be engaging with a Wordwall game. The students' expressions and body language indicate excitement and concentration, which could mean they are sharing an educational or entertaining activity, like a quiz or game, that has caught their collective interest. Figure 5 likely shows students using the Wordwall platform in a classroom setting. The students are gathered around a device, such as a smartphone or tablet, suggesting they might be playing a Wordwall quiz or interactive game together. Their focus and engagement indicate they are likely involved in a group learning activity. Wordwall's format, which often includes quizzes, matching games, and other interactive content, aligns well with this collaborative scene, as it encourages group participation and discussion. This setup supports a fun, interactive way of learning, where students can test their knowledge, possibly on topics like vocabulary or grammar in a gamified environment.

Conclusion

According to this study, Wordwall, an online learning game, can help Indonesian primary school students become more proficient readers and increase their vocabulary. By gamifying English training, Wordwall has transformed traditional learning into a fun and interesting experience. Students demonstrated increased confidence and excitement as well as more active participation in their learning activities. Wordwall's gamified elements, visual aids, and immediate feedback enhanced vocabulary retention and comprehension while lowering the fear of making mistakes. The findings demonstrate the potential use of digital technologies in addressing problems in Indonesian classrooms, including overcrowding and limited access to engaging educational resources for gamification of wordwall website.

REFERENCE
Abidin, Z. (2021). Manajemen Peningkatan Mutu PendidikanKarakter Berbasis Agama,

Budaya, DanSosiologi. *Al-Fikar: Jurnal For Islamic Studies*, *4*(1), 181–202. https://al-afkar.com/index.php/Afkar_Journal/issue/view/4https://al-fkar.com/index.php/Afkar_Journal/issue/view/4

Afriani, I. H. (2021). The Role of Education and Internet User for Encourage Indonesian Economic Growth in The Digital Era. *Splash Magz*, *August*, 11–16. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3890168

Agustin, A. (2019). Reflective Journal as a Self-Directed and Sustainable Professional Development Tool for Pre-Service Teachers: A Case Study in English Language Education Study Program. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, *9*(2), 103–110. https://doi.org/10.24246/j.js.2019.v9.i2.p103-110

Carter, N., Bryant-Lukosius, D., Dicenso, A., Blythe, J., & Neville, A. J. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum*, *41*(5), 545–547. https://doi.org/10.1188/14.ONF.545-547

Global, A., & Report, M. (2015). Education for All Global Monitoring Report. *Encyclopedia of Quality of Life and Well-Being Research*, *September*, 1811–1814. https://doi.org/10.1007/978-94-007-0753-5_3082

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? - A literature review of empirical studies on gamification. *Proceedings of the Annual Hawaii International Conference on System Sciences*, 3025–3034. https://doi.org/10.1109/HICSS.2014.377

Hamidah, F., Setiawan, F., & Mirnawati, L. B. (2023). Strenghthening Digital Literacy of Elementary School Students Through Utilization of Wordwall as Game-Based Learning Interactive Media. *Jurnal Ilmiah Sekolah Dasar*, *7*(2), 215–223. https://doi.org/10.23887/jisd.v7i2.55807

Hashim, H., Md. Yunus, M., Amin Embi, M., & Mohamed Ozir, N. A. (2017). Mobile-assisted Language Learning (MALL) for ESL Learners: A Review of Affordances and Constraints. *Sains Humanika*, *9*(1-5), 45–50. https://doi.org/10.11113/sh.v9n1-5.1175

Kristiawan, D., Ferdiansyah, S., & Picard, M. (2022). Promoting Vocabulary Building, Learning Motivation, and Cultural Identity Representation through Digital Storytelling for Young Indonesian Learners of English as a Foreign Language. *Iranian Journal of Language Teaching Research*, *10*(1), 19–36. https://doi.org/10.30466/ijltr.2022.121120

Li, X., & Chu, S. K. W. (2018). Using design-based research methodology to develop a pedagogy for teaching and learning of Chinese writing with wiki among Chinese upper primary school students. *Computers and Education*, *126*, 359–375. https://doi.org/10.1016/j.compedu.2018.06.009

Snow, C. E., Burns, S. M., & Griffin, P. (2022). Preventing reading difficulties in young children: Committee on the Prevention of Reading Difficulties in Young Children. In *National Research Council* (Vol. 25, Issue 1). www.nap.edu/readingroom/books/prdyc/

Sulistyanto, H., Djumadi, D., Sumardjoko, B., Haq, M. I., Zakaria, G. A. N., Narimo, S., Astuti, D., Adhantoro, M. S., Setyabudi, D. P., Sidiq, Y., & Ishartono, N. (2023). Impact of Adaptive Educational Game Applications on Improving Student Learning: Efforts to Introduce Nusantara Culture in Indonesia. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, *5*(3), 249–261. https://doi.org/10.23917/ijolae.v5i3.23004

Zaen, F. N. W., & Fauzi Miftakh, I. P. (2022). The Use of Wordwall Media to Enrich Students Vocabulary Size in EFL Class. *Jurnal Ilmiah Wahana Pendidikan*, 8(19), 127–136.

Zhang, J. (2024). *Applying Relevance Theory and Multimodal Transcription to the Interlingual Subtitling of Politeness and Humour in the English-Chinese Language Pair Hotel Babylon as a Case Study Applying Relevance Theory and Multimodal Transcription to the Interlingual Su.*