



Enhancing English Reading Comprehension through Gamified Digital Platforms

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ABSTRACT

This study investigates the effectiveness of integrating gamification tools—specifically Quizizz, Kahoot, Pear Deck, and Nearpod—in improving English reading comprehension among first-year students at Universitas Pamulang, Indonesia. Utilizing a pre-experimental design with pretest and posttest assessments, the research measured students' proficiency in literal, inferential, and critical comprehension aligned with the KET-Cambridge international exam format. A census sample of 27 students participated in a semester-long intervention where gamified activities were embedded into classroom instruction. Results revealed significant improvements: while 57.14% of the experimental group achieved “Outstanding” posttest scores, none remained at the “Beginning” level. Qualitative and quantitative data highlighted enhanced vocabulary acquisition, engagement, and familiarity with exam structures, supported by real-time feedback and interactive elements. The findings align with prior research on gamification's role in fostering motivation and academic performance. This study underscores the potential of gamified tools to transform traditional language pedagogy, particularly in contexts requiring alignment with global standards. Recommendations include broader adoption of such tools in higher education and further exploration of their applicability across language skills.

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INTRODUCTION

One of the enduring challenges in the field of education is ensuring that students achieve satisfactory learning outcomes, particularly through the integration of innovative, formative, and feedback-oriented digital tools. This challenge becomes even more pronounced in remote and hybrid learning environments, where direct teacher-student interaction is limited, and learner autonomy must be supported by engaging technological interfaces. In this context,

gamification—defined as the application of game design elements in non-game settings—has emerged as a promising pedagogical strategy to enhance student motivation, participation, and learning outcomes (Deterding et al., 2011; Koivisto & Hamari, 2019).

The development of reading comprehension skills in English remains essential across all educational levels. In higher education, English proficiency is not only a basic academic requirement but also a strategic necessity for accessing international scholarships, undertaking standardized examinations (such as TOEFL and IELTS), and engaging with scholarly content published predominantly in English (Hastomo et al., 2025). However, research has consistently shown that many students, particularly those transitioning from secondary school to university, encounter significant difficulties in comprehending both general and subject-specific English texts (Matyakhan et al., 2024). These challenges can lead to a lack of confidence, reduced academic performance, and limited access to global academic opportunities.

Gamification in education is more than the use of points, leaderboards, or digital badges. It involves constructing an abstract challenge governed by rules, interactivity, and feedback, leading to quantifiable outcomes that can influence learner emotions and motivation (Kapp, 2012; Nah et al., 2014). In educational contexts, gamified environments help learners pursue pedagogical objectives by creating meaningful engagement, real-time assessment, and repeated reflective cycles that support cognitive development.

Digital platforms such as Quizizz and Pear Deck have shown considerable promise in this regard. Cheenath and Gupta (2017), the developers of Quizizz, designed the platform to enable formative assessment in a gamified format that includes music, memes, power-ups, and both immediate and asynchronous feedback. These features contribute to a dynamic learning environment in which students can review their performance, monitor their progress, and develop their metacognitive skills. Similarly, these features support active learning by embedding interactive questions into presentations, allowing real-time feedback and fostering communication and collaboration skills (Pha., 2023).

The integration of gamified tools with nationally available educational content enhances the contextual relevance of learning. In Indonesia, Rumah Belajar, a platform developed by the Ministry of Education and Culture, provides accessible, curriculum-aligned digital resources to support student learning across regions. By aligning reading materials from *Rumah Belajar* with the Common European Framework of Reference for Languages (CEFR) and embedding them into gamified platforms like Quizizz, educators can support learners in acquiring the English skills necessary for academic progression and international certification.

Furthermore, empirical studies confirm the effectiveness of such tools. Pham (2023) demonstrated that gamified platforms like Quizizz significantly improved

ESL learners' grammar and reading comprehension. Nacional (2024) reported that gamification increases student engagement by creating a sense of playfulness and competition. Maryo and Pujiastuti (2022) emphasized that the integration of ICTs promotes asynchronous and synchronous feedback, collaborative learning, and learner autonomy. These findings underscore the potential of gamification to transform traditional teaching into a dynamic and student-centered process.

In the Indonesian context, many students continue to struggle with reading comprehension in English, especially those in their first year who have recently transitioned from high school. Their limited proficiency may impede success in international assessments and reduce access to academic scholarships and opportunities. Moreover, a lack of motivation, often caused by uninspiring instructional methods, may further hinder their progress.

Therefore, this study aimed to determine the level of English reading comprehension among first-to-second semester students at a private university, Universitas Pamulang, in South Tangerang, Banten, Indonesia, during the 2024-2025 academic year. The study utilized reading content from the *Rumah Belajar* platform, integrated into the Quizizz gamification environment, and adapted to CEFR-based international exam formats. The primary objective was to assess the effectiveness of this integration in enhancing reading comprehension skills in a digital, feedback-rich, and engaging learning context.

METHOD

This study employed a hypothetico-deductive approach, where the working hypothesis was developed from the theoretical framework and tested through deductive reasoning, in line with the scientific method (Kerlinger & Lee, 2000). The research followed a pre-experimental design, using pretest and posttest assessments to evaluate the effect of an intervention on a single group without a control group (Creswell & Creswell, 2018).

The study population included students from the English Literature program at Universitas Pamulang. A non-probability convenience sampling method was used, selecting all 27 first- and second-year students who were readily available and willing to participate. This constitutes a census sample, meaning the entire defined population was included (Babbie, 2021).

To collect data, both qualitative and quantitative techniques were applied, aligned with the study's two variables: gamification tools and reading comprehension. For gamification, data were obtained through structured observation using a checklist to track the application of gamified strategies during instruction. This allowed the researcher to monitor key elements of gamification aimed at supporting reading comprehension and overall language acquisition. For reading comprehension, data were gathered through written tests (pretest and posttest) and document analysis. The tests measured students' performance in

reading before and after the intervention, focusing on three comprehension dimensions: literal, inferential, and critical. Additional materials such as class documents and students' work were analyzed to supplement findings.

Data were processed using Microsoft Excel for organization, tabulation, and visualization, and SPSS version 23 for statistical analysis. The study applied both descriptive and inferential statistics: Descriptive statistics included frequency tables and summary statistics to describe the variables; Inferential analysis employed a paired-sample t-test to evaluate significant differences in students' reading comprehension before and after the intervention.

The scoring rubric for the Reading Comprehension Test is divided into four levels. A score between 0 and 5 indicates the Beginning Level, showing a minimal understanding of the text. Scores ranging from 6 to 10 fall under the Developing category, reflecting partial comprehension with some noticeable gaps. The Expected Achievement level is represented by scores between 11 and 15, demonstrating a satisfactory grasp of the material. Finally, a score between 16 and 20 signifies Outstanding Achievement, indicating a strong and thorough understanding of the reading content.

RESULTS AND DISCUSSION

Results

A. Reading Comprehension Level – Pre-Test

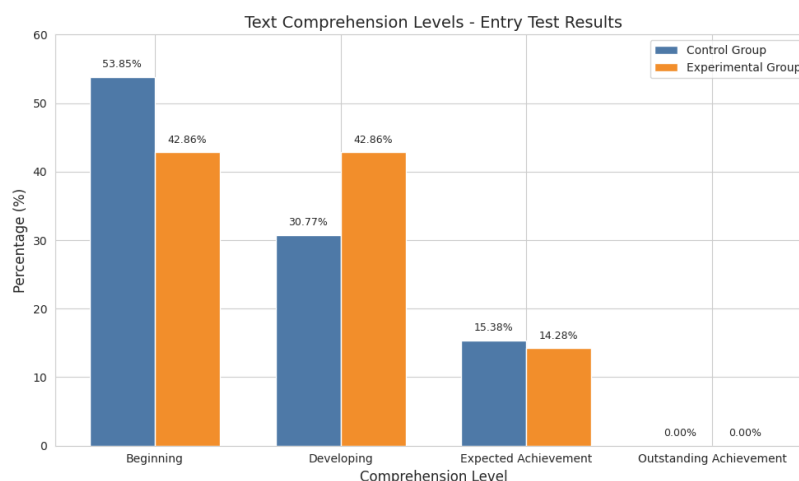


Figure 1. Reading comprehension levels in English

As shown in Figure 1, at the beginning level, a majority of students scored at the “Beginning” level: 53.85% in the control group and 42.86% in the experimental group. At the “Developing” level, 30.77% of the control group and 42.86% of the experimental group scored within this range. Additionally, at the “Expected Achievement” level, 15.38% of the control group and 14.28% of the experimental

group achieved this standard. Finally, no students from either group reached the “Outstanding Achievement” level.

These results indicate that most students experienced difficulties in responding to questions that assessed literal, inferential, and critical comprehension levels. One of the main contributing factors was their limited vocabulary, which hindered their ability to understand most of the text and made it difficult to make decisions when answering the questions. Furthermore, the questions requiring critical thinking posed the greatest challenge for students.

It can be concluded that prior to the implementation of gamification tools, the majority of students were at the “Beginning” level, demonstrating significant difficulties in understanding the text. This was primarily due to a limited vocabulary, which impeded their ability to interpret content and respond appropriately to the questions posed.

B. Reading Comprehension Level – Post-Test

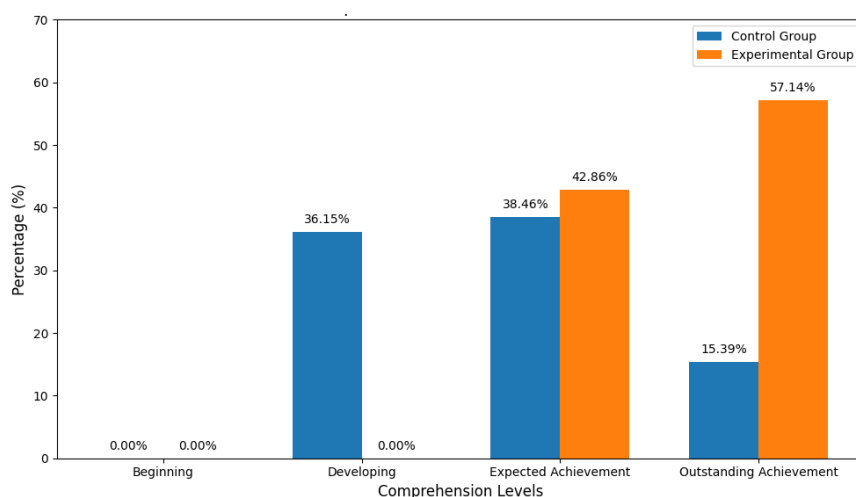


Figure 2. Reading comprehension levels in English

As shown in Figure 2, no students in either group remained at the “Beginning” level. At the “Developing” level, 36.15% of students in the control group were placed, while no students in the experimental group fell within this category. At the “Expected Achievement” level, 38.46% of the control group and 42.86% of the experimental group reached this level. Finally, in the “Outstanding Achievement” level, only 15.39% of the control group achieved this, compared to 57.14% in the experimental group.

The results indicate that most students demonstrated significant improvement in their ability to respond correctly to literal, inferential, and critical comprehension questions. In the control group, pedagogical strategies were employed without the use of gamification tools, while in the experimental group, four gamification tools were integrated: *Quizizz*, *Kahoot*, *Pear Deck*, and *Nearpod*. These tools were used throughout the 2024-2025 academic semester through

classroom practice modelled after the aforementioned international exam format, with varied and adapted exercises based on the gamified platforms.

The data suggest that students significantly improved their vocabulary and became more familiar with the language through exposure to a range of texts. Additionally, they developed technological skills that allowed for continuous feedback on their progress and learning in English.

It can be concluded that after the exit test, the majority of students in the experimental group reached the “Outstanding Achievement” level, showing a statistically significant difference compared to the control group. This confirms that the use of gamification tools was effective in enhancing the students’ abilities across the dimensions of literal, inferential, and critical comprehension. Consequently, the reading comprehension level of first-year students in English Literature program at Universitas Pamulang improved during the 2024 academic semester.

Discussion

After describing and analyzing the different results obtained regarding the variables “*Gamification Tools*” and “*Reading Comprehension in English*”, this section presents the discussion in alignment with the objectives set forth in the present study. The general objective of this research was to determine the level of reading comprehension in English using the KET-Cambridge International Exam format through the use of gamification tools among first-year students in English Literature program at Universitas Pamulang.

This study established that there was a significant improvement in students’ English reading comprehension levels when gamification tools were utilized. These findings are consistent with those reported by Maryo and Pujiastuti (2022), whose study highlighted a high percentage of positive responses toward the use of the gamified platform *Quizizz* in English classes compared to other applications. Their research found that the integration of *Quizizz* during class was significantly effective in educational institutions as a teaching tool, making lessons more engaging and capturing students’ attention in the proposed activities. Their research found that the integration of *Quizizz* during class was significantly effective in educational institutions as a teaching tool, making lessons more engaging and capturing students’ attention in the proposed activities.

One explanation for the observed improvement in reading comprehension using the international exam format aligns with the findings of Matyakhan et al. (2024), who emphasized the impact of gamification applications when used as formative and feedback-oriented assessment tools. Their study demonstrated that integrating gamified elements into reading instruction significantly enhanced students’ engagement and comprehension, highlighting the effectiveness of such tools in educational setting. Data gathered through observations, surveys, interviews, and document analysis demonstrated that these applications positively

affected student motivation, retention, and performance. Moreover, adapting the activities to the structure and format of international exams enabled students to become familiar with the testing style.

This study further illustrates that students who are taught and exposed to specifically designed strategies aimed at improving particular skills—such as the one addressed in this report—can achieve the expected competencies. In their analysis of real-time assessment tools, Moreira and Lara Freire (2024) noted that *Quizizz* increased student interest due to its visual appeal and use of humor through memes in feedback, contributing to its gamified nature geared toward both formative and summative assessment within the teaching-learning process. Similarly, Aerts and Groeneveld (2023) emphasized the effectiveness of gamified quizzes in enhancing student engagement and providing immediate feedback, which are essential components of both formative and summative assessment.

Therefore, this research has enabled a more comprehensive understanding and validation—through objective data—of how English language learning competencies can be effectively developed in conjunction with various gamification applications. Similarly, studies by Quezada et al. (2021) and Anggoro (2021) confirmed that the use of Pear Deck and Nearpod led to increased student interest and engagement in class. Students interacted more confidently with the features of these applications, fostering active learning. This was also evidenced in the present study: during the experiment, students showed higher levels of participation in class, worked collaboratively, and engaged in reflective thinking about their learning. This was facilitated through reviewing end-of-class reports provided by the applications, which allowed students to monitor their progress throughout each lesson.

The literature review revealed that several recent studies reported that gamification, when used for assessment purposes, improved achievement and engagement in attaining the stated learning objectives. For instance, Bai et al. (2020) conducted a meta-analysis examining the impact of gamification on academic performance and found an overall significant medium effect, highlighting gamification's ability to promote goal-setting, fulfill students' need for recognition, and provide performance feedback. Similarly, a systematic review by Zainuddin et al. (2020) confirmed that gamification positively affects student motivation and academic performance, with digital tools like *Kahoot* and *Quizizz* being commonly used to integrate gamification in the classroom.

Additionally, Mustikasari and Yugopuspito (2021) observed that implementing gamification through *Quizizz* in classroom learning significantly improved students' collaboration skills, engagement, and academic achievement. In a study examining whether online assessment tools such as *Kahoot* and *Quizizz* increased students' motivation, participation, and learning, Lee et al. (2023) concluded that these tools enhanced students' grammatical knowledge and sparked

their interest in further engaging with the content delivered through such platforms. Moreover, it was found that the primary reason students preferred using *Kahoot*, *Quizizz*, *Peardeck*, and *Nearpod* in classroom settings was their need for strong stimuli and immediate feedback regarding their performance, coupled with the sense of comfort these tools provided, as they removed the pressure often associated with traditional assessments (España-Delgado, 2023).

This report corroborates findings from prior studies conducted in various countries where English is taught as a second language. These studies demonstrated the effectiveness of gamification tools, students' perspectives on their usage, and the overall impact on English reading comprehension. The research confirms the role of these tools in facilitating the understanding of English texts (Zainuddin et al., 2020).

Recent studies have highlighted the significant impact of digital tools on enhancing English text comprehension, particularly concerning grammatical structures. For instance, research by Pham (2023) demonstrated that the use of gamified platforms like Quizizz significantly improved ESL learners' grammar achievement, indicating the effectiveness of such tools in language learning contexts.

Moreover, the feedback mechanisms within *Quizizz* contribute to improving students' grasp of English grammar concepts as part of their second language acquisition. The immediate feedback provided by these platforms allows learners to identify and correct errors in real-time, fostering a more interactive and responsive learning environment.

The application of gamification in educational settings aims to transcend traditional teaching approaches by establishing new learning parameters. It transforms the educational experience into one grounded in motivation and social identification through play, thereby fostering stronger student engagement with the learning process. Nacional (2024) emphasized that gamification strategies, when effectively implemented, can enhance student engagement and motivation, leading to improved learning outcomes.

Specifically, the commitment to developing reading comprehension skills for international English exams opens opportunities for further research into its effectiveness in other language domains such as speaking, listening, and writing. It is necessary to seek plausible explanations for the initial low performance in reading comprehension tasks based on the KET-Cambridge exam format, as well as the significant improvements observed post-intervention. One contributing factor may be that, prior to the introduction of gamification tools, students lacked familiarity with digital game-based platforms and had limited exposure to international exam formats, particularly in reading comprehension.

Another factor is that, once students were introduced to the applications, their features, and the essential elements required for successful engagement with the proposed tasks, they found the experience to be more dynamic, flexible, and

innovative. The process not only actively developed their reading comprehension skills but also provided ongoing, real-time feedback (by displaying immediate results during activities) and asynchronous feedback (through reviewable performance reports). With *Kahoot* and *Quizizz*, students were able to monitor their progress, while *Peardeck* and *Nearpod* contributed to increased confidence, participation, and interaction in virtual classes, fostering a more positive disposition toward learning and practice.

Therefore, it is essential for students to utilize technological tools that help strengthen their English language skills and competencies as a second language within higher education institutions. This approach aims to shift away from the rigid paradigms of traditional education. The present study not only demonstrates a significant academic improvement in reading comprehension of texts aligned with international exam formats, but also evidences the effective use of gamification tools for formative learning. These tools enable students to recognize their progress and focus on developing their skills by identifying both their strengths and weaknesses. Each technological tool, moreover, should be adapted to the specific context and needs of the classroom.

CONCLUSION

Based on the data obtained in this study, fair and balanced conclusions can be drawn regarding the functionality and impact of gamification tools on English reading comprehension aligned with the KET-Cambridge international exam format. The key findings of the study are as follows:

According to the research results, the level of English reading comprehension improved following the implementation of gamification tools among first-year students in English Literature program at Universitas Pamulang. The study revealed that each student progressed at least one proficiency level compared to their previous performance, with the experimental group showing greater improvement than the control group.

It is confirmed that students successfully completed the activities designed by the instructor using *Kahoot*, *Quizizz*, *Nearpod*, and *Peardeck*. These activities aimed to help students identify, infer information, and exercise critical judgment when engaging with English texts formatted according to international exam standards. The integration of gamified elements—such as images, videos, quotes, memes, avatars, power-ups, and interactive forums—within each application provided students with individualized performance reports. These allowed them to reflect on their learning in a personalized and autonomous manner. In other words, students were able to learn at their own pace, recognizing their strengths and areas for improvement. Additionally, their vocabulary increased, and they became more familiar with the formats that contributed to successfully completing the tasks based on literal, inferential, and critical comprehension levels.

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