



Supporting EFL Listening Ability and Vocabulary Acquisition with Lyrics Training App

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The purpose of this study is to investigate the effectiveness of lyrics training as an alternative learning tool for enhancing English as a Foreign Language (EFL) listening skills. A total of 34 freshman students from a university in Taiwan participated in this study. A mixed research method was employed to collect data from multiple sources including pre- and post-test scores measuring listening and vocabulary proficiency, analysis of students' lyrics training tasks, classroom observations conducted by the researchers, and an end-of-semester course evaluation survey. The quantitative data analysis revealed a statistically significant improvement in students' English listening and vocabulary acquisition skills. Additionally, the qualitative data analysis demonstrated significantly positive perceptions among students regarding the utilization of the LyricsTraining app. Students expressed enthusiasm for this innovative approach to language learning, highlighting the enjoyable and interactive nature of the app. These results indicated that engaging with music and lyrics in a structured manner positively impacted students' learning outcomes. Based on these findings, it can be concluded that the LyricsTraining app serves as an effective medium for enhancing students' EFL listening ability and vocabulary acquisition. The combination of engaging with music, lyrics, and interactive exercises through the app proved beneficial in improving students' language skills.

Keywords: m-learning, EFL, language learning, mobile applications, lyrics training

INTRODUCTION

The widespread availability of mobile devices has revolutionized the learning landscape, enabling students to access educational resources anytime and anywhere (Dias & Victor, 2017; Kee & Samsudin, 2014). The integration of mobile devices as educational tools in the field of English as a Foreign Language (EFL) has been gained significant attention and support in numerous studies (Cahyono & Astuti, 2019; Hwang & Chen, 2013; Jiang & Zhang, 2020; Sung, Chang, & Liu, 2016; Tang & Hew, 2017;

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Yang, Li, & Lu, 2015). In addition, the combination of lyrics and mobile learning has been recognized as a valuable and effective approach to address EFL learners' challenges (Nguyen, 2023). EFL educators are increasingly recognizing the significance of integrating English songs into formal education, resulting in successful implementation in various small-scale experimental courses (Engh, 2013). Limited research has delved into the utilization of song lyrics in higher education for adult learners, and even fewer studies have investigated the effectiveness of a lyrics mobile application in enhancing students' motivation and learning outcomes, with a particular focus on limited EFL proficiency and low motivation students.

Songs have long been regarded as a powerful pedagogical tool for language learning, as they create a pleasant learning atmosphere and cater to the educational needs of learners (Haghverdi, 2015). The incorporation of songs has proven to be effective in reducing learners' affective barriers, fostering a meaningful learning environment, and promoting positive attitudes and self-confidence, thus facilitating language acquisition (Alisaari & Heikkola, 2017; Engh, 2013). It has been well-established that music creates an enjoyable, relaxing, and motivating ambiance, enabling EFL learners to alleviate stress and enhance information absorption. Shen (2009) observed that listening to songs helps EFL learners overcome anxiety, apprehension, and a lack of self-assurance, enabling them to reduce stress levels and consequently learn more effectively. The diverse musical rhythms and captivating themes play a pivotal role in motivating EFL learners and igniting their enthusiasm for acquiring the target language. Further, learning EFL through song lyrics contributes to vocabulary expansion, improved listening skills, the breakdown of cultural barriers, reduced difficulty in comprehending foreign accents, and the acquisition of essential conversational English phrases (Shen, 2009).

Since the 1960s, researchers have extensively investigated the efficacy of incorporating song lyrics in EFL learning, leading to several notable findings. These studies have highlighted numerous positive effects, including vocabulary expansion, enhanced listening skills, dismantling of cultural barriers, reduction of foreign accents, and acquisition of essential English phrases (Kao & Oxford, 2014; Morales Neisa, 2008; Murphey, 1990; Orlova, 2003; Richards, 1969; Şevik, 2011; Talamini, Grassi, Toffalini, Santoni, & Carretti, 2018). Furthermore, the use of songs has been found to significantly aid students in mastering English grammar and vocabulary, while lyrics have been observed to improve English listening comprehension and enhance pronunciation (Alisaari & Heikkola, 2017; Tegge, 2017). The musical elements inherent in songs allow students to assimilate vocabulary alongside emotional and contextual cues. Notably, song lyrics prove particularly beneficial in exposing learners to phrasal verbs when acquiring a second or foreign language (Akbari, Shahriari, & Hosseini Fatemi, 2018).

The integration of mobile technology with song lyrics also plays a crucial role in fostering EFL students' learning motivation and cultivating enthusiasm for self-directed learning. In a successful and motivated learning environment, students can conveniently access songs through their mobile phones and engage in active learning (Kukulskahulme, Traxler, & Pettit, 2007). Lee (2014) emphasized that songs obtained from social media platforms like YouTube, accessed via mobile phones, serve as effective tools for

language learning. The incorporation of a musical teaching approach has shown to stimulate students' motivation to learn and enhance their overall learning performance. Moreover, Rau, Gao, and Wu (2008) highlighted the significant impact of mobile learning in motivating students who were previously reported to have lower motivation and poor academic performance in senior vocational and technological education programs in Taiwan. In addition, Borromeo García (2015) conducted a study investigating students' perceptions of a LyricsTraining website, and the results revealed a predominantly positive attitude among users, acknowledging its effectiveness in improving listening comprehension.

For teachers, it is crucial to have a deep understanding of the appropriate utilization and implementation of song lyrics as professional pedagogical tools within a language learning environment. This understanding can significantly enhance learning effectiveness and motivation, particularly for learners who exhibit lower levels of motivation (Angelina, 2020). In Taiwan, night school students often face unique challenges and circumstances. These students may lack motivation or feel frustrated with their academic achievements, and many of them are compelled to work during the day due to financial constraints. Balancing their daytime jobs and attending courses in the evening places these students under considerable pressure and burden. They are expected to overcome fatigue from their work and confront academic challenges such as assignments and reports. Despite their best efforts, physical and mental exhaustion persist. The challenges and pressures they experience differ significantly from those who voluntarily engage in personal development or lifelong learning during nighttime. It becomes arduous for students to concentrate on their studies when they are grappling with work fatigue and have limited academic resources.

Therefore, the primary objective of this study was to address the aforementioned situation by examining the utilization of song lyrics training in higher education, with a focus on night school students who have limited EFL proficiency. The study aimed to evaluate how effective a lyrics mobile application, specifically LyricsTraining app, could be in enhancing students' listening ability and expanding their vocabulary. This app was chosen as the intervention in the study after conducting a thorough review of related apps, and there were several specific reasons for this choice. It functioned as a means to create an engaging and enjoyable learning environment, helping to mitigate the typical frustrations associated with learning English and, most importantly, fostering students' interests and motivation throughout the learning process. The choice of this app aligned perfectly with the specific objectives: addressing the needs of night school students with limited EFL proficiency, improving language skills through an immersive learning atmosphere, and exploring innovative pedagogical approaches that incorporate both mobile technology and music-based learning strategies. It was regarded as a promising tool for improving the educational experiences of adult learners in the EFL context, while also offering valuable insights into effective language learning methods. By exploring these uncharted areas, this study aimed to shed light on the integration of innovative pedagogical approaches, mobile technology, and music-based learning strategies, ultimately enhancing the educational experiences of adult learners in the EFL context.

Literature Review

Mobile application for learning

With the rapid development of mobile technology, the role of the mobile phone has undergone continuous transformation (Chapelle & Sauro, 2017). Mobile phones are no longer just devices for communication in daily life; they have become powerful educational tools that offer portability and mobility, enabling users to learn anytime and anywhere (Motiwalla, 2007; Oz, 2014). As a result of these evolving features, English language teaching has shifted from Computer Assisted Language Learning (CALL) to Mobile Assisted Language Learning (MALL) over the past two decades (Kee & Samsudin, 2014). This technological evolution has brought about numerous mobile applications that have revolutionized the delivery of educational content. By integrating and utilizing mobile applications in teaching, self-directed learning among students can be fostered (Jumaat & Tasir, 2013)

Khaddage and Cosío (2014) defined the mobile application as “a touch-based, on-demand, on the go, and a takeaway software application that runs on a smart mobile device.” With their interactive capabilities, a wide range of educational mobile applications have been developed. It has been reported that mobile applications are experiencing the most rapid growth as educational tools in higher education (Johnson, Adams & Cummins, 2012). Many instructors now encourage students to submit soft copies of their assignments through internet learning management systems instead of using printed outputs. These changes have fundamentally transformed the traditional education system, and the innovation brought by mobile technology and mobile applications has greatly enhanced teaching and learning productivity.

Research studies have highlighted the positive impact of mobile applications on various aspects of EFL learning. For instance, Skiada et al. (2014) conducted a study with dyslexic students and found that the use of a game-based mobile application improved their learning experience and contributed to better word recognition and reading comprehension skills. The study results demonstrated that the use of mobile applications had a positive impact on the learning experience of dyslexic students. Another study by Şimşek and Arat (2015) investigated university students' preferences for mobile learning materials and found that students favored using mobile applications over traditional textbooks, as they provided a more engaging and interactive learning experience.

Furthermore, the researchers observed that incorporating educational mobile applications into the learning process not only motivates students but also enhances their ability to absorb information, explore problem-solving approaches, and improve their engagement (Licorish, et al., 2018). Mobile applications provided learners with engaging and interactive content, such as language exercises, quizzes, flashcards, and multimedia resources, which can enhance their motivation and engagement in the learning process (Kim & Kwon, 2012). The integration of mobile applications in EFL learning also caters to the diverse learning needs and preferences of individual learners (Hao et al., 2019). With a wide range of applications available, learners can choose apps that align with their learning styles, interests, and proficiency levels (Ghobadi et al.,

2021). Some applications offer personalized learning paths, adaptive features, and intelligent algorithms that tailor the content and activities to the learner's specific needs (Kukulska-Hulme, 2016). This personalized approach enhances the learner's autonomy and provides them with a sense of ownership over their learning journey.

In addition to individual learning, mobile applications also facilitate collaborative learning and communication among learners. Some applications offer features such as chat forums, discussion boards, and virtual language exchange platforms, enabling learners to connect with fellow language learners worldwide and engage in authentic language practice (Kukulska-Hulme & Viberg, 2018)). Collaborative activities through mobile applications foster a sense of community and provide learners with opportunities to interact and learn from each other, thus enhancing their language proficiency (Avci & Adiguzel, 2017). Mobile applications have transformed EFL learning by providing learners with accessible, personalized, and engaging language learning experiences.

Learning language through song lyrics

Eng (2013) emphasized the significance of music as a valuable tool for learning as it fosters social harmony and enhances students' motivation. He highlighted the importance for teachers to be well-versed in incorporating music into the learning environment and to understand its effects on students' cognition and behavior. Songs possess unique qualities that not only improve students' academic achievements and learning motivation but also create a positive atmosphere in the classroom. Schoepp (2001) outlined several reasons why songs should be utilized in language learning classrooms:

1. **Affective:** Affective learning occurs when the affective filter is low. A weak affective filter indicates that students exhibit proactive attitudes, high motivation, and self-confidence in their learning. Conversely, students with a strong affective filter tend to have low motivation, self-confidence, and a lack of enthusiasm for learning. According to the Affective Filter Hypothesis, teachers should create a positive learning environment to reduce students' learning anxiety.
2. **Cognitive:** One of the primary benefits of using songs in language learning classrooms is their ability to develop automaticity. Songs facilitate language development by providing repetition and consistency, which contribute to the students' language learning process.
3. **Linguistic:** Songs can serve as excellent examples of conversational English. Exposure to English songs can help students improve their language skills.

By incorporating songs into the language learning curriculum, teachers can create an engaging and effective learning experience that addresses affective, cognitive, and linguistic aspects of language acquisition.

According to Murphey (1992), there is a widespread belief among researchers that songs and lyrics have a significant impact on learners' short and long-term memory. Numerous studies have confirmed the strong support that music and songs provide within the language learning environment. Educators widely acknowledge the benefits of incorporating music and songs into language teaching (Duarte Romero, Tinjacá

Bernal, & Carrero Olivares, 2012) and recognize music as a valuable tool for English language instruction. However, while many educators follow their intuition and support the use of music and songs in the classroom (Eng, 2013; Salcedo, 2010), some rely on their own experiences and perceptions to decide whether to incorporate music or songs into their teaching practices.

Since the 1990s, several studies have explored the application of song lyrics to enhance verbal skills in EFL learners. Lowe (1998) discussed the impact of songs on language learning and found that they not only motivated students but also led to improvements and outstanding performance in grammar structure and vocabulary acquisition within the control group. Orlova (2003) recommended the use of songs specifically for developing speaking skills and promoting cultural competence in EFL teaching. Incorporating songs in English classes created a relaxed and engaging atmosphere, eliciting greater interest and enthusiasm among students (Cuestas Cifuentes, 2006). Songs also played a role in encouraging and improving students' verbal skills, offering access to authentic language materials and helping them overcome difficulties in language learning. For EFL instructors, it is imperative to seek out effective tools for language learning.

METHOD

Participants

This study included thirty-four freshmen EFL students from a technological university's night school program in Taiwan, comprising 18 males and 16 females, with ages ranging from 17 to 19. None had prior experience with LyricsTraining Apps. In contrast to their daytime school peers, these students held daytime jobs and attended classes in the evening. This dual role in a night school setting posed challenges as they balanced work and education, which often led to lower motivation, academic performance, and interest in learning, as noted by Huang (2006). Despite studying English for a minimum of ten years, the participants' English proficiency ranged only from high beginner to low intermediate levels.

Research setting

The course was led by a professor and a teaching assistant who were also the researchers conducting the study. The course was taught by a professor and a teaching assistant who were also the researchers conducting the study. As part of the course, there was a dedicated hour every week for students to participate in interactive games using the LyricsTraining app. This app served as a supplementary tool to enhance instruction in the course. Over the course of the semester, these LyricsTraining app activities were conducted twelve times, incorporating a variety of popular songs with engaging and easily understandable lyrics. During the research period, the selection of the most popular pop songs, including titles like "Love Me Like You Do" and "All of Me," was deliberately made with the aim of enhancing student engagement and participation in the study. These songs were chosen based on insights provided by the research conducted by Kao and Oxford in 2014. Their study highlighted that the lyrics of such songs possessed a unique and captivating quality that made them an attractive

option for language learning. The selection of songs aimed to create a pleasurable learning experience, moving away from the traditional reliance on textbooks.

Instrument and data analysis

In this study, the LyricsTraining app, an innovative mobile application, was utilized as a supplementary learning tool for listening training in the course. Originally designed to enhance language learning, this app provides interactive song lyrics practice, offering a distinctive and enjoyable method to particularly improve listening skills (Nguyen, 2023). With LyricsTraining, users can choose from a vast library of popular songs across various genres and languages. As the song plays, the lyrics appear on the screen with missing words or phrases. Users are challenged to fill in the gaps correctly, engaging in a fun and immersive learning experience. The app provides different difficulty levels, allowing learners of all proficiency levels to participate. With its gamified features and personalized learning approach, LyricsTraining motivates users to actively engage with authentic lyrics, improving their listening abilities while enjoying their favorite music. Whether you're an English language learner or a music enthusiast exploring foreign languages, LyricsTraining is an invaluable tool that makes language learning a delightful and rewarding experience (García, 2015).

The participants' listening skills were evaluated using the General English Proficiency Test (GEPT) listening section. The GEPT, developed by the Language Training and Testing Center (LTTC) under the authority of the Ministry of Education in Taiwan, has been in existence since 1999. It serves as a standardized assessment tool to measure English proficiency levels across various domains. It consists of five proficiency levels, namely elementary, intermediate, high-intermediate, advanced, and superior. Each level corresponds to different degrees of English proficiency, with a reliability range of 0.87-0.91 (Roever & Pan, 2008). For this research, the GETP Intermediate listening test was selected based on the participants' English level. The purpose of this test was to evaluate the impact of the LyricsTraining app on their listening abilities.

In addition to assess the participants' progress in acquiring vocabulary, a series of pre- and post-tests were administered. These tests encompassed word translations, definitions of terms, and completing missing lyrics, employing a multiple-choice format. Furthermore, an end-of-semester survey was developed using insights from relevant literature and input gathered through interviews with both instructors and students. In addition, it underwent a thorough review by the instructors' colleagues and students before being administered. It consists of 21 close-ended and four open-ended questions, aimed at gathering insights into students' perceptions regarding the efficacy of the LyricsTraining app as a tool for EFL listening and vocabulary learning. The survey focused on three primary areas: (1) listening achievements, (2) vocabulary acquisition, and (3) students' attitudes towards lyrics training.

To analyze the quantitative dataset, SPSS 23 was utilized. The paired sample t-test analysis was employed to examine the pre- and post-test scores for listening abilities and vocabulary acquisition. The responses from the end-of-semester survey were analyzed Next using descriptive data analysis. Additionally, the qualitative data

obtained from classroom observations and open-ended questions were subjected to content analysis.

Procedure

All students underwent the same pre-test to evaluate their vocabulary acquisition and listening abilities. Subsequently, the LyricsTraining app was introduced, accompanied by instructions on how to play the game. The goal was to help students improve their listening skills by following along with the lyrics while listening to songs. In order to promote collaborative learning and reduce language learning anxiety, students were organized into pairs or small groups. When working together, the student responsible for following the lyrics could seek help from their partner if they had difficulty understanding the lyrics. The other member was expected to search for the lyrics on a separate mobile phone. Practicing with the mobile application in groups had the potential to alleviate learning stress and boost motivation for mastering the song lyrics.

After introducing the mobile application, the researcher explained the procedural steps as follows:

1. The initial ten minutes involved showing the song video with lyrics using the "YouTube" mobile application, allowing students to become familiar with the song.
2. The subsequent ten minutes required all participants to listen to the song in the "Practice Model".
3. Following that, for ten minutes, the participants practiced the lyrics at the "Beginner Level".
4. In the final twenty minutes, all participants engaged in playing the game, striving to achieve their highest scores. Students within the same group took turns playing the games. The game requires that students start by entering the beginner level, listen to the songs, and tap on the correct words that are missing from the screen. Once they finish the songs, the game concludes, and the scores are displayed.
5. Lastly, students were instructed to take a screenshot of their highest score and submit it to the school's learning management system.

Throughout the activity, students engaged with the app by following the lyrics, which were synchronized with the music. They listened to the music and tapped the missing words in the lyrics. The app monitored their progress and offered real-time feedback, highlighting areas in the lyrics that required correction. Students were given scores and feedback based on their performance, enabling them to track the number of correct words and their accuracy rate. The LyricsTraining app also includes gamification elements, motivating students to compete with others and work towards improving their scores. Students had the option to replay songs and practice repeatedly, reinforcing their language learning through repetition. In addition, researchers conducted class observations to observe students' reactions and identify any difficulties they encountered. Then, during the final class session, students took the post-test to assess their listening abilities and vocabulary acquisition. They also completed an end-of-semester course evaluation survey.

FINDINGS

The effectiveness of LyricsTraining App on students' listening ability

Pre- and Post-test for listening ability

To assess the students' listening abilities before and after utilizing the LyricsTraining app for a semester, pre- and post-tests were administered. At the beginning of the semester, there were a total of 34 enrolled students, but only 28 students completed both the pre- and post-tests. Table 1 displays the results of the paired-sample t-test, revealing a significant difference between the pre-test ($M = 59.61$, $SD = 22.389$) and post-test ($M = 65.79$, $SD = 15.922$) scores. This indicates that students' listening abilities showed improvement following the implementation of the LyricsTraining app.

Before the implementation, 14 students (50%) scored below 60, but after the activity, the average score increased to 65.79 ($SD = 15.922$). Additionally, the number of students scoring below 60 decreased to 9, representing a decrease from 46% to 32%. These findings highlight the significant enhancement of students' listening abilities through the implementation of the LyricsTraining App in the EFL classroom.

Table 1

Paired sample t-test analysis for the pre- and post-tests scores of students' listening ability

	N	Min	Max	M	SD	P
Pre-test	28	13	93	59.61	22.389	0.026*
Post-test	28	28	99	65.79	15.922	

* $p < 0.05$

End-of-semester course survey

According to the findings presented in Table 2, the average score for listening learning achievement was 4.15, indicating that the LyricsTraining app played a significant role in enhancing students' overall listening achievements. The majority of participants agreed that the LyricsTraining app positively contributed to improving their English listening ability ($M = 4.33$, $SD = 1.028$). In addition, most participants found the app helpful in facilitating their English listening practice ($M = 4.27$, $SD = 1.048$). Approximately 73.3% of the participants ($M = 4.20$, $SD = 1.031$) felt that after engaging in the LyricsTraining app activity, they were able to comprehend the majority of the lyrics. Furthermore, 70% of the participants ($M = 4.03$, $SD = 1.129$) observed an improvement in their English pronunciation through the utilization of the lyrics mobile application. Students also acknowledged the usefulness of the LyricsTraining app in enhancing their conversation skills ($M = 3.90$, $SD = 1.125$).

Table 2
Descriptive data analysis of the end-of-semester survey-listening achievement

Items	N	M	SD	%	
				Agree	Strongly Agree
My listening ability improved	30	4.33	1.028	16.7	63.3
My pronunciation improved	30	4.03	1.129	23.3	46.7
My conversation ability improved	30	3.90	1.125	23.3	40.0
I can understand most of the lyrics	30	4.20	1.031	20	53.3
Listening practice became efficient	30	4.27	1.048	16.7	60.0

The effects of the LyricsTraining App on students' vocabulary acquisition

Pre- and Post-tests for Vocabulary Acquisition

As shown in Table 3, a notable difference emerged between the scores of the pre- and post-tests for vocabulary acquisition ($M = 44.72$; $SD = 12.685$). The average score for the post-tests rose to 54.57 ($SD = 16.310$), signifying a substantial enhancement in students' vocabulary acquisition subsequent to the implementation of the LyricsTraining app.

Table 3
Paired samples t-test analysis of pre- and post-tests scores of students' vocabulary acquisition

Variable	N	Min	Max	M	SD	P
Pre-test	28	17	65	44.72	12.685	
Post-test	28	27	83	54.57	16.310	0.000*

* $p < 0.05$

Students' performance on LyricsTraining App activities

The LyricsTraining app activities were carried out in the classroom over a span of 18 weeks, with a total of 12 sessions involving different songs. Figure 1 illustrates the weekly average performance scores of the students. Initially, during the early weeks of lyrics training, students were unfamiliar with the rules of lyrics training and the tempo of the songs. Consequently, they were unable to achieve high scores. However, as the weeks progressed, the average score showed a gradual increase, except for a slight dip during the 8th week. Students noted that the song featured in that particular week was comparatively more challenging than others. Nevertheless, students exhibited significant improvement in their overall performance on the LyricsTraining app activities throughout the duration of the study.

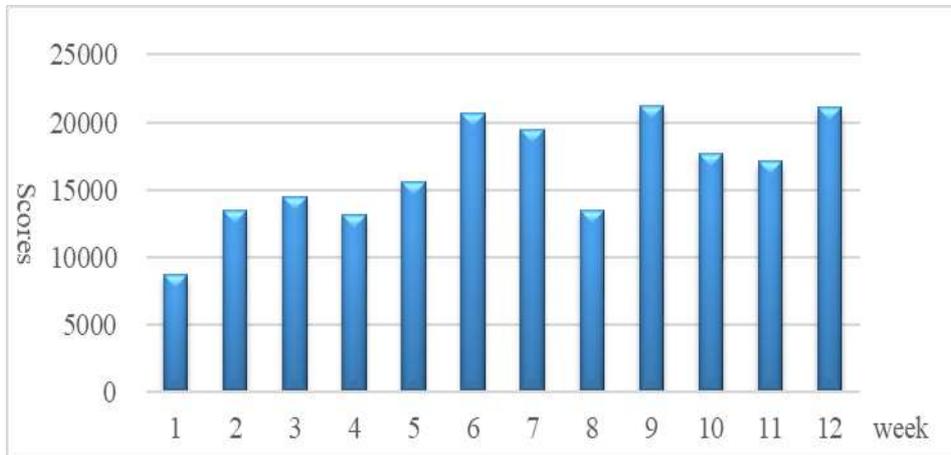


Figure 1
Students' weekly performance

End-of-semester course survey

As demonstrated in Table 4, the average score for listening learning achievement was 4.11, indicating that the LyricsTraining app significantly contributed to students' overall vocabulary acquisition. A majority of the participants (83.4%, $M = 4.33$, $SD = 0.922$) agreed that the app enhanced the efficiency of English vocabulary learning. Furthermore, 76.7% of the participants ($M = 4.23$, $SD = 0.817$) believed that it facilitated easy memorization of new words, which was evident from their ability to recall the newly learned words after each activity ($M = 4.20$, $SD = 1.064$). Following the lyrics training, students experienced an increase in their vocabulary acquisition ($M = 4.10$, $SD = 1.094$). Additionally, they acknowledged improvements in their reading skills ($M = 4.10$, $SD = 1.155$) and writing abilities ($M = 3.67$, $SD = 1.422$).

Table 4

Descriptive data analysis of the end-of-semester survey- vocabulary acquisition

Items	N	M	SD	%	
				Agree	Strongly agree
Expanded English vocabulary size	30	4.10	1.094	13.3	53.3
Improved English reading ability	30	4.10	1.155	16.7	53.3
Improved English writing ability	30	3.67	1.422	13.3	43.3
Made the vocabulary acquisition efficient	30	4.33	0.922	26.7	56.7
Made the vocabulary acquisition easier	30	4.23	0.817	30.0	46.7
New vocabulary learned every activity	30	4.20	1.064	23.3	53.3

Students' perceptions towards the LyricsTraining app

End-of-semester course survey

As depicted in Table 5, the average score for students' perception was 4.40, indicating a generally positive perception toward the LyricsTraining app. Nearly all participants (93.4%, $M = 4.70$, $SD = 0.569$) expressed their liking for the course design. The majority of participants ($M = 4.40$, $SD = 0.855$) found the app easy to navigate and expressed enthusiasm about using it to learn English in the classroom ($M = 4.07$, $SD = 1.172$). After engaging with the LyricsTraining app for a semester, students noted that it was suitable for English listening courses ($M = 4.47$, $SD = 0.681$) and for vocabulary learning ($M = 4.33$, $SD = 0.922$). Additionally, most participants agreed that their enjoyment of English learning increased after using the app ($M = 4.40$, $SD = 4.037$).

Table 5

Descriptive data analysis of the end-of-semester survey on students' perceptions on the Lyrics Training app

Items	%				
	N	M	SD	Agree	Strongly agree
I look forward to attending this course	30	4.07	1.172	23.3	50.0
The app is easy to use	30	4.40	0.855	33.3	56.7
The app is suitable to be used in EFL listening course	30	4.47	0.681	33.3	56.7
The app is suitable to be used for EFL vocabulary learning	30	4.33	0.922	33.3	53.3
I like this course design	30	4.70	0.596	16.7	76.7
I like to learn English more because of the app	30	4.40	4.037	16.7	66.7

During their final class, all students were requested to respond to open-ended questions on the end-of-semester survey. The survey consisted of four questions, and the students' answers are discussed below.

For question one, students were asked to specify the accomplishments they achieved through the use of the LyricsTraining app. The majority of students expressed positive attitudes towards the app. Fifteen students reported that the lyrics training had helped them improve their vocabulary acquisition, while seven students indicated an improvement in their listening abilities. Some students mentioned that they were motivated to learn English through the app. One student stated, "*The LyricsTraining app strengthened my writing skills and expanded my vocabulary. I started listening to English songs and thoroughly enjoyed this English Listening course. I hope this app can be utilized in other English listening courses as well.*" Another student remarked, "*I can now understand most of the lyrics and have learned numerous new words.*" Other students expressed sentiments such as, "*Learning English is no longer difficult for me. It's quicker to learn, and there's no pressure in acquiring new words from my favorite English songs. Additionally, I improved my pronunciation, and I feel that my English has improved significantly.*"

Students' overall responses regarding their achievements through the use of the LyricsTraining app are outlined below:

1. "My speaking ability improved."
2. "My pronunciation improved."
3. "The more I understood the lyrics, the more vocabulary I learned while using the LyricsTraining app. It helped me expand my vocabulary."
4. "I have enhanced my English linking sounds and pronunciation."
5. "The app motivated me to start singing English songs."

However, there is one negative view expressed about the LyricsTraining app. One student mentioned, *"Some lyrics were too difficult, and it was challenging for me to follow native English singers, so I made several mistakes while practicing."*

Question two inquired about the students' perception of learning English through the use of the LyricsTraining app. The majority of students agreed that lyrics training is an effective tool for learning English. It appeared that students found this type of training highly motivating. One student expressed, *"I started eagerly anticipating the English Listening Course every week."* Another student mentioned, *"I enjoyed this learning method because it made me feel relaxed and less stressed."* Some students commented, *"The training was both interesting and helpful,"* and *"I found myself spending more time on English learning because of this lyrics training app."* One student highlighted the convenience and user-friendliness of the app, stating, *"The app was very convenient and easy to use, and it not only increased my interest but also boosted my confidence in learning English."* Another student wrote, *"This lyrics training sparked my interest in learning English, which was a pleasant surprise. I never thought English learning could be this fascinating."* Other students mentioned that they sometimes practiced after school because the lyrics training was enjoyable and effortless.

Overall, most students displayed a positive attitude toward the lyrics training. However, one student mentioned, *"I experienced stress during practice as I'm not a frequent mobile phone user, leading to slower typing speed. At times, my low scores were due to slow tapping, not a lack of word comprehension."* Despite the student's perception of stress during the lyrics practice, their tapping performance showed improvement in the last few weeks.

Question three focused on whether students noticed any difference or improvement in their English listening ability after the lyrics training. The majority of students firmly believed that this lyrics training had a positive impact on their listening skills. One student shared their progression, stating that they initially learned new words, which eventually led to understanding the meaning of sentences, and now they can comprehend entire songs. They expressed, *"Prior to the lyrics training, I merely listened to the melody of songs. However, now I can comprehend the lyrics."*

Most students acknowledged significant progress in their English listening ability due to the LyricsTraining app, which they viewed as a fresh and captivating learning tool. One

student mentioned, *"Ever since this app was incorporated into the course this semester, I have developed an interest in English listening practice. I realized that I learn better when using popular English songs."* Two other students highlighted that the lyrics training increased their awareness of words and helped them become accustomed to native speakers' accents. They stated, *"We believe our improvement stems from the app's assistance in understanding the tones and accents of native speakers."* By recognizing these accents, students found it easier to comprehend native speakers' speech. Another student mentioned, *"Now I find it easier to understand English movies."*

However, two participants mentioned challenges they faced. One student expressed, *"I often made mistakes, and some lyrics were too difficult for me due to the foreign accent."* Another student shared, *"It was challenging for me to keep up when the song lyrics were sung rapidly. Additionally, I realized the need to memorize more new words to enhance my comprehension of the lyrics."* These obstacles, such as foreign accents, song speed, and pronunciation, seemed to hinder students' understanding of the lyrics. Despite these difficulties, students overwhelmingly affirmed the positive effects of using songs in their responses.

Question four inquired about students' observations regarding any differences or improvements in their English vocabulary acquisition after using the LyricsTraining app. The students' responses to this question were predominantly positive, indicating that most participants were able to learn new vocabulary words during each lyrics practice. One student expressed, *"Compared to last semester, I found that I could learn words more efficiently because of the app."* Another student mentioned, *"This semester, I put in more effort and tried to memorize more words from the songs to improve my English."* Yet another student shared, *"I discovered numerous new words through the app. Additionally, I learned many beautiful sentences from the songs."* Furthermore, three other students mentioned that using the app was an effective method for acquiring new words.

Moreover, some students highlighted the creative, beneficial, and entertaining aspects of learning vocabulary from the LyricsTraining app on their mobile phones. One student stated, *"This training method was completely different from conventional teaching. It was enjoyable and innovative."* Many students emphasized their fondness for learning new words through the app, as it enabled them to memorize numerous new words quickly and effortlessly, without feeling pressured. As one student remarked, *"I am no longer afraid to encounter unfamiliar words, and I can pronounce them correctly on the first try."* Another student shared, *"I learned a vast amount of new words, and whenever I encountered unfamiliar words, I was motivated to look up their meanings."*

Classroom observation

Toward the end of the research period, nearly all students exhibited improved concentration and motivation during the practice sessions. The participants' listening ability was enhanced through the use of the LyricsTraining app. After a few training sessions, many of them were able to reduce their practice time while still achieving high scores. Despite encountering some challenging activities within the app, the students

expressed their enthusiasm for learning the lyrics of songs. Some even made requests to include their favorite songs in the practice song list because they were eager to learn their lyrics.

Throughout the semester, the researchers diligently recorded the participants' weekly responses to the LyricsTraining app, as well as identified the benefit and various obstacles they encountered.

1. Improvement in learning motivation: Most students dedicated time and effort to practice and achieve high scores on the LyricsTraining app. Some demonstrated a competitive spirit by exploring different strategies to increase their scores, such as requesting additional practice time after class, using earphones to block out background noise, and searching for lyrics on the internet. Many participants noted that this type of lyrics training reduced their anxiety and further enhanced their motivation to improve their English listening skills.

2. Limited internet access: The LyricsTraining app relies on a stable internet connection, but the campus internet access was often unreliable. Inconsistent connectivity during the activity caused frustration among students, leading them to lose patience. Consequently, they were unwilling to replay the game or tackle fast-paced songs.

3. Issue of absences: Absences posed a significant problem for night school students' academic performance and for the research itself. Night school students face added pressure and exhaustion, resulting in higher rates of class absenteeism. When a student was absent from the group, the remaining student had to practice with someone else. The absence issue was particularly pronounced during the initial four weeks of the semester but gradually improved as students realized the importance of achieving higher scores on the LyricsTraining app to pass the course.

4. Obstacles in pronunciation, accent, and speech speed: The varying pronunciation and accents presented challenges for participants in accurately comprehending the lyrics. Some reported difficulties in understanding the words due to the singers' pronunciation and accent. Additionally, keeping up with the speed of the songs proved challenging. These obstacles were more prominent among freshmen who had not actively studied English for an extended period. Their limited exposure to the English language and different accents necessitated more time to become familiar with native English pronunciation, accents, and speech speed.

CONCLUSION AND DISCUSSION

Mobile technology and mobile applications have expanded beyond communication tools and now offer valuable learning aids, providing EFL students with exceptional opportunities to enrich their learning experiences. The widespread availability of mobile technology has enabled students to access learning resources anytime and anywhere. This study aimed to examine the effectiveness of using the LyricsTraining app as a learning tool to enhance students' listening and vocabulary abilities in an EFL class over the course of one semester. In addition, the study explored students' motivation toward using the mobile application.

The results of the students' pre- and post-tests clearly demonstrated a significant improvement in their listening skills and vocabulary acquisition through lyrics training, aligning with Nguyen's 2023 study. The findings from the end-of-semester survey confirmed that the LyricsTraining app is an effective tool for enhancing students' English proficiency and learning motivation. The participants expressed a positive perception of the app and acknowledged its usefulness as an English learning resource, as evident in their responses to the open-ended questions. Classroom observations corroborated these results and revealed a significant improvement in students' learning motivation. By incorporating non-academic materials through lyrics training, students found a captivating approach to learning a foreign language. They perceived this practice more as a game rather than a test or traditional academic activity, thereby enhancing their focus and word retention. The utilization of lyrics training not only improved students' English proficiency but also stimulated their enthusiasm for learning the language. It can be concluded that the activities provided in the LyricsTraining app have the potential to spark students' interest and motivation for learning. This finding aligns with a study conducted by Shen (2009), which emphasized that incorporating English songs in the EFL classroom naturally cultivates affective learning. Implementing English song lyrics training creates a friendly and relaxed atmosphere, reducing anxiety and nurturing students' motivation to learn. However, it is crucial to select appropriate songs as some students mentioned occasional difficulties in keeping up with the singer's pace and accents.

The conclusion drawn from the students' feedback highlights the positive impact of engaging in game based mobile app on their language learning experience. The feedback reflects several key points that indicate the effectiveness of this approach:

1. Improved word retention and grammar comprehension: The students firmly believed that the lyrics practice significantly enhanced their ability to retain words and understand grammar and phrases commonly found in songs. This suggests that the use of authentic song lyrics as a teaching tool is effective in reinforcing language concepts. This study's results align with the findings of Rainey and Larsen in 2002, demonstrating that language accompanied by a melody is more easily segmented and, therefore, more comprehensible.
2. Noticeable progress: Over the semester, the students demonstrated noticeable improvement. They not only strived for higher scores in their weekly exercises but also actively applied the new vocabulary and phrases they learned from lyrics in their everyday English conversations. This not only shows academic progress but also practical application of their language skills.
3. Willingness to put in extra effort: The students displayed a strong commitment to enhancing their English skills across all language domains, including listening, speaking, and writing. This eagerness to go above and beyond in their learning journey indicates a high level of motivation and engagement. This finding aligns with previous research conducted by Sofiana and Mubarak in 2020, which similarly demonstrated that English game-based mobile applications enhance students' motivation to learn.

4. Value of authentic lyrics: The students highly valued the opportunity to engage with authentic English lyrics. This real-world exposure to language helped them improve their listening abilities and expand their vocabulary. Authentic materials can make learning more engaging and relevant. The importance of authentic lyrics is further substantiated by Werner (2019), who emphasized that they enhance students' language awareness by naturally introducing the language in engaging grammatical contexts, underscoring their significance.
5. Positive Experience with the app: The feedback also points to the app's gamified elements and personalized learning experience as contributing factors to the students' positive experience. This result is consistent with a study conducted by García in 2015. Gamification can make the learning process more enjoyable and motivating, while personalized learning ensures that students receive content tailored to their individual needs and progress.

The students' feedback highlights the effectiveness of using song lyrics as a language learning tool. It not only enhances vocabulary retention and grammar comprehension but also motivates students to actively apply their new language skills in their daily lives. The use of technology, particularly the app with gamified elements and personalization, further amplifies the positive impact of this teaching approach, creating a well-rounded and engaging language learning experience for the students.

One of the study's goals was to investigate how the LyricsTraining app could be effectively integrated into the language learning classroom. This objective was successfully accomplished; however, it's important to acknowledge that the study did encounter certain limitations. The primary limitation was the restricted internet access, resulting in connectivity issues during the activities, particularly within the campus. This obstacle should be considered in future research. In addition, although qualitative data was collected through classroom observations and open-ended questions, it was deemed insufficient to gain a comprehensive understanding of the participants' perceptions regarding the use of the LyricsTraining app. Conducting future interviews is recommended to acquire valuable insights from the participants. Furthermore, the participants in this study were non-random samples and may not represent all university students in Taiwan. Lastly, as the participants were likely enrolled in various English courses targeting different language skills, it is important to recognize that the LyricsTraining app might not have been the sole factor contributing to their improvement in English listening and vocabulary acquisition. Nevertheless, this study provided valuable insights into the potential of lyrics training as an alternative and enjoyable approach to language learning, presenting educators with a promising tool to complement traditional instructional methods and enhance students' overall language proficiency.

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