

Using Gliglish Application on English speaking skills among upper secondary education students at a public institution.

Uso de la aplicación Gliglish en las habilidades de habla inglesa entre estudiantes de educación secundaria superior en una institución pública.

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Abstract

The incorporation of artificial intelligence in education offers innovative approaches to language acquisition, especially in enhancing speaking skills. This study aimed to explain the use of the Gliglish Application on enhancing English speaking skills among upper secondary education students at a public institution in San Pablo de Tenta Parish, Saraguro canton, Loja province and Ecuador country. It has used an action-research design. The study employed a mixed- method approach, by combining quantitative and qualitative data. Data were gathered through pre-test and post-test to know the App's effectiveness and a survey which offers comprehensive perceptions of students. The results revealed significant improvements in speaking components such as pronunciation, grammar, vocabulary, fluency and comprehension. As a conclusion, the Gliglish application effectively enhances English speaking skills among upper secondary students at a public institution because its features like personalized learning, interactive and engaging flexibility, accessibility and autonomous learning. This study offers valuable insights into the role of adaptive technologies in modern education.

Keywords: AI tools, interactive learning, pronunciation feedback, language acquisition

Resumen

La incorporación de la inteligencia artificial en la educación ofrece enfoques innovadores para la adquisición del lenguaje, especialmente en el mejoramiento de la destreza del hablado. El objetivo del estudio es explicar el uso de la aplicación de Gliglish para mejorar la destreza del hablado en inglés entre los estudiantes del nivel secundario en una institución pública de la parroquia San Pablo de Tenta, cantón Saraguro, provincia de Loja y país Ecuador. Se ha utilizado un diseño de investigación-acción, el estudio empleó un enfoque de método mixto, combinando datos cualitativos y cuantitativos. Los datos fueron recolectados a través de pruebas previas y posteriores para conocer la efectividad de la aplicación y una encuesta que ofrece percepciones de los estudiantes. Los resultados revelan mejoramientos significativos en los componentes del hablado como son: pronunciación, gramática, vocabulario, fluidez y comprensión. En conclusión, la aplicación de Gliglish mejora efectivamente la destreza del hablado en el idioma Inglés entre los estudiantes del nivel secundario en una institución pública debido a sus características, como el aprendizaje personalizado, la flexibilidad interactiva y atractiva, la accesibilidad y el aprendizaje autónomo. Éste estudio ofrece información valiosa sobre el papel de las tecnologías en la educación moderna

Palabras claves: Herramientas de inteligencia artificial, aprendizaje interactivo, retroalimentación de pronunciación, adquisición del lenguaje.

Introducción

Speaking is one of the most essential skills in learning English, as it facilitates effective interaction in a variety of contexts. As Lázaro (2020) points out, the ability to communicate fluently and accurately in English is key not for only to achieving effective communication, but also to developing a deeper understanding of the language in everyday situations. Speaking in English involves an integration of vocabulary, pronunciation and grammar that is put into practice in spontaneous interactions, making speaking fundamental to full linguistic proficiency.

The ability to speak English is becoming increasingly relevant in the professional and academic world. In a globalized environment, proficiency in spoken English has become an essential skill for professionals in various fields, as it allows them to interact with people from different cultures and perform work tasks in international contexts. Lázaro (2020) points out that, on many occasions, oral ability is a determining factor for academic and professional success, given that most exams and interviews in English include evaluations of the ability to speak effectively.

The development of speaking proficiency in English presents several challenges that have been widely discussed by recent researchers. According to Liu and Zhang (2021), one of the main problems is linguistic anxiety, which can affect fluency and confidence in speaking, especially in contexts of assessment or interaction with native speakers. In addition, as Gómez (2020) points out, many students face difficulties in pronunciation and intonation, which can hinder mutual understanding and create communication barriers. On the other hand, Martinez (2022) argues that limited access to opportunities to practice speaking in real-world settings is another major obstacle, as most students do not have sufficient interactions with native speakers outside the classroom.

These factors underscore the complexity of speaking and the need to address not only the technical aspects of the language, but also the psychological barriers and limitations of

practice in authentic situations. Research underscores the role of AI in advancing language education by giving personalized and engaging learning experiences (Pokrivcakova, 2019). AI tools like Gliglish can help close the communication gap by allowing students to practice their speaking skills in an environment with no pressure and building their confidence and proficiency.

This leads to a review of the following studies such as Akbar Elsenring (2024), in their article on the use of chatbots in English language learning, point out that their use has led to many advantages, evident in the enthusiasm of both students and teachers who have implemented this teaching method.

Another relevant study is that of Kim (2018), in which the author selected 46 university students, dividing them into two groups. The first group consisted of 24 students in an experimental group, while the remaining 22 were placed in a control group. His studies show that the use of chatbots to improve English reading and listening skills positively affected both groups. Both listening comprehension and reading abilities improved in the study groups, with students advancing from an intermediate to an advanced level due to the use of chatbots (Akbar Elsenring, 2024).

One of the main disadvantages of using apps to improve English speaking skills is the lack of authentic interaction. Many of these tools do not provide the opportunity to practice with native speakers, which restricts fluency and naturalness in conversations. Practice in real situations is essential to build confidence and develop communication skills.

Another limitation is poor attention to pronunciation. Some apps do not provide adequate corrections, which can lead to the formation of incorrect habits that are difficult to correct. Without proper guidance, it is easy to maintain errors that can affect comprehension by others.

In addition, many applications do not provide personalized feedback. Without an assessment that is tailored to the user's specific needs, it is difficult to identify areas for improvement. Feedback is vital for effective learning, as it allows learners to modify their approach

and focus on what they really need to develop. Learning to improve English language skills is crucial for several reasons. First, mastering the language opens access to both academic and professional opportunities. Many educational institutions and companies require a good level of English, so perfecting this skill can be a determining factor for progress in your studies and career.

Learning to communicate effectively in English facilitates cross-cultural interaction. In an increasingly interconnected world, being able to interact with people from different cultures is vital. This not only strengthens personal and work relationships, but also enriches the understanding of diverse perspectives. Another relevant reason is the increase in confidence. As speaking skills improve, students often feel more confident in their communication, allowing them to participate more actively in conversations, discussions and presentations. This confidence is essential for continued learning and for taking advantage of opportunities as they arise.

The study of English enhances cognitive skills. Learning a new language stimulates brain activity, improves memory and fosters critical thinking. These skills are valuable not only in language learning, but also in other aspects of life. With reference to all the above-mentioned background, the study will therefore address the following sub-questions: (1) How effective is the Gliglish Application in improving English speaking skills among these students? and (2) What are the students' perceptions of using Gliglish to enhance their English speaking abilities? Having the following research objectives: the general objective is: To explain the use of the Gliglish Application on enhancing English speaking skills among upper secondary education students at a public institution. And the 2 specific objectives are: to analyze the effectiveness of Gliglish Application on enhancing English speaking skills among upper secondary education students. And to identify the students' perceptions regarding the use of Gliglish on enhancing English speaking skills among upper secondary education students.

This literature review discusses studies aimed at examining the impact of English speaking skills. Currently, there are a wide variety of applications designed specifically to improve speaking skills in different languages, with Giglish being one of the most prominent in this field. This application not only focuses on speech practice, but also offers innovative tools that allow users to develop their fluency and confidence when communicating. Throughout this review, the various features that Giglish offers will be explored, as well as its performance in real speech situations, which will help to understand its effectiveness. In addition, studies and research that have examined the impact of using applications such as Giglish on student learning will be reviewed; highlighting how this technological tool can significantly enhance users' language skills and facilitate more interactive and dynamic learning. Therefore, this section explains the following topics: Gliglish Application, How Gliglish works, Benefits of Gliglish, Features of Gliglish, definition of speaking, the function of speaking, assessment of speaking, components of speaking and state of the art

Gliglish is an AI-based language learning application designed to help students have better language skills using active speaking and interaction. It offers an immersive learning experience by allowing students to talk with an AI teacher and role play real-life situations. This method helps students to be able to speak as a native by improving speaking and listening skills. An advantage of Gliglish is that it can be used anytime and anywhere, giving the students flexibility to practice (Zhvakina, 2023).

AI has emerged as a popular method in language education, offering numerous opportunities to improve learning outcomes and cultivate positive attitudes toward AI (Xia, y otros, 2022). Gliglish is designed to assist students in enhancing their language skills through active speaking and interaction (Zhang, 2022), creating immersive learning experiences where students can engage in real-life conversations with AI teachers (Zhvakina, 2023).

Gliglish facilitates gradual improvement in language skills by providing opportunities for conversation practice and listening exercises with virtual teachers. The tool features real-time corrections for speech and grammar, helping students enhance their language abilities (Richards & Schmidt, 2010).

The Gliglish app offers several key advantages: **Personalized Learning:** Immediate feedback on pronunciation, grammar, and vocabulary tailored to each student. **Interactive Experience:** Engaging real-life scenarios that motivate learners and increase participation. **Flexibility:** Accessible anytime, accommodating various schedules. **Multilingual Support:** Enables practice in multiple languages and dialects. **Focus on Speaking Skills:** enhances pronunciation and overall speaking proficiency. **Adaptive Learning:** Adjusts content and speaking speed based on individual skill levels. **Feedback Mechanism:** Provides clear insights into areas for improvement. **Promotes Autonomous Learning:** Encourages students to take charge of their learning journey.

Cultural Context Integration: Incorporates cultural nuances to enrich language learning (Reinders, 2017). **Gamified Learning:** Implements game-like features to make learning engaging and motivating (Deterding et al., 2011). **Smart AI:** Offers personalized learning experiences and contextual understanding. **Real-Time Pronunciation Feedback:** Provides immediate corrections during practice. **User-Friendly Interface:** Simplifies navigation and accommodates users with disabilities. **Engaging Suggestions:** Tailored recommendations enhance the learning experience. **Adjustable Learning Speed:** Allows learners to progress at their own pace. **Grammar Feedback:** Instant evaluations of pronunciation and grammar. **Translations:** Facilitates understanding by providing context for new vocabulary. **Multilingual Speech Recognition:** Enables practice in a supportive, engaging environment.

Speaking is a crucial component of language learning, requiring a deep understanding of phonetics, syntax, and vocabulary. Effective communication involves not only the transmission of

information but also the ability to manage conversational dynamics (Gan et al., 2022; Ibnian, 2019).

Talk as Interaction: Focuses on managing conversation rhythm and turn taking. Talk as Transaction: Aims at achieving specific goals, such as exchanging information. Talk as Performance: Involves influencing others through speech dynamics (Halliday, 1978).

Imitative speaking focuses on the precise repetition of words and sentences, emphasizing accurate pronunciation and rhythm. This kind of oral practice is crucial for building language skills, as it assists learners in grasping the rhythm and intonation patterns of the target language. Tools like Gliglish support this by offering models for imitation and providing feedback on accuracy, which helps reinforce correct pronunciation and speech patterns.

Intensive speaking practice is vital for working on grammatical structures and vocabulary, demanding accurate articulation in brief phrases or texts. This approach focuses on repetitive oral practice, which is key to reinforcing particular language elements and achieving correct pronunciation and grammar (Brown, 2007; Ellis, 2008). Tools like Gliglish can assist in this by providing targeted exercises and instant feedback, making practice more effective and supporting skill development (Richards & Schmidt, 2010; Ur, 2012). Responsive speaking involves understanding and reacting appropriately during conversations, which is essential for effective communication. It requires quick thinking and the ability to process spoken words in real-time to participate in meaningful exchanges (Goh & Burns, 2012). Tools like Gliglish can aid learners in developing this skill by providing interactive conversation practice and feedback on how well their responses align with the conversation, thereby improving their overall communication abilities (Brown, 2007).

Transactional speaking involves using language to achieve specific goals, such as making a purchase or seeking information. This form of speaking is marked by the use of clear and direct

language to ensure that everyone easily understands the interaction involved (Richards & Schmidt, 2010). Tools like Gliglish can aid in developing transactional speaking skills by offering practice scenarios and immediate feedback, helping learners improve their ability to use language effectively in practical situations (Goh & Burns, 2012).

Interpersonal speaking centers on fostering relationships and expressing personal emotions, emphasizing the social and emotional aspects of communication (Goh & Burns, 2012). This type of communication is particularly prevalent in romantic relationships and family contexts, where the focus extends beyond merely accomplishing tasks to nurturing emotional bonds and understanding one another better. Extensive speaking is commonly used in academic presentations, workshops, and training sessions, where the focus is on delivering detailed and comprehensive discussions on a specific topic.

The pronunciation can have a detrimental effect on language learners, causing them to lose confidence in their own abilities and in their capacity to express themselves and interact with native or non-native speakers. It can also limit their potential and impede their advancement in social, academic, and professional spheres. In the context of education, pronunciation is usually overlooked in favor of grammar or writing (Phuong, 2022).

Vocabulary English communication is challenging for pupils due to a deficiency of vocabulary. Then, because their vocabulary is still limited, they are not proficient. In order to construct meaningful discourse that the other person can understand, students must be choosy in their word choice since they presume that English has a distinct word diction (Suprapti et al, 2021). Li (2021) asserts that the strategies employed to encourage the acquisition of grammar are more intricate than the memorization technique utilized to acquire vocabulary. For this reason, in order to utilize grammar successfully, one must possess both explicit and implicit knowledge of the language's grammatical structures. However, a person's unique skills and personality

attributes have a significant impact on how readily and successfully they acquire language. (Li S., 2021).

Vocabulary is related to fluency since fluency is dependent on vocabulary. Despite years of EFL training, many students still find it difficult to communicate clearly and effectively because they lack a substantial corpus of learned vocabulary. It results in stutters, irregular pauses, and a lack of confidence when speaking. Most of the time, newly acquired language is monotonous and confined to a single setting, which impedes scholastic advancement (Sinambela, 2017).

As a fundamental aspect of communication, comprehension is based on a person's ability to decode a message, interpret the context, and recognize the intentions of the speaker. This allows all the obtained information to be organized and assimilated, providing an appropriate response to the request (Barnlund, 1970).

(Nurani, 2021) Emphasizes that word choice is important since each word must be taken into consideration alone as well as a part of the phrase, which is another important consideration. It is important to realize that words can have a wide range of cultural meanings. For this reason, memory exercises are highly beneficial since they can be accomplished via the use of contemporary information and communication technology (Nurani, 2021).

(Li, 2021) Asserts that the strategies employed to encourage the acquisition of grammar are more intricate than the memorization technique utilized to acquire vocabulary. For this reason, in order to utilize grammar successfully, one must possess both explicit and implicit knowledge of the language's grammatical structures. Grammar should be studied first while studying EFL, according to (Oxford, 2018), since it focuses on elucidating and analyzing the connections between the numerous words that will eventually be merged to make a sentence. Stated differently, vocabulary (or word form) is determined by grammar. As a result, they are a collection of rules necessary for language development and the construction of sentences that enable efficient communication.

People must do controlled and guided tasks with the correct vocabulary, grammar, and pronunciation in order to be accurate. Usually, accuracy is emphasized, and the instructor supports this with comments. For precise work, continuous correction is usually beneficial. Even though children are encouraged to use the language they know to communicate, the instructor nevertheless focuses on proper language use throughout unstructured activities. (Derakhshan et al., 2016).

As a fundamental aspect of communication, comprehension is based on a person's ability to decode a message, interpret the context, and recognize the intentions of the speaker. This allows all the obtained information to be organized and assimilated, providing an appropriate response to the request (Barnlund, 1970). To determine linguistic comprehension, research was conducted thanks to telephone transmissions after World War II. Based on these models, researchers Shannon and Weaver (1949) developed a mathematical model of human communication.

The literature review on the Gliglish application and speaking skills highlights some important aspects. Absolutely, the relationship between the features of Gliglish (instant feedback, real-time pronunciation, translation and responsive speaking) and how can replace as a virtual teaching method towards more personalized learning systems, facilitated by AI was presented, as well as the three aspects that impact student's speaking skills specially fluency, pronunciation and grammar, for a satisfactory development research work. However, all the information that conceptualizes the subject has not directly addressed the effectiveness of using Gliglish Application on English speaking kills among upper secondary education students because most studies have been conducted with other applications and these students should be given a higher priority at the time of their academic stage. This highlights the importance of the present research work, which seeks to fill the gaps in previous studies by applying the use of Gliglish on English speaking kills among upper secondary education students.

Method and materials

This research was carried out at “Unidad Educativa Comunitaria Intercultural Bilingue “ABC” public institution located in San Pablo de Tenta parish, Saraguro canton, and Loja province, Ecuador. Saraguro is known for its unique indigenous tradition and culture, offering a diverse linguistic environment. This setting presented a perfect context to observe the potential effects of the Gliglish application, specifically designed to improve English speaking skills in non-native environment. The institution attends students from a kind of socioeconomic backgrounds, which provided a representative sample of secondary education students in the area.

The participants for this research involved of upper secondary students from 17 to 18 years old, enrolled in the third year of bachillerato of the “ABC” institution. A total of 23 students were selected by convenience. All of whom were enrolled for the 2024-2025 academic year and are learning English as a second language, this group offered A2 level of English proficiency, which established a baseline for their speaking skills. The members were required to have basic knowledge of using TICs to facilitate their interaction with the Gliglish application during the intervention.

An action research approach was used in this study to promote iterative reflection and improvement based on the results gathered. Action research was appropriate for this investigation, as it allowed the researcher to evaluate and modify the intervention progressively to enhance its impact on students' speaking abilities (Creswell, 2018).

A mixed-methods approach was used to assess Gliglish, incorporating quantitative and qualitative research techniques. The quantitative aspect involved pre-tests and post-tests to evaluate improvements in English skills, including pronunciation, grammar, vocabulary, comprehension, and fluency. This provided statistical evidence of the app's effectiveness. At the same time, the qualitative component used surveys to gain detailed insights into students'

perceptions of features like instant feedback. Combining these methods offered a comprehensive view of both the measurable impact and the user experience with Gliglish, ensuring a thorough evaluation of its effectiveness in language learning.

Data collection involved multiple sources and techniques to capture a complete view of students' progress in English speaking skills. A survey with Likert's items was managed at the end to gain detailed visions into students' perceptions of Gliglish features. Furthermore, two assessment facts were established: a pre-test conducted before introducing the Gliglish application and a post-test managed after a six weeks of intervention period. The pre-test and post-test calculated speaking proficiency in components of grammar, fluency, pronunciation, comprehension and vocabulary with scores analyzed using a standardized rubric. Each test was validated by two certified English language teachers. This approach allowed for a nuanced analysis of the impact of Gliglish on students' speaking skills.

Analysis of results

Data collected from the pre-test, post-test, and survey were analyzed using descriptive and inferential statistics. First, descriptive statistics, including mean, median, and standard deviation, were calculated to summarize the central tendency and dispersion of students' scores. Then, normality tests, the Shapiro-Wilk test, was conducted to verify if the pre-test and post-test scores followed a normal distribution, which guided the selection of suitable inferential statistics for further analysis.

Subsequently the data were normally distributed, a paired samples t-test was used to compare the mean scores from the pre-test and post-test, supporting an evaluation of the Gliglish application's impact on English speaking skills. The survey was tabulated and taken the percentage of each question with its respective item. For statistical calculations, the researcher utilized the Jamovi software, which provided a user-friendly interface for both descriptive and

inferential statistical analyses. Jamovi's functionality facilitated accurate calculations of the data, supporting the interpretation of the results in a clear and accessible manner. Through this important approach, the analysis emphasized the effectiveness of Gliglish in enhancing students' English speaking abilities.

This research project used the action research cycle as outlined by Willis and Edwards (2014). The action research cycle is designed to address practical problems through a cooperative and iterative process.

In this research project was used the action research model which includes four stages: planning, acting, observing and reflecting. This project aims to ensure a rigorous and iterative approach to addressing the identified problem.

The intervention plan began with the stage of the observation in which the researcher identifies the problem through a question that says how effective is the Gliglish Application in improving English speaking skills among these students? Through different speaking activities. Then continued with the planning stage which help the researcher a possible solution to the problem that is What are the students' perceptions of using Gliglish to enhance their English speaking abilities? After that, the action stage in which the solution was applied with the students. Finally, the reflection stage was used to analyze the main finding in the research process.

Title: Using Gliglish Application on English speaking skills among upper secondary education students at a public institution.

Objective 1:

To analyze the effectiveness of Gliglish Application on enhancing English speaking skills among upper secondary education students

Table 1. Pre-test: Descriptive measures for speaking skills

	N	Mean	SD	Min	Max
Grammar (2points)	23	1.000	0.584	0.000	1.50
Pronunciation (2points)	23	0.739	0.423	0.000	1.50
Fluency (2points)	23	0.891	0.451	0.000	1.50
Comprehension (2points)	23	1.239	0.365	0.500	2.00
Vocabulary (2points)	23	0.826	0.596	0.000	1.50
TOTAL (10 points)	23	4.696	1.717	2.000	7.50

Table 1 presents 23 students' scores gained for the pre-test results. This instrument was directed before the intervention with the purpose to establish a baseline measurement of upper secondary education students' English speaking skills to measure the speaking abilities, broken down by (vocabulary, fluency, grammar, pronunciation, and comprehension). A total of 10 points are awarded for each skill, graded two points of each one. As a whole, students received a mean score of 4.69/10, which is less than 50% of the total, with a standard deviation of 1.71. Their mean scores, which varied from 2.00 to 7.50, were very low. Because of this, the teacher-researcher who chose to do this action research with the third year of upper secondary education students found that the mean score in general was a problem.

From the five components of speaking skills under study, "pronunciation" obtained the lowest mean score (0.73/2) with a standard deviation of 0.42, and the scores ranged from 0.00 to 1.50 points. This indicates that no one was able to complete the speaking skill of "pronunciation" with a perfect score of two points. These results show that students impeded effective communication, making it difficult for listeners to understand speakers. When looking at the

"vocabulary" sign, in which students received 0.82/2 (SD 0.59), or less than half of the total score. This explains why, according to the minimal range of points from 0 to 1.50, some students received no score at all. These results show that students had trouble in the meaning of words. When it comes to "fluency" scores ranged from 0.00 to 1.50, with a somewhat higher mean of 0.891 and substantial variability (SD = 0.45). It shows that students had problems when they speak. And, the average score for grammar was 1.00 out of 2, with values ranging from 0.00 to 1.50 and substantial variability (SD = 0.58). These results demonstrate that the students did not have clear the grammar structure. Finally, stronger performance was indicated by comprehension, which had the highest mean score of 1.23/2 with a range of 0.50 to 2.00 and comparatively low variability (SD = 0.36). These results indicate that some students comprehend what the speaker is saying were somewhat better than "vocabulary, fluency, grammar and pronunciation". Nevertheless, they need more enhancement in all the components of speaking.

Table 2. Post-test: Descriptive measures for speaking skills

	N	Mean	SD	Min	Max
Grammar (2 points)	23	1.76	0.333	1.00	2.00
Pronunciation (2 points)	23	1.50	0.302	1.00	2.00
Fluency (2 points)	23	1.70	0.250	1.50	2.00
Comprehension (2 points)	23	1.70	0.328	1.00	2.00
Vocabulary (2 points)	23	1.59	0.246	1.00	2.00
TOTAL (10 points)	23	8.24	0.903	6.50	10.00

On the other hand, table 2 shows the same 23 students scores after the intervention. The post test was managed to measure their increases in speaking skills. Based on vocabulary, grammar, comprehension, fluency and pronunciation. Generally, the results demonstrate that students got the total mean score of 8.24/10 (SD 0.90), which exceeded the average of 7 points proposed by the research (national grading scale). It is clear that mean scores ranged from 6.50 to 10 points, which are higher than gotten in the pre-test.

Making comparisons and contrasts of pre-test and post-test results in speaking skills the students speaking skills have improved. In the component of grammar: mean scores improved from 1.00 to 1.76, indicating enhanced precision and grammatical usage. Also, in pronunciation: the results increased from 0.73 to 1.50, showing more confident and articulate pronunciation by the students. Similarly in fluency: scores increased from 0.89 to 1.70, demonstrating more fluid and reliable language use. Equally, in comprehension: Students' understanding and response to speaking practice improved, as evidenced by the increase from 1.23 to 1.70. In the same way happens in vocabulary: increased lexical richness and diversity were reflected in scores, which elevated from 0.82 to 1.59. In conclusion the app's effectiveness is demonstrated by the over 75% improvement in overall score from 4.69 to 8.24.

Table 3. Normality test Shapiro Wilk- Pre-test/Post-test for speaking skills

	N	Shapiro-Wilk	
		W	p
Pre- test	23	0.935	0.137
Post-test	23	0.960	0.455

After explained the pre-test and post-test results, the Shapiro-Wilk test results showed a normal distribution of data for the pre-test (0.13) and post-test (0.45) scores. Consequently, a parametric test (Paired T-Test) was employed to find whether the difference between pre-test and post-test results statistically important, as shown below.

Table 4. Statistical difference between pretest and posttest of speaking skills using paired T-Test

			Statistics Difference	gl	p
Pre- test	Post-test	T de Student	-13.1	22.0	< .001

Nota. $H_a \mu_{\text{Medida 1}} - \mu_{\text{Medida 2}} \neq 0$

Table 4 presents the results of the Paired T-Test which compares the pre-test and post-test taken by 23 students of this study (third year) to see if there is a statistically important difference between them. The value -13.1 reflects a large t-value that indicates a significantly improved between the pre-test and post-test, as evidenced by the significant p-value (<0.001) is less than .001, which indicates an upper statistical significance. As a conclusion, there is a high probability that the intervention enhance speaking skills in an effective way.

Objective 2:

To identify the students' perceptions regarding the use of Gliglish on enhancing English speaking skills among upper secondary education students.

Table 5. Frequency of Survey

ITEMS	QUESTIONS	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
Talk with AI Teacher anytime, anywhere.	I can easily interact with the AI teacher at any time and from any location.	57%	30%	13%		
	The availability of the AI teacher is convenient and beneficial for my English learning.	50%	46%	4%		
Engaging Suggestions.	The app provides engaging suggestions that effectively simulate real-life conversations.	74%	13%	13%		
	The role-playing scenarios offered by the app are useful for improving my English-speaking skills.	44%	26%	30%		
Provides instant feedback on pronunciation, grammar, and vocabulary. Translation s.	The app provides immediate feedback on my pronunciation during practice sessions.	100%				
	The feedback on grammar provided by the app is timely and helpful.	39%	35%	26%		
	The translation feature helps me understand English words or sentences by providing translations in my mother tongue.	35%	26%	26%	13%	
	The translations provided are accurate and enhance my comprehension of English.	70%	17%	13%		
Achieving a more natural or Native-like fluency.	Using the app has helped me achieve a more natural fluency in English.	78%	9%	13%		
	My English speaking skills have improved to a more native-like level as a result of using the app.	78%		22%		

This table contains a frequency analysis of survey responses about students' perceptions on the use of Gliglish application after intervention. This qualitative data covers students' feedback

on several areas of the App. Accessibility: 30% of students agreed and 57% strongly agreed that communicating with the AI teacher at anytime and anywhere was very convenient. This emphasizes the accessibility of the app as a major advantage. And Engaging suggestions: 74% of respondents strongly agreed that the software simulates actual conversations. Despite their positive reception, role-playing situations elicited a range of reactions 44% strongly agreed, 30% were ambivalent, indicating possible areas for improvement. Instant Feedback: all users believe that the app provides efficient pronunciation feedback. More moderately, 39% of the participants strongly agreed with grammar suggestions, while 26% were neutral. In translation: 70% of respondents firmly agreed that translations improved comprehension and were accurate. 13% disagreed, though, suggesting that user experiences with this function vary. Finally in Fluency development, because the program emphasizes conversational techniques, 78% of respondents highly believed that it helped them become more naturally fluent.

The data shows significant increases in vocabulary, grammar, and fluency, which are probably due to the apps focused feedback features and students completely agreed that the application might improve their English because the Gliglish Application offers useful resources and organized activities that improve fundamental language skills.

In summary, pre-test and post-test comparisons and qualitative feedback support the analysis's finding that the Gliglish Application greatly improves upper-secondary students English speaking skills. While the qualitative results demonstrate great student support for accessibility, feedback, and fluency development, the quantitative data demonstrate notable improvements in vocabulary, grammar, and fluency.

Nevertheless, the data also points to areas that need work, especially in improving grammar correction and enhancing role-playing exercises to increase participation. All things considered, the app is a useful and accepted resource for improving English language skills.

Discussion

The way students learn new abilities, especially in language acquisition, has been completely transformed in recent years by the introduction of artificial intelligence (AI) into education. The purpose of this study was to particularly examine how well upper secondary students at a bilingual public institution in Saraguro were able to speak English thanks to the Gliglish program, an AI-powered language learning tool. Speaking requires fluency, accurate pronunciation, and real-time processing, making it one of the most difficult parts of language learning. With its interactive situations, instant feedback, and adaptable learning environment, the Gliglish app offers to solve these issues.

Since the study used an action research design, it was possible to make adjustments and changes iteratively as it progressed. The study combined quantitative and qualitative methodologies, including questionnaires to gather subjective opinions about the application and pre-test and post-test evaluations to gauge objective gains in speaking abilities. This two-pronged strategy offered thorough insights on the app's strengths and weaknesses.

The Gliglish application enhances English speaking skills by providing interactive learning experiences tailored students' needs. This approach aligns with the modern pedagogical practices, fostering engagement and practical language use in meaningful every day context.

Under the direction of two research topics, the project aimed to investigate:

How effective is the Gliglish application in improving English speaking skills among upper secondary students?, What are students' perceptions of using Gliglish to enhance their English speaking abilities?

The results add to the expanding corpus of studies on AI-powered teaching resources and their usefulness in language acquisition.

The findings clearly showed that learners speaking abilities were greatly improved by the Gliglish program. Quantitative comparisons of pre-test and post-test results showed significant gains in vocabulary, grammar, pronunciation, fluency, and comprehension. For example, the mean scores for pronunciation and fluency increased significantly, supporting the intervention's overall efficacy. These improvements were further confirmed by paired t-tests, which highlighted the findings' statistical significance with p-values less than 0.001. This is consistent with earlier studies by Kim (2018), who discovered that chatbots and AI-powered resources had a beneficial effect on language learning. Kim's study, like Gliglish's, focused on the advantages of immediate feedback for skill improvement. Although Kim concentrated mostly on reading and listening, this study showed how useful AI is for improving speaking, a skill that is sometimes overlooked in technology-driven language programs.

Furthermore, the results address issues raised by Liu and Zhang (2021), who pointed out that learners' speaking abilities tend to be limited by tension and a restricted vocabulary. Gliglish probably reduced students' anxiety by mimicking real-life situations and offering a judgment-free atmosphere, which promoted more efficient learning. The Gliglish application was generally viewed favorably, according to qualitative survey data. 100% participants recognized the advantages of the app's pronunciation feedback, and a significant percentage (78%) believed that it assisted them in achieving natural fluency. Particularly appreciated for their interesting and useful approach to language learning were features like participation and real-life simulations.

Pokrivcakova (2019), who highlighted the importance of interactive, specific AI technologies in maintaining learners' motivation, supports with these findings. But there were other places that needed work, including mixed feedback regarding grammar correction. A significant 26% were neutral, despite 39% strongly agreeing with its usefulness. This discrepancy reflects Oxford's (2018) worries over the difficulties of integrating grammar into real-time language learning tools.

Although the research credited the Gliglish application with the noted enhancements, there are a number of other plausible factors that should be taken into account: Immediate feedback as a Vital Factor The capacity of Gliglish to offer real-time feedback on errors is one of its best qualities. Speaking abilities may have improved more as a result of this urgency than the app's general design. According to Richards and Schmidt (2010), immediate feedback is essential for successful language learning because it enables students to fix errors before they get incorporated. Therefore, rather than the app's distinctive characteristics, its efficacy may be attributed to this fundamental educational premise.

Engagement and motivation Gliglish's interactive and interactive features probably made students more naturally motivated to practice. Immersion AI settings provide increased engagement, which improves learning outcomes (Zhvakina, 2023). It is probable that rather than particular features like vocabulary expansion or grammatical correction, the observed gains were caused by students practicing more frequently as a result of the app's interesting design.

The action research model's function throughout the study, the researcher was able to make iterative improvements thanks to the action research design, which might have increased the effectiveness of the intervention. Although beneficial, this flexibility could make it more difficult to replicate the findings in less dynamic environments. Action research's recurrent interaction with feedback may have generated some prejudice because ongoing improvement frequently produces better results. Unusual outcomes given the fundamental significance of grammatical feedback in language development, the differing opinions were unexpected. This unusual may be the result of the app's grammatical correction errors, which might cause it to overlook details in context. Phuong (2022), who emphasized the difficulty of obtaining accuracy in automated grammar feedback systems, has observed similar difficulties.

This study, which focused exclusively at upper secondary students in a bilingual public school, provided insightful information on the potential of AI-based tools in a variety of language

contexts. The study addressed both quantitative and subjective results by integrating qualitative surveys with quantitative pre-test and post-test evaluations, offering a comprehensive knowledge of the influence of the Gliglish application. One specific strength was the application of the action research paradigm, which allowed for iterative improvements based on observations made in real time. The intervention's relevance and applicability in the classroom were increased by this pragmatic approach, which made sure it was customized to the individual requirements of the students.

Despite its advantages, the research featured a number of disadvantages that should be taken into account:

Size of the Sample there were only 23 participants in the research, which limited how far the results could be applied. Stronger proof of the app's efficacy in various language and demographic circumstances would come from a bigger, more varied sample. Teacher as researcher despite being informative, survey replies could vary depending on the respondent's taste. Because of their relationship with the researcher or their desire to live up to imagined expectations, students may have given unduly positive evaluations.

Technological difficulties regarding certain app features like grammatical feedback and translation accuracy, several students had conflicting experiences. The students go to translation to know the meaning of phrases or questions, but they cannot use adequately the features of application to know their feedback. These technical constraints show that in order to guarantee dependability and flexibility, AI processes must be further improved.

The intervention of six weeks using Gliglish application may not time enough for the results to be generalized because of the time. The study's iterative design and mixed-method approach demonstrated its methodological rigor. By combining quantitative and qualitative data, the study offered a comprehensive assessment of the effects of the Gliglish application. However, speaking

assessments that rely mostly on standardized rubrics might overlook subtle gains like increased confidence or decreased anxiety. To further examine these characteristics, future research should think about using qualitative techniques like focus groups or interviews.

The results of this study highlight how AI-powered resources, such as the Gliglish app, have the potential to transform language learning, especially when it comes to improving English speaking abilities. The app's efficacy in addressing major speaking issues is demonstrated by the notable improvements seen in students' grammar, pronunciation, fluency, vocabulary, and comprehension. Furthermore, the highly favorable response from students emphasizes the need of engaging, adaptable, and interactive learning environments.

Conclusions

The Gliglish application effectively enhances English speaking skills among upper secondary students at a public institution because its interactive features like personalized learning, interactive and engaging flexibility, accessibility and autonomous learning. The Gliglish application highlights the greatly increase students' speaking abilities by improving grammar, pronunciation, vocabulary, fluency, and comprehension. Students are able to perform better in real-time communication settings because to the application's excellent resolution of major issues such speaking tension and low confidence it means the application proves to be an effective tool for language learning.

Students expressed largely positive perceptions of the application with high measurements for features like talk with AI teacher anytime-anywhere, engaging suggestions, provides instant feedback on pronunciation, grammar and vocabulary, translation, and achieving native fluency. Pronunciation instant feedback was especially valued, as all students (100%) highlighted its advantages.

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