

Integrating Digital Music Platform in EFL Instruction: Changes on Listening Comprehension and Vocabulary Acquisition

Integración de Plataforma Digital Musicales en la Enseñanza de EFL: Cambios en la Comprensión Auditiva y la Adquisición de Vocabulario

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ABSTRACT

Developing listening comprehension and acquiring vocabulary in English as a Foreign Language (EFL) remains a challenge in educational settings characterized by traditional teaching methods and limited opportunities for language exposure. This study analyzed the impact of integrating music-based digital platforms as a pedagogical strategy to enhance these linguistic skills among secondary school students. The research employed a mixed-methods approach with a single-group pre-experimental design (pre-test and post-test), utilizing both quantitative and qualitative instruments to assess student progress before and after the intervention. Diagnostic (pre-test) and final (post-test) assessments, along with surveys and observations, were used to measure changes in listening comprehension, vocabulary usage, and motivation for language learning. The intervention involved implementing structured activities via a digital platform that utilizes songs and interactive exercises based on song lyrics. The results demonstrated a substantial improvement in students' ability to comprehend auditory information, recognize vocabulary in context, and engage in active listening activities. Additionally, an increase in motivation and interest in learning English was observed, attributed to the dynamic and interactive nature of the digital tools employed. These findings suggest that using music-based digital platforms is an effective strategy for boosting key linguistic skills, thereby fostering more meaningful, autonomous, and contextualized learning in EFL environments.

Keywords: listening comprehension; digital music platforms; vocabulary acquisition

RESUMEN

El desarrollo de la comprensión auditiva y la adquisición de vocabulario en inglés como lengua extranjera (EFL) continúa siendo un desafío en contextos educativos donde predominan metodologías tradicionales y limitadas oportunidades de exposición al idioma. En este estudio se analizó el impacto de la integración de plataformas digitales basadas en música como estrategia pedagógica para mejorar estas habilidades lingüísticas en estudiantes de nivel secundario. La investigación adoptó un enfoque mixto con diseño preexperimental de un solo grupo con pretest y posttest, utilizando instrumentos cuantitativos y cualitativos para evaluar el progreso de los estudiantes antes y después de la intervención. Se aplicaron pruebas diagnósticas (pre-test) y finales (posttest), así como encuestas y observaciones, con el fin de medir cambios en la comprensión auditiva, el uso del vocabulario y la motivación hacia el aprendizaje del idioma. La intervención consistió en la implementación de actividades estructuradas mediante una plataforma digital que utiliza canciones y ejercicios interactivos basados en letras musicales. Los resultados evidenciaron una mejora sustancial en la capacidad de los estudiantes para comprender información auditiva, reconocer vocabulario en contexto y participar en actividades de escucha activa. Asimismo, se observó un incremento en la motivación y el interés por el aprendizaje del inglés, atribuible al carácter dinámico e interactivo de las herramientas digitales utilizadas. Estos hallazgos sugieren que el uso de plataformas musicales digitales constituye una estrategia efectiva para potenciar habilidades lingüísticas clave, promoviendo un aprendizaje más significativo, autónomo y contextualizado en entornos EFL.

Palabras clave: comprensión auditiva; plataformas digitales musicales; adquisición de vocabulario

INTRODUCTION

The learning of English as a Foreign Language (EFL) has become essential in contemporary education due to its global role in communication, science, and technology. However, the development of listening comprehension remains one of the most challenging skills for learners, particularly in contexts where exposure to authentic language input is limited. Listening comprehension is an active and complex process that requires learners to recognize linguistic input, construct meaning, and integrate contextual information while processing spoken language (Gilakjani & Ahmadi, 2011; Nadig, 2013). Despite its importance, listening has historically received less instructional attention than other language skills in many EFL contexts, despite its central role in communication and language development (Gilakjani & Ahmadi, 2011).

In addition, vocabulary acquisition plays a crucial role in language learning, as it directly influences learners' ability to understand spoken and written discourse. Students with limited lexical knowledge often struggle to comprehend audio input, which negatively affects their communicative competence. Vocabulary knowledge plays a central role in both receptive and productive language use, and meaningful contextual exposure can contribute to the development of lexical knowledge (Nation, 2013; Ur, 2012). Therefore, integrating strategies that simultaneously develop listening and vocabulary is essential for effective EFL instruction.

In recent years, the integration of technology into educational contexts can positively support learning outcomes when digital resources are appropriately aligned with instructional objectives and pedagogical practices (Tamim et al., 2011). Among these innovations, music based digital platforms have gained attention as effective pedagogical resources, as they combine audio, visual, and textual elements to create meaningful learning experiences.

The use of music in language learning has been widely recognized as a powerful tool for improving listening comprehension and vocabulary acquisition. Music can provide meaningful and motivating input for language learners, while songs offer repeated exposure to pronunciation, rhythm, lexical items, and contextualized language use (Kao & Oxford, 2014; Yuliarini, 2022; Intriago-Cañizares, 2023). Furthermore, Music may also contribute to learner motivation and emotional engagement, making language-learning experiences more meaningful and personally relevant (Engh, 2013; Kao & Oxford, 2014). Through repetition and interaction with lyrics, students can internalize language patterns and improve their listening skills in an enjoyable and meaningful way.

From an EFL perspective, listening comprehension requires learners to coordinate perceptual, linguistic, semantic, and contextual processing while actively constructing meaning from spoken input (Rost, 2011; Vandergrift & Goh, 2012). Metacognitive and cognitive listening strategies, including prediction, monitoring, inferencing, and evaluation, can support learners in processing spoken language more effectively (Gilakjani & Ahmadi, 2011; Vandergrift & Goh, 2012).

This study focuses on the integration of digital music platforms in EFL instruction as an innovative approach to improve listening comprehension and vocabulary acquisition. The research is grounded in the need to address students' low motivation,

limited vocabulary, and difficulties in understanding spoken English, which have been identified as key challenges in language learning contexts.

Regarding the variables of the study, the independent variable is defined as the integration of digital music platforms, understood as the use of online tools that incorporate songs, lyrics, and interactive exercises to facilitate language learning. These platforms provide opportunities for repeated listening, contextual vocabulary exposure, and autonomous practice, which are essential for skill development.

Listening comprehension refers to learners' ability to process and construct meaning from spoken language (Nadig, 2013; Rost, 2011). Vocabulary acquisition refers to the gradual development of knowledge about word form, meaning, use, and contextual relationships necessary for effective language comprehension and production (Nation, 2013).

The significance of this study lies in its contribution to the field of EFL teaching by providing empirical evidence on the effectiveness of integrating music-based digital platforms. By combining technology, music, and interactive learning, this research aims to offer innovative strategies that enhance students' linguistic skills, increase motivation, and promote meaningful learning experiences.

METHODS

This study adopted a pre-experimental one-group pretest-posttest design within a mixed-methods approach, combining quantitative and qualitative data to examine changes in listening comprehension and vocabulary acquisition following the integration of digital music platforms. This design allowed the researchers to compare participants' performance before and after the intervention while acknowledging that, in the absence of a control or comparison group, observed changes cannot be attributed exclusively to the intervention (Creswell, 2014).

The study also followed a socio-educational research approach, focusing on real classroom conditions and learners' experiences. This approach enables the analysis of both measurable outcomes and contextual factors influencing the teaching-learning process. Additionally, the research incorporated descriptive elements to identify patterns related to students' performance, motivation, and engagement.

The participants consisted of 60 secondary-level students aged between 12 and 13 years, drawn from two intact classes of approximately 30 students each. All participants received the same digital music-based intervention and completed the pretest and posttest assessments. Participants were selected through non-probabilistic purposive sampling based on their relevance to the research objectives, particularly their identified difficulties in listening comprehension and limited vocabulary knowledge. Previous classroom observations indicated that learners experienced difficulties recognizing words in spoken input and frequently relied on repetition or translation to construct meaning.

To ensure a comprehensive analysis, multiple data collection instruments were employed:

- **Pre-test and Post-test:** These assessments were designed to measure students' listening comprehension and vocabulary acquisition before

and after the intervention. Listening comprehension was evaluated through audio-based tasks, while vocabulary was assessed through contextual recognition and usage activities. Pretest-posttest comparisons allow researchers to examine changes in participants' performance following an educational intervention; however, without a comparison group, observed changes cannot be attributed exclusively to the intervention (Fraenkel et al., 2012).

- **Survey Questionnaires:** Surveys were administered to gather information about students' attitudes, motivation, and perceptions regarding the use of digital music platforms. These instruments helped identify affective factors influencing learning.
- **Observation Records:** Classroom observations were conducted during the intervention to document students' participation, engagement, responses to musical activities, and interaction with the digital platform. The observation records were subsequently incorporated into the qualitative analysis.

The data analysis in this study combined quantitative and qualitative approaches to ensure a comprehensive evaluation of the intervention. Quantitative data obtained from pre-test and post-test assessments were analyzed using descriptive statistics, including percentages and mean scores, to determine improvements in listening comprehension and vocabulary acquisition. Comparative analysis was applied to identify differences in students' performance before and after the implementation of the digital music platform (Fraenkel et al., 2012).

In parallel, qualitative data collected through surveys and classroom observations were examined using thematic analysis to identify patterns related to motivation, engagement, and learning behaviors (Braun & Clarke, 2006). This mixed-methods integration allowed for a deeper understanding of both measurable outcomes and students' learning experiences within authentic educational contexts

This study adhered to ethical principles in educational research, ensuring respect, confidentiality, and voluntary participation of all participants. Prior informed consent was obtained from the students' parents or legal guardians, while student assent was obtained before participation. Confidentiality, anonymity, voluntary participation, and the right to withdraw were ensured throughout the research process.

Additionally, the study ensured that the activities implemented did not negatively affect students' academic development but instead contributed to their learning process. The research followed ethical guidelines for classroom-based studies, promoting a safe and respectful environment for all participants (Cohen et al., 2018).

RESULTS AND DISCUSSION

The comparison between pre-test and post-test results revealed a clear improvement in students' listening comprehension and vocabulary acquisition after the implementation of the digital music platform. In the initial stage, most students demonstrated limited ability to understand spoken English, particularly when dealing with

authentic audio materials. Experimental evidence also suggests that singing can facilitate the learning and recall of foreign-language material under appropriately designed learning conditions (Ludke et al., 2014).

This difficulty was mainly associated with reduced vocabulary knowledge and limited exposure to listening activities, factors frequently associated with difficulties in EFL listening comprehension (Gilakjani & Ahmadi, 2011; Rost, 2011). After the intervention, students showed increased comprehension accuracy, suggesting that repeated exposure to songs and contextual learning contributed positively to their development.

Furthermore, the quantitative analysis showed a noticeable increase in performance across all evaluated dimensions. Students improved not only in recognizing words and phrases but also in interpreting meaning within context. The repeated combination of language and music may also support memory and recall of linguistic material, particularly when learners repeatedly process verbal input through songs (Salcedo, 2010).

These findings are consistent with previous research indicating that the use of songs can support listening development by increasing learner interest and providing repeated exposure to meaningful auditory input (Kao & Oxford, 2014; Yuliarini, 2022). The integration of visual and auditory elements through the platform facilitated deeper cognitive processing, allowing learners to retain and apply new vocabulary more effectively.

In addition, the results highlight the importance of interactive learning environments in language acquisition. The post-test results demonstrated that students became more confident in processing spoken language and engaging with listening tasks. This improvement supports the idea that listening comprehension is an active process that can be strengthened through meaningful practice and exposure (Nadig, 2013). Overall, the findings indicate positive changes in students' performance following the intervention.

Table 1
Pre-test and Post-test Results

Dimension	Pre-test (%)	Post-test (%)	Improvement (%)
<i>Listening Comprehension</i>	48%	79%	+31%
<i>Vocabulary Recognition</i>	50%	82%	+32%
<i>Understanding Context</i>	45%	77%	+32%
Overall Performance	48%	79%	+31%

Source: Own elaboration

Students' Perceptions and Motivation

The survey results revealed a positive change in students' attitudes toward learning English after the intervention. Before the intervention, many students reported low motivation and limited interest in listening activities. Following the integration of the digital music platform, students expressed more positive perceptions of the learning experience. These findings are compatible with evidence indicating that technology-supported instruction can contribute positively to learning when it is meaningfully

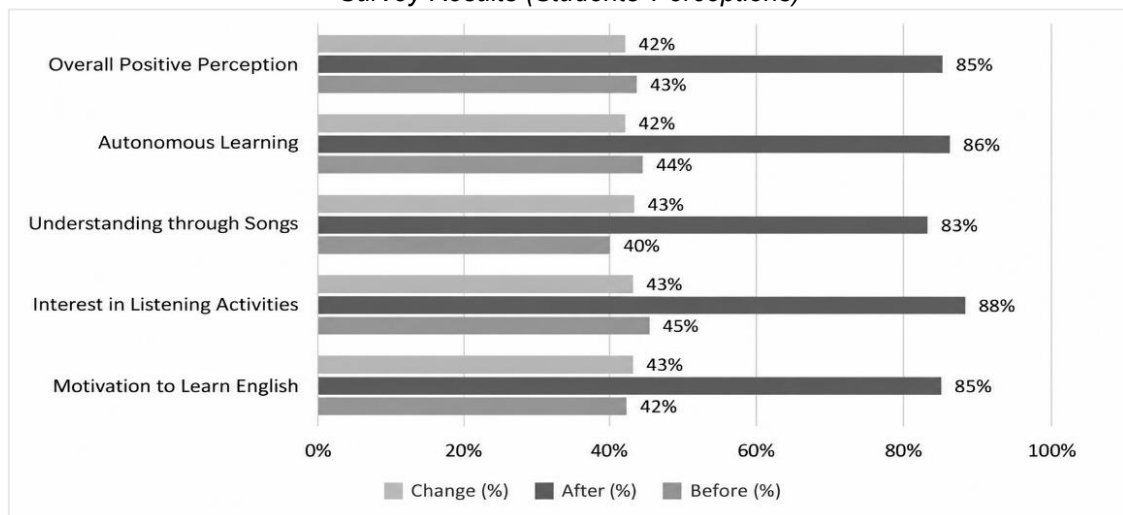
integrated into pedagogical practice (Tamim et al., 2011). However, after the intervention, students expressed a more positive perception of learning English, highlighting the role of music and technology in making lessons more engaging.

Moreover, students reported that learning through songs helped them better understand pronunciation, rhythm, and vocabulary in context. The use of lyrics allowed them to connect meaning with sound, which facilitated comprehension and retention. These findings are consistent with research suggesting that music can enhance learner interest, motivation, and emotional engagement in language-learning contexts (Luo et al., 2022). The interactive nature of the platform also encouraged students to participate more actively in classroom activities. Similarly, the integration of songs and other engaging activities has been associated with vocabulary development and increased motivation among young EFL learners (Chou, 2014).

Additionally, the results indicate that students developed a greater sense of autonomy in their learning process. Many participants reported practicing listening activities independently outside the classroom, which contributed to their improvement. Song-based instruction has also been associated with gains in receptive L2 vocabulary knowledge, suggesting that repeated musical input can provide meaningful opportunities for lexical development (Coyle & Gómez Gracia, 2014).

This pattern is consistent with research highlighting the relationship between technology-mediated language learning and opportunities for greater learner autonomy and independent practice (Reinders & White, 2016). Overall, positive changes were observed in students' performance, motivation, and engagement following the intervention.

Figure 2
Survey Results (Students' Perceptions)



Source: Own elaboration

CONCLUSIONS

The findings indicate notable improvements in students' listening comprehension and vocabulary acquisition following the integration of digital music-based activities. The pretest-posttest comparison showed measurable progress in understanding spoken English, recognizing vocabulary, and interpreting meaning in context. However, given the characteristics of the research design, these improvements should be interpreted as changes observed after the intervention rather than as definitive evidence of a causal effect. They should be interpreted in light of the absence of a control or comparison group and the use of descriptive statistical analysis. Future studies should employ larger samples, comparison groups, and inferential statistical procedures to strengthen causal interpretation and generalizability.

In addition, the survey results revealed a substantial increase in students' motivation and interest in learning English after the intervention. Prior to the implementation, students reported low engagement and limited enthusiasm for listening activities. However, after participating in music-based learning tasks, they expressed more positive attitudes toward language learning, highlighting the role of interactive and dynamic resources in fostering motivation.

Furthermore, the data indicates that students developed greater autonomy in their learning process, as reflected in their willingness to engage in independent practice outside the classroom. The combination of improved test performance and positive survey perceptions suggests that digital music platforms may represent a promising pedagogical strategy. Overall, the findings indicate that this approach has the potential to support linguistic development, motivation, and learner engagement.

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