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The Effects of Quizizz on Students' Reading Ability and Learning Motivation in Indonesian EFL Classrooms

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Abstract

This study explores the impact of Quizizz, a gamified learning platform, on students' reading comprehension and learning motivation. The research focuses on ten reading subskills, including vocabulary, inference, and text structure, and investigates motivational outcomes through the lens of Self-Determination Theory, which encompasses autonomy, competence, and relatedness. Employing a quasi-experimental mixed-methods approach, the study involved 40 eleventh-grade students from SMA Muhammadiyah 11 Jakarta, equally assigned to experimental and control groups. Over a five-week period, the experimental group utilized Quizizz during instruction, while the control group received conventional teaching. Data were collected through reading comprehension tests and semi-structured interviews. Quantitative findings revealed a statistically significant improvement in the experimental group's post-test scores, as measured by the Mann-Whitney U Test. Qualitative analysis indicated that Quizizz supported students' autonomy through flexible learning, enhanced their competence via immediate feedback, and fostered relatedness through social interaction and friendly competition. These results suggest that integrating gamified tools like Quizizz can enhance both reading outcomes and student motivation in EFL classrooms. Implications for classroom practice highlight the potential for incorporating game-based learning into curriculum design to foster more engaging and effective literacy instruction.

Keywords: Quizizz; Reading comprehension; Learning motivation; Game-based learning

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INTRODUCTION

Reading is a cognitively complex skill that enables individuals to process written language, generate ideas, and reflect critically on information (Trasmundi et al., 2021). It involves a dynamic interplay between word recognition, prior knowledge, and linguistic structure, all of which contribute to the reader's ability to comprehend text (Smith et al., 2021). In EFL contexts, reading demands that learners interpret unfamiliar vocabulary, infer meaning, and grasp text structure (Robertson, 2017). These components support deeper comprehension, especially when students are taught to apply specific reading strategies such as scanning, predicting, and identifying key ideas (Mikulecky & Jeffries, 1996). However, many students still struggle with comprehension because they have not mastered these core sub-skills (Kilpatrick et al., 2019). The situation is more complex for learners with low exposure to English, limited vocabulary, or weak critical thinking habits. In such cases, effective instructional methods must be implemented to support and scaffold their reading processes. This has led researchers to explore approaches that combine cognitive development with motivational support in reading instruction.

To address this, interactive learning has been proposed as a method to enhance students' engagement with reading tasks (Malikovna et al., 2022). In interactive environments, students are not passive recipients but active participants who co-construct knowledge through dialogue, reflection, or feedback-rich activities. When reading is treated as a dialogic and reflective activity, it builds not only comprehension but also deeper cognitive engagement (A. Al Roomy, 2022). Critical reading, for example, requires students to question assumptions, interpret meaning beyond literal content, and evaluate text structure critically. These skills are essential in fostering academic literacy and overall thinking ability. However, sustaining engagement and cognitive effort in reading is difficult if students are not intrinsically motivated. As reading becomes more challenging, learners may disengage or develop negative attitudes toward texts. This highlights the need for instructional strategies that build both skill and motivation. Digital platforms that support interactivity and autonomy may offer a solution to this dual challenge.

A considerable body of research highlights the pivotal role of motivation in achieving academic success, particularly in the context of reading (Filgona et al., 2020). Drawing on Self-Determination Theory Ryan & Deci (2022), motivation is believed to be most effective when learners experience autonomy, competence, and relatedness. When students feel they have agency in their learning, trust in their own abilities, and maintain meaningful connections with peers or educators, their motivation becomes more internally driven. Such intrinsic motivation contributes to consistent engagement and fosters deeper comprehension (Harmer, 1988). In reading instruction, learners who receive emotional and psychological support tend to persevere through challenging texts and utilize more advanced thinking strategies. In contrast, those who lack adequate support are at greater risk of disengagement or underperformance. Therefore, cultivating a classroom environment that intentionally nurtures students' psychological needs is essential. This goal can be supported not only through teacher-student interaction but also by the learning tools and instructional methods employed.

Gamification represents a pedagogical strategy aligned with Self-Determination Theory, aiming to make learning experiences more meaningful and stimulating. It involves integrating elements commonly found in games, such as scoring systems, incentives, and immediate feedback, into educational settings (Luo, 2022). When implemented effectively, this approach has demonstrated positive impacts on students' motivation, engagement, and academic achievement (Oliveira et al., 2023). In reading instruction, gamification encourages students to complete tasks by offering immediate feedback, visual rewards, and opportunities for collaboration (Manzano-León et al., 2021). Tools that incorporate game mechanics can foster a sense of autonomy through choice-based activities and competence through measurable progress (Koivisto & Hamari, 2019). In turn, these tools support the emotional and social aspects of learning by allowing students to work together or compete constructively (Saleh & Sulaiman, 2019). By aligning with students' digital habits, social tendencies, and intrinsic motivations, gamified platforms have the potential to shift reading from a passive activity into an engaging and meaningful learning experience.

Quizizz is an example of a digital platform that incorporates gamification into classroom instruction. As a game-based learning tool, it enables educators to design interactive quizzes that promote student-centered learning. The platform allows students to work at their own pace while providing immediate feedback on their responses (Zhao, 2019). The tool's game-like interface, complete with leaderboards, timers, and badges, increases student engagement and fosters a fun learning environment (Degirmenci, 2021). Unlike traditional testing methods, Quizizz provides real-time results and performance tracking, making it easier for teachers to monitor learning outcomes (Handoko et al., 2021). Moreover, students can use Quizizz from multiple devices, making it accessible and

flexible for diverse learning settings (Yana et al., 2019). These features directly support SDT's principles by reinforcing autonomy, competence, and relatedness (Yunus & Hua, 2021). As a result, Quizizz serves not only as an assessment tool but also as a means to cultivate persistence, motivation, and learner confidence. In the context of reading instruction, it can help overcome comprehension challenges while sustaining student engagement.

Although other digital platforms widely used in high school learning such as Kahoot and Socrative also provide gamified quiz formats, they differ in significant ways. Kahoot promotes live participation and fast-paced competition, which can enhance classroom energy but may be less suitable for students who read more slowly or experience performance anxiety. In contrast, Socrative centers on formative assessment and teacher-directed feedback but lacks immersive game elements. Quizizz strikes a balance between the two by combining engaging visuals and a competitive environment with features that support self-paced learning and instant feedback. These characteristics make Quizizz particularly effective for reading instruction, where thoughtful comprehension is just as essential as motivation and engagement (Fonseca et al., 2024).

Despite growing evidence on the benefits of gamification in general education settings, limited research specifically explores its effect on reading comprehension and motivation in an integrated manner. Some studies focus solely on affective outcomes such as engagement, while others emphasize academic gains without explaining the psychological processes behind them (Butterfuss et al., 2020). In addition, prior research often focuses on tools like Kahoot or Duolingo, while overlooking Quizizz's unique feedback features that align well with SDT (Maraza-Quispe et al., 2024). Furthermore, few studies address how gamification influences specific reading skills such as vocabulary development, inference-making, or understanding text structure (Banditvilai, 2020). The present study aims to explore the potential of Quizizz in supporting both cognitive and affective dimensions of reading instruction.

This study aims to examine the effectiveness of incorporating Quizizz into reading instruction in enhancing students' reading comprehension and learning motivation. It concentrates on three key elements of reading: vocabulary acquisition, inferential understanding, and awareness of text structure. Furthermore, the study explores the extent to which Quizizz supports the fulfillment of the three basic psychological needs outlined in Self-Determination Theory, namely autonomy, competence, and relatedness (Ryan & Deci, 2022). Through this dual focus, the research examines the cognitive and motivational benefits of using a game-based platform in the English language classroom. By combining reading strategies with digital interactivity, the study aims to provide a more effective and engaging model of instruction. This is particularly relevant for EFL learners who often struggle with both comprehension and motivation.

This research provides a distinctive contribution by examining reading achievement and learning motivation simultaneously through a single integrated platform. While many previous studies have investigated the cognitive or affective aspects of gamified tools in isolation, few have explored how a platform like Quizizz can address both domains at once within the Self-Determination Theory framework. By focusing on this dual impact in the context of Indonesian EFL learners, the study responds to a gap in existing literature and proposes a more holistic perspective on gamified learning.

To guide this investigation, the following research questions were formulated:

1. To what extent does the use of Quizizz affect students' reading comprehension in an Indonesian EFL classroom?
2. How does the use of Quizizz influence students' learning motivation in terms of autonomy, competence, and relatedness?

METHOD

Research Design

The research employed a mixed-method approach with a quasi-experimental design to investigate the impact of Quizizz on students' reading comprehension and learning motivation. It was conducted at SMA Muhammadiyah 11 Jakarta during the 2025–2026 academic year. Two existing eleventh-grade classes were chosen through purposive sampling and assigned as the experimental and control groups. Each group consisted of 20 students. The experimental group received reading instruction supported by Quizizz, while the control group was taught through a conventional, non-gamified approach. The grouping was based on similar academic records and reading abilities, as assessed by the English teachers and school documentation.

The intervention took place over the course of five weeks, with each treatment session lasting 90 minutes. Both classes followed the same English syllabus, learning objectives, and teaching materials to maintain instructional consistency across groups. To ensure fidelity of implementation, the researcher developed and followed a standardized procedure for integrating Quizizz into each session. This included consistent timing for launching the activity, structured feedback delivery, and real-time monitoring of student progress. Since the researcher also served as the instructor, all sessions were delivered according to the planned procedures, which minimized the risk of instructional bias and ensured uniformity across treatments. The use of a quasi-experimental design allowed the researcher to observe the effects of the intervention in an authentic classroom setting without random assignment. To gain a more comprehensive understanding of student performance and engagement, both quantitative and qualitative data were collected. Reading comprehension was assessed using pre- and post-tests, while student motivation and learning experiences were explored through semi-structured interviews guided by Self-Determination Theory (Ryan & Deci, 2022).

Research Participants and Instruments

This study involved 40 eleventh-grade students from SMA Muhammadiyah 11 Jakarta, equally divided into two intact classes. One class served as the experimental group, while the other acted as the control group. Participants were selected through purposive sampling, considering their comparable academic standing and accessibility within the school schedule. Both groups followed the same curriculum content and learning objectives during the intervention period to ensure instructional consistency.

The experimental group consisted of 7 male and 13 female students, while the control group included 5 male and 15 female students. Based on mid-semester assessments and teacher observations, the participants demonstrated reading proficiency ranging from lower-intermediate to intermediate levels. While most students had previous exposure to digital learning platforms such as Google Classroom and educational videos, their familiarity with game-based applications like Quizizz was limited.

To measure students' reading comprehension, a test comprising pre- and post-test components was constructed. It assessed ten essential reading sub-skills: scanning, previewing and predicting, vocabulary knowledge, topic identification, paragraph-level topic recognition, understanding main ideas, organizational patterns, skimming, inferencing, and summarizing (Mikulecky & Jeffries, 1996). Each sub-skill was represented by five multiple-choice items, making a total of 50 questions. To ensure content validity and alignment with students' academic level, the test was reviewed by a senior English teacher and a university EFL lecturer. A pilot test was administered before the main study, and minor revisions were made based on item clarity and student feedback.

To complement the quantitative findings, semi-structured interviews were conducted with a subset of students from the experimental group after the post-test. The interview protocol focused on the three psychological needs emphasized in Self-Determination Theory: autonomy, competence, and relatedness. Each session lasted approximately 10 to 15 minutes and was conducted in a quiet room with the participants' consent. All interviews were audio-recorded and transcribed for analysis. The purpose was to explore students' motivational experiences, emotional engagement, and perceptions of Quizizz in supporting their reading development.

During the implementation, students in the experimental group used their own smartphones to access Quizizz under the supervision of the researcher. Activities took place in the regular classroom setting, with reliable internet connectivity. No significant technical difficulties were reported during the sessions. This setup allowed the intervention to reflect realistic conditions and contributed to the ecological validity of the study.

Data Analysis

Data analysis in this study combined both quantitative and qualitative approaches. The quantitative component involved comparing students' pre-test and post-test scores in the experimental and control groups. Descriptive statistics were first employed to summarize the data, including measures such as mean, standard deviation, and score range. Statistical analysis was performed using IBM SPSS Statistics version 25. To assess the suitability of parametric tests, normality was examined through the Kolmogorov-Smirnov and Shapiro-Wilk tests. Since the data did not meet the assumptions of normal distribution, non-parametric tests were applied. The Wilcoxon Signed-Rank Test was used to analyze within-group score differences, while the Mann-Whitney U Test compared post-test scores between the groups.

The qualitative component involved thematic analysis of students' interview transcripts, guided by the framework of Self-Determination Theory. The analysis followed a systematic process: first, the transcripts were read multiple times for familiarization. Then, relevant excerpts were coded manually and sorted into initial categories. These codes were subsequently reviewed, refined, and grouped into overarching themes corresponding to the psychological needs of autonomy, competence, and relatedness. While no specialized software was used, manual coding was cross-checked to ensure consistency and reliability.

Autonomy was identified in students' reflections about managing their own learning pace and accessing materials independently through Quizizz. Competence was demonstrated through increased confidence, clearer understanding of reading tasks, and appreciation of instant feedback that helped them monitor their progress (Handoko et al., 2021). Relatedness was reflected in the students' enjoyment of gamified social features, such as peer visibility, leaderboards, and classroom interactions, which fostered a stronger sense of belonging (Degirmenci, 2021;Yunus & Hua, 2021). By combining these qualitative insights with statistical outcomes, the study was able to offer a more holistic understanding of both the cognitive and motivational effects of using Quizizz in the reading classroom.

RESULTS AND DISCUSSION

This section presents and interprets the research findings regarding the influence of Quizizz on students' reading comprehension and learning motivation. The analysis combines both quantitative and qualitative perspectives to provide a comprehensive understanding of the outcomes. Quantitative results, gathered from students' reading test scores, highlight measurable improvements in reading comprehension after the integration of Quizizz, indicating its effectiveness as a supportive learning tool. These scores reflect not only better recall and understanding of texts but also increased engagement during

reading activities. Complementing these results, qualitative insights derived from student interviews offer a deeper exploration of learners' experiences. Students expressed positive perceptions of Quizizz, emphasizing its interactive design, immediate feedback, and gamified features as key factors that enhanced their motivation. Interpreted through the lens of Self-Determination Theory, these insights suggest that Quizizz fosters intrinsic motivation by fulfilling students' needs for autonomy, competence, and relatedness within the learning process.

Quantitative Results

Descriptive Statistics

The initial stage of the analysis involved examining students' performance prior to and following the treatment through descriptive statistics. Table 1 presents the mean scores and standard deviations for both the experimental and control groups on the pre-test and post-test.

Table 1. Descriptive Statistics Results

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
Pre Test Experiment (Quizizz)	20	52.00	32.00	84.00	1312.00	65.6000	14.50372
Post Test Experiment (Quizizz)	20	24.00	70.00	94.00	1716.00	85.8000	6.51799
Pre Test Control	20	52.00	36.00	88.00	1302.00	65.1000	15.86091
Post Test Control	20	32.00	60.00	92.00	1524.00	76.2000	9.79581
Valid N (listwise)	20						

Descriptive statistics were used to illustrate students' reading performance prior to and following the intervention. The study involved 40 eleventh-grade students from SMA Muhammadiyah 11 Jakarta, divided evenly into two groups of 20: the experimental group and the control group. The experimental group achieved a mean pre-test score of 65.60, with scores ranging from 32 to 84 and a standard deviation of 14.50. Following the implementation of Quizizz in their instruction, the group's average post-test score rose to 85.80, while the standard deviation declined to 6.52, reflecting a more uniform level of performance among the participants. The control group, which received conventional instruction, also improved. Their mean score rose from 65.10 to 76.20, with a decrease in standard deviation from 15.86 to 9.79. While this group also showed progress, the improvement was not as significant as in the experimental group. These results suggest that Quizizz may contribute to better reading outcomes and more uniform achievement among students. To support further analysis, the next section presents the results of the normality test.

Test of Normality

The normality test was conducted to determine whether the data conformed to a normal distribution, which is an essential prerequisite for the application of parametric statistical tests. Ensuring normality allows researchers to apply parametric analyses confidently, as these tests assume data symmetry and consistency around the mean. In this study, the decision criterion was based on the p-value. A p-value greater than 0.05 indicated that the data did not significantly deviate from normality, permitting the use of parametric methods. Conversely, a p-value less than 0.05 signaled non-normal distribution, necessitating the application of non-parametric alternatives.

Table 2. Normality Test Results

		Kolmogorov-Smirnov			Shapiro-Wilk		
	Class	Statistic	Df	Sig.	Statistic	Df	Sig.
Test of Normality for Reading Comprehension Scores	PreTest Experiment	.120	20	.200*	.927	20	.134
	PostTest Experiment	.190	20	.056	.896	20	.034
	PreTest Control	.154	20	.200*	.937	20	.214
	PostTest Control	.137	20	.200*	.957	20	.493

To evaluate data normality, the Shapiro-Wilk test was applied, as it is considered more suitable for small sample sizes (n = 20) and tends to be more sensitive than the Kolmogorov-Smirnov test. The analysis indicated that the pre-test scores for both the experimental group (p = 0.134) and the control group (p = 0.214) followed a normal distribution (p > 0.05). Similarly, the post-test scores of the control group (p = 0.493) met the criteria for normality. In contrast, the post-test scores of the experimental group (p = 0.034) deviated from this assumption (p < 0.05). Given this distribution pattern, the dataset did not fully meet the requirements for parametric testing. Therefore, non-parametric methods were adopted. The Wilcoxon Signed-Rank Test was employed to analyze the differences between pre- and post-test scores within each group.

Test of Within-Group Differences Using the Wilcoxon Signed-Rank Test

The Wilcoxon Signed-Rank Test was used to analyze changes between pre-test and post-test results within each group. As a non-parametric method, it is suitable for paired data that do not meet the assumption of normal distribution. Statistical significance was determined using a p-value threshold of 0.05, which helped assess whether the intervention had a measurable effect on student outcomes.

Table 3. Wilcoxon Signed-Rank Results

	PostTest Experiment - PreTest Experiment	PostTest Control - PreTest Control
Z	-3.927[b]	-3.928[b]
Asymp. Sig. (2-tailed)	.000	.000

The analysis revealed a statistically significant difference in the experimental group's pre-test and post-test scores, with a Z-value of -3.927 and a p-value of 0.000 (p < 0.05). This outcome suggests that students in the experimental group performed considerably better following the intervention. The improvement may reflect the impact of the treatment, particularly the integration of Quizizz or other interactive learning tools, on their reading skills. A similar pattern was observed in the control group, which also demonstrated a significant change between pre- and post-test scores (Z = -3.928, p = 0.000). This gain may be attributed to regular instruction or ongoing learning exposure during the study. Despite the significant gains in both groups, it should be noted that the Wilcoxon Signed-Rank Test only evaluates within-group differences and does not account for comparative effectiveness. Therefore, to determine whether the experimental group outperformed the control group, a between-group analysis using the Mann-Whitney U Test was subsequently conducted.

Test of Between-Group Differences Using the Mann-Whitney U Test

To determine whether a significant difference existed in reading performance between students who received instruction through Quizizz and those taught using

conventional methods, the Mann-Whitney U Test was applied. This non-parametric procedure was chosen based on the non-normal distribution of the data and its suitability for comparing independent samples with limited size. By analyzing the rank-order of post-test scores, the test provides insight into the potential impact of each instructional strategy without depending on the assumptions underlying parametric tests.

Table 4. Rank Summary of Mann-Whitney U Test

	Class	N	Mean Rank	Sum of Ranks
Post-test Reading Scores	Post-Test Experiment	20	26.28	525.50
	Post-Test Control	20	14.73	294.50
	Total	40		

The Mann-Whitney U Test results indicated that the experimental group (n = 20) obtained a mean rank of 26.28 with a total rank score of 525.50, whereas the control group (n = 20) recorded a mean rank of 14.73 and a total of 294.50. These rank distributions imply that, overall, students in the experimental group achieved higher post-test scores than their counterparts in the control group. In this test, a greater mean rank reflects stronger performance within that group. Given the notable difference in rank values, it appears that the students exposed to the Quizizz intervention outperformed those who received conventional instruction. This preliminary interpretation suggests that the treatment may have contributed to better reading outcomes. However, this conclusion requires verification through the statistical output of the Mann-Whitney U Test, specifically the U value and corresponding p-value, to confirm whether the difference is statistically significant.

Table 5. Test Statistics of Mann-Whitney U Test

Mann-Whitney U	84.500
Wilcoxon W	294.500
Z	-3.138
Asymp. Sig. (2-tailed)	.002
Exact Sig. [2*(1-tailed Sig.)]	.001[b]

Table 4 shows that the experimental group recorded a higher mean rank (26.28) than the control group (14.73), suggesting that the students who received instruction through Quizizz generally outperformed those taught using conventional methods. This outcome is supported by the statistical findings presented in Table 5. The Mann-Whitney U value was calculated at 84.500, with a Z-score of -3.138. The Asymptotic Significance (two-tailed) was 0.002, while the Exact Significance (two-tailed), which provides greater accuracy for small samples, was 0.001. As both significance values fall below the 0.05 threshold, the difference in post-test performance between the two groups can be considered statistically significant.

These findings indicate that students in the experimental group, who were taught using Quizizz or similar interactive learning strategies, demonstrated stronger reading performance than those in the control group who received conventional instruction. The application of the Mann-Whitney U Test, an appropriate non-parametric method for analyzing independent samples with non-normal distribution, supports the interpretation that the observed difference is attributable to the instructional intervention rather than chance. Accordingly, the results suggest that the treatment had a meaningful and statistically significant influence on students' reading achievement. In light of these results, the null hypothesis (H_0), which proposed that the use of Quizizz would not improve students' reading ability and learning motivation, was rejected. Conversely, the alternative

hypothesis (H_1) was supported, indicating that integrating Quizizz into instruction can positively influence students' reading performance and motivation. These outcomes further underscore the potential of gamified learning platforms such as Quizizz in promoting academic achievement and active engagement in reading tasks.

Qualitative Results

The qualitative findings in this study provide valuable perspectives on how Quizizz influences students' motivation and learning behavior. Using Self-Determination Theory as a lens Ryan & Deci (2022), the analysis centers on three core psychological needs: autonomy, competence, and relatedness. Autonomy refers to one's capacity to make decisions and exercise control over their actions. In an educational setting, this includes students' ability to manage their learning, such as deciding when to study, choosing how to complete tasks, and selecting appropriate learning resources. A strong sense of autonomy is thought to encourage intrinsic motivation, as students perceive their efforts as self-directed rather than externally imposed. When learners are given opportunities to make meaningful choices, they tend to become more engaged and take greater ownership of their learning process. Within this study, understanding autonomy is particularly relevant because platforms like Quizizz allow students to work at their own pace and access content independently. This raises the question of whether such flexibility supports their motivation to study beyond classroom hours. To examine this aspect, students were asked reflective questions about their independent experiences with Quizizz, including how they felt about self-directed learning and whether they found it motivating or enjoyable.

"Yes, I enjoy studying independently using Quizizz at home, especially when the topics are interesting or when I'm preparing for upcoming tests. Sometimes, I also like using it with friends by entering the same code, which makes it more fun."

All four respondents in this study indicated that they enjoy using Quizizz independently at home, although their preferences and usage patterns varied. Some students shared that they are more motivated when the topics are interesting or related to upcoming assessments. Others mentioned using the platform with friends through shared game codes, which added a social and enjoyable aspect to their independent study. Overall, the responses show that students appreciate the flexibility to decide when, how, and with whom they engage with learning materials. This sense of control reflects the development of autonomy, where learners begin to take greater ownership of their study process and choices outside the classroom setting. These patterns align with the idea that independent learning is not only about studying alone but also about experiencing a shift in attitude. It involves becoming more self-reliant, confident, and less dependent on others in the learning process (Moh Ghoizi Eriyanto et al., 2021). The theory explains that learning helps shape individuals to stand on their own, and this transformation toward autonomy reflects personal growth that occurs through education. Furthermore, the findings also reflect that independent learning involves an internal capacity to overcome challenges such as navigating technology or maintaining motivation in online settings (Sumbawati et al., 2020). It highlights that students who are able to manage their own learning, use digital tools effectively, and stay motivated on their own demonstrate the essential characteristics of autonomous learners in digital learning environments. However, autonomy alone is not enough to sustain meaningful engagement. Another key factor in Self-Determination Theory is competence, which refers to a learner's need to feel effective and capable when engaging with tasks and challenges. To explore how students perceive their own competence while using Quizizz, they were asked to reflect on their experience with feedback, progress, and their confidence in learning while using the platform.

Within the Self-Determination Theory framework, competence refers to the need for learners to feel capable and effective when facing academic tasks and challenges. In educational settings, it is reflected in students' confidence to comprehend learning materials, accomplish assignments, and grow through continuous effort. Experiencing success and recognizing personal progress can enhance students' motivation and encourage persistence in their learning journey. Tools like Quizizz help support this need by offering instant feedback, allowing learners to identify their mistakes and make corrections immediately. This process helps build a sense of achievement and encourages continued engagement. To better understand how students perceive their own competence while using Quizizz, they were invited to reflect on whether features like instant feedback, scoring, and progress tracking helped them feel more confident in their learning.

"Yes, the auto-feedback feature in Quizizz helps me feel more motivated and enthusiastic about learning because it allows me to understand my mistakes and correct them in the next question. When I answer correctly, I feel more confident, and when I get something wrong, the immediate explanations help me understand the material better. This feature also makes me feel supported in my learning process and better prepared for upcoming tasks."

All four students shared that they felt more motivated and confident when using Quizizz because of its auto-feedback feature. In their combined response, they expressed that the instant feedback helped them understand their mistakes, correct their answers, and better comprehend the material. They appreciated how the explanations provided after each question guided them toward improvement, making them feel more supported and prepared for future tasks. For these students, the feedback was not just informative, it was also encouraging, increasing their enthusiasm for learning. This response illustrates the role of competence in Self-Determination Theory, which highlights a student's need to feel effective in their learning. When learners are able to recognize their mistakes and immediately act on them, they are more likely to develop a sense of progress and accomplishment. This contributes to sustained motivation and builds confidence over time. These patterns are consistent with research on digital feedback systems. Automated feedback has been shown to improve the overall learning experience by reducing the delay between answering and receiving input, while also removing the possibility of bias in how responses are scored (Hahn et al., 2021). This means students can receive fast, objective feedback that helps them adjust without waiting or relying on subjective judgment. In addition, automatic feedback plays a key role in improving academic outcomes, especially when it helps guide learners through specific topics or areas of difficulty (Cavalcanti et al., 2021). Rather than just identifying what was wrong, such systems actively support learning by helping students understand where and how to improve. Furthermore, platforms that allow for multiple attempts and nearly instant feedback tend to increase students' satisfaction and give them more opportunities to succeed (Messer et al., 2024). When students are given opportunities to retry and reflect on their work, such tools help establish a learning environment that nurtures their sense of competence. Alongside autonomy and competence, Self-Determination Theory also highlights relatedness as a key factor, referring to the learner's need to feel connected to others, supported emotionally, and recognized as a valued part of the learning community.

Another important aspect in Self-Determination Theory is relatedness, which refers to the emotional bonds and social connections students develop in their learning environment. This includes feeling accepted, supported, and part of a group where collaboration and interaction are encouraged. When students feel connected to those around them, they are more likely to stay motivated and engaged in learning activities. A sense of community can also help reduce feelings of isolation and foster a more positive attitude toward academic tasks. Quizizz supports this element of motivation through features that allow students to play together, share codes, and view real-time leaderboards.

These tools create opportunities for students to interact socially, participate in friendly competition, and experience learning as a shared process. To explore this further, students were asked to reflect on whether learning with peers and seeing their names on the leaderboard helped them feel more connected and encouraged to participate in the activity.

"Yes, working with friends on Quizizz makes me feel more motivated, especially when I can see their progress on the leaderboard, which challenges me to improve myself. Studying together creates a more exciting atmosphere and makes me feel closer to my classmates. The friendly competition that arises helps me focus and motivates me to do better, even though sometimes it feels more like a race. Seeing my rank encourages me to compete in a positive way and improve my results, while the support from my peers helps me understand the material more effectively. This shared experience not only boosts my learning but also strengthens my connection with others."

The students' shared response reflects that learning alongside classmates through Quizizz features, such as real-time leaderboards, helps create a stronger sense of motivation and connection. The social interaction and friendly competition that emerge during these activities appear to enhance their engagement and make the learning environment feel more dynamic. Students described how studying together made them feel emotionally closer to their peers, and how seeing each other's progress encouraged them to put forth greater effort. Although the activity sometimes felt competitive, it was perceived as positive and enjoyable, contributing to a sense of community and mutual accomplishment. This reflects the principle of relatedness in Self-Determination Theory, which highlights the role of social connection and emotional support within the learning environment. When students experience learning not as an isolated task but as a collaborative process with others, they tend to be more intrinsically motivated. These student perspectives are supported by prior research.

Providing relatedness support through caring, emotionally responsive environments has been shown to significantly enhance intrinsic motivation (Maddens et al., 2023). This suggests that motivation increases when students feel seen and valued in their learning context. Leaderboards, in particular, have shown positive effects on students' motivation, engagement, and academic outcomes by fostering a learning environment that is both interactive and socially engaging (Li et al., 2024). They add an element of friendly competition that keeps students actively involved and aware of their progress. The use of leaderboards has also been shown to strengthen motivation by helping students visualize their performance in comparison to others, which encourages ongoing participation and effort (Leitão et al., 2022). These findings reinforce that social features embedded in learning platforms like Quizizz play an essential role in meeting students' psychological need for relatedness.

The results of the study provide clear answers to the two research questions. For the first question, the quantitative data indicate that the use of Quizizz significantly improved students' reading comprehension, as reflected in the higher post-test scores of the experimental group compared to the control group. For the second question, the qualitative findings show that Quizizz enhanced students' motivation by supporting their psychological needs for autonomy, competence, and relatedness, as conceptualized in Self-Determination Theory. These findings suggest that gamified platforms like Quizizz can effectively promote both academic performance and motivational engagement in EFL reading classrooms.

CONCLUSION

This study investigated the effects of using Quizizz on students' reading comprehension and learning motivation, with a focus on gamified instructional strategies. The findings indicated that integrating Quizizz into classroom activities supported significant improvements in various reading subskills. Students showed noticeable gains

in understanding vocabulary, recognizing main ideas, drawing inferences, and summarizing texts. These skills are widely recognized as fundamental components of reading proficiency and are essential for academic success in EFL settings.

From a motivational perspective, the study adopted the lens of Self-Determination Theory to explore how Quizizz shaped students' engagement. The results suggested that the platform helped fulfill three basic psychological needs: autonomy, competence, and relatedness. Students valued the opportunity to manage their own learning, benefit from instant feedback, and interact with peers through gamified features. These aspects contributed to higher motivation, greater confidence, and more consistent participation during the learning process.

The findings demonstrate that game-based tools like Quizizz offer more than just technological novelty; they present meaningful pedagogical value when applied intentionally. By creating a more dynamic, interactive, and student-centered learning environment, such platforms can enhance both cognitive and affective outcomes. Future curriculum planning and instructional design should consider incorporating gamification more purposefully to promote deeper learning and sustained motivation, especially in reading instruction for EFL learners.

RECOMMENDATION

The findings underscore the importance of continuing to explore gamified learning platforms like Quizizz to enhance reading instruction in real-world classroom contexts. Future research could investigate its use across various language skills, compare its impact with other educational technologies, or examine its long-term effectiveness in diverse educational settings. While the current study offers promising evidence, additional inquiry is needed into how such tools can be seamlessly integrated into curricula, adapted for different proficiency levels, and optimized for instructional design. In addition to research directions, practitioners are encouraged to explore the thoughtful use of gamified tools like Quizizz to support student engagement and reading development. Teachers might experiment with combining game-based features and traditional methods to create more dynamic and motivating classroom experiences.

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