Investigating the Influence of *Duolingo, Elsa Speak, And Hello English* Mobile Applications on Students Attitudes and Speaking Skills

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Abstract

This thesis examines the impact of mobile applications, specifically Duolingo, Elsa Speak, and Hello English, on students' speaking skills. With technology being increasingly used in language learning, mobile apps offer innovative solutions for acquiring language skills. The purpose of this study is to explore students' perceptions of these apps and investigate how they can be used effectively. A quantitative study was conducted, distributing a detailed questionnaire to 100 students. The data were analyzed using descriptive statistics, ANOVA, and paired sample t-tests, while qualitative feedback from open-ended questions provided additional insights. Results indicate a generally positive attitude towards the apps, highlighting their convenience and effectiveness in improving pronunciation, confidence, and vocabulary. However, challenges such as connectivity issues, cost, and the need for more native speaker interactions were also identified. Notably, the ANOVA and paired sample t-tests revealed significant differences in student perceptions based on gender, particularly in areas of confidence and continued use. This research underscores the potential of mobile apps to significantly enhance language learning, provided that user feedback is integrated into their ongoing development. By addressing the identified issues, these apps can become even more effective tools for improving students' speaking skills. The study concludes with recommendations for app developers to consider user experience improvements, thereby optimizing the educational impact of these digital tools.

Keywords: Mobile Apps, Speaking Skills, Language Learning, Duolingo, ELSA Speak, Hello English, Student Attitudes, Educational Technology, Mobile-Assisted Language Learning (MALL), Computer-Assisted Language Learning (CALL)

Introduction

The rapid growth of technology has changed how we learn, especially in language education. Mobile applications have become important tools for language learning, offering easy access to interactive and flexible resources. These apps are particularly useful for learning English, a global language necessary for communication in many fields. Traditional methods of language learning often do not provide enough speaking practice or engagement. Mobile apps like Duolingo, ELSA Speak, and Hello English address this issue. Duolingo uses games to make learning fun. ELSA Speak focuses on improving pronunciation with instant feedback. Hello English offers lessons that cover vocabulary, grammar, and speaking skills. Although many students use these apps, it is important to understand how they affect students' attitudes towards speaking skills. Research has shown that mobile-assisted language learning (MALL) can be effective, but there is limited

information on students' perceptions and attitudes. This study aims to explore how using these apps influences students' motivation, confidence, and overall attitudes towards speaking English.

Statement of the Problem
In recent years, the integration of mobile applications into educational practices has shown significant promise, particularly in the realm of language learning. Despite the widespread use of mobile apps like Duolingo, ELSA Speak, and Hello English, there remains a need to critically examine their impact on students' attitudes towards developing speaking skills. While these apps are designed to enhance language proficiency, it is unclear how they influence students' motivation, confidence, and overall perception of their speaking abilities. This research seeks to fill this gap by investigating the attitudes of students who use these mobile applications for improving their English speaking skills.

Objectives
To examine students attitudes towards the impact of mobile apps on their speaking skills.
To identify the ways through which these Apps use more effectively.

Research Questions
1. What are student's attitudes towards the impact of mobile apps on their speaking skills?
2. What strategies do the students suggest for using these apps more effectively?

Significance of the Study
The findings of this research hold significant value for both the Department of English and the broader field of language education. By understanding the role of mobile apps in shaping student attitudes and performance, the department can explore their integration into existing curriculum and consider developing app-based language learning initiatives tailored to students' specific needs. For the field of language education, this research contributes to a nuanced understanding of mobile app effectiveness in non-native speaking contexts, informing the development of effective mobile-based learning strategies for similar environments.

Rationale of the Study
This study addresses the increasing importance of English speaking skills in today's globalized world. Traditional language learning methods often fail to effectively improve speaking skills, which are essential for success in international communication. Mobile language learning apps, such as Duolingo, ELSA Speak, and Hello English, offer interactive and flexible learning opportunities that traditional methods lack. However, there is limited research on how well these apps improve speaking skills. This study aims to fill this gap by evaluating the effectiveness of these apps, providing valuable insights for educators and developers on using technology to enhance language learning.

Delimitation of the Study
This research will focus specifically on the impact of the Duolingo, ELSA Speak, and Hello English apps on students' speaking skills in the context of language learning. The findings and conclusions may not be generalizable to other language learning apps or to the development of other language skills such as reading or writing.

Literature Review
The Literature Review chapter offers a thorough overview of past research related to learning languages, focusing on speaking skills and mobile-assisted language learning (MALL). It starts with a general discussion on language learning theories and methods, then focuses on the importance of speaking skills. The chapter reviews the theoretical background and past studies

on MALL, noting the benefits and challenges of using mobile apps for learning languages. Detailed reviews of the apps studied Duolingo, ELSA Speak, and Hello English— are provided, discussing their features and effectiveness. The chapter concludes by pointing out gaps in the existing research that this study aims to fill.

Linguistics

Linguistics refers to the scientific examination of language, encompassing its components and the rules guiding their arrangement. Through careful observation and analysis of language usage within communities, linguistics employs systematic methods to explore linguistic elements. Researchers gather data from language users, conducting scientific investigations to provide comprehensive explanations within their field of study. This approach has overshadowed traditional language study methods, rendering them obsolete for theoretical purposes (Sreekumar, 2011: 20).

Discourse Linguistics

Discourse linguistics, or discourse analysis, studies how language is used in social settings to convey meaning beyond individual sentences. It looks at how conversations, texts, and other forms of communication are structured and function. Norman Fairclough's article "Discourse analysis: Investigating processes of social construction" go deep into how language shapes and mirrors social realities, highlighting the connection between language, power, and beliefs. (Fairclough N.1992) emphasizes the significance of analyzing discourse to grasp social occurrences, like how media stories influence public views or how political discourse establishes and sustains power dynamics. In essence, discourse linguistics provides a useful framework for examining language within its wider cultural and social context.

Media Discourse

Media discourse refers to how media sources, like Mobile phone, newspapers, TV, radio, and online platforms, share information with the public. It includes the words, pictures, and stories used to talk about events, topics, and people, which shape what the public thinks. Media discourse isn't just about what's said; it's also about what's not said, showing who has power, cultural rules, and what society values. Using methods like setting agendas, framing stories, and building agendas, media discourse affects how people see things, their social beliefs, and even government choices. Understanding media discourse means looking at what's said, how it's said, where it comes from, and the ideas behind it, to see what it's trying to say and how it affects people. (Fairclough, N.1995)

Computational Assisted language learning

Computational Assisted Language Learning (CALL) involves utilizing computer technology to support language instruction and acquisition. This encompasses various tools such as interactive exercises, multimedia resources, language analysis aids, and virtual learning environments. These applications afford learners personalized and self-paced learning experiences, along with access to genuine language materials and cultural content. Moreover, CALL facilitates communication and collaboration among learners and educators through online platforms like forums, chat rooms, and video conferencing. By harnessing computational capabilities, CALL enriches language learning outcomes by furnishing engaging and efficacious tools for honing language skills. (Brown, D.2000)

So In short Theory in general "Linguistics, the study of language and its parts, uses systematic approaches to examine language elements by observing and analyzing language use in communities. This method surpasses traditional language study methods (Sreekumar, 2011: 20). Discourse linguistics, also known as discourse analysis, investigates how language

communicates meaning in social contexts, stressing the link between language, power, and beliefs (Fairclough N.1992). Media discourse, which involves various media sources shaping public opinions, influences societal beliefs and governmental decisions, underscoring the significance of grasping both explicit and implicit messages (Fairclough, N.1995). Computational Assisted Language Learning (CALL) employs computer technology to aid language instruction, offering personalized and interactive tools that enhance language learning outcomes (Brown, D.2000)."

Learning through Mobile Phone

The development of language learning via mobile apps marks a significant change from traditional teaching methods to more modern, technology-driven approaches. Traxler (2009) explores the potential impact of mobile learning in education, highlighting its ability to support personalized, learner-focused learning experiences beyond the classroom. The adaptability and customization offered by mobile apps are especially beneficial for language learning, as they address the diverse needs, learning styles, and speeds of individual learners.

Mobile Assisted language learning (MALL)

Burston (2015) conducts a critical examination of mobile-assisted language learning (MALL) apps, suggesting they could democratize language learning by providing high-quality resources to a broader audience. This accessibility is vital for improving speaking skills, enabling students from different backgrounds to access interactive speaking exercises, pronunciation drills, and real-time feedback that were previously unavailable or limited to expensive language courses. Current research focuses on the impact of gamification in language learning apps on student motivation and involvement. Liu et al. (2017) examine how game-like features in educational apps enhance students' intrinsic motivation and their willingness to participate in language learning tasks. This increased engagement is especially crucial for speaking practice, where consistent and motivated involvement is vital for improvement. Additionally, Reinders and Wattana (2015) study the use of interactive storytelling and simulation games in language learning, demonstrating how these components can create immersive learning environments that encourage active participation and oral communication. These environments not only enhance speaking abilities but also cultivate a positive attitude towards language learning, as students perceive the process as enjoyable and fulfilling.

Research consistently demonstrates that mobile apps can effectively reduce speaking anxiety, a common obstacle in language acquisition. Golonka et al. (2014) discuss how the anonymity and privacy afforded by mobile learning environments can mitigate the fear of making errors in front of peers, encouraging students to speak more confidently. Woodrow (2006) examines the anxiety levels of language learners in various learning settings and finds that technology-mediated environments notably decrease anxiety, particularly during speaking tasks. The non-judgmental and feedback-focused nature of mobile apps allows learners to practice language skills and receive helpful feedback without the immediate social pressures and anxieties present in traditional classroom settings.

The encouragement of independent learning through mobile apps is another significant area of influence. Viberg and Grönlund (2013) analyze the self-regulated learning behaviors facilitated by mobile technology, observing that apps offer opportunities for learners to establish their own objectives, track their advancement, and contemplate their learning process. This independence is particularly advantageous for speaking proficiency, enabling learners to concentrate on personal challenges or interests, customize their practice sessions, and participate in self-evaluation.

Mobile Apps

Kessler (2018) examines the consequences of mobile technology for learner independence in language education, highlighting that the adaptability and versatility of mobile apps can result in more efficient and individualized learning encounters. The capacity to decide when, where, and how to refine speaking abilities can significantly heighten learners' involvement and dedication to their language learning endeavor. Despite the beneficial effects, using mobile apps for language learning presents challenges. O'Bannon and Thomas (2014) express concerns regarding possible technological distractions and the absence of face-to-face interaction, essential for refining nuanced conversational abilities. The significance of blending mobile learning with conventional, interactive language learning encounters is underscored by Kukulska- Hulme (2012), who promotes a harmonious approach that harnesses the advantages of both digital and human resources in language education.

To cultivate favorable attitudes towards mobile learning, educational institutions and app developers need to tackle the obstacles students encounter in embracing these technologies. This involves enhancing the usability and accessibility of mobile learning apps, seamlessly integrating mobile learning into the curriculum, and offering sufficient support and training for students. Additionally, comprehending the varied needs and preferences of students can assist in creating more tailored and efficient mobile learning encounters (Cheon, Lee, Crooks, & Song, 2012). Incorporating specific examples into the discourse concerning the influence of mobile apps on student attitudes towards speaking skills, three notable language learning applications are examined: Duolingo, ELSA Speak, and Hello English. These apps showcase the innovative methods in language learning facilitated by mobile technology, each focusing on distinct facets of speaking skills enhancement, motivation, engagement, and the alleviation of speaking anxiety.

Duolingo App

Duolingo distinguishes itself through its widespread popularity and integration of gamification to boost language learning motivation and engagement. The application offers an intuitive interface, a variety of languages, and a structured curriculum that progressively advances in difficulty. Vesselinov and Grego (2012) conducted one of the initial studies on Duolingo's efficacy, noting substantial enhancements in language proficiency among participants, particularly emphasizing its captivating design and motivational features. Duolingo's gamification strategy encompasses immediate feedback, scoring, levels, and a competitive leaderboard, collectively fostering a positive and supportive learning atmosphere. This conducive environment is pivotal for speaking practice, encouraging consistent utilization and advancement through speaking exercises, thereby enhancing fluency and diminishing speaking apprehension.

ELSA Speak

ELSA Speak (English Language Speech Assistant) is a specialized application concentrating on accent reduction and refining pronunciation. It utilizes advanced speech recognition technology to offer immediate feedback on pronunciation, providing exercises tailored to address the learner's specific challenges based on their native language pronunciation. Derwing, Munro, and Thomson (2007) underscore the significance of pronunciation in bolstering speaking confidence and intelligibility, emphasizing that targeted pronunciation practice can notably enhance communicative skills. ELSA Speak facilitates this by allowing learners to practice at their own pace, receive detailed feedback, and monitor progress over time, directly influencing learners' confidence in their speaking aptitude.

Hello English App

Hello English caters to English learners, particularly those from non-English speaking

backgrounds, offering comprehensive language instruction covering grammar, vocabulary, and speaking proficiency. The application distinguishes itself through its emphasis on real-life conversational abilities, incorporating interactive lessons, games, and a feature enabling conversation practice with native speakers. Agarwal and Pandey (2014) stress the significance of real-life conversational interaction in language acquisition, suggesting that it substantially augments language proficiency and cultural understanding. Hello English's integration of conversational practice with interactive content and feedback mechanisms promotes a holistic approach to language learning, addressing both the technical aspects of language acquisition and the pragmatic skills essential for effective communication.

Speaking Skills Components
Speaking skills encompass two primary groups: fluency, which denotes the ability to initiate natural and continuous speech, and accuracy, which involves the precise use of words, grammar, and pronunciation across diverse contexts. These language components are indicative of one's ability to communicate effectively in English (Rizqiningsih & Hadi, 2019).

Vocabulary
Vocabulary, as noted by Widiastuti (2008), is a fundamental component crucial for mastering any language. It signifies the accurate utilization of vocabulary in conversation, enabling learners to express themselves effortlessly in both verbal and written forms.

Grammar
Grammar, as highlighted by Rizqiningsih & Hadi (2019) and Purpura (2013), serves as a structured framework to assess a speaker's linguistic competence. Learners should employ a diverse range of structures naturally, producing consistently accurate sentences, and adhere to grammatical rules to prevent confusion in communication (Greenbaum & Nelson, 1996).

Pronunciation
Pronunciation, according to Kline (1989), involves the elements and fundamentals determining how sounds are articulated, contributing to improved vocabulary accuracy during communication.

Fluency
Fluency, an integral speaking skill, signifies the seamless flow of communication that transcends language barriers. Lackman (2010) notes that fluent speakers convey messages without dwelling on language components, speaking at a reasonable pace with minimal pauses.

Comprehension
Comprehension is the ability to understand and grasp information. Successful oral communication requires individuals to comprehend a subject thoroughly, facilitating the initiation and response to speech. The researcher posits that fluency and accuracy are the two main sub-skills contributing to speaking skills, with accuracy encompassing vocabulary and grammar, while fluency sub-skills involve elements of pragmatism, strategy, and discourse (Widiastuti, 2008).

Basic Types of Speaking
According to Brown (2004:114), there are five fundamental types of speaking or oral production expected of students in the classroom:

Imitative
Imitative speaking involves simply repeating a word, phrase, or sentence. It is purely phonetic,

focusing on pronunciation. The listener's role is short-term, storing the prompt long enough for the speaker to imitate the language accurately.

Intensive
Intensive speaking tasks require short stretches of oral language to demonstrate competence in specific grammatical, phrasal, lexical, or phonological relationships. The speaker needs awareness of semantic properties but minimal interaction with an interlocutor.

Responsive
Responsive tasks involve interaction and comprehension at a somewhat limited level, such as short conversations, standard greetings, small talk, and simple requests and comments.

Interactive
Interactive speaking differs from responsive speaking in the length and complexity of interaction, including multiple exchanges and/or participants. Interaction can be transactional (exchanging specific information) or interpersonal (maintaining social relationships), with potential complexity in casual register, colloquial language, ellipsis, slang, humor, and sociolinguistic conventions.

Extensive (Monologue)
Extensive oral production tasks include speeches, oral presentations, and storytelling, where listener interaction is highly limited or ruled out. Language style is often more formal and deliberative, but certain informal monologues may also be included, such as casually delivered speech (e.g., sharing a vacation experience or recounting a novel or movie plot) (Brown, 2004).

The Importance of Speaking
Speaking is a vital aspect of how we communicate every day. Whether in social situations or personal connections, being able to speak well is an important part of how we interact with others.. In language teaching and learning, speaking holds importance in the curriculum (Luoma, In social situations, speaking well is crucial for how much and how well we connect with others. At work, being good at communicating is vital for succeeding in your career. Leaders, for instance, depend on their communication skills to share information, persuade others, and guide actions. On a personal level, communication skills showcase our abilities, personality, self-image, knowledge, and reasoning in the target language (Luoma, 2004). In today's world, effective speaking has gained widespread attention as a prominent quality that attracts others' attention. It has become a highly valued skill, appreciated by many. Ultimately, speaking is a crucial and demanded skill in communication. (Luoma, 2004).

Problems in Speaking
Speaking is more complex than it may appear, involving both intrinsic and extrinsic aspects. It showcases how a speaker bravely uses vocabulary in the right way. Different individuals face specific problems in speaking, as suggested by Brown (2001):

Clustering
Fluent speech involves phrasing, not a word-by-word approach. Learners can enhance their output by organizing it both cognitively and physically, grouping words into breath clusters.

Redundancy
Redundancy in language offers an opportunity to clarify meaning. Learners can benefit from this feature of spoken language to enhance their communication.

Reduced Forms
Colloquial contractions, elisions, and reduced vowels pose challenges in teaching spoken English. Students not proficient in colloquial contractions may develop a formal, bookish speaking style.

Performance Variables
Spoken language allows for performance variables like hesitation, pauses, backtracking, and corrections. Learners can be taught how to strategically use pauses and hesitation, including filler expressions like "um," "well," and "you know."

Colloquial Language
Students should be familiar with colloquial words, idioms, and phrases. Practice in producing these forms is essential for effective spoken communication.

Rate of Delivery
Achieving an acceptable speed is crucial for fluency in spoken English. Teaching should focus on helping learners attain a suitable rate of delivery along with other fluency attributes

Stress, Rhythm, and Intonation
The stress-timed rhythm and intonation patterns of spoken English are vital characteristics. They convey important messages and play a significant role in English pronunciation.

Interaction
Learning to produce language in a vacuum without interlocutors deprives speaking skills of a crucial component: the creativity involved in conversational negotiation (Brown, 2001).

Previous studies in detail

Mobile-Assisted Language Learning (MALL)
MALL, which stands for Mobile-Assisted Language Learning, emphasizes using mobile technology for language learning. Unlike traditional classrooms or computers, MALL allows learners to study anywhere, providing an ideal solution to overcome time and place constraints (Miangah & Nezarat, 2012). This technology offers flexibility, accessibility, and interactivity through mobile apps, distinguishing it from conventional classroom tools (Liu, Tan, & Chu, 2009). This unique combination enables language learning by accessing authentic, contextualized resources. For example, it allows students to connect prior knowledge, acquire new information, and enhance problem-solving skills (Liu, Tan, & Chu, 2009; Liu, Navarrete & Wivagg, 2014).

ELSA Speak Application
ELSA Speak, or English Learning Speech Assistant, is an application designed to aid users in specific processes related to productivity, creativity, and communication. Developed by Vu Van in 2015, this application, headquartered in San Francisco, United States, earned acknowledgment as one of the 13 promising tech startups in Southeast Asia (South China Morning Post). ELSA aims primarily to help learners speak English with clarity, fluency, and confidence. Easily downloadable from the Play or App Store on smartphones, ELSA utilizes advanced technology to precisely train English pronunciation, detecting pronunciation errors with up to 95% accuracy. Offering over 1,200 lessons and 60 topics, the app includes an interactive dictionary to aid users in pronunciation (Lengkanawati, 2016).

Duolingo Application
Comprehensive Exploration: Duolingo, a language learning app crafted by Luis von Ahn and

Severin Hacker, extends beyond web access to include versions for Android, iOS, and Windows Phone. In the current educational landscape, where students increasingly rely on mobile applications for language learning (Klimova, 2020), Duolingo stands out as a versatile tool, bridging the gap between classroom and self-paced learning. Emphasizing the pivotal role of media in learning, the application contributes significantly to conveying information effectively (Nushi & Eqbali, 2017).

Research Methodology

This chapter outlines the methodology employed to investigate the impact of mobile apps on students' speaking skills, focusing on their attitudes towards learning through these digital platforms. The study adopts a quantitative research design, utilizing a questionnaire as the primary tool for data collection. This approach facilitates the measurement of students' perceptions, experiences, and attitudes towards mobile learning apps in a structured and statistically analyzable manner. The subsections below detail the research design, population and sampling method, data collection procedures, and the approach to data analysis. In short, Methodology used in this research is quantitative to examine students' perspectives on the influence of mobile apps mainly Duolingo ELSA Speak and Hello English App on their speaking skills. The research will utilize a questionnaire to gather relevant data from the participants.

Research Design

In this research, a descriptive and quantitative approach is utilized to methodically investigate how mobile learning applications influence students' oral proficiency. Through the utilization of a structured questionnaire containing closed-ended inquiries, the research quantifies students' perspectives, usage habits, and perceived efficacy of mobile apps in language acquisition. This design facilitates the gathering of numerical data, which can then undergo statistical analysis to unveil trends, patterns, and correlations among the variables under investigation.

Data Collection

Data collected through structured questionnaire to find students' attitudes towards the efficiency of "Duolingo, ELSA Speak and Hello English App" in improving their speaking proficiency. The questionnaire will also elaborate the effectiveness of these apps and their impact on language learning. Data collected from sample of "100 students" through close ended questionnaire in which 53 Female and 47 are Male students. The questions aiming to collect information about students' views on mobile learning applications, their usage behaviors, and the perceived influence of these applications on their speaking skills. Response choices were structured on a 5-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree," describing detailed examination of participants' perspectives. Respondents were given a "1 Month timeframe" to complete and submit their view. Regular reminders were dispatched to encourage participation and uphold a substantial response rate.

Sampling

The study utilizes convenient sampling technique to select participants from the Department of English, University of Malakand. The target population for this study is enrolled students at Department of English, University of Malakand. A sample size of 100 non-random selected students is chosen for the study.

Data Analysis

The data collected through questionnaire will be analyze through quantitative approach. The data will pass through SPSS to show descriptive statistics such as percentage, frequency, mean, median, standard deviation will summarize participant responses. ANOVA and ONE sample-T test is Applied, Inferential statistics like correlation and regression analysis may be utilized to

explore relationships between mobile app usage and speaking skills. Data Analysis performed through following steps;

Organization of Data
The Data are organized in way that Responses received through questionnaire were recorded and added to SPSS. In which each row represents a participant, and each column corresponds to a question or variable of interest.

Statistical Description
The Data are plotted through formulas to find out Descriptive statistics; including percentages and Frequencies, were calculated for each response option to summarize the distribution of responses. This provided an overview of how many students selected each option for every question, with gender description (53 Female 47 Male) ANOVA and one sample-t test applied to the data.

Questions Analysis
For each of the 15 Likert-scale questions (Question 1 to Question 15), descriptive statistics were calculated to understand the distribution of responses. Pie graphs are created to visualize the distribution, providing insights into participants' perceptions and attitudes towards specific aspects of mobile app usage in language learning. The description and interpretation of each question's analysis are presented below:
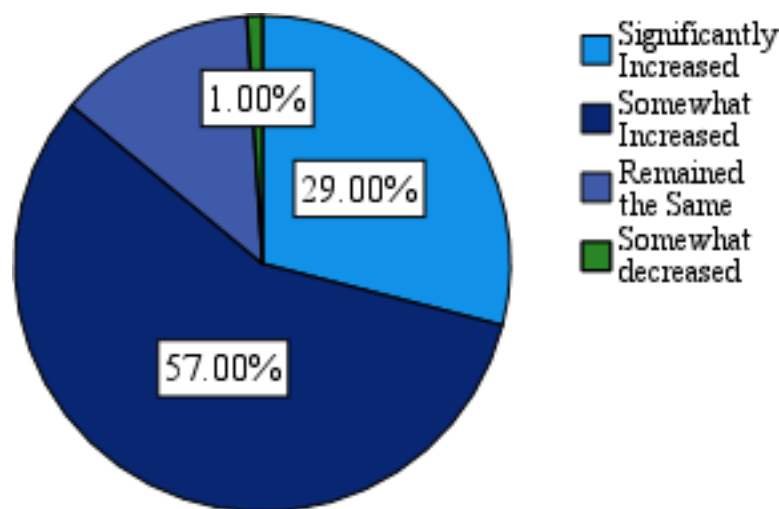
Q. No. 1

Figure 4. 1. Shows how students' motivation to improve their speaking skills changed while using speaking apps. The chart is broken down into four categories. 29% of the students reported a "Significantly Increased" motivation, represented by the light blue section. The largest group, making up 57%, experienced a "Somewhat Increased" motivation, shown in dark blue. 13% of the students said their motivation "Remained the same "illustrated in blue. Only 1% reported a "Somewhat Decreased" motivation, indicated by the green segment. Overall, the data show that majority of students motivation increased while using speaking Apps.
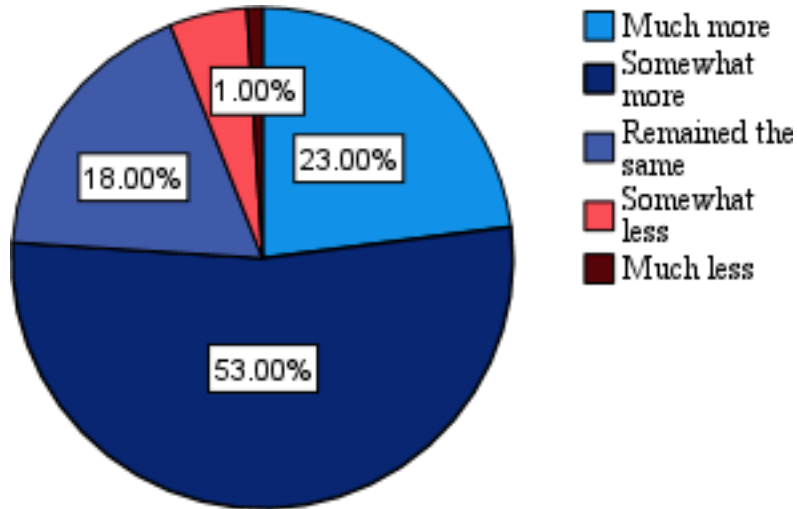
Q. No. 2

Figure 4. 2. Illustrates the changes in students' confidence levels while using speaking apps. The pie chart is divided into five categories. 23% of the students felt "Much More" confident, represented by the light blue section. The largest segment, 53%, reported feeling "Somewhat More" confident, shown in dark blue. 18% of the students indicated that their confidence "Remained the same," depicted in blue. 1% experienced "Somewhat Less" confidence, illustrated in red. Another 1% felt "Much Less" confident, indicated by the dark red segment. This data show that the majority of students experienced an increase in confidence while using speaking apps.
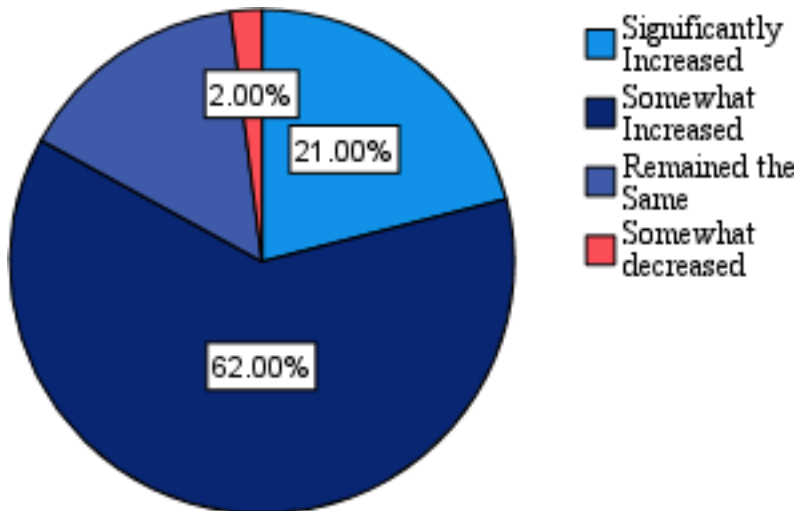
Q. No. 3

Figure 4. 3. Shows the reported improvement in students' speaking skills while using speaking apps. The pie chart is divided into four categories. 21% of the students reported a "Significantly Increased" improvement in their speaking skills, represented by the light blue section. The largest group, 62%, experienced a "Somewhat Increased" improvement, shown in dark blue. 15% of the students indicated their speaking skills "Remained the Same," depicted in blue. A small percentage, 2%, reported a "Somewhat Decreased" improvement, illustrated in red. Overall, the data show that a significant majority of students saw an improvement in their speaking skills while using the apps.
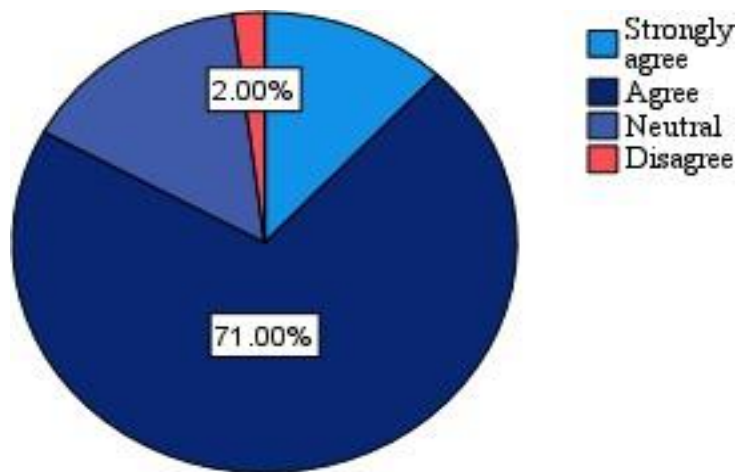
Q. No. 4

Figure 4. 4. Shows the reported control in students' speaking skills while using speaking apps. The pie chart is divided into four categories. 12% of the students reported a "Strongly Agree" control in their speaking skills, represented by the light blue section. The largest group, 71%, experienced a "Agree" control, shown in dark blue. 15% of the students indicated their speaking skills "Neutral," depicted in blue. A small percentage, 2%, reported a "Disagree" control, illustrated in red. Overall, the data show that a majority of students got control on their speaking skills while using the speaking apps.
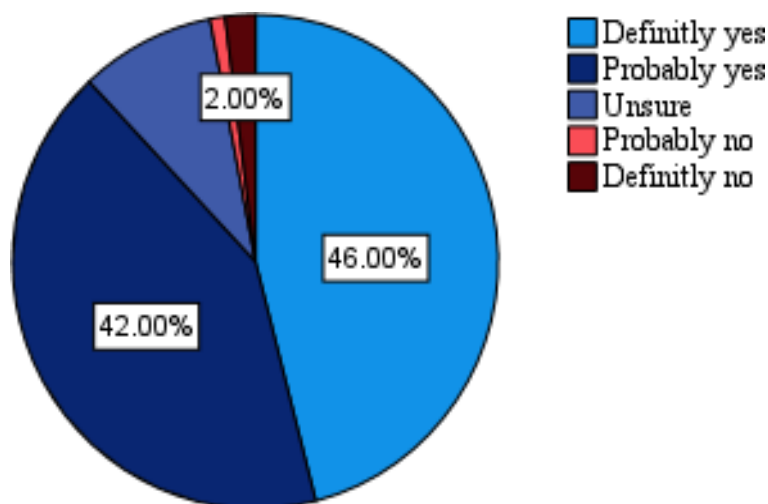
Q. No. 5

Figure 4. 5. Illustrates the continuation of speaking apps in future. The pie chart is divided into five categories: The largest segment, 46% of the students reported "Definitely Yes" to continue the use of Apps in future, represented by the light blue section. 42%, reported feeling "probably Yes", shown in dark blue. 9% of the students indicated "Neutral," depicted in blue. 1% experienced "probably No", illustrated in red. Another 2% felt "Definitely No", indicated by the dark red segment. This data show that the majority of students will continue using speaking apps in future.
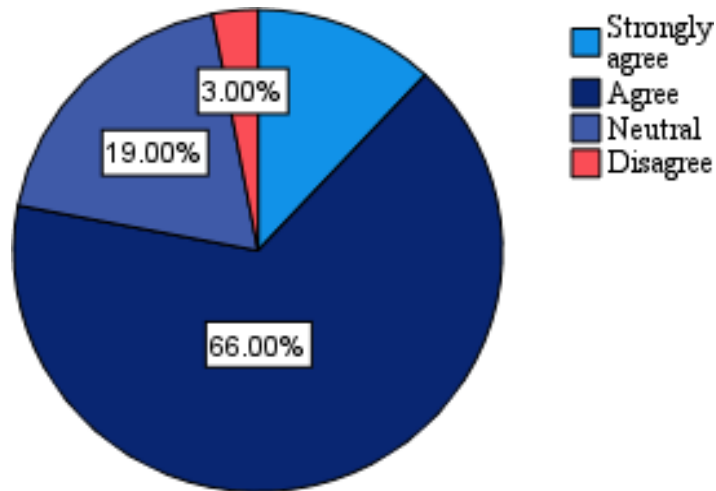
Q. No. 6

Figure 4. 6. Shows the reported progress of students while using speaking apps. The chart is divided into four categories. 12% of the students "Strongly Agree" that they have made progress, represented by the light blue section. The largest group, 66%, "Agree" that they have made progress, shown in dark blue. 19% of the students indicated a "Neutral" stance, depicted in blue. A small percentage, 3%, "Disagree" that they have made progress, illustrated in red. Overall, the data indicates that a significant majority of students felt they made progress in their speaking skills while using the apps.

Q. No. 7
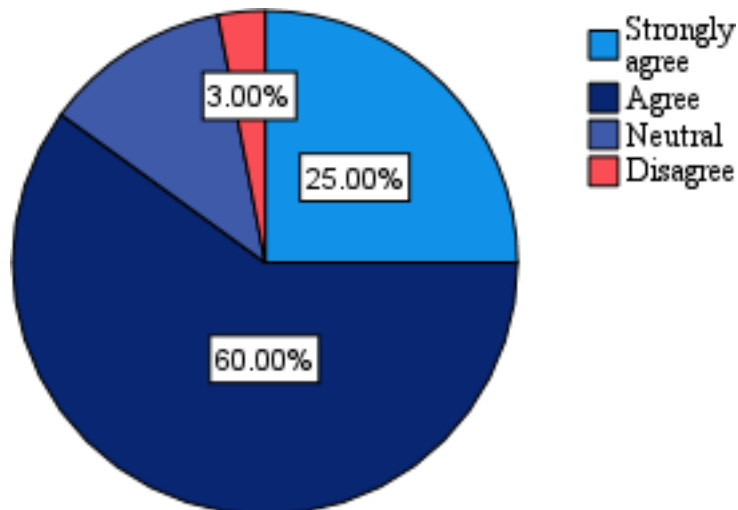
Figure 4. 7. Illustrates the students' responses regarding whether speaking apps provide opportunities for speaking practice. The chart is divided into four categories. 25% of the students "Strongly Agree" that the apps provide opportunities for speaking practice, represented by the light blue section. 60% "Agree" that the apps provide these opportunities, shown in dark blue. 12% of the students indicated a "Neutral" stance, depicted in blue. A small percentage, 3%, "Disagree" that the apps provide opportunities for speaking practice, illustrated in red. Overall, data show that students believe that speaking apps offer valuable opportunities for speaking practice.

Q. No. 8

Figure 4. 8. Show that students' view regarding speaking Apps lessons are well-structured and progressive. The pie chart is divided into four categories. 20% of t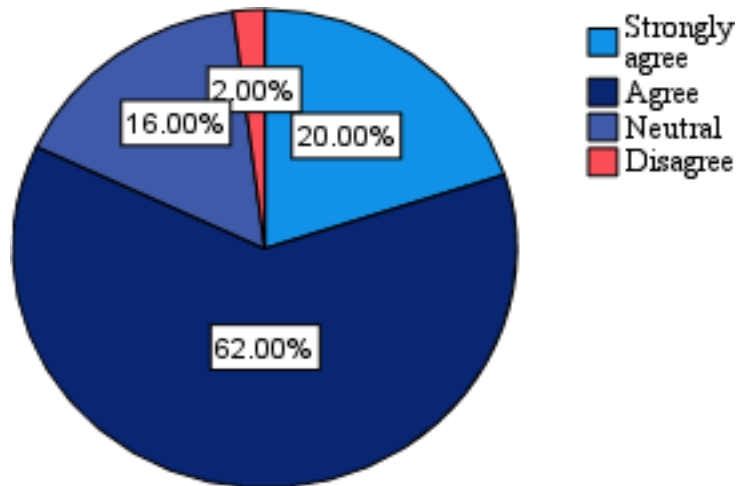he students "Strongly Agree" that the app lessons are well-structured and progressive, represented by the light blue section. 62% "Agree" with this statement, shown in dark blue. 16% of the students indicated a "Neutral" stance, depicted in blue. A small percentage, 2%, "Disagree" that the app lessons are well-structured and progressive, illustrated in red. Overall, the data show that the majority of students believe that the app lessons are well- structured and progressive.

Q. No. 9
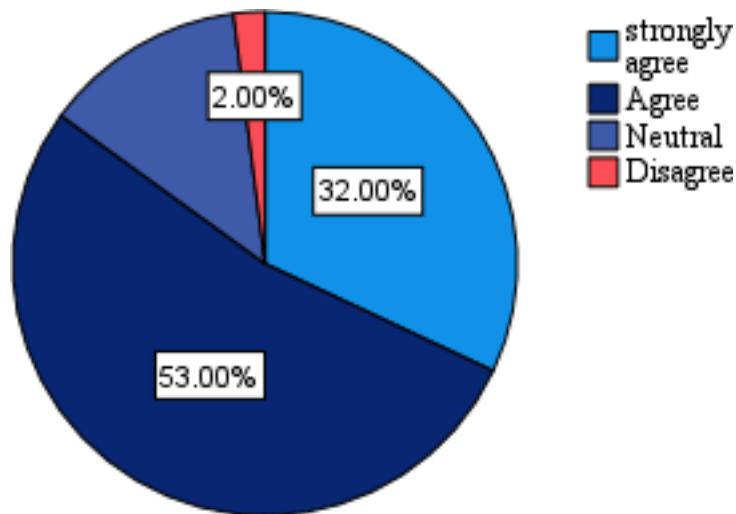
Figure 4. 9. Illustrates the students' view regarding speaking apps increased their interest in other aspects of language learning, grammar and vocabulary. The chart is divided into four categories. 32% of the students "Strongly Agree" that the apps increased their interest in other aspects of language learning, represented by the light blue section. 53% "Agree" with this statement, shown in dark blue. 13% of the students indicated a "Neutral" stance, depicted in blue. A small percentage, 2%, "Disagree" that the apps increased their interest in other aspects of language learning, illustrated in red. Overall, the data show that a majority of students found that speaking apps also increased their interest in learning grammar and vocabulary.

Q. No. 10
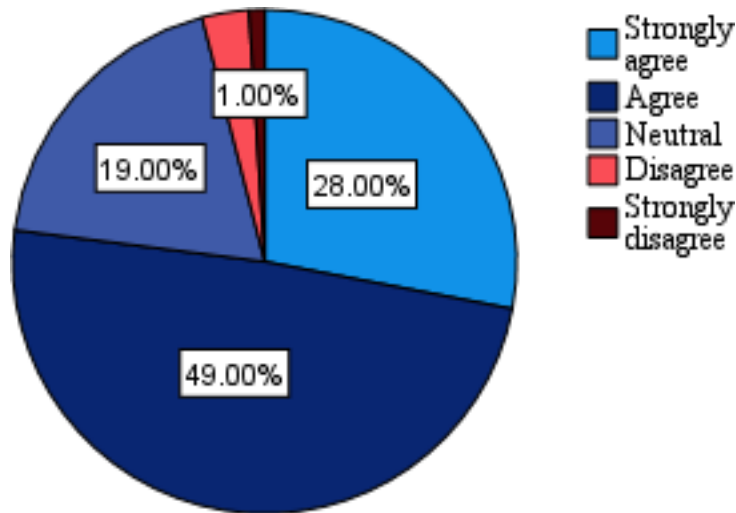
Figure 4. 10. Illustrates the students' view about Gamification elements of the Apps make learning more interesting. The chart is divided into five categories. 28% of the students "Strongly Agree" that the gamification elements make learning more enjoyable, represented by the light blue section. 49% "Agree" with this statement, shown in dark blue. 19% of the students indicated a "Neutral" stance, depicted in blue. 3% "Disagree" that the gamification elements make learning more enjoyable, illustrated in red. A small percentage, 1%, "Strongly Disagree" with this statement, shown in dark red. Overall, the data shows that in most of students gamification elements of the app increased their learning experience.

Q. No. 11

Figure 4. 11. Illustrates the students' responses regarding whether mobile apps make speaking practice more convenient. The chart is divided into three categories. A significant majority, 88%, responded "Yes," indicating that mobile apps make speaking practice more convenient, represented by the Dark blue section. 9% responded "No," shown in light blue. 3% were "Unsure," depicted in Dark Red. Overall, the data suggests that majority of students find mobile apps to be a convenient tool for speaking practice.

Q. No. 12

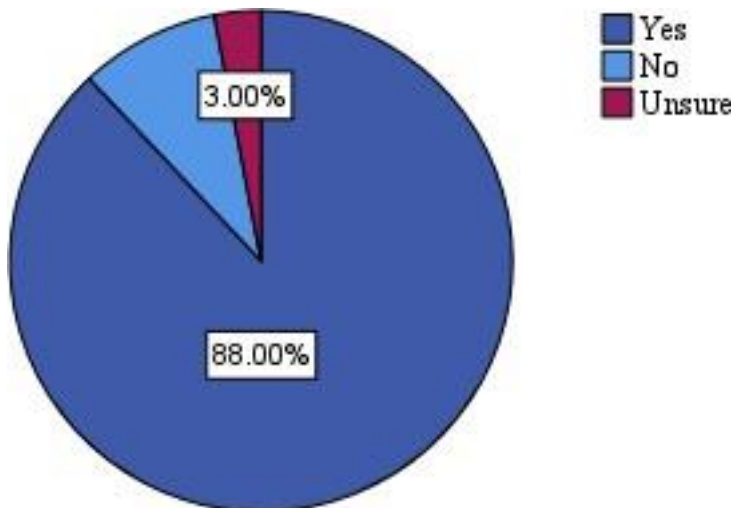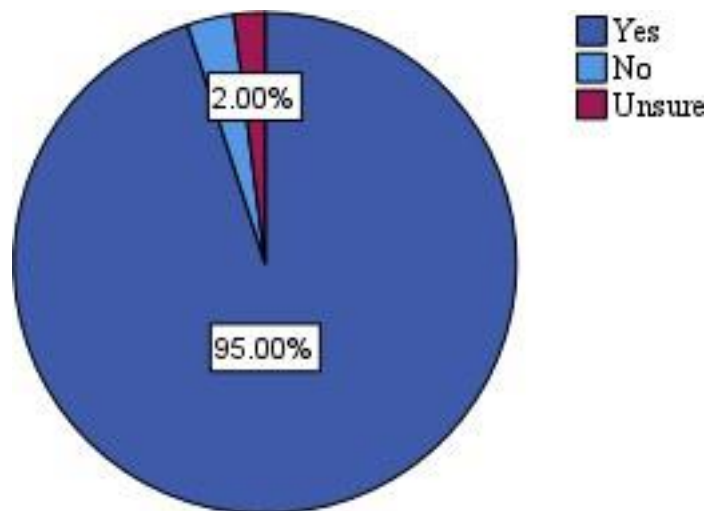Figure 4. 12. Illustrates the students' responses regarding whether mobile apps can improve pronunciation. The chart is divided into three categories. An overwhelming majority, 95%, responded "Yes," indicating that mobile apps can improve pronunciation, represented by the dark blue section. 3% responded "No," shown in light blue. 2% were "Unsure," depicted in dark red. Overall, the data suggests that the vast majority of students believe that mobile apps can effectively improve pronunciation.

Q. No. 13
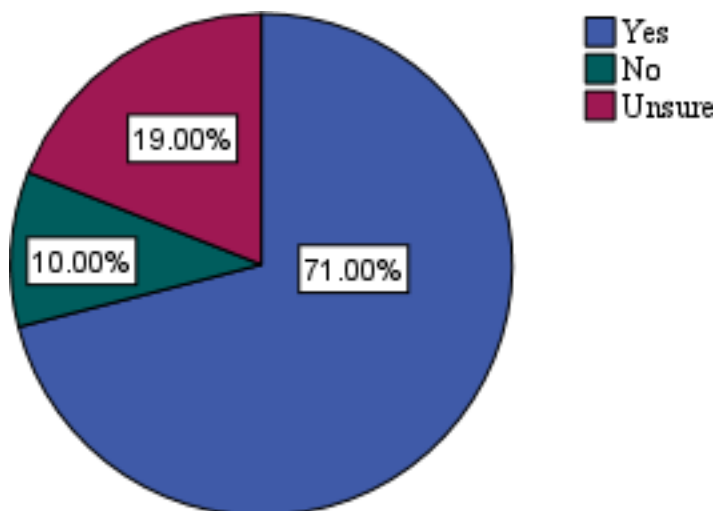
Figure 4. 13. Illustrates the students' responses regarding whether mobile apps have improved their ability to use phrasal verbs in English. The chart is divided into three categories. 71% responded "Yes," indicating that mobile apps have improved their ability to use phrasal verbs, represented by the Dark blue section. 10% responded "No," shown in green. 19% were "Unsure," depicted in Dark red. Overall, the data suggests that a significant majority of students believe that mobile apps have enhanced their ability to use phrasal verbs in English.

Q. No. 14
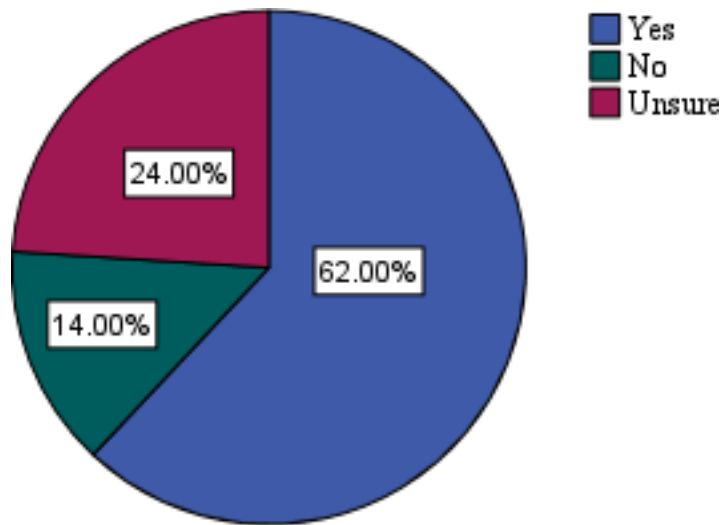
Figure 4. 14. Illustrates the students' responses regarding whether mobile apps have improved their ability to use discourse markers in English. The chart is divided into three categories. 62% responded "Yes," indicating that mobile apps have improved their ability to use discourse markers, represented by the Dark blue section. 14% responded "No," shown in Green. 24% were "Unsure," depicted in Dark red. Overall, the data suggests that a majority of students believe that mobile apps have enhanced their ability to use discourse markers in English.

Q. No. 15
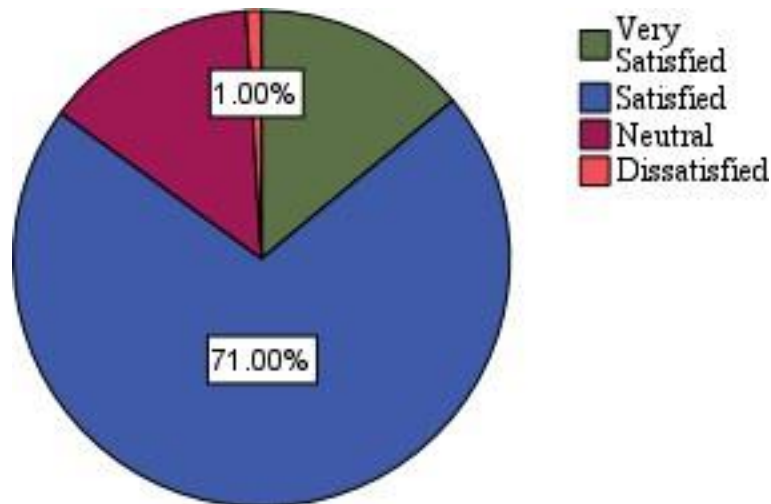
Figure 4. 15. Illustrates the students' responses regarding their satisfaction with the impact of mobile apps on their speaking skills. The chart is divided into four categories. 14% of the students are "Very Satisfied" with the impact, represented by the Green section. The majority, 71%, are "Satisfied," shown in dark blue. 14% indicated a "Neutral" stance, depicted in Dark red. A small percentage, 1%, are "Dissatisfied" with the impact, illustrated in orange. Overall, the data suggests that the majority of students are satisfied with how mobile apps have impacted their speaking skills.

One-Way ANOVA (Analysis of Variance)

One-Way ANOVA (Analysis of Variance) is a statistical technique used to compare the means of three or more independent groups to determine if there are significant differences among them. It helps in understanding whether the observed variations in data are due to the influence of different group treatments or if they occurred by chance. Key elements of a One-Way ANOVA include:

- Sum of Squares (SS): Measures the total variability within the data.
- Degrees of Freedom (df): The number of independent values that can vary, typically associated with the number of groups and the sample size.
- Mean Square (MS): The average of the squared deviations (Sum of Squares divided by Degrees of Freedom).
- F-Statistic: The ratio of the variance between the group means to the variance within the groups. A higher F-value indicates a more significant difference between group means.
- Significance (Sig.): The p-value that indicates the probability that the observed differences among group means occurred by chance.

In this study, One-Way ANOVA was utilized to examine whether different factors related to mobile app usage had a statistically significant impact on students' speaking skills.

Table 4. 1: ANOVA Results

						95% Confidence Interval for Mean			
		N	**Mean**	**Std. Deviation**	**Std. Error**	**Lower Bound**	**Upper Bound**	**Minimum**	**Maximum**
Motivation	Female	53	1.7547	.61724	.08478	1.5846	1.9248	1.00	3.00
	Male	47	1.9787	.70678	.10309	1.7712	2.1862	1.00	4.00
	Total	100	1.8600	.66697	.06670	1.7277	1.9923	1.00	4.00
Confident	Female	53	1.9245	.70299	.09656	1.7308	2.1183	1.00	4.00
	Male	47	2.2553	.94335	.13760	1.9783	2.5323	1.00	5.00
	Total	100	2.0800	.83702	.08370	1.9139	2.2461	1.00	5.00
Improved	Female	53	1.9245	.61548	.08454	1.7549	2.0942	1.00	4.00
	Male	47	2.0426	.72103	.10517	1.8308	2.2543	1.00	4.00
	Total	100	1.9800	.66636	.06664	1.8478	2.1122	1.00	4.00
Control	Female	53	2.0566	.60176	.08266	1.8907	2.2225	1.00	4.00
	Male	47	2.0851	.58346	.08511	1.9138	2.2564	1.00	4.00
	Total	100	2.0700	.59041	.05904	1.9528	2.1872	1.00	4.00
Continue	Female	53	1.7358	.88036	.12093	1.4932	1.9785	1.00	5.00
	Male	47	1.6809	.78315	.11423	1.4509	1.9108	1.00	5.00
	Total	100	1.7100	.83236	.08324	1.5448	1.8752	1.00	5.00
Progress	Female	53	2.1887	.62193	.08543	2.0173	2.3601	1.00	4.00
	Male	47	2.0638	.67258	.09811	1.8664	2.2613	1.00	4.00
	Total	100	2.1300	.64597	.06460	2.0018	2.2582	1.00	4.00
Opportunities	Female	53	2.0000	.70711	.09713	1.8051	2.1949	1.00	4.00

		N	Mean	SD	SE	Lower	Upper	Min	Max
	Male	47	1.8511	.69089	.10078	1.6482	2.0539	1.00	4.00
	Total	100	1.9300	.70000	.07000	1.7911	2.0689	1.00	4.00
Lessons	Female	53	2.0189	.60417	.08299	1.8523	2.1854	1.00	4.00
	Male	47	1.9787	.73690	.10749	1.7624	2.1951	1.00	4.00
	Total	100	2.0000	.66667	.06667	1.8677	2.1323	1.00	4.00
Grammar/ Vocabulary	Female	53	1.9245	.67508	.09273	1.7385	2.1106	1.00	4.00
	Male	47	1.7660	.75794	.11056	1.5434	1.9885	1.00	4.00
	Total	100	1.8500	.71598	.07160	1.7079	1.9921	1.00	4.00
Gamification	Female	53	1.9811	.77187	.10603	1.7684	2.1939	1.00	4.00
	Male	47	2.0213	.89660	.13078	1.7580	2.2845	1.00	5.00
	Total	100	2.0000	.82878	.08288	1.8356	2.1644	1.00	5.00
Speaking Practice	Female	53	1.0943	.29510	.04053	1.0130	1.1757	1.00	2.00
	Male	47	1.2128	.54916	.08010	1.0515	1.3740	1.00	3.00
	Total	100	1.1500	.43519	.04352	1.0636	1.2364	1.00	3.00
Pronunciation	Female	53	1.0566	.30478	.04186	.9726	1.1406	1.00	3.00
	Male	47	1.0851	.35076	.05116	.9821	1.1881	1.00	3.00
	Total	100	1.0700	.32582	.03258	1.0053	1.1347	1.00	3.00
Phrasal_Verb	Female	53	1.3774	.73971	.10161	1.1735	1.5812	1.00	3.00
	Male	47	1.5957	.85108	.12414	1.3459	1.8456	1.00	3.00
	Total	100	1.4800	.79747	.07975	1.3218	1.6382	1.00	3.00
Discourse_ markers	Female	53	1.6226	.85993	.11812	1.3856	1.8597	1.00	3.00
	Male	47	1.6170	.84835	.12375	1.3679	1.8661	1.00	3.00
	Total	100	1.6200	.85019	.08502	1.4513	1.7887	1.00	3.00
Satisfied	Female	53	2.0943	.56378	.07744	1.9389	2.2497	1.00	4.00
	Male	47	1.9362	.56738	.08276	1.7696	2.1028	1.00	3.00
	Total	100	2.0200	.56818	.05682	1.9073	2.1327	1.00	4.00

Description of the Results

Table : Descriptive statistics students' exposure to speaking apps mean scores and variability measures on the use of speaking apps by gender; For Example, females obtains a mean motivation of 1.75 (SD =0.62), however for males it is obtained as 1.98 (SD =0.71). As noted in the table above, it can be observed that male tended to report higher motivation whenever they use the speaking Apps compared to their counterpart female. Likewise, regarding males compared to females on confidence specifically, the average score is lower for males (M = 2.26) than for their female counterparts (M = 1.92 SD=.70), which indicates that males are more confident from using the speaking App. The Overall satisfaction M(SD) Female 2.09(0.56) while males have a mean score of 1.94 (SD = 0.57), suggesting that females are slightly more satisfied with the impact of the apps on their speaking skills compared to males. These descriptive statistics set the stage for further inferential analysis, such as ANOVA, to determine if the differences observed are statistically significant.

Table 4. 2 ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Motivation	Between Groups	1.250	1	1.250	2.863	.094
	Within Groups	42.790	98	.437		
	Total	44.040	99			
Confident	Between Groups	2.726	1	2.726	4.009	.048
	Within Groups	66.634	98	.680		
	Total	69.360	99			
Improved	Between Groups	.347	1	.347	.780	.379
	Within Groups	43.613	98	.445		
	Total	43.960	99			
Control	Between Groups	.020	1	.020	.058	.811
	Within Groups	34.490	98	.352		
	Total	34.510	99			
Continue	Between Groups	.075	1	.075	.108	.743
	Within Groups	68.515	98	.699		
	Total	68.590	99			
Progress	Between Groups	.388	1	.388	.930	.337
	Within Groups	40.922	98	.418		
	Total	41.310	99			
Opportunities	Between Groups	.553	1	.553	1.129	.291
	Within Groups	47.957	98	.489		
	Total	48.510	99			
Lessons	Between Groups	.040	1	.040	.089	.765
	Within Groups	43.960	98	.449		
	Total	44.000	99			
Grammar/Vocabulary	Between Groups	.626	1	.626	1.225	.271
	Within Groups	50.124	98	.511		
	Total	50.750	99			
Gamification	Between Groups	.040	1	.040	.058	.810
	Within Groups	67.960	98	.693		
	Total	68.000	99			
Speaking Practice	Between Groups	.349	1	.349	1.861	.176
	Within Groups	18.401	98	.188		
	Total	18.750	99			
Pronunciation	Between Groups	.020	1	.020	.189	.665
	Within Groups	10.490	98	.107		
	Total	10.510	99			
Phrasal_Verb	Between Groups	1.188	1	1.188	1.885	.173
	Within Groups	61.772	98	.630		
	Total	62.960	99			
Discourse_markers		.001	1	.001	.001	
	Within Groups	71.559	98	.730		
	Total	71.560	99			
Satisfied	Between Groups	.623	1	.623	1.949	.166
	Within Groups	31.337	98	.320		
	Total	31.960	99			

ANOVA Results

An Analysis of Variance (ANOVA) was conducted to compare the effects of gender on various measures of students' experiences with speaking apps. Here are the main values and interpretations for each variable: Motivation for speaking English: The F = 2.863 and p = 0.094 are the values of motivation. Interpretation: There is No significant difference in motivation

between males and females (p> 0.05). Confidence: The F = 4.009 and p = 0.048 are the values of students confidence. Interpretation: A Clear difference in confidence between males and females, with males reporting higher confidence levels ($p < 0.05$). Improvement in speaking: The F = 0.780 and p = 0.379 are the values of improvement. Interpretation: There is No significant difference in perceived improvement between males and females ($p > 0.05$). Control: The F = 0.058 and p = 0.811 are the values of control over speaking. Interpretation: No significant difference in sense of control between males and females ($p > 0.05$). Continuation of App: The F = 0.108 and p = 0.743 are values of continuation of Apps in future. Interpretation: Again No significant difference in intention to continue using the app between males and females ($p > 0.05$). Progress in speaking: The F = 0.930 and p = 0.337 are the values of progress regarding speaking. Interpretation: No significant difference in perceived progress between males and females ($p > 0.05$). Opportunities Provided by the App:** F = 1.129, p = 0.291. Interpretation: No significant difference in the opportunities provided by the app between males and females ($p > 0.05$). Lesson Structure: The F = 0.089 and p = 0.765 are the values of lesson structure in App. Interpretation: No significant difference in the lesson structure between males and females ($p > 0.05$) students Vocabulary improvement: The "F = 1.225 and p = 0.271" are the values of improvement in Grammar and vocabulary while using speaking Apps. Interpretation: No significant difference Seen in grammar and vocabulary between males and females ($p > 0.05$). Gamified Elements: The F = 0.058 and p = 0.810 are the values of Gamified elements present in App. Interpretation: No significant difference in the impact of gamification elements between males and females ($p > 0.05$). Speaking Practice: The F = 1.861 and p = 0.176 are the values of practice provided by the app for speaking. Interpretation: There is No significant difference in the convenience of speaking practice between males and females ($p > 0.05$). Pronunciation: The F = 0.189 and p = 0.665 are the values of pronunciation. Interpretation: There No significant difference in pronunciation improvement between males and females ($p > 0.05$). Phrasal Verbs: The F = 1.885 and p = 0.173 are the values for Phrasal verb improvement. Interpretation: again there is No significant difference in the use of phrasal verbs between males and females ($p > .05$). Improvement in Discourse Markers: The values of discourse marker are (p = 0.974, F = 0.001). Interpretation: No significant difference in the use of discourse markers between males and females ($p > 0.05$). Satisfaction of students: The F = 1.949 and p = 0.166 are the satisfaction values. Interpretation: there is No significant difference in overall satisfaction between males and females ($p > 0.05$).

One-Sample T-Test
A one-sample t-test is a statistical method used to determine whether the mean of a single sample is significantly different from a known or hypothesized population mean. This test is Particularly useful when comparing the sample mean to a specific benchmark or expected value. Key elements of a one-sample t-test include:
(1) T-Statistic (t): A ratio that measures the difference between the sample mean and the population mean, relative to the sample's variability.
(2) Degrees of Freedom (df): The number of independent values in the final calculation of the statistic that are free to vary.
(3) Significance (Sig.): The p-value indicating the probability that the observed difference occurred by chance.
(4) Mean Difference: The difference between the sample mean and the test value.
(5) Confidence Interval: The range within which the true population mean is expected to lie with a certain level of confidence (typically 95%). In this study, the one-sample t-test was employed to determine whether the students' attitudes and improvements in speaking skills were significantly different from a baseline value of zero, indicating a neutral or no impact.

Table 4. 3: One-Sample T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Gender	100	.4700	.50161	.05016
Motivation	100	1.8600	.66697	.06670
Confident	100	2.0800	.83702	.08370
Improved	100	1.9800	.66636	.06664
Control	100	2.0700	.59041	.05904
Continue	100	1.7100	.83236	.08324
Progress	100	2.1300	.64597	.06460
Opportunities	100	1.9300	.70000	.07000
Lessons	100	2.0000	.66667	.06667
Grammar/Vocabulary	100	1.8500	.71598	.07160
Gamification	100	2.0000	.82878	.08288
Speaking Practice	100	1.1500	.43519	.04352
Pronunciation	100	1.0700	.32582	.03258
Phrasal_Verb	100	1.4800	.79747	.07975
Discourse_markers	100	1.6200	.85019	.08502
Satisfied	100	2.0200	.56818	.05682

One-Sample T-Test Descriptions

One-Sample Statistics:
   1. Motivation:
      - Mean: 1.8600
      - Generally positive motivation towards using mobile apps for language learning.
   2. Confident;
      - Mean: 2.0800
      - Students feel somewhat confident using the apps to improve their speaking skills.
   3. Improvement:
      - Mean: 1.9800
      - Perceived moderate improvement in speaking skills.
   4. Control:
      - Mean: 2.0700
      - Moderate sense of control over learning using the apps
   5. Continue:
      - Mean: 1.7100
      - Slightly positive inclination to continue using the apps.
   6. Progress:
      - Mean: 2.1300
      - Students feel they are making reasonable progress.
   7. Opportunities:
      - Mean: 1.9300
      - Fair amount of learning opportunities provided by the apps.
   8. Lessons:
      - Mean: 2.0000

- Effective lessons on average.

9. Grammar/Vocabulary:
- Mean: 1.8500
- Positive, though not strong, improvement in grammar and vocabulary.

10. Gamification:
- Mean: 2.0000
- Gamification elements are generally enjoyable and engaging.

11. Speaking Practice:
- Mean: 1.1500
- Limited frequency or effectiveness in speaking practice.

12. Pronunciation:
- Mean: 1.0700
- Somewhat effective in helping with pronunciation.

13. Phrasal Verb:
- Mean: 1.4800
- Moderate effectiveness in using phrasal verbs.

14. Discourse Markers:
- Mean: 1.6200
- Somewhat helpful in improving discourse markers.

15. Satisfied:
- Mean: 2.0200
- General satisfaction with the apps among the students.

Table 4. 4 One-Sample Test

	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower
Gender	9.370	99	.000	.47000	.3705
Motivation	27.887	99	.000	1.86000	1.7277
Confident	24.850	99	.000	2.08000	1.9139
Improved	29.714	99	.000	1.98000	1.8478
Control	35.060	99	.000	2.07000	1.9528
Continue	20.544	99	.000	1.71000	1.5448
Progress	32.974	99	.000	2.13000	2.0018
Opportunities	27.571	99	.000	1.93000	1.7911
Lessons	30.000	99	.000	2.00000	1.8677
Grammar/Vocabulary	25.839	99	.000	1.85000	1.7079
Gamification	24.132	99	.000	2.00000	1.8356
Speaking Practice	26.425	99	.000	1.15000	1.0636
Pronunciation	32.840	99	.000	1.07000	1.0053
Phrasal_Verb	18.559	99	.000	1.48000	1.3218
Discourse_markers	19.054	99	.000	1.62000	1.4513
Satisfied	35.552	99	.000	2.02000	1.9073

One-Sample T-Test Results

The one-sample t-test was conducted to assess whether the mean scores for various aspects of mobile app usage significantly differed from zero. The results for each measured variable are summarized below:

1) Motivation: t (99) = 27.887, p < .001. The mean difference of 1.86000 shows high motivation among students to use mobile apps for language learning, indicating strong engagement.
2) Confidence: t (99) = 24.850, p < .001. The mean difference of 2.08000 demonstrates that students feel significantly more confident using these apps to improve their speaking skills.
3) Improvement: t (99) = 29.714, p < .001. The mean difference of 1.98000 suggests substantial perceived improvement in speaking skills due to app usage.
4) Control: t (99) = 35.060, p < .001. The mean difference of 2.07000 indicates students feel a significant sense of control over their learning process with these apps.
5) Continuance: t (99) = 20.544, p < .001. The mean difference of 1.71000 reflects a strong inclination among students to continue using these mobile apps.
6) Progress: t (99) = 32.974, p < .001. The mean difference of 2.13000 highlights significant progress in speaking skills reported by the students.
7) Opportunities: t (99) = 27.571, p < .001. The mean difference of 1.93000 suggests students perceive significant learning opportunities through these apps.
8) Lessons: t (99) = 30.000, p < .001. The mean difference of 2.00000 indicates the lessons provided by the apps are effective and beneficial.
9) Grammar/Vocabulary: t (99) = 25.839, p < .001. The mean difference of 1.85000 shows improvement in grammar and vocabulary due to app usage.
10) Gamification: t (99) = 24.132, p < .001. The mean difference of 2.00000 reflects the effectiveness of gamification elements in engaging students.
11) Speaking Practice: t (99) = 26.425, p < .001. The mean difference of 1.15000 indicates effective speaking practice provided by the apps.
12) Pronunciation: t (99) = 32.840, p < .001. The mean difference of 1.07000 suggests significant improvement in pronunciation skills.
13) Phrasal Verbs: t (99) = 18.559, p < .001. The mean difference of 1.48000 reflects effective learning of phrasal verbs.
14) Discourse Markers: t (99) = 19.054, p < .001. The mean difference of 1.62000 suggests effective learning of discourse markers.
15) Satisfaction: t (99) = 35.552, p < .001. The mean difference of 2.02000 indicates high overall satisfaction with the mobile apps.

Table 4. 5 One-Sample Test

	95% Confidence Interval of the Difference
	Upper
Gender	.5695
Motivation	1.9923
Confident	2.2461
Improved	2.1122
Control	2.1872
Continue	1.8752
Progress	2.2582
Opportunities	2.0689

Lessons	2.1323
Grammar/Vocabulary	1.9921
Gamification	2.1644
Speaking Practice	1.2364
Pronunciation	1.1347
Phrasal_Verb	1.6382
Discourse_markers	1.7887
Satisfied	2.1327

Summary of One-Sample T-Test Confidence Intervals

The one-sample t-test also provided 95% confidence intervals for the mean differences, confirming the significance and precision of the results. Below are the upper bounds for each variable's confidence interval:

1) Motivation: 95% CI [1.7277, 1.9923]. Students show strong motivation towards using mobile apps for language learning, with a high degree of confidence in this result.
2) Confidence: 95% CI [1.9139, 2.2461]. There is a significant increase in students' confidence in their speaking skills, attributed to the use of mobile apps.
3) Improvement: 95% CI [1.8478, 2.1122]. The significant perceived improvement in speaking skills due to app usage is confirmed within this range.
4) Control: 95% CI [1.9528, 2.1872]. Students feel a significant sense of control over their learning process with these apps, with a tight confidence interval.
5) Continuance: 95% CI [1.5448, 1.8752]. A strong inclination among students to continue using mobile apps is indicated within this confidence interval.
6) Progress: 95% CI [2.0018, 2.2582]. Students report significant progress in their speaking skills, confirmed by this precise interval.
7) Opportunities: 95% CI [1.7911, 2.0689]. Students perceive substantial learning opportunities through these apps, as indicated by this interval.
8) Lessons: 95% CI [1.8677, 2.1323]. The effectiveness and benefit of the lessons provided by the apps are confirmed within this range.
9) Grammar/Vocabulary: 95% CI [1.7079, 1.9921]. Improvement in grammar and vocabulary due to app usage is confirmed within this interval.
10) Gamification: 95% CI [1.8356, 2.1644]. The effectiveness of gamification elements in engaging students is supported by this interval.
11) Speaking Practice: 95% CI [1.0636, 1.2364]. The apps provide effective speaking practice, as indicated by this confidence interval.
12) Pronunciation: 95% CI [1.0053, 1.1347]. Significant improvement in pronunciation skills is confirmed within this precise range.
13) Phrasal Verbs: 95% CI [1.3218, 1.6382]. Effective learning of phrasal verbs is indicated by this confidence interval.
14) Discourse Markers: 95% CI [1.4513, 1.7887]. Effective learning of discourse markers is suggested within this interval.
15) Satisfaction: 95% CI [1.9073, 2.1327]. High overall satisfaction with the mobile apps is confirmed within this range.

Result and Discussion

ANOVA Results Summary

The ANOVA tests were conducted to determine if there were significant differences between groups (male and female students) across several variables. The key findings from the ANOVA

analysis are summarized as follows:
1.   Motivation: No significant difference between male and female students in terms of motivation ($F(1, 98) = 2.863$, $p = .094$).
2.   Confidence: Significant difference in confidence levels between genders, with male students reporting higher confidence than female students ($F(1, 98) = 4.009$, $p = .048$).
3.   Other Variables: No significant differences were found for Improved, Control, Continue, Progress, Opportunities, Lessons, Grammar/Vocabulary, Gamification, Speaking Practice, Pronunciation, Phrasal Verbs, Discourse Markers, and Satisfaction.

Paired Samples T-Test Results

Interpretation of Results
Confidence vs. Improved: Although there was no significant mean difference between confidence and improvement ($t(99) = 1.17$, $p = .244$), the correlation ($r = .365$, $p < .001$) suggests a moderate positive relationship, indicating that as students' confidence increases, their perceived improvement also tends to increase.
Control vs. Continue: A significant mean difference between control and the intention to continue using the apps ($t(99) = 4.83$, $p < .001$) suggests that students felt a significant improvement in their control over speaking skills and were more likely to continue using the apps.
Progress vs. Opportunities: Significant difference between progress and perceived opportunities for practice ($t(99) = 2.53$, $p = .013$) indicates that students felt they made progress and also recognized that the apps provided ample opportunities for speaking practice.
Gamification vs. Speaking Practice: Significant mean difference between the enjoyment of gamification elements and the convenience of speaking practice ($t(99) = 9.41$, $p < .001$) underscores the effectiveness of gamification in making speaking practice enjoyable and engaging.
Pronunciation vs. Phrasal Verbs: Significant difference between pronunciation and the ability to use phrasal verbs ($t(99) = -4.87$, $p < .001$) suggests that while students felt confident in their pronunciation, they had more difficulty with phrasal verbs.
Satisfied vs. Discourse Markers: Significant difference between overall satisfaction and the use of discourse markers ($t(99) = 4.29$, $p < .001$) indicates that students' satisfaction with the apps was associated with an improved ability to use discourse markers.
Future Research Directions
Future research could explore the impact of speaking apps on different populations and settings to enhance the generalizability of the findings. Investigating the long-term effects of using speaking apps and their impact on actual language proficiency would provide further insights. Additionally, examining other variables such as the role of feedback and the effectiveness of different gamification elements could offer more detailed guidance for app development.

Discussion
Students have reported that using mobile apps has boosted their motivation, confidence, and speaking skills. Many find speaking practice more accessible, and the courses offered by these apps are well-organized and advanced. The apps help improve vocabulary, grammar, pronunciation, and fluency with phrasal verbs and discourse markers. The inclusion of gamification elements adds enjoyment and engagement, which leads to higher overall satisfaction.
1. Motivation and Confidence
The high levels of motivation and confidence reported by both males and females highlight the effectiveness of mobile apps in engaging students and encouraging their language learning journey. The use of interactive and immersive tools helps students feel more at ease in practicing speaking.

2. Improvement and Control
The significant improvements in speaking skills, along with students' feelings of being in control of their learning journey, suggest that mobile apps offer effective and flexible learning opportunities. This sense of control may contribute to sustained motivation and continued usage.

3. Progress Tracking and Opportunities
The ability of language learning apps to track progress and provide ample speaking practice opportunities supports students' learning and development. This may lead to improved speaking skills and greater confidence in using the language.

4. Lessons and Speaking Practice
The structured lessons provided by language learning apps, coupled with convenient speaking practice, contribute to the overall effectiveness of the apps in enhancing students' speaking skills. This structure may help students progress systematically and efficiently.

5. According to students' result a positive improvement occur in vocabulary, grammar, and pronunciation. This suggests that mobile apps are a valuable tool for enhancing these essential language acquisition skills.

6. Gamification and Enjoyment
The inclusion of gamification elements within language learning apps increases engagement and enjoyment for students. This not only enhances the learning experience but may also encourage continued usage and progress.

Implications of the Study
The findings suggest that mobile apps can significantly enhance students' language skills if their design and functionality meet users' needs and challenges. Developers should focus on improving the app, making the learning experience more interactive, and continuously reviewing apps with feedback from users there has been added. Educational institutions may also consider integrating these apps into their language learning courses to provide additional practice opportunities for students.

Recommendations
The following are the recommendations for future researchers:

1. For App Developers
- Enhance app connectivity and reduce downtime.
- Offer more interactive features, such as live conversations with native speakers.
- Address security concerns and simplify the user interface.
- Provide more free content and offline access to lessons.

2. For Educators
- Increase motivation of students to use these apps as supplementary tools for practice.
- This study Provide guidance on how to effectively use the speaking apps to maximize learning outcomes.
- Integrate app-based activities into classroom instruction to reinforce speaking skills.

3. For Future Research
- Conduct longitudinal studies to assess the long-term impact of mobile apps on speaking skills.
- Investigate the effectiveness of specific app features in improving language proficiency.
  - Explore the impact of mobile apps on different aspects of language learning, such as grammar and listening skills.

Conclusion

In conclusion, mobile applications like Duolingo, Elsa Speak, and Hello English have the potential to significantly enhance students' speaking skills. Although students generally have positive attitudes towards these apps, they can further improve their effectiveness by addressing identified challenges. By leveraging technology and incorporating user feedback, these apps can be powerful language learning tools, providing intuitive and engaging ways to increase students' language skills Research contributes to the growing body of research on the use of technology in education and provides practical recommendations for practitioners, educators and future researcher.

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TY - JOUR AU - Alzatma, Alaaeddin AU - Khader, Khader PY - 2020/09/19 SP - T1 - Using Mobile Apps to Improve English Speaking Skills of EFL Students at the Islamic University of Gaza VL - DO - 10.13140/RG.2.2.13775.10408 ER -

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