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The Impact of Lyrics Training Application on Enhancing Speaking Skills in A1-Level Students

El impacto de la aplicación de Lyrics Training *en la mejora de las habilidades de habla en estudiantes de nivel A1*

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ABSTRACT

Lyrics Training is a learning app that enhances oral expression skills, allowing students to learn a second language through music videos and the lyrics of their favorite songs. This study investigated the effectiveness of this application in improving speaking accuracy. 147 students from three institutions were divided into two groups of first and second-year high school (SDB and RCE). Additionally, two groups of dual enrollment students, who take classes at a university and come from different high school levels and institutions, were included. The study employed a quantitative approach with a quasi-experimental pretest-posttest design. The results indicated that the application had a statistically significant effect on participants' language skills ($p < 0.001$ according to the Wilcoxon test). The consistency of improvements in comprehension, language skills, pronunciation, and content understanding suggest that the intervention was comprehensive and effectively addressed all key aspects of language learning. Furthermore, when comparing high school students with those in dual enrollment roles, improvements were advantageous for high school students in comprehension and fluency ($p<0.05$ according to the Mann Whitney U test). Thus, this study provides compelling evidence of the effectiveness of using songs in the speech of students learning English A1.

Keywords: Lyrics training, High School, Teaching English as a Foreign Language

RESUMEN

Lyrics Training es una aplicación de aprendizaje que potencia las habilidades de expresión oral, permitiendo a los estudiantes aprender un segundo idioma mediante videos musicales y letras de sus canciones favoritas. Este estudio investigó la efectividad de esta aplicación en mejorar la precisión al hablar. Se dividió a 147 estudiantes de tres instituciones en dos grupos de primer y segundo año de educación secundaria (SDB y RCE). Además, se incluyeron dos grupos de estudiantes de doble inscripción que toman clases en una universidad y provienen de distintos niveles e instituciones de secundaria. El estudio empleó un enfoque cuantitativo con un diseño cuasiexperimental de preprueba y posprueba. En los resultados se advirtió que la aplicación tuvo un efecto estadísticamente significativo en las habilidades lingüísticas de los participantes ($p <0,001$ según la prueba Wilcoxon). La consistencia de las mejoras en la comprensión, habilidades lingüísticas, pronunciación y comprensión del contenido sugiere que la intervención fue integral y abordó eficazmente todos los aspectos clave del aprendizaje de idiomas. Mientras que al comparar a los estudiantes de colegio con los del rol dual, se advierte que las mejoras obtuvieron ventajas para los estudiantes de secundaria en comprensión y fluidez ($p<0,05$ según la prueba U de Mann Whitney). Por lo expuesto, el presente estudio proporciona evidencia convincente de la efectividad del uso de canciones en el habla de los estudiantes que están aprendiendo inglés A1.

Palabras clave: Lyrics training, High School, Teaching English as a Foreign Language

INTRODUCTION

Learning to communicate in a new language is sometimes a difficult challenge especially for English as a Foreign Language (EFL) students, as they navigate the intricacies of a language that holds global significance (Cook, 2016). In this linguistic journey, the acquisition of speaking skills emerges as a cornerstone. Besides, a robust vocabulary is not merely a tool for communication, but the scaffold upon which language proficiency is constructed (Nation I. S., 2013). The acquisition of new words, phrases, and expressions is central to the EFL learning process, influencing every facet of linguistic competence, from reading comprehension to effective communication (Schmitt, 2008).

Because of technological advances, the ways people learn a foreign language have diversified unique features, ease, and variety, making such advances important tools for language learners. Applications (Apps) for language learning, for instance, provide planned activities on a range of language acquisition topics, such as grammar, vocabulary, speaking, listening, and reading. These applications frequently use spaced repetition algorithms and flashcards to improve learning efficiency and effectiveness by improving memorizing and retention of new words and phrases.

Among the innumerable language learning applications, Lyrics Training, an innovative musical app, has garnered attention and acclaim from learners. Although its premise would be deceptive for some people, it could optimize the

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learning of speaking and information through videos and activities such as filling in the lyrics of your favorite songs.

In addition, this digital tool may help learners to strengthen speaking skills through songs, especially for students who are starting to learn a language.

As it is known, listening and speaking can be easily and enjoyably practiced using music. A learner's favorite song can be played and listened to develop engaging activities. With Lyrics Training, not only will listening comprehension be quickly improved, but also vocabulary will be expanded by learning new words and expressions, speaking comprehension will be enhanced, and even grammar skills will be boosted.

It is hypothesized that by using music videos and the words to their favorite songs, this software helps students learn and improve their EFL skills. Above all, it is believed that this program would train the ear, greatly enhancing one's ability to distinguish quickly and accurately words and sounds in a foreign language. It is thought that this training happens practically instinctively, regardless of whether one understands the meaning of every phrase or not.

According to recent research, simply hearing a foreign language can help create the neural connections and structures needed to learn that language. Furthermore, music is suggested as a fun way to learn, hear, and pronounce different accents and pronunciations. This allows for more flexibility when assessing a person's capacity to distinguish between different sound patterns.

In addition, This digital tool helps will students to strengthen their skills through songs, especially in students who are just learning a language, from our perspective, teachers seek innovations for each class, and always have a vision for each student to better understand the English skills, the skill that more difficult, and that students need to develop is speaking, because of the exposure does not allow them to move forward but with materials that attract their attention and especially their learning that is fundamental in each student.

Lyrics Training can be particularly useful to teachers looking for a fun way to teach new words and help students improve their listening skills. Although it is most appropriate for older kids, teachers could use it with younger English-language learners, if they carefully seek age-appropriate titles. Moreover, it is easy to use this site's print options to curate cloze-reading passages using students' favorite songs.

Finally, while some research on technology-assisted language learning exists in the Ecuadorian context, studies specifically focus on the Lyrics training impact on listening and speaking practice. This study aimed to bridge this gap and provide valuable data for educators, policymakers, and learners. The researcher chose students from A1 level.

Research problem or question: Clearly state the research problem or question that the study aims to address.

Speaking issues could be significantly exacerbated by a lack of everyday exposure to English. In contrast to nations where English is taught from a young age or is widely spoken, learners may have fewer opportunities in Ecuador to practice and use the language outside of the classroom.

The issue might be exacerbated by traditional teaching strategies that place more emphasis on reading comprehension and grammar than on speaking and listening abilities. If language education in Ecuador is predominantly focused on textbooks, devoid of communicative exercises and practical integration, pupils can encounter difficulties in enhancing their speaking abilities. Speaking ability can also be greatly influenced by students' motivation levels and cultural attitudes toward language acquisition. Students may be less likely to practice and advance their speaking abilities outside of the classroom if they lack desire or don't think learning English is important.

Augusto & García (2012) stated that Lyrics Training is a tool that gives ESL students learning materials they can use daily. To utilize this software, students must have a device, a strong internet connection, and the motivation to learn. According to Meilinda (2019), Lyrics Training is a program that incorporates music from YouTube. It attempts to give students entertaining alternatives to work on their listening and speaking comprehension in English.

Additionally, Garlaza (2022) demonstrated that lyric training is a free technical tool that educators and students can use. It motivates students to use their free time to independently practice listening. According to Garib (2021), Lyrics Training has six standout elements, including the home page features, the game's starting page, the game that is now being played, and the game score.

Teaching Speaking throughout this app, will help students to acquire the skill of speaking with confidence and fluency, which will benefit them in all aspects of their lives. Speaking abilities are characterized as those that enable successful communication. They enable us to communicate orally and in a manner that is understandable to the listener.

Speaking is an interactive process in which the listener responds to what is said and shares information as needed. Therefore, to communicate successfully, it's critical to improve both speaking and listening abilities.

This study was designed to answer the following Research Question (RQ):

- How will the Lyrics Training application impact on enhancing Speaking Skills in A1 level students?

The research question and the hypotheses listed in the previous paragraph were examined through a quantitative quasi-experimental research design. The causality was inferred from the effect of the experimental conditions, the Lyrics training application, on the outcome variables, on Enhancing Speaking Skills in A1-Level Students from three institutions. Two institutions from high schools and one from the higher education with students from high schools (dual enrollment).

The inclusion of students enrolled in dual enrollment programs adds another layer of complexity to the study's participant demographics. These students, who are concurrently pursuing high school education while taking university-level courses to obtain an English certificate at the A1 level, present a unique profile. Their decision to undertake additional courses may stem from academic challenges encountered in high school, suggesting a need for supplemental support. However, their participation also signifies advantages in terms of both economic resources and available time to attend extra classes. This combination of factors underscores the diverse motivations and circumstances driving their educational journey, enriching the study's exploration of the effectiveness of the "Lyrics Training" program in varied learning contexts.

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General Objective:

- To assess the effectiveness of Lyrics Training app to improve students' speaking skills compared to a traditional classroom.

Specific Objectives:

- To measure the speaking proficiency levels of students in both the high school students' group and the university students' group before and after the implementation of Lyrics Training App
- To assess the speaking skills improvement in both groups after the intervention period.
- To compare the speaking proficiency levels between the high school students' group and the university students' group before and after the implementation of Lyrics Training App

Significance of the study

The use of English Songs to Activate Student's Speaking English Skills

The purpose of this study was to investigate the problems that teachers encountered when teaching students to speak proficiently using songs. Using a fun approach, a song they already know the song is intended to assist pupils become acclimated to the vocabulary and pronunciation of the English language across all learning phases. Based on the study's findings, it can be deduced that the teacher mainly used the song to incorporate learning into three activities: the opening, while, and closing activities by giving the students access to a YouTube video and helping them with translation to inspire them to use the song to practice speaking English.

Moreover, the efficacy of the Lyrics Training app in teaching the brain and ear to identify and comprehend sounds and words in an unfamiliar language carries wider consequences for neurocognitive studies on language acquisition. According to recent research, hearing a foreign language can create neural pathways and structures in the brain that help in language learning. With the use of interactive exercises and music, the app not only will keep users interested but also will activate the neurocognitive processes that support language learning. Overall, the app's success will improve language proficiency, encouraging a love of music-based learning, and upending conventional teaching techniques highlights its importance and important contributions to the body of knowledge already available in the fields of EFL instruction, vocabulary acquisition, grammar instruction, neurocognitive research, and innovative pedagogy.

LITERATURE REVIEW

Technology

These days, technology is an essential part of teaching modern music, especially with today's students who are digital natives. Prensky (2001) popularized this phrase, which describes people who have grown up surrounded by digital devices like iPads, applications, video games, computers, and the internet. Since today's students are digital natives used to technology in many areas of their lives, incorporating it into music education is a logical and necessary step forward (Prensky, 2001).

To successfully engage their technologically savvy pupils, music educators need to stay up to date on emerging music technology tools and digital platforms. Research conducted in 2017 by Savage and Waldron highlights how crucial it is for teachers to continue their professional development to improve their use of technology in the classroom and the learning experiences of their students. Teachers can accommodate a variety of learning styles and deliver engaging learning experiences by using both in-class resources and additional materials like instructional films and interactive platforms (Savage & Waldron, 2017).

Benefits like customized instruction and asynchronous learning are provided by integrating technology into music education; these are especially helpful in today's diverse school settings. Scholars such as Webster (2018) emphasize how students can study music in-depth and at their own pace thanks to technology, which enables individualized learning experiences. As students use interactive platforms and digital resources, this method not only encourages student engagement but also the creation of new learning methodologies (Webster, 2018).

Additionally, innovative, affordable, and readily available technology resources for music instruction make them priceless tools for teachers and students alike. According to studies by Abramo (2016), engaging and immersive learning experiences may be had at a fraction of the price of traditional music equipment when using digital platforms and software apps. By enabling students to master the instruments and methods that contemporary professional musicians and composers employ, these materials help close the knowledge gap between classroom instruction and practical application (Abramo, 2016).

To sum up, the incorporation of technology into music education empowers learners and gives them the tools they need to succeed in the current digital landscape. Teachers may build dynamic and engaging learning environments that stimulate creativity, improve learning outcomes, and equip students for success by adopting novel technology and integrating them into their teaching practices.

Music and learning

The current publications offer proof of improved auditory and cognitive capacities in people with musical training, which supports the phonological and reading components of second language learning. For example, Moreno et al. (2009) discovered that musical training improves the brain mechanisms that underlie speech processing, which may have a beneficial effect on second language learners' phonological abilities. Furthermore, Schön et al.'s (2004) study showed that musicians have better reading comprehension, pointing to a transfer effect between musical training and literacy in second language learning.

As previously said, there is still much to learn about the impact of musical activities on other language subdomains like grammar and pragmatics, and the application of findings from native-language studies to L2 is still in its infancy. Research on the entire range of L2 learning features beyond phonological skills is lacking, despite studies showing links between musical training and improved reading and phonological abilities in L2 learners.

More research is required to completely describe the range of advantages that musical activities have on people's capacity to learn new languages, to close this gap. Scholars like Slevc (2012) have stressed the importance of conducting

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long-term research to look at how musical training affects other language subdomains, like grammar and pragmatics, in second language learners over time. Additionally, examining how musical activities affect various age groups and skill levels might shed light on the possible advantages of including music education into the curriculum for language learning.

This research has shown that musical activities are beneficial for some parts of second language learning, but there is still more to learn about how they affect pragmatics, grammar, and other language subdomains. As scholars like Slevc (2012) have argued, more study in this field is needed to better understand the connection between music and language acquisition as well as to develop more effective teaching strategies for a variety of educational settings.

A selection of the papers that the researcher has gathered are included below; these articles examine the Lyrics Training apps.

Augusto & García (2012), the first researcher, found out how students utilize the Lyrics Training app. Twenty individuals, comprising three pre-intermediates and seventeen beginners, were involved in this study at Universidad Veracruzana. There are two rounds of exercises and questions in the experiments. Consequently, the researchers discovered that this software aids in the development of their listening and pronouncing skills. Additionally, students are more engaged in learning English and listening skills since they have access to a greater selection of songs (in addition to those found in the coursebook). On the other hand, the researcher was also let down by the fact that some terms and spelling conventions were unfamiliar.

In the second, Angelina (2020), she discovers the benefits and limitations of Lyrics Training. During the final four months of 2019, it was held at Sonata Dharma University's English Language Educational Study Program. This experiment involves thirty pupils. Like the Likert scale and open-ended questions, it consists of two phases. Ultimately, the outcome demonstrated that there were two benefits and one drawback. The first benefit is that by easing their pressure to learn, it can assist pupils in becoming more motivated to learn.

The second is their ability to recall the lyrics of songs they enjoy. The drawback is that it occasionally loses the hints and still has a lot of commercials.

Next, Dharmawan et al. (2019), the third researcher, conducted a study with 34 first-year University of Bandar Lampung students who had been studying English for 12 years but were still having trouble listening. They participated in the study that included questionnaires, interviews, and teacher observation. Consequently, most students expressed their satisfaction with the software, which encouraged them to continue learning English. Additionally, it helps children focus more intently on the instruction.

Music and learning

Particularly during the early phases of an infant's development, there is a deep connection between music and language. This mutually beneficial interaction is essential for the child-caregiver bond to form and for early language acquisition. Deutsch (2010a) asserts that a baby's understanding of music is essential to their language development and helps to strengthen the bond between them and their caregiver, who is usually their mother.

Research conducted at the Infant Learning Lab at the University of Wisconsin underscores the significance of music in language acquisition. McGowan (2008) found that infants demonstrate accelerated learning when exposed to sung speech compared to spoken speech. This suggests that music enhances infants' receptivity to language input, facilitating faster comprehension and learning.

Furthermore, "motherese," which is typified by pronounced vocal inflections and a sing-songy style of speech, is a phenomenon that is shared by people from many cultural backgrounds. This musical mode of expression helps kids make the transition from nonverbal to verbal knowledge. As explained by Deutsch (2010b), "motherese" acts as a link between song and speech, obfuscating the distinction between the two modalities and adding in newborns' language development.

Music and language intertwine in profound ways, especially in the developmental stages of infants. This symbiotic relationship is crucial for early language acquisition and bonding between caregiver and child. According to Deutsch (2010b), an awareness of music plays a pivotal role in a baby's language development, fostering a deeper connection between the infant and their caregiver, typically the mother.

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Incorporating these insights into your research can provide a solid theoretical foundation for understanding how the Lyrics Training application can be effectively implemented to improve listening and speaking skills among A1 level students.

Music as a Tool for Learning

Research indicates that musical practice has implications for central auditory processing, suggesting that musical ability is associated with better performance in several auditory processing skills. Using songs is another, more popular method of incorporating music into foreign language instruction. Over time, this use has developed into a multi-level, multi-skills system. Songs were occasionally utilized in conjunction with the Audiolingual Method, a "method in the teaching of foreign languages," from the 1950s through the 1970s.

Languages are built around a drill technique where students mimic or modify teacher-pronounced or oral sample sentences (Oxford English Dictionary). Singing songs allowed for the repetitive drills in this strategy since they are repetitious, and it also made the drill process less boring (Kanel, 2000). As certain methods of teaching languages spread, such as communicative language instruction and the task-based language instruction, "there was an unexpected need for instructional resources for the use of music in the classroom for language acquisition (Engh, 2013b, p. 113). Different teachers created their own song-based FL teaching methods. For example, Anton (1990) established the

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Contemporary Music Approach, which uses songs to practice grammar, while Mora (2000) developed the Melodic Approach, which emphasizes language through melody. Songs can be used in the FL classroom in a variety of ways, aside from these approaches. Examples include using the song itself, the context, the singer, etc.

The Melodic Approach by Mora and the Contemporary Music Approach by Anton are two excellent examples of how teachers have imaginatively used songs into language training to address various linguistic characteristics like grammar and melody are Anton's Contemporary Music Approach and Mora's Melodic Approach. These approaches highlight how adaptable music is as a teaching tool and how it can be used to get students interested in practicing their language skills.

Furthermore, the recognition that songs may be used in the FL classroom in a variety of ways outside of these methods highlights how versatile and flexible music-based learning is. This recognition gives teachers more freedom to experiment with different approaches to integrating music into their lessons while meeting the individual requirements and preferences of their students.

Overview of relevant studies: Provide an overview of the existing literature on language learning, technology in education, and speaking skill development, focusing on studies that have explored the use of applications for improving speaking skills.

Bernaus et al. (2009) carried out a thorough investigation on how music affects learning a second language. Their study explored the complex connection between music and language learning, with a special emphasis on how singing can help second language learners acquire the language more quickly. Additionally, Bernaus et al. (2009) examined the cognitive mechanisms that underlie the incorporation of music into language learning environments, emphasizing how musical engagement activates brain pathways linked to memory consolidation and language processing (Slevc & Miyake, 2006).

Their results supported the inclusion of singing and musical activities as essential elements of language learning curriculum, highlighting the pedagogical potential of music in second language instruction (Levitin & Tirovolas, 2009).

Teachers can create immersive and engaging learning environments that support language competency and cultural appreciation among second language learners by using the inherent musicality of language (Wong & Eiser, 2012).

Finally, Bernaus et al. (2009) provided insightful information about the transformative potential of music in the study of second languages and argued for its use into instructional strategies to enhance language acquisition and develop communicative competence in students.

According to Fonseca-Mora et al. (2014), the study looked at how musical components like melody, rhythm, and intonation might act as useful scaffolds for language acquisition by giving students auditory signals and mnemonic devices to help with pronunciation and vocabulary recall.

Lyrics Training App

Wahyuni et al. (2019) conducted a study on the application of Lyrics Training to enhance listening comprehension. Initially,

Lyrics Training's utilization of technology was also studied by Dixon & King (2016). They employ the method of content analysis. In the end, they find that college students would benefit more from this app than younger ones. Additionally, it can help them focus during the lecture. The process of selecting the game's difficulty and the app's language is similarly simple for students to use. Students can also select from a variety of musical genres on it.

An important development in language learning, especially in the context of English as a Foreign Language (EFL) instruction, is the Lyrics Training app. Its creative method immerses students in a dynamic and immersive learning environment by fusing music, lyrics, and interactive exercises. This innovative approach not only will improve Speaking comprehension by having students fill in the blanks in the lyrics, but it also makes meaningful vocabulary acquisition easier by introducing students to a variety of words in the context of songs. Furthermore, by emphasizing natural language usage in songs, the app will give users implicit grammar education, which would help them get a more intuitive grasp of grammatical patterns and structures. This method questions established ideas about explicit grammar training and emphasizes the advantages of using real materials in grammar instruction.

Additionally, Garlaza (2022) demonstrated that lyric training is a free technical tool that educators and students can use. It motivates students to use their free time to independently practice listening. According to Garib (2021), the Lyrics Training has six standout elements, including the home page features, the game's starting page, the game that is now being played, and the game score.

Nowadays, many people are looking for alternatives to learn English in an easy and fun way, and with the help of songs, it is easier to learn. This technological application besides training, helps to improve the English levels that each one has, through songs, videos, and training activities that this application offers. It is very useful because it can be used inside and outside the home or school, where more and more teenagers like this application and improve their English skills, especially listening and speaking.

With the use of Lyrics Training, you can quickly and effectively teach your ear to recognize foreign language words and sounds. This training occurs practically subconsciously, regardless of whether you are familiar with the vocabulary.

According to recent research, simply hearing a foreign language helps our brains form the connections and structures needed to learn it.

Furthermore, listening to varied accents and pronunciations gives you more freedom when testing your ability to distinguish between the many sound patterns of a foreign language. Music is also an enjoyable approach to study. Compared to the standard listening exercises in language schools, where the pronunciation is excessively precise and not very useful, this is significantly different.

Why choose Lyrics Training

Garib (2021) claims that Lyrics Training is a free app with two million users across roughly 13 languages that offers students 32 distinct genres of music. By listening to music and completing an assignment regarding the grammar points in the song, it offers students a variety of options for learning the languages they enjoy. With the aid of this software,

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students can enhance their lexical grammar, expressions in language, listening comprehension, and pronunciation.

Expressions used in language and lexical grammar.

Numerous variations exist that could potentially set this app apart in the context of academia. According to research by Azhari & Adnan (2018), students only learn in class when they passively monitor the news on TV and listen to academic conversations. To put their knowledge into practice, they must participate in engaging activities. The researcher selected this app in the hopes of allowing it to provide students with more engaging resources, such as music videos and songs, which can enhance their learning experience.

Then, because of Aldas (2020), this app's segmental and supra-segmental capabilities can help kids' speaking and listening abilities. It's a tool that helps prevent classroom boredom.

MATERIALS AND METHODS

This study employed a quantitative approach to explore the effectiveness of "Lyrics Training" as an educational tool in improving listening and speaking skills in students. Using a quasi-experimental pretest-posttest design, data were collected before and after the educational intervention (Cabrera-Tenecela, 2023). The research was conducted in three different educational institutions, with instruction provided by three different teachers, providing diversity in the context of program implementation and potentially in the observed results.

The inclusion criteria considered participants who were actively engaged in the "Lyrics Training" program for a minimum of three weeks. This intervention aimed to bolster language skills through the application. Participants comprised two cohorts from each of the three institutions: the 1st and 2nd years of high school (SDB and RCE institutions), represented by Freshmen and Sophomores, respectively. Additionally, high school students with university supplements, known as Dual enrollment, were involved. Maintaining consistent student participation was crucial to ensuring the validity and relevance of the collected data in meeting the study's learning objectives.

The overall total sample size across all schools is 147, as depicted in Table 1. This table displays the distribution of students across different levels and schools, and is a tool commonly used in statistical analysis to test for independence between variables. Table 1 presents a contingency table that categorizes the students by both their academic level and institution, namely: SDB (San Diego High School from Quito city), RCE (Rafael Cajiao Enríquez High School in Pastocalle parish, Latacunga city), and TUC (Cotopaxi Technical University in Latacunga, Ecuador).

Table 1. *Students' sample*

Level	School			Total
	SDB	RCE	TUC	
1st year of High School: Freshmen	32	13	0	45
2nd year of High School: Sophomores	35	13	0	48
High School students with university supplements: Dual enrollment	0	0	54	54
Total	67	26	54	147

JASP (Jeffrey's Amazing Statistics Program) version 17.00 was used to perform the data analysis for this study (Goss-Sampson, 2019). The statistical analysis for this study was conducted using both descriptive statistics and inferential techniques. Descriptively, measures such as mean, standard deviation (SD), and standard error (SE) provided a summary of central tendency and variability within the pretest and posttest scores. These descriptives offered an initial understanding of the data distribution and the variability within the sample of 147 students, serving as a groundwork for further inferential analysis.

Inferentially, the Wilcoxon signed-rank test was employed, which is a non-parametric test suited for paired samples when the normality assumption cannot be guaranteed. This test was used to assess whether there was a statistically significant median difference in scores from pretest to posttest. The calculated Z-scores from the test were significantly negative, indicating that the post-intervention (posttest) scores were consistently higher than the pre-intervention (pretest) scores across all measures, which confirmed the effectiveness of the educational tool used.

Additionally, a raincloud plot provided a visual representation of the data. This type of plot is particularly useful as it combines elements of a scatter plot and boxplot. It shows the distribution of individual scores (as dots), the range and median (boxplot), and the density of the data (violin plot). The movement of scores from pretest to posttest is clearly visible with lines connecting the paired observations, effectively illustrating the upward shift in scores post-intervention.

Pre and posttest also were evaluated using a Wilcoxon signed-rank test to compare two related samples, matched samples, to assess whether their population mean ranks differ. Z-value is approximately -7.745 with a p value of less than 0.001. This indicates a statistically significant difference between the two sets of scores: pretest and posttest with the alternative hypothesis specifying that the scores from pretest are less than those obtained after the intervention, in the posttest.

The sum over 16 points is lower in the pretest (mean=9.36, SD=3.65) than the posttest (mean 10.76, SD=3.48) suggesting an overall increase in the scores. Figure 1 illustrates a raincloud plot that shows each student as a dot which moves from the initial position (green points in pretest) to the final position (orange points in posttest). This movement is visualized with a gray line. On the right position, there are two boxes which present the median, interquartile range. This graphic shows the different position of this measure, higher position to the orange (posttest). .

RESULTS

In the insightful *Table 2* of the study, we delve into the nuances of language skill enhancements experienced by participants, as delineated by pre and posttest mean scores. This rigorous examination incorporates the Wilcoxon signed-rank test—a non-parametric statistical approach—to discern the significance of the differences observed in the group of 147 individuals.

For comprehension, we observe not just an improvement but a statistically significant leap from a pretest with a mean of 2.41 to a posttest mean of 2.80. The Z-score associated with the Wilcoxon signed-rank test, which stands

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at an impressive 5.705, underscores the robustness of this advancement, with a p-value of less than 0.001 ruling out random chance as an explanation for the enhancement.

Fluency, a pivotal aspect of linguistic aptitude, witnessed a similar elevation. The pre-intervention fluency mean was a modest 2.39, which, following the educational intervention, saw a boost to 2.73 in the posttest. The negative Z-score here, -5.777, obtained from the Wilcoxon signed-rank test, confirms the significance of the improvement post-intervention, ensuring that these findings hold statistical weight.

The realm of pronunciation, often challenging to refine, echoed the positive trend observed in other language domains. Starting from a pretest average of 2.23, participants' scores ascended to 2.67 posttest. The Z-score of 6.088 from the Wilcoxon test affirms the educational impact, and the p-value less than 0.001 validates the changes as statistically significant.

Content comprehension was not to be outdone, showcasing growth from a mean score of 2.33 to 2.56, a subtle yet significant rise, as evidenced by the Z-score of -4.143 from the Wilcoxon signed-rank test.

Table 3 presents the mean differences between pre and posttest scores for high school and dual enrollment students across various language skills.

In terms of comprehension, high school students exhibited a mean increase of 0.52 points, whereas dual enrollment students showed a smaller increase of 0.15 points. This difference was statistically significant (W = 3.173, p = 0.001), indicating a more pronounced improvement in comprehension among high school students.

For fluency, high school students demonstrated a mean increase of 0.42 points, while dual enrollment students had a slightly lower increase of 0.20 points. The difference between the two groups was statistically significant (W = 2.923, p = 0.038), although the effect size was small.

Regarding pronunciation, high school students showed a mean increase of 0.52 points, compared to 0.29 points for dual enrollment students. However, this difference was not statistically significant (W = 2.850, p = 0.107).

In terms of content understanding, both high school and dual enrollment students exhibited similar improvements, with mean increases of 0.23 and 0.24 points respectively. This difference was not statistically significant (W = 2.493, p = 0.931), suggesting comparable gains in content understanding for both groups.

Table 2. *Pre and posttest mean*

	N	Mean	SD	SE	Z	p
Pre comprehension	147	2.41	1.078	0.089	5.705	<0.001
Post comprehension	147	2.80	0.967	0.080		
Pre fluency	147	2.39	0.940	0.077	-5.777	<0.001
Post fluency	147	2.73	0.872	0.072		
Pre pronunciation	147	2.23	1.015	0.084	.6.088	<0.001
Post pronunciation	147	2.67	0.960	0.079		
Pre content	147	2.33	1.105	0.091	-4.143	<0.001
Post content	147	2.56	1.099	0.091		
Pre total	147	9.36	3.656	0.302	-7.745	<0.001
Post total	147	10.76	3.481	0.287		

Table 3. *High School and University means differences between pre and posttest*

		N	Mean	SD	SE	W	p
Comprehension	High School	93	0.52	0.72	0.07	3.173	0.001
	Dual enrollment	54	0.15	0.41	0.06		
Fluency	High School	93	0.42	0.61	0.06	2.923	0.038
	Dual enrollment	54	0.20	0.41	0.06		
Pronunciation	High School	93	0.52	0.76	0.08	2.850	0.107
	Dual enrollment	54	0.29	0.50	0.07		
Content	High School	93	0.23	0.59	0.06	2.493	0.931
	Dual enrollment	54	0.24	0.51	0.07		
Total	High School	93	1.70	2.02	0.21	2.985	0.047
	Dual enrollment	54	0.89	1.02	0.14		

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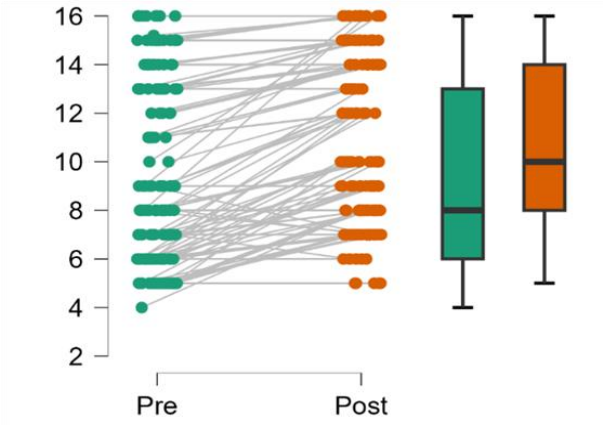
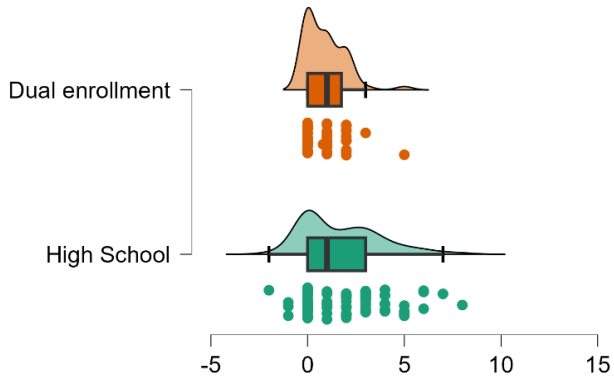
Figure 1. *Pre and posttest raincloud plot of the sum of the four subskills*



The Wilcoxon signed-rank test was employed to assess the pre and posttest scores, evaluating two related samples to determine if their population mean ranks differ. The Z-value, approximately -7.745, with a p-value of less than 0.001, indicates a statistically significant difference between the two sets of scores. The alternative hypothesis suggests that the scores from the pretest are lower than those obtained after the intervention, in the posttest. Specifically, the sum over 16 points is lower in the pretest (mean = 9.36, SD = 3.65) compared to the posttest (mean = 10.76, SD = 3.48), suggesting an overall increase in the scores. Figure 1 illustrates this improvement with a raincloud plot, depicting each student as a dot transitioning from the initial (green points in pretest) to the final position (orange points in posttest) via a gray line. Additionally, the plot includes two boxes representing the median and interquartile range, highlighting the higher position of these measures in the posttest (orange). Moreover, the effect size for this comparison was 0.923, indicating a large effect of the intervention on the improvement in scores (Figure 1).

Figure 2. *High School and Dual enrollment mean differences between pre and posttest*



Examining the total improvement score, high school students showed a larger mean increase of 1.70 points compared to 0.89 points for dual enrollment students. This difference was statistically significant (W = 2.985, p = 0.047), indicating a more significant overall improvement in language skills among high school students. Additionally, the correlation biserial coefficient measuring the effect size was 0.189, suggesting a small to medium effect of the intervention on the overall improvement in language skills. Figure 2 illustrates how concentrated the increase of dual enrollment students is compared to high school students.

DISCUSSION

The Lyrics Training website program has made a statistically significant impact on the participants' language skills. The consistency of improvement across comprehension, fluency, pronunciation, and content understanding suggests that the intervention was holistic, addressing all key facets of language learning effectively. This provides compelling evidence for the efficacy of the methods used and could serve as a model for similar educational initiatives.

The study of the application of Lyrics Training as a technological tool represents a significant advancement in language education, particularly in the realm of speaking proficiency. With the ubiquitous presence of the internet in households, the accessibility of such digital resources offers unparalleled opportunities for language learners of all backgrounds.

Lyrics Training, as a digital platform for learning English, offers an immersive and interactive experience that caters to diverse learning styles and preferences. By leveraging music as a medium, learners engage with authentic language input in the form of song lyrics, thereby enhancing their listening comprehension, vocabulary acquisition, and pronunciation skills (Thomson & Derwing, 2015).

The core feature of Lyrics Training lies in its emphasis on speaking practice, a critical component of language proficiency often overlooked in traditional educational settings. Through the platform's interactive exercises, learners actively engage in vocalizing and enunciating lyrics, thereby honing their pronunciation accuracy and fluency (Derwing & Munro, 2015).

Moreover, the availability of Lyrics Training as a free and easily accessible tool democratizes language learning, making it accessible to individuals from diverse socioeconomic backgrounds. This democratization of access to language education aligns with the broader goals of inclusive and equitable learning opportunities for all (Benson, 2011).

The application of Lyrics Training in language instruction holds immense potential for achieving tangible learning outcomes. Studies evaluating its effectiveness have shown promising results, with learners demonstrating improved speaking proficiency and confidence following regular usage of the platform (Zimmerman, 2016).

In conclusion, the integration of Lyrics Training into language learning pedagogy represents a significant paradigm shift, harnessing the power of technology to promote speaking proficiency and foster a more inclusive and accessible learning environment for language learners worldwide.

In addition to the significant impact observed across various language skills, it's noteworthy to mention that high school students had a slight advantage over their dual enrollment counterparts. While this outcome may be expected given the higher academic level of university students, it's important to highlight that there's limited theoretical basis for directly comparing these two student populations. Nonetheless, the findings suggest that both

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groups benefited from the Lyrics Training intervention, albeit with varying degrees of improvement. This underscores the versatility and effectiveness of the program across different educational settings and student demographics, reinforcing its potential as a valuable tool for language education.

CONCLUSIONS

The study conducted a thorough examination of the effectiveness of the "Lyrics Training" educational tool in improving students' listening and speaking skills. Through a quasi-experimental design implemented across three distinct educational settings, the research identified a notable enhancement in language proficiency following the intervention. Robust statistical analyses, including the Wilcoxon signed-rank test and raincloud plots, provided compelling evidence of the program's efficacy. It's worth noting that while both high school and dual enrollment students demonstrated improvements, the latter group exhibited a slight advantage, reflecting the diverse educational contexts. This underscores the program's adaptability and capacity to meet the needs of different learner populations. The integration of technology like Lyrics Training represents a significant stride in language education, offering immersive and accessible learning experiences. In summary, these findings underscore the transformative potential of technology-driven approaches in creating inclusive and effective language learning environments globally.

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