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Exploring Learners' Needs in Basic Reading Context: A Game-Based Learning Approach with Wordwall

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Abstract

This study explores learners' needs in basic reading contexts and examines how a game-based learning approach using the Wordwall platform can address these needs. A needs analysis was conducted with vocational students to identify gaps between their current reading abilities and the competencies expected in English as a Foreign Language (EFL) instruction. The findings indicate that while many students engage in reading regularly, their duration remains limited, with 52% reading less than 30 minutes per day. Vocabulary emerged as the most significant challenge (88%), followed by grammar (59%), complex sentence structures (48%), and cultural references (22%). Motivation also posed a barrier, with only 15% dedicating consistent time to reading. Learners expressed a preference for short, visually supported texts, interactive tasks, and immediate feedback. Game-based features such as points, levels, and progress tracking were highly valued, while leaderboards and competition were less central. The results suggest that instructional design using Wordwall should emphasize vocabulary and grammar enrichment, short yet substantive reading texts, and interactive activities that provide instant feedback. These findings provide insights into aligning pedagogical design with learners' preferences, thereby enhancing the effectiveness of game-based approaches in improving basic reading comprehension.

Keywords: *needs analysis, game-based learning, Wordwall, vocabulary, reading comprehension*

1. INTRODUCTION

Reading is a fundamental skill in language learning that enables learners to access information, develop critical thinking, and expand their academic as well as professional opportunities. In the context of English as a Foreign Language (EFL), reading comprehension plays a crucial role in equipping students with the ability to understand texts, interpret meanings, and apply knowledge in real-life situations. However, research and reports indicate that reading remains one of the least developed skills among students in Indonesia. UNESCO data (2023) highlights that the reading interest index in Indonesia is still extremely low, with only a small proportion of learners engaging in extensive reading activities. Similarly, surveys conducted by Kominfo and Katadata (2023) reveal that students spend significantly more time on social media platforms such as TikTok, Instagram, and YouTube than on academic reading materials such as books, e-journals, or scholarly articles.

This situation poses a significant challenge for educators, particularly in higher education, where students are expected to comprehend academic texts and apply them in professional and global contexts. Students in vocational education often find English texts even more challenging due to limited vocabulary, grammatical difficulties, and lack of motivation. Observations show that many learners are reluctant to engage with long or complex reading passages, resulting in a lack of reading fluency and comprehension. As digital natives, Generation Z students demonstrate a strong preference for technology-based, interactive, and visually stimulating activities over conventional classroom methods. This phenomenon underscores the need for innovative teaching strategies that align with learners' preferences while addressing their weaknesses in reading comprehension.

One promising approach is **Game-Based Learning (GBL)**, which integrates the elements of games—such as challenges, rewards, and interactivity—into the learning process. Unlike traditional methods, GBL can increase learner engagement, motivation, and active participation by transforming learning tasks into enjoyable and meaningful experiences. Among various digital tools available for GBL, **Wordwall** has gained popularity due to its

accessibility, user-friendly features, and wide range of customizable templates. Wordwall enables instructors to design interactive tasks such as quizzes, matching activities, crossword puzzles, and drag-and-drop exercises, making it a flexible platform for teaching reading in an engaging way.

Before developing effective instructional materials, however, it is essential to conduct a **needs analysis** to understand students' actual difficulties, preferences, and learning goals. Needs analysis helps identify learners' lacks (what they cannot yet do), wants (what they wish to learn), and necessities (what they need to achieve in academic or professional contexts). This study therefore focuses on **exploring learners' needs in basic reading context** with particular attention to how Wordwall and GBL approaches can be integrated to meet those needs.

By conducting a comprehensive needs analysis, this research aims to provide valuable insights into the design of reading materials that are not only pedagogically sound but also technologically relevant for today's learners. Ultimately, the findings are expected to contribute to the development of interactive and student-centered reading instruction that fosters motivation, enhances vocabulary acquisition, and strengthens overall comprehension skills.

2. REVIEW OF LITERATURE

2.1 Reading

Gough (1972) explained that reading is an interaction between bottom-up (linguistic) and top-down (contextual) processes. Skilled readers use both strategies flexibly depending on the type of text and the purpose of reading. Reading is viewed as a linear decoding process that progresses from the smallest units (letters, words) to the overall meaning of the text. Readers rely on linguistic competence—phonology, vocabulary, and grammar—to comprehend texts. This explanation emphasizes the importance of vocabulary and grammar mastery in reading comprehension.

Reading is not merely decoding; it is also a process of predicting meaning based on the reader's context and prior knowledge. Readers employ schemata (knowledge frameworks) to interpret texts (Smith, 1971). This theory supports a meaning-based approach to reading and highlights the importance of contextual understanding.

Reading, therefore, is a linguistic act in which individuals engage with written material by predicting meaning and constructing comprehension. It involves their expectations toward the text and the alignment between content and those expectations. Reading enables individuals to achieve their personal goals and needs, while also providing enjoyment and satisfaction (Goodman, 1967).

Furthermore, Browne (1998) defines reading as encompassing both personal reading—fiction or nonfiction aligned with individual interests—and critical, analytical reading, which enriches experiences, opens access to diverse ideas, explores alternative perspectives, and cultivates evaluative and decision-making skills. Reading also helps individuals acquire new insights and reflect on their own values as well as those of others.

2.2 Game-Based Learning

Games can be understood as structured systems in which participants engage in competitive situations specifically designed, governed by a set of rules, and producing measurable outcomes (Salen & Zimmerman, 2004). This definition forms the basis for understanding the nature of games in educational contexts. Within education, two main approaches incorporate game elements:

1. **Gamification of Learning**
   This approach applies game elements—such as point systems, levels, or rewards—into conventional learning activities. For instance, awarding stars or badges for completing routine mathematics exercises. Its primary aim is to increase learners' extrinsic motivation (Can & Cagiltay, 2006).
2. **Game-Based Learning**
   Unlike gamification, this approach fundamentally transforms learning activities by integrating the actual mechanics of games, including structured challenges and specially designed rules. While it may still include points or rewards, its central focus is to create intrinsically enjoyable learning experiences.

Recent developments in education show a growing application of game principles (educational gamification) as an innovative strategy to enhance learner engagement and motivation. Within the domain of educational technology, digital educational games encompass both games specifically designed for instructional purposes and commercial games that carry potential educational value. The latter are often referred to as digital games with educational content.

2.3 Wordwall

Wordwall is a browser-based digital platform that functions as a multifunctional learning resource, an interactive instructional medium, and an engaging assessment tool for learners (Ma'rifah & Mawardi, 2022). Conceptually, Wordwall can be understood as a vocabulary-based instructional medium that is systematically arranged, visually displayed in large fonts, and traditionally posted on classroom walls (Hartatiningsih, 2022). According to Lesatari (2021), the platform serves three primary functions in education such as a self-learning resource, an interactive instructional medium and an alternative assessment instrument. From a technical perspective, Wordwall offers various multimedia features, including: Visual elements (images and animations), audio components, a variety of educational game formats

These features are designed to enhance engagement in learning and can be accessed through multiple digital devices such as laptops or smartphones.

Based on theoretical perspectives presented by scholars, Wordwall can be concluded to integrate three key aspects:

1. Comprehensive functionality (learning resource, instructional medium, and evaluation tool)
2. Interactive design (through multimedia elements and gamification)
3. High accessibility (compatible with diverse devices)

The primary advantage of Wordwall lies in its ability to provide a more engaging and varied learning experience through gamification while meeting the educational demands of the digital era. Its implementation in teaching has the potential to enhance learner motivation and active participation, although its optimal effectiveness still requires strategic adaptation to align with learner characteristics and specific instructional objectives.

3. METHOD

This research employed a **descriptive survey design** to explore learners' needs in basic reading contexts. The study was conducted at Politeknik Negeri Bengkalis, Indonesia, with participants drawn from the Language Department. A structured questionnaire was distributed to collect data on students' reading habits, difficulties, learning preferences, motivational factors, and familiarity with digital learning platforms. The instrument included both closed and open-ended items, supported by visual graphs to measure students' responses on reading practices, vocabulary challenges, grammar difficulties, text preferences, and desired game-based features. Descriptive statistics were used to analyze quantitative

responses, while qualitative data were interpreted thematically. The findings from the needs analysis served as the basis for identifying priorities in designing game-based reading materials on the Wordwall platform.

4. RESULT & DISCUSSION

Conducting a needs analysis is a critical step in identifying the gap between students' current abilities and the competencies expected in the learning objectives of reading instruction. The purpose of this stage is to provide a foundation for designing relevant activities and appropriate reading inputs. In the present study, the findings of the needs analysis inform the design of learning materials that employ a game-based approach using the Wordwall platform, thereby enhancing the effectiveness and efficiency of teaching basic reading skills. Needs analysis also helps to clarify what students actually require, including their deficiencies, preferences, and goals. Such information is instrumental in prioritizing learning objectives and in tailoring the curriculum and instructional approaches to match students' needs and learning contexts (Brown, 2016; Richards, 2001).

Students' Reading Habits and Preferences

The analysis of students' reading habits revealed that although many reported being regular readers, their reading duration remained relatively low. More than half (52%) of the respondents indicated that they spend less than 30 minutes per day reading. This suggests that instructional activities should be designed to be short but engaging. Students showed a preference for concise, social media–styled texts, gradually transitioning to light academic content. The data also indicated varied daily reading times, ranging from less than 30 minutes to one hour, suggesting that while students read frequently, they lack sustained focus. As a result, the design of instructional materials should emphasize brevity, variety, and interactivity to sustain engagement (Grabe, 2009; Nation, 2001).

Reading Difficulties

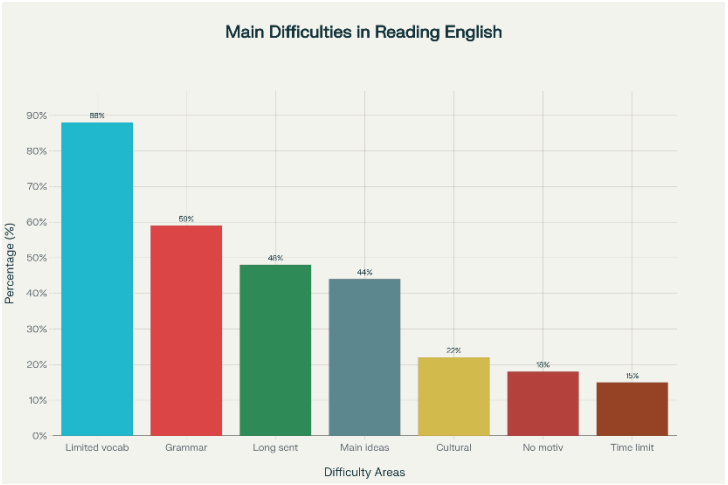


Figure 1. Main difficulties in Reading English

Figure 1 illustrates students' perceived difficulties in reading English texts. A significant proportion (88%) identified limited vocabulary as their primary challenge. Vocabulary is widely recognized as a key predictor of reading comprehension, and a lack of

lexical knowledge severely constrains text understanding (Nation, 2001; Webb & Nation, 2017). Grammar also posed difficulties, with 59% of students reporting struggles in processing syntactic structures. Research confirms that grammatical knowledge correlates significantly with reading comprehension because it enables accurate parsing of sentences, interpretation of word and phrase relationships, and construction of overall textual meaning (Jeon & Yamashita, 2014). Additionally, 48% of students found long and complex sentences challenging, while 22% struggled with cultural references due to limited background knowledge. Motivation emerged as another concern: 18% of students reported low motivation and only about 15% dedicated consistent time to reading. These findings highlight the necessity of designing instructional materials that emphasize vocabulary building, grammar practice, and cultural awareness, while embedding motivational elements through game-based tasks.

Preferred Learning Modalities

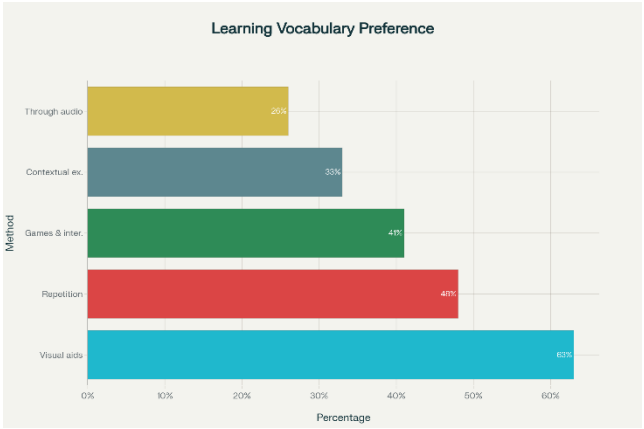


Figure 2. Learning Vocabulary Preference

According to the result displays in Figure 2 toward students' responses indicated diverse preferences for learning strategies. A majority (63%) favored learning new vocabulary through visual aids such as illustrations and charts, highlighting the effectiveness of visual scaffolding in retention and comprehension. Nearly half (48%) emphasized the importance of repetition and practice, consistent with established principles of spaced repetition in vocabulary learning (Webb & Nation, 2017). Interactive and playful activities were also valued, with 41% indicating that games and hands-on tasks sustain engagement. By contrast, audio-based learning was less preferred (26%). These findings suggest that game-based platforms such as Wordwall, which integrate visual, interactive, and repetitive elements, are well aligned with students' learning preferences.

Motivation Factors

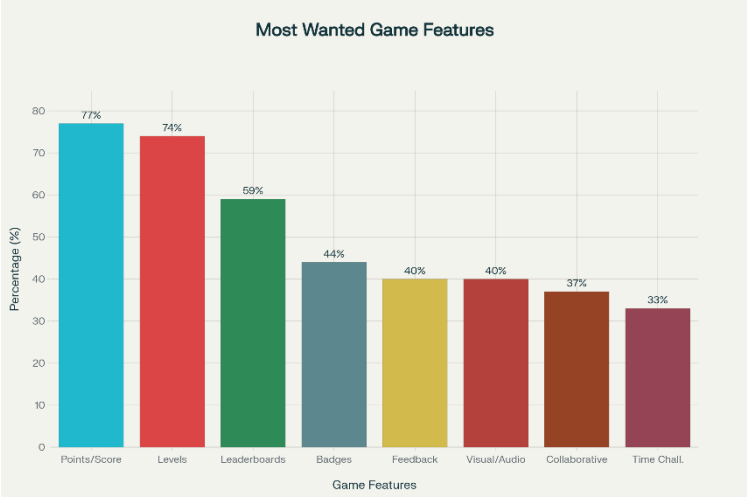
Motivation was shaped by both extrinsic and intrinsic factors. Approximately 70% of students identified grades as a motivating factor, while 55% cited employment opportunities. At the same time, 44% reported being motivated by personal interest and enjoyable activities. These findings resonate with Self-Determination Theory (Deci & Ryan, 2000), which posits that both extrinsic rewards and intrinsic satisfaction are essential for sustained learner engagement. Although competition and rapid feedback were less prioritized (22%), they still played a role in maintaining motivation. Consequently, instructional design should balance achievement-oriented rewards (e.g., points, progress tracking) with intrinsically enjoyable experiences.

Familiarity with Digital Games and Wordwall

The survey further revealed that 84% of students had prior experience with digital learning games, although about 20% were unfamiliar with Wordwall specifically.

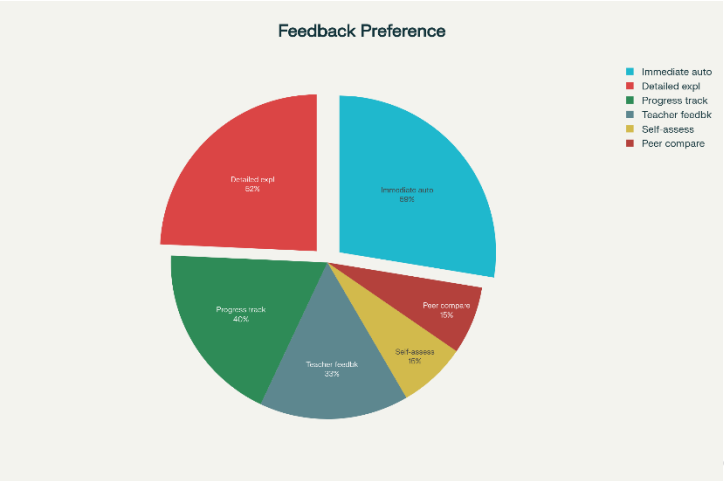
Nonetheless, students expressed strong interest in using such platforms, with 70% reporting enthusiasm for game-based reading activities. These results indicate high receptivity to gamified learning environments, though introductory training and gradual integration may be necessary for optimal use.

Game Design Preferences



According to the material design as game future in Wordwall, the data shows that core motivational drivers in gamification are points, levels, and progression systems (each around 74-77%), emphasizing the importance of clear goals and rewarding advancement. Leaderboards, desired by 59%, indicate that competition motivates many but should be optional to avoid discouraging less competitive learners. Additionally, badges and immediate feedback support continued engagement and reinforce learning. Features like visual/audio effects and collaborative activities complement these drivers by making gameplay more immersive and socially engaging. The students prefer short to medium length texts, with over half favoring 100–200 words and one-third comfortable with 200–400 words. Very short and long texts are less popular, suggesting that materials need to be concise yet sufficiently substantive. This aligns well with mobile learning contexts where attention spans and available reading time—often under 30 minutes—are limited. These findings also align with Krashen's Input Hypothesis (1985), suggesting that materials should be slightly above students' current proficiency (i+1), ensuring content that is both accessible and challenging.

Feedback Preferences



Students demonstrated a strong preference for immediate, automated feedback (59%) and detailed explanations of incorrect responses (52%). Progress tracking (40%) was also valued, while teacher feedback (33%) remained important but less central compared to system-generated responses. Self-assessment and peer comparison were rated lowest (15%). These findings suggest that Wordwall-based activities should prioritize instant, explanatory feedback mechanisms, which can enhance motivation and promote deeper learning.

Table 1. Table title. Table captions should always be positioned *above* the tables.

Title 1 (*regular*)	Title 2 (*regular*)	Title 3 (*regular*)
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Mathematical formulas (equations) should be written in italics using the Equation Editor and numbered sequentially, as shown in Equation (1) below.

$$A = \pi r^2 \quad (1)$$

5. CONCLUSION

The results of the needs analysis demonstrate that vocational students face significant barriers in reading comprehension, particularly related to limited vocabulary and grammar knowledge, reduced reading duration, and fluctuating motivation. However, their positive orientation toward technology-enhanced learning and preference for visual, interactive, and feedback-rich activities suggest that game-based platforms such as Wordwall offer strong potential to address these challenges. Effective instructional design should prioritize vocabulary building, contextualized grammar support, and the use of short, manageable texts integrated into interactive Wordwall activities. The incorporation of gamified features—such as points, levels, and progress systems—alongside immediate automated feedback can further enhance engagement and learning outcomes. Ultimately, this study highlights the importance of aligning instructional strategies with learners' actual needs and preferences to foster meaningful improvements in basic reading comprehension.The conclusion should focus on the specific key points derived from the.

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Gaps & Implications for Needs Analysis

While these findings are promising, there remain gaps especially relevant for a study on *learners' needs in basic reading contexts with Wordwall*:

- Many studies focus on *interest, motivation,* or *vocabulary*, but fewer address in detail *which* reading difficulties (e.g. decoding, fluency, comprehension of inference, cohesion) students have in basic reading contexts.
- There is limited research on how learners perceive their own needs: e.g. what they think would help them, what kinds of text, formats, or supports they prefer, especially in Wordwall contexts.
- Studies often measure outcomes (reading gains, motivation), but less frequently explore *processes* or *preferences* (e.g. how often to use Wordwall, preferred types of game tasks, difficulty levels).
- Also, the majority of empirical work is in primary or lower secondary levels; there is less about vocational students or adult EFL learners in basic reading contexts.