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**PROMOTING FORMATIVE ASSESSMENT
WITH QUIZZZ:
A CLASSROOM ACTION RESEARCH STUDY**

**PROMOVIENDO LA EVALUACIÓN FORMATIVA CON
QUIZZZ: UN ESTUDIO DE INVESTIGACIÓN ACCIÓN EN EL
AULA**

Helen Moreira

Universidad Nacional de Educación, Ecuador

Martha Lucia Lara Freire

Universidad Nacional de Educación, Ecuador



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Promoting Formative Assessment with Quizizz: A Classroom Action Research Study

Helen Moreira¹

helen.moreira@unae.edu.ec

<https://orcid.org/0000-0003-1061-1887>

Universidad Nacional de Educación
Ecuador

Martha Lucia Lara Freire

martha.lara@unae.edu.ec

<https://orcid.org/0000-0002-3847-0554>

Universidad Nacional de Educación
Ecuador

ABSTRACT

This research aims to explore the utility of Quizizz as a formative assessment tool within educational settings, considering the evolving landscape where traditional assessment methods are giving way to innovative technological solutions. Quizizz, a digital platform seamlessly integrating gamification and formative assessment methodologies, has gained popularity owing to its dynamic and interactive features. This study endeavors to delve into students' perspectives and experiences with Quizizz, examining its alignment with formative assessment principles and identifying optimal strategies for its integration into undergraduate education. Employing a classroom action research methodology, this study centers on teacher-researchers' enhancements of their teaching processes through a cycle of investigation and action. The research encompasses planning, implementation, observation, and reflection stages, utilizing data from observation sheets and focus group discussions. The results underscore Quizizz's efficacy in engaging students, providing prompt feedback, and fostering interactive learning environments. Students express appreciation for Quizizz's gamified approach, enhancing motivation and participation. Nevertheless, challenges, including technical issues and the need for clearer explanations, are identified. Informed by students' recommendations and preferences, this study contributes to best practices for educators utilizing Quizizz as a dynamic formative assessment tool.

Keywords: formative assessment, quizizz, EFL, ELT

¹ Autor principal.

Correspondencia: helen.moreira@unae.edu.ec



Promoviendo la Evaluación Formativa con Quizizz: Un estudio de Investigación Acción en el Aula

RESUMEN

El objetivo de la presente investigación es explorar la utilidad de Quizizz como herramienta de evaluación formativa en entornos educativos, teniendo en cuenta la evolución del panorama en el que los métodos de evaluación tradicionales están dando paso a soluciones tecnológicas innovadoras. Quizizz, una plataforma digital que integra a la perfección metodologías de gamificación y evaluación formativa, ha ganado popularidad debido a sus características dinámicas e interactivas. Este estudio pretende profundizar en las perspectivas y experiencias de los estudiantes con Quizizz, examinando su alineación con los principios de la evaluación formativa e identificando las estrategias óptimas para su integración en la enseñanza universitaria. Empleando una metodología de investigación-acción en el aula, este estudio se centra en la mejora por parte de los profesores-investigadores de sus procesos de enseñanza a través de un ciclo de investigación y acción. La investigación abarca las etapas de planificación, implementación, observación y reflexión, utilizando datos de hojas de observación y discusiones de grupos focales. Los resultados subrayan la eficacia de Quizizz a la hora de incrementar la participación de los estudiantes, proporcionar retroalimentación inmediata y fomentar entornos de aprendizaje interactivos. Los estudiantes aprecian el enfoque lúdico de Quizizz, que aumenta la motivación y la participación. No obstante, se señalan algunos retos, como cuestiones técnicas y la necesidad de instrucciones más claras. A partir de las recomendaciones y preferencias de los estudiantes, este estudio aporta a mejores prácticas para los educadores que utilizan Quizizz como herramienta dinámica de evaluación formativa.

Palabras clave: evaluación formativa, cuestionario, inglés como lengua extranjera, ELT

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INTRODUCTION

Assessment is a key element of the education process, as it provides insight into students' learning and informs teaching practices (Pellegrino et al., 2001). Traditionally, assessments have been administered through paper-based tests, quizzes, and assignments. Innovative assessment approaches, on the other hand, have become available to help educators and learners respond to changing needs in a rapidly evolving technology (Bennett & Maton, 2010; Chuang, 2014). The use of Quizizz, a web platform that brings together gamification elements and formative assessment techniques, is one approach that has been popularized in education settings (Fadiyah et al., 2023).

The integration of technology in education has redefined the learning experience for both students and teachers, providing personalized and interactive learning opportunities (Van Eck, 2017). This transformation has, in turn, reshaped the landscape of formative assessment, with educators actively seeking digital methods aligned with the demands of the digital era (Shute & Ventura, 2013).

Quizizz, a technological tool at the forefront of this paradigm shift, offers a dynamic and interactive formative assessment experience. This platform empowers educators to create and customize quizzes accessible to students remotely. Students engage with quizzes through their devices, receiving instant feedback and performance analytics that foster self-assessment and reflective learning (Suwarni et al., 2023).

Thus, this study aims to delve into students' perceptions and experiences regarding Quizizz as a formative assessment tool, evaluating its alignment with formative assessment principles and identifying best practices for its integration into undergraduate educational settings. The research seeks to empower educators with informed decisions for implementing Quizizz, addressing the limitations of traditional assessment methods and advocating for innovative alternatives.

Assessment Methods Employed in Education

Assessment involves the systematic collection and analysis of evidence to inform educational decisions. Two key types of assessment commonly used in education are formative assessment and summative assessment. Formative assessment focuses on providing ongoing feedback and monitoring student progress, while summative assessment evaluates overall learning outcomes and assigns grades. Together,



these assessment types contribute to a comprehensive understanding of student learning and inform instructional practices.

Formative and summative assessments have separate functions and characteristics. Formative assessments are constant and frequent, with the primary purpose of guiding instruction and providing feedback for progress (Black & Wiliam, 2009). They aim to be useful, helping students and teachers to identify areas of strength and weakness and transform teaching and learning strategies accordingly. Summative assessments, on the other hand, are often given at the end of a learning period and are primarily concerned with measuring success against established standards (Gronlund, 2013). They provide an overview of students' overall performance and are frequently used for grading, program evaluation, and accountability.

For decades, traditional assessments in education have been most frequently carried out by means of paper tests, quizzes and assignments. These methods were at the center of assessing students' knowledge and understanding. However, they have limitations that have prompted the exploration of innovative assessment approaches.

Technology and its Impact on Formative Assessment Practices

One of the key impacts of technology on assessment practices is the shift from traditional pen-and-paper assessments to computer-based assessments. Computer-based assessments offer several advantages, including enhanced efficiency, increased flexibility, and improved accessibility (Wainer, 2000). They can be administered remotely, allowing for greater convenience and flexibility in scheduling assessments (Bennett, 2010). Depending on the aim of the assessment, different models can be employed, such as evaluating a general level of proficiency, providing diagnostic information, or characterizing knowledge (Mislevy et al. 2012). Rich and immediate feedback at the end of the test can assist teachers in identifying at-risk students. When students respond incorrectly on a practice test, it also protects against perseveration errors (Dunlosky et al. 2013).

Furthermore, technology has facilitated the development of formative assessment tools and platforms that make use of digital capabilities. For example, online learning management systems (LMS) and assessment platforms like Quizizz, Kahoot, and Google Forms have gained popularity in educational settings (Raju et al., 2021) These platforms offer features such as instant feedback, automated scoring,



and data analytics, allowing educators to assess student performance in real-time and gain valuable insights into student learning (Dangwal, 2023). They also provide opportunities for formative assessment, enabling educators to monitor student progress, provide timely interventions, and promote self-regulated learning (Nadeem & Alfalig, 2020).

Features of Quizizz as a Formative Assessment Tool

Quizizz has emerged as an innovative formative assessment tool that uses technology to enhance the assessment experience for both teachers and students. It is well-suited to be used as a formative test tool as teachers can download the tests reports and evaluate student performance after given a quiz (Perdana & Permatawati, 2019) It offers a range of features that can contribute to student concentration, participation, happiness, motivation, and student satisfaction (Chaiyo & Nokham, 2017). It presents elements like leaderboards, avatars, and funny memes to create an enjoyable assessment environment. These features make the assessment process more interactive, fostering students' interest and participation in learning (Zhao, 2019)

Quizizz also offers flexibility and accessibility. Teachers have the option to create and share quizzes that can be opened by students from any device with internet access, facilitating both in-person and online environments (Siti & Bambang, 2020). As a result of this flexibility, assessments can be completed at a time that is convenient for students while also accommodating to a variety of learning situations.

Another notable feature is its self-pace mode. Students have autonomy and control over their learning process due to this feature, which allows them to complete the quizzes at their own pace. Assessments can be completed independently by students, giving them a personalized learning experience. Furthermore, Lestari (2019) discovered that students are more centered and mindful of the test when utilizing Quizizz.

Quizizz stands out as an innovative formative assessment tool, enhancing the assessment experience for teachers and students alike. Offering features such as leaderboards, avatars, and memes, Quizizz creates an engaging assessment environment, fostering student interest and participation. Its flexibility, accessibility, and self-paced mode further contribute to personalized learning experiences, making Quizizz a valuable addition to modern educational practices.



METHODOLOGY

The present study responds to classroom-based action research since it is focused on the teacher-researchers' teaching process improvement based on a cycle of investigation and action (Khasinah, 2013). The purpose was to investigate the characteristics and benefits of the Quizizz online platform and its use in formative assessment in the Pedagogical Models classroom during one semester. As stated by Sagor (2005), there are two categories of action research according to the purpose; the first one seeks to determine what is currently occurring; and the second to test a hypothesis. In this research, the emphasis is on the first purpose; for that reason, the researchers are engaged in what is called descriptive research. In descriptive research, the researchers not only consider their own experience, but also the contribution of other authors since the information collected directs the course for understanding the actions which need to be taken as to understand the strategies, the materials, and the outcomes by collecting data (McCombes, 2023).

In education, the terms action research and practitioner research are often used interchangeably because both types of research emphasize the role of the practitioner in conducting investigation in their classroom and schools. Many times, teachers find themselves concerned about their practices and how the learning process is conducting; hence, the need to contribute to understand current issues in the context of the classroom appears, with the purpose of designing effective strategies for improvement (Efrat & Ravid, 2020). Therefore, this study responds to the necessity of implementing innovative technological tools, platforms, or apps which can contribute to the development of interactive formative assessment in the Pedagogical Models classroom; considering that this subject is mostly theory-based. Regarding the achievement targets, there are three categories of foci that emerge most frequently for teacher-researchers; they are the following: performance targets, process targets, and program targets. The current study directs its attention to process targets as they are related to the techniques or strategies which teachers want to use in their repertoire, in this specific case, an online platform. Process targets give priority to the improvements or the usefulness of a specific method, strategy, or technique; for example, the use of Quizizz for formative assessment (Bennett, 2011).

Classroom action research is done through a cycle and is designed into four steps. Kemmis and McTaggart (1988) state that the research starts by planning for an action; then, the plan is implemented



as an action in the classroom, and the action is observed; finally, the reflection is conducted to analyze the data obtained during the action.

In this context, the researchers first selected the research participants, 41 students belonging to Third Semester of the Pedagogy of National and Foreign Language career in the first 2023 academic period. After that, the teachers used Quizizz as a formative assessment tool by creating questionnaires to activate background knowledge and assess information retention regarding the theory students review during the four units; the quizzes were implemented at the beginning and at the end of a unit or topic. Subsequently, an observation sheet including five categories was applied; the categories were the following: (1) instructional design and preparation, (2) student's engagement and preparation, (3) immediate feedback and progress monitoring, (4) differentiation and individualized learning, (5) overall assessment. In order to analyze the students' perception concerning the use of Quizizz, two focus group discussions also took place. To finish the cycle, the researchers organized and analyzed the data collected from the two data collection techniques: the observation sheet and the focus group discussion. As mentioned above, the observation sheet included five different categories and for the focus group discussions, the teachers organized two face-to-face meetings where students could share their perceptions about the use of Quizizz for formative assessment, challenges they faced, benefits they could identify, and suggestions they have for future lessons and studies.

Finally, it is essential to highlight that classroom action research is a method to find out what works best in our classrooms so that teachers could improve the teaching-learning process in a student-centered environment by taking advantage of the technology, a resource students enjoy using in class (Lufungulo, Mambwe, & Kalinde, 2021).

RESULTS AND DISCUSSION

Findings

For the findings analysis, first, the information collected from the observation sheet is presented; then, students' perceptions, comments, and suggestions from the focus group discussions are detailed. To exhibit the observation sheet findings in a visual and reader-friendly format, a table is used.



Table 1. Observation sheet findings

No.	Criteria	Findings
1	Instructional design and preparation	The quizzes teachers implemented in the classroom were aligned with the learning objective and content being taught. Besides, the questions were clear, concise, and appropriate for the students' level. Furthermore, they were varied as the teachers included multiple choice, true or false, and filled in the blanks questions which were great to get the whole class attention and engagement.
2	Student engagement and participation	To start with, it was observed that the teachers asked questions to assure students' understanding of the instructions and questions and to obtain better results. In addition, students seemed to enjoy the quiz as they were laughing, having fun, and showing interest in the activities.
3	Immediate feedback and progress monitoring	Through observation, it was noticed that some students got distracted as they were using their cellphones to develop the Quizizz activities; for that reason, permanent and effective monitoring is necessary. Nonetheless, the teachers' role is fundamental during the lesson; they provided immediate feedback, not only by the use of Quizizz, but also adding comments and meaningful information regarding students' incorrect answers as well as clarifying misconceptions and providing guidance for improvement.
4	Differentiation and individual learning	Considering that one of the Quizizz mode is instructor-paced, the teachers were making sure that all students answered the question before moving onto the next one. Furthermore, the teachers offered personalized feedback as they allowed at least 1 minute for discussion after each question was completed, which gave teachers the opportunity to provide extra examples.
5	Overall assessment	During the observation, teachers used Quizizz for formative assessment. At the beginning of the class to activate background knowledge and at the end of a lesson to monitor students' progress. It could be observed that students felt motivated as the activities were not graded and also to see their names on the podium.

Note: Summary of the observation sheets applied during the study



As previously stated, the second data collected technique applied in the study was focus groups. The analysis from the focus group discussions reveals valuable insights into the use of Quizizz as an educational tool. Students acknowledged that Quizizz served primarily as a means of testing their knowledge and assessing their understanding of various subjects. The interactive and game-like nature of Quizizz was appreciated by some, making the experience enjoyable and engaging. The enjoyable aspects of Quizizz for students included the element of competition and the instant feedback they received, which added to the gamified experience. Multiple-choice questions were particularly favored for their ability to aid in information recall.

Students also mentioned they felt motivated, challenged, and excited as Quizizz presents a competition format and provides the three best-scored students' podium. In addition, students consider Quizizz contributes to their learning process since they can check their wrong answers and reinforce the knowledge regarding some specific content or skills. Besides, the messages, emojis, and images they can visualize increase their interest while engaging them in the activities teachers develop during their class. Nonetheless, there were mixed feelings about the overall experience with Quizizz. While some students found them convenient and productive, others perceived Quizizz as potentially dull, challenging, and stressful, especially with long and complex questions. Specifically, one student mentioned that it is complicated for him to read and understand the questions in his mobile device which makes it hard for him to concentrate; therefore, this student affirmed he prefers paper-based activities and quizzes. Notwithstanding, the mobile accessibility of quizzes was seen as a positive aspect, facilitating easy access and completion of assessments.

The effectiveness of Quizizz in facilitating learning was a subject of diverse opinions among students. Some believed that Quizizz activities were beneficial for memorization and reinforcement, particularly for topics like vocabulary and regular verbs. However, a few students questioned the educational value of Quizizz, suggesting that they might be better suited for assessing existing knowledge rather than fostering the understanding of new topics. Moreover, students expressed they would rather use Quizizz for formative assessment than for summative assessment, as the grades are a priority for them.

Furthermore, while some students saw Quizizz activities as valuable learning aids that helped them identify areas for improvement and focus on specific topics, others were skeptical of their educational



impact, noting that Quizizz could sometimes lead to guessing answers without necessarily enhancing understanding. Nonetheless, students are aware of the fact that they have to be active learners and that Quizizz it is only a tool they must take the most advantage of.

The challenges and suggestions for improvement provided valuable feedback for enhancing the Quizizz experience. Students expressed concerns about the limited time for answering questions, difficulties in understanding certain questions, technical issues, and the lack of feedback on incorrect answers. To address these challenges, students recommended increasing the time limit, providing explanations for correct and incorrect answers, and allowing the option to change answers during the quiz.

Regarding the frequency and integration of quizzes, students had varying preferences. Some suggested regular weekly or bi-weekly quizzes, while others favored sporadic use as a supplementary learning tool. They also emphasized the importance of integrating quizzes into classroom activities to assess understanding after specific lessons.

In terms of best practices for teachers, students recommended using quizzes as formative assessment tools to gauge knowledge and progress. Quizzes were considered more suitable for practice and review rather than being the sole basis for grading. Providing explanations and feedback on students' performance was highlighted as a valuable practice.

Overall, the analysis from both focus groups demonstrates that quizzes can be effective tools for assessing knowledge and engaging students in the learning process. However, to optimize their educational value, it is essential to address challenges and incorporate students' feedback, such as providing more time, explanations, and reinforcement on incorrect answers. Teachers can use quizzes strategically as formative assessment and incorporate them into classroom activities to ensure learning and identify areas for improvement. By adopting best practices and considering students' preferences, quizzes can serve as valuable additions to the educational toolkit, supporting student learning and progress effectively.

DISCUSSION

In order to contribute to the discussion of this paper, first, two relevant background studies are provided. In the scientific article entitled *Formative Assessment: A critical review*, Bennett (2011) declares that it is fundamental for both teachers and students to understand what formative assessment implies. The



author mentions that the origin of the formative assessment was to focus on the process in order to find the best methods, strategies, and techniques to assure students' progress and positive outcomes. Nevertheless, it seems like with time, formative assessment became student oriented. For this reason, the author emphasizes the significance of knowing what the purpose of formative assessment is and in what context it is being implemented. After citing more than four researchers, English teachers, and specialists like Bloom; Bennet concluded that for a meaningful definition of formative assessment, we need at least two things: a theory of action and a concrete instantiation. Among other things, the theory of action identifies the characteristics and components of the entity we are claiming is formative assessment, along with the rationale for each of those characteristics and components; and postulates how these characteristics and components work together to create some desired set of outcomes. The concrete instantiation illustrates what formative assessment built to the theory looks like and how it might work in a real setting.

Then, the contribution of Bennett opens reflection and the relevance of analyzing how formative assessment is conceived; in this case, in the Pedagogical Models class; highlighting the purpose of providing an enjoyable environment and learning opportunities for students.

The second study which significantly pitches in is EFL learners' motivation in a gamified formative assessment: The case of Quizizz. To start, the definition of formative assessment is considered; emphasizing that the formative evaluation, unlike overall summative evaluation, aims to facilitate an individual's progress. Nonverbal feedback, homework assignments, and question-and-answer sessions are typical examples of formative assessment. However, with the assistance of the well-known assessment gamification platform Quizizz, teachers can conduct enjoyable and engaging student-paced formative tests with students of all ages. The gamified environment, which includes advancement, emotion, and relationships, is characterized by game dynamics. The mechanic's process involves crucial procedures to elicit behavior and increase player engagement.

After analyzing the data collected through observation, interviews, and tests; the authors conclude that the gamified assessments suit learners' mental needs in introjected regulation and knowledge recognition in identifying regulation thanks to the clear feedback and challenge of an uncertain environment. This research reveals gamified formative assessment could be applied to teachers and students in the



classroom. While there are many elements that affect how teachers utilize technology, the Barrier to Technology Integration Model (2005) indicated barriers such as value beliefs and aptitude that limit how much technology integration instructors can do. According to this study, instructors may use Quizizz successfully and with fewer barriers to most students' favorable attitudes. Teachers can effectively educate students and inspire them to place importance on the tests' purpose with the aid of Quizizz to increase their motivation. In addition, the online platform was created well for cooperative gaming components and for creating customizable learning settings. Still, it needs to give more consideration to differentiation and invisible barriers like complex operations (Zhang & Crawford, 2023).

In sum, the success in the implementation of a technological tool or in this case on online platform, relies on the teacher's knowledge, ability and how they plan their class; with clear objectives and focusing on the students' learning outcomes and how enjoyable their experience could be by applying a game-based formative assessment.

CONCLUSIONS

Quizizz has emerged as a spark of innovation in the fast-expanding environment of education, where technology is reshaping the way we teach and learn, bridging the gap between traditional assessment methods and the digital era. Quizizz's gamified and interactive nature taps into students' natural curiosity and competition, converting the assessment process from a mere evaluation of knowledge into an entertaining adventure of discovery. This research has shed light on the significant impact that a well-designed technology tool may have on student engagement, motivation, and overall learning experiences. While the findings highlight Quizizz's potential, they also highlight the necessity for a comprehensive approach to its implementation. Students' challenges, ranging from technical glitches to the perceived difficulty of some questions, remind us that, while technology can empower, it is educators' smart pedagogical practices and adaptation that truly harness its power. Educators may improve the effectiveness of Quizizz and ensure that it matches perfectly with their educational objectives by listening to student feedback and incorporating their ideas into the teaching process.

Furthermore, the debate over Quizizz highlights serious concerns about the changing role of assessments in modern education. As it is suggested in this study, formative assessment systems such as Quizizz are more than just procedures for assessing student understanding; they are essential components of the



learning journey itself. They provide insight into individual progress, provide customized learning paths, and instill a sense of control over one's education. However, it is vital to strike a balance, realizing that while technology might improve assessment processes, it should not overwhelm education's underlying goals of critical thinking, problem solving, and conceptual understanding.

In essence, Quizizz exemplifies the power of technology-enhanced formative assessment. Its inclusion in the educational environment represents an evolving shift in the teaching paradigm, from the traditional position of the teacher as the single source of knowledge to a facilitator of engaging, interactive, and student-centered learning experiences. This study emphasizes the importance of teachers' ability to adapt, innovate, and use technological tools such as Quizizz to make meaningful connections with their students and improve their learning journey.

The results of this study highlight the necessity of pedagogical knowledge for successful technological integration. In addition to its features, technologies like Quizizz have the power to alter education by empowering students, igniting their curiosity, and inspiring a love of lifelong learning. Technology and pedagogy can be used to provide an educational experience that is effective, interesting, and in line with the goals of a rapidly changing world.

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