

QUIZLET-BASED FORMATIVE ASSESSMENT IN EFL READING: ITS EFFECT ON STUDENTS' READING COMPREHENSION ACHIEVEMENT

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Abstract

Reading comprehension is an essential component of English language learning because students must be able to interpret written texts and construct meaning from the information they encounter. However, classroom assessment may not always contribute sufficiently to this process when it focuses mainly on measuring students' achievement rather than assisting them during learning. To address this concern, this study investigated the use of Quizlet-based formative assessment to support students' reading comprehension and evaluated its effectiveness in comparison with conventional assessment practices. The study employed a quantitative approach within a quasi-experimental pretest-posttest control group framework, involving 66 tenth-grade students distributed across an experimental group of 32 and a control group of 34. The data were obtained from multiple-choice reading comprehension tests and examined through descriptive statistics, paired-samples *t*-tests, an independent-samples *t*-test, and Cohen's *d*. The experimental group demonstrated an increase in its mean score from 78.44 in the pre-test to 87.97 in the post-test, while the control group's mean score increased from 76.47 to 83.38. Although both groups showed statistically significant improvement ($p < .001$), the experimental group achieved a greater gain. The post-test analysis further revealed a significant difference between the two groups ($p = .010$), with an effect size of 0.66, indicating a moderate effect. These findings indicate that incorporating Quizlet into formative assessment may contribute to the development of students' reading comprehension by giving them opportunities for repeated practice, immediate feedback, and more active involvement in the learning process.

Keywords: Quizlet; formative assessment; reading comprehension; EFL; digital learning;

1 INTRODUCTION

Reading constitutes a fundamental dimension of English language learning, as it enables learners to access information, interpret ideas, and construct meaning through engagement with written texts. In English as a Foreign Language (EFL) contexts, effective reading involves considerably more than recognizing individual words. Learners need to process information, connect ideas, infer meanings, and construct an integrated understanding of the text (Grabe & Stoller, 2011). Along similar lines, Kusumarasdyati (2023) conceptualizes reading comprehension as an active meaning-making process through which readers construct interpretations by interacting with and processing information presented in a text. For EFL learners, comprehension problems can occur when they are required to locate the main idea, distinguish pertinent details, understand unfamiliar vocabulary, or formulate conclusions based on information that is only implied (Ramadhianti & Somba, 2023). These challenges underscore the need for instructional practices that provide continuous support instead of concentrating solely on the evaluation of students' achievement at the conclusion of instruction.

Assessment can contribute to such support when it is integrated into the learning process rather than being used exclusively at its final stage. Brown (2004) characterizes assessment as a structured process through which information about something is systematically collected and examined learners through various forms of measurement. Within this broader function, formative assessment uses information collected throughout instruction to recognize learners' needs and guide their further development. Ismail et al. (2022) found that assessment practices can influence various dimensions of student learning, including motivation, attitudes, test anxiety, and self-regulation. Similarly, Karaman (2021) reported that formative assessment can make a positive contribution to student learning. When assessment is accompanied by feedback and opportunities for learners to respond to that feedback, it can therefore perform a developmental role, extending beyond its traditional function of measuring academic achievement.

The advancement of digital technology has broadened the ways in which formative assessment can be implemented, particularly through interactive tasks, immediate feedback, and features that enable learners to monitor their progress. Nuraini et al. (2025), for instance, demonstrated the potential of Edmodo-based formative assessment to support reading comprehension by delivering real-time feedback and promoting active learner involvement. A comparable opportunity is offered by Quizlet, a digital platform that incorporates flashcards, quizzes, and interactive learning activities. These features enable learners to review instructional materials and engage in repeated practice. Consequently, Quizlet can function not only as a medium for learning but also as a tool that supports the implementation of formative assessment within classroom instruction.

Previous research has predominantly focused on how Quizlet can be utilized to facilitate students' vocabulary development. Dizon (2016) found that the platform supported the acquisition of academic vocabulary, while Sanosi (2018) reported favorable outcomes from its application in vocabulary learning. Öğretim et al. (2019) investigated the integration of Quizlet for vocabulary instruction in relation to learners' attitudes toward English. Likewise, Setiawan & Wiedarti (2020) reported increased motivation in vocabulary learning, and Permatasari et al. (2025) demonstrated the platform's contribution to EFL learners' vocabulary mastery. Taken together, these findings establish Quizlet as a useful resource for language learning. Nevertheless, the strong emphasis on vocabulary development suggests that its application to reading comprehension has received comparatively limited scholarly attention.

The potential contribution of Quizlet can also be explained from the perspective of retrieval practice. Roediger & Karpicke (2006) demonstrated that actively recalling previously learned information through testing can promote stronger long-term retention. When retrieval activities are conducted regularly and supported by feedback, learners are given opportunities to recognize areas that require further attention, reinforce their understanding, and retain information more effectively. Quizlet provides conditions that can accommodate this process because learners can repeatedly retrieve and engage with instructional materials while receiving immediate information about whether their responses are accurate.

Although scholarly interest in Quizlet has continued to increase, its specific application as a formative assessment tool for developing reading comprehension remains relatively underexplored. Existing studies have largely emphasized vocabulary acquisition, learner motivation, and engagement, with less attention devoted to the integration of Quizlet into reading instruction from an assessment-for-learning perspective. This gap creates an opportunity to reconsider the function of Quizlet beyond its widely recognized role as a vocabulary-learning application. Examining the platform from a broader perspective may demonstrate how repeated practice, assessment, feedback, and reading comprehension can be brought together within an integrated learning process. Accordingly, the present study positions Quizlet not merely as a digital learning medium but as a component of formative assessment intended to provide ongoing support for the development of students' reading comprehension.

Accordingly, this study sought to determine the extent to which embedding Quizlet within formative assessment practices could influence students' reading comprehension achievement. It also investigated the extent to which students' reading comprehension improved following the implementation of the approach and determined whether differences existed in reading comprehension achievement between students who received Quizlet-based formative assessment and those who were taught through conventional assessment methods.

2 METHODOLOGY

A quantitative approach was employed to investigate the execution of Quizlet-supported formative assessment within a quasi-experimental framework. The research was structured around a pretest-posttest control group design and involved 66 tenth-grade students enrolled in the 2026/2027 academic year. Rather than assigning students randomly, the participants remained in their respective existing classes; consequently, the experimental and control groups were established based on the predefined classroom structure. The experimental group consisted of 32 students who participated in formative assessment activities supported by Quizlet, while the control group comprised 34 students who received assessment through conventional classroom procedures.

Students' reading comprehension was measured using an objective multiple-choice test. The instrument covered four comprehension indicators: main ideas, specific information, inference, and vocabulary in context. A total of 40 items were prepared, of which 20 were administered in the pre-test and the

remaining 20 in the post-test. Each correct answer was awarded five points, whereas an incorrect response received zero points. Before being utilized for the primary data collection, the instrument underwent an initial try-out to evaluate its validity and reliability. An acceptable level of internal consistency among the test items was indicated by the reliability analysis's Cronbach's alpha coefficient of 0.929.

The research procedures were organized into three successive stages: preliminary assessment, instructional treatment, and final assessment. During the preliminary stage, the test instrument was first subjected to a try-out, followed by the administration of a pre-test to identify students' initial reading comprehension performance. The treatment stage then involved the implementation of different assessment approaches in the two groups. For the experimental group, Quizlet was integrated into formative assessment activities, allowing students to review the learning materials, undertake structured practice, respond to comprehension questions, and receive feedback throughout the learning process. Meanwhile, students in the control group participated in assessment activities conducted through conventional procedures. Following the completion of the instructional treatment, both groups undertook a post-test to determine the extent of change in their reading comprehension achievement.

The collected scores underwent descriptive and inferential analyses to provide both an overview of students' performance and statistical evidence of the treatment effects. Changes occurring within each group were assessed through a paired-samples *t*-test, which compared students' performance across the pre-test and post-test stages. To establish whether the two groups differed in their post-test achievement, an independent-samples *t*-test was subsequently performed. The magnitude of the observed difference was further evaluated using Cohen's *d* to determine the practical strength of the treatment effect. All statistical decisions were made using a significance criterion of 0.05.

3 RESULTS

3.1 Research Overview

The study drew on 66 tenth-grade students who remained within their established classroom groups, comprising 32 participants in the experimental group and 34 in the control group. Before the instructional treatment commenced, both groups undertook a pre-test to establish their initial reading comprehension performance. The subsequent instructional phase differentiated the assessment practices applied to each group: the experimental group engaged in Quizlet-based formative assessment, whereas the control group continued with conventional assessment procedures. Upon completion of the treatment, a post-test was administered to both groups to determine changes in reading comprehension achievement in accordance with the quasi-experimental design.

3.1.1 Descriptive Statistics

Descriptive statistics were employed to capture the overall pattern of students' performance across the pre-treatment and post-treatment stages.

Table 1. Descriptive Statistics for the Control Group

Group	N	Pre-test Mean	Post-test Mean	Mean Gain
Control	34	76.47	83.38	6.91
Experimental	32	78.44	87.97	9.53

Both groups demonstrated measurable gains in reading comprehension following the instructional period, although the extent of progress differed between them. In the control group, the mean score moved from 76.47 on the pre-test to 83.38 on the post-test, yielding a 6.91-point increase. A more substantial gain was recorded in the experimental group, where the mean rose from 78.44 to 87.97, corresponding to an improvement of 9.53 points. The upward movement in both sets of scores suggests that the instructional process contributed to students' reading comprehension development; however, the larger gain achieved by the experimental group points to the potential added value of Quizlet-based

formative assessment in supporting reading comprehension beyond conventional assessment practices.

3.1.2 Normality Test

The normality of the collected scores was evaluated through the Shapiro–Wilk test to establish whether their distribution conformed to the assumption of normality.

Table 2. Normality test results

Class		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pre-test score	DKV 1	0,142	34	0,081	0,941	34	0,067
	DKV 2	0,144	32	0,088	0,954	32	0,187
Post-test score	DKV 1	0,156	34	0,036	0,946	34	0,090
	DKV 2	0,171	32	0,018	0,939	32	0,070

The Shapiro-Wilk results yielded significance values exceeding the 0.05 threshold for all datasets, thereby confirming that the data satisfied the assumption of normality.

3.1.3 Homogeneity Test

The equality of variance was assessed to establish whether the two groups exhibited a comparable degree of score variability.

Table 3. Homogeneity Test Results

Test Type	Sig. value
Post-test	0,475

The obtained significance value of 0.475 exceeds the 0.05 criterion, indicating that the variability across the groups can be regarded as homogeneous.

3.1.4 Paired Sample t-Test

A paired-samples *t*-test was conducted to examine changes in students' performance by comparing their pre-test and post-test scores within each group.

Table 4. Paired Sample t-Test Results

Group	Mean Difference	<i>t</i>	df	Sig. (2-tailed)
Control	-6.912	-7.142	33	< .001
Experimental	-9.531	-7.041	31	< .001

Although both groups made significant progress, the experimental group showed a larger increase in mean scores, suggesting that the improvement was more pronounced than in the control group.

3.1.5 Independent Sample t-Test

The analysis was undertaken to establish whether the post-test outcomes showed a statistically meaningful difference between the two groups.

Table 5. Independent-Samples t-Test Results

Comparison	<i>t</i>	df	Sig. (2-tailed)	Mean Difference
Experimental vs. Control	-2.663	64	.010	-4.586

With a significance value of 0.010 falling below the predetermined 0.05 criterion, the statistical analysis provides evidence of a significant difference in performance between the two groups.

3.1.6 Effect Size

Cohen's *d* was employed to quantify the magnitude of the effect associated with the intervention across the experimental and control groups.

Table 6. Effect Size of Quizlet-Based Formative Assessment

Experimental Mean	Control Mean	Pooled SD	Cohen's <i>d</i>	Interpretation
87.97	83.38	6.99	0.66	Moderate

The Cohen's *d* value of 0.66 represents a moderate effect, suggesting that the treatment produced a meaningful difference in students' reading comprehension performance. While both groups demonstrated progress following the instructional intervention, students exposed to Quizlet-Based Formative Assessment achieved a more substantial improvement. One possible explanation lies in Quizlet's interactive features, particularly the immediate feedback provided during learning activities. Through this feedback, students can monitor their performance as they learn and recognize areas that still need further improvement. Beyond feedback, the use of digital learning media may encourage greater motivation and active participation, allowing students to engage more directly with the learning tasks. From an instructional perspective, incorporating technology into formative assessment can shift assessment from a purely evaluative process toward a more interactive learning experience in which students take a more active role in monitoring and developing their own understanding. These findings therefore highlight the potential of innovative assessment practices to support EFL instruction, particularly in facilitating continuous development of students' reading comprehension achievement.

3.2 Discussions

The pre-test and post-test scores reveal a clearer improvement among students who received Quizlet-based formative assessment. Their mean score increased from 78.44 to 87.97, resulting in a gain of 9.53 points. In comparison, the control group improved from 76.47 to 83.38, representing a 6.91-point increase. Although both groups made progress after the instructional treatment, the larger gain achieved by the experimental group indicates that Quizlet-based formative assessment may have offered greater support for developing students' reading comprehension than conventional assessment practices.

The improvement demonstrated by the experimental group's improvement may be ascribed to the continuous learning opportunities incorporated into the assessment process. Assessment was not restricted to determining students' final learning outcomes; instead, students were given opportunities to review reading materials, engage in practice activities, answer comprehension questions, and revisit content after receiving feedback. Through this sequence of activities, assessment became integrated with instruction and allowed students to repeatedly engage with the learning material to consolidate their understanding.

Immediate feedback may have also played an important role in supporting students' progress. Through Quizlet, learners could determine whether their responses were correct immediately after completing an activity. This feature allowed them to identify mistakes, reconsider their interpretation of the text, and review information that they had not yet fully understood. Such feedback is particularly valuable in reading comprehension, where learners are required to locate relevant information, establish connections between ideas, and construct meaning from written texts. Providing feedback throughout

the learning process may therefore help students respond to comprehension difficulties before they become persistent.

The findings may further be understood in relation to the concept of retrieval practice. Roediger and Karpicke (2006) found that retrieving previously learned information through testing can contribute to stronger retention over time. The repeated activities available through Quizlet provided students with opportunities to recall, process, and apply information contained in the instructional materials. When retrieval was combined with regular practice and feedback, students had greater opportunities to reinforce their understanding, which may have contributed to the improvement observed in their reading comprehension performance.

Previous studies have likewise emphasized Quizlet's potential as a language study tool. Dizon (2016), for example, reported significant gains in academic vocabulary among EFL learners who used Quizlet. Although the focus of that study was vocabulary acquisition, its findings demonstrate the platform's capacity to support repeated language practice. The present findings extend this potential by positioning Quizlet within a formative assessment framework and applying its features to reading comprehension rather than limiting its use to vocabulary development.

The comparison of post-test outcomes demonstrated a discernible difference in students' reading comprehension performance under the two assessment conditions. An independent-samples *t*-test produced a significance value of .010, which was below the predetermined 0.05 level, confirming that the difference between the experimental and control groups was statistically significant. Further examination of the effect magnitude yielded a Cohen's *d* value of 0.66, indicating that the observed difference represented a moderate effect.

The findings point to the potential of Quizlet to strengthen formative assessment by integrating repeated practice, retrieval-based learning, and immediate feedback into classroom activities. The experimental group not only recorded a larger gain in mean scores but also showed a statistically significant difference in post-test performance when compared with the control group. This pattern suggests that Quizlet's interactive assessment features may extend the role of assessment beyond simply measuring achievement by providing learners with continuous opportunities to practice, respond to feedback, and monitor their progress. In this way, Quizlet-based formative assessment may offer a more engaging and supportive learning environment than conventional assessment practices used in the classroom.

4 CONCLUSIONS

The findings demonstrate a favorable contribution of Quizlet-based formative assessment to students' reading comprehension. Although both groups made significant gains, the experimental group progressed further, with its mean score rising from 78.44 to 87.97, compared with an increase from 76.47 to 83.38 in the control group. The significant post-test difference ($p = .010$), together with a moderate Cohen's *d* of 0.66, indicates that the advantage associated with the Quizlet-based approach was meaningful, though not substantial in magnitude. This improvement may reflect the role of Quizlet in facilitating repeated practice, retrieval of previously learned material, and immediate feedback, which enabled students to recognize and respond to comprehension difficulties during instruction. Accordingly, Quizlet can be viewed not merely as a digital assessment medium, but as a formative learning tool that supports continuous engagement and the gradual development of reading comprehension.

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