Mobile Assisted Language Learning (MALL) Applications and Their Effectiveness in the Speaking Skills of High School Students
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Mobile Assisted Language Learning (MALL) Applications and Their Effectiveness in the Speaking Skills of High School Students

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Abstract

This study investigates the effectiveness of Mobile Assisted Language Learning (MALL) applications in enhancing the speaking skills of high school students. With the increasing prevalence of mobile phone usage among students, the research hypothesizes that MALL applications can significantly improve language learning outcomes. The study is grounded in the Technology Acceptance Model by Davis and the Cognitive Load Theory by Sweller, providing a theoretical framework for understanding how technology can facilitate language acquisition. The research employs a mixed-methods approach, integrating both qualitative and quantitative methodologies to collect and analyze data. This dual approach allows for a comprehensive examination of the impact of MALL applications on students' speaking abilities.

Keywords: Mobile assisted language learning, technology, language learning

Introduction

Mobile Assisted Language Learning (MALL) applications, such as Duolingo, ELSA Speak, and Memrise, have rapidly gained prominence as innovative tools shaping the future of language education. In recent years, as society has advanced deeper into the digital age with instant access to information, traditional classroom learning alone is often no longer sufficient for mastering languages like English. Learners increasingly need to cultivate independent learning skills that allow them to explore language beyond formal instruction and tailor their studies to personal needs (Aminatun & Oktaviani, 2019). This shift was significantly accelerated by the COVID-19 pandemic, which compelled students and teachers worldwide to rapidly adapt to online learning environments facilitated by mobile devices.

Despite the growing prevalence of mobile phones in daily life, traditional education methods have faced challenges in effectively integrating these technologies. MALL apps serve as a

crucial bridge between classroom instruction and authentic language use, offering unparalleled portability, interactivity, and individualized learning opportunities (Alshabeb & Almaqrn, 2018; Mengorio & Dumlao, 2019). Existing research consistently indicates that many MALL applications are highly usable, stable, and accessible, often resulting in positive learning experiences for high school students. Their personalization features—such as adaptive content and gamification—effectively address diverse learner needs and preferences, while interactive and multimedia elements, including AI, audio, and video, significantly enhance student engagement and motivation. The surge of interest in tools like Duolingo since 2018 reflects a global trend toward embracing mobile technologies in language learning (Short et al., 2021).

However, despite this global trend and the recognized benefits, specific questions persist regarding the precise effectiveness of MALL apps in enhancing key language skills, particularly speaking proficiency as measured by standardized assessments such as the IELTS. Furthermore, while extensive international research has explored MALL, there remains a significant scarcity of studies examining their impact within the unique Philippine educational context, marking a notable gap in the existing literature. It is also important to acknowledge that challenges such as device limitations, usability issues, or misalignment between app content and learner needs have occasionally hindered user satisfaction and overall effectiveness, underscoring the need for localized adaptation and improved digital infrastructure.

Addressing these identified gaps, the present study investigated the effectiveness of MALL applications in developing the speaking skills of Filipino high school students. Grounded in Sweller's Cognitive Load Theory—which emphasizes optimizing learning conditions by managing cognitive demands (Sweller, 2011)—and Davis' Technology Acceptance Model, which highlights perceived usefulness and ease of use as factors influencing technology adoption (Davis, 1989), this research employed an experimental design. The study aimed to empirically evaluate speaking proficiency using IELTS-based criteria, comparing students who utilized MALL apps with those engaged in traditional learning methods.

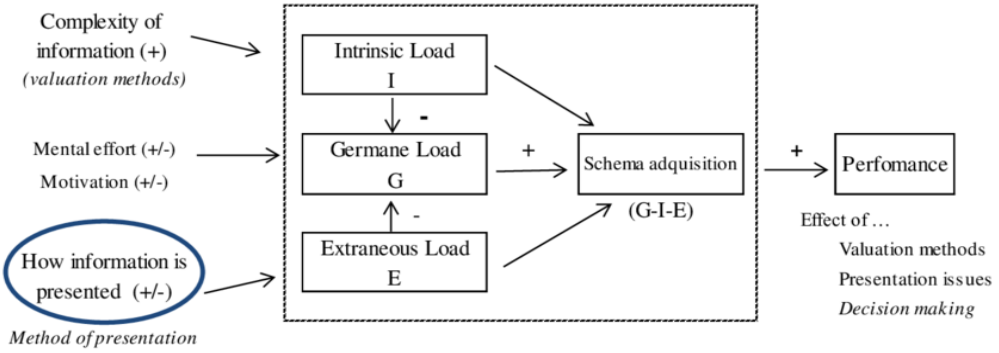
The findings from this study revealed MALL apps are highly usable, stable, and accessible, contributing to positive learning experiences for high school students. Key findings include the value of personalization features (adaptive content, gamification) in addressing diverse learner needs, and how interactivity and multimedia support (AI, audio, video) significantly boost engagement and motivation. While occasional dissatisfaction arises from usability issues, device limitations, or content misalignment, the study crucially concludes that MALL apps are effective tools for improving language skills, particularly for expanding vocabulary and supporting speaking practice.

These insights are expected to contribute valuable information on how MALL applications can be effectively integrated into language education within the Philippine setting. Such integration can help educators, curriculum developers, and policymakers promote access to reliable internet and up-to-date devices, while also encouraging collaborations between app developers and language institutions to tailor content to local learner goals and culture. Ultimately, continued innovation in interactive and multimedia functionalities, alongside ongoing user feedback, is vital to enhancing the effectiveness of MALL apps and ensuring that language instruction remains relevant, engaging, and responsive to evolving digital landscapes.

Theoretical Framework

A Theory by John Sweller (2011) called, Cognitive Load Theory stated that, learning is best learned in the best conditions in terms of the human cognition architecture. It emphasizes that the learners learned more when the design is very appealing to them, Cognitive load theory is concerned with the conditions under which learners can best absorb and retain new information without overwhelming their limited short term memory resource (Sweller, 2011).

Figure 1.
Cognitive Load Theory



Similarly, a model by Davis (1989) called the Technology Acceptance Model has a similar approach, but the model is focused on the two factors that are mentioned, perceived usefulness, and perceived ease of use. The objective of TAM is to examine why users' attitudes and beliefs influence their acceptance or rejection of IT. TAM aims to provide an explanation of the determinants of the adoption and use of IT. Davis (1989) developed the TAM, which is based on the TRA, to understand the causal relationships among users' internal beliefs, attitudes, and intentions as well as to predict and explain acceptance of computer technology. Davis et al. (1989) showed that the attitude construct does not significantly mediate in the belief-intention relationships Davis' model is related to the theory because the theory focuses on the theory on how the learner uses the cognitive thinking and it depends on the appearance of the design, while Davis' model tackles on the effectiveness of technology that focuses on the usefulness of the technology and how easy the technology is when learning.

Figure 2.
Technology Acceptance Model

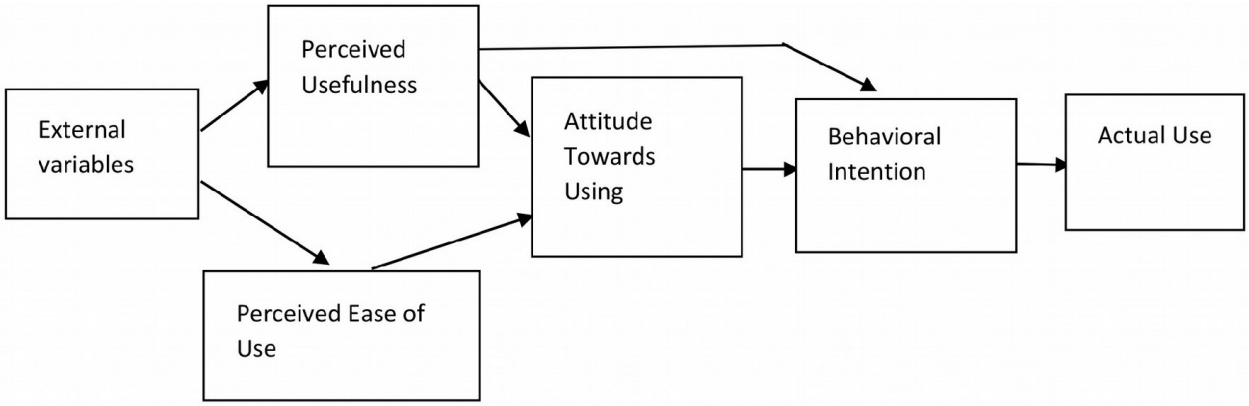
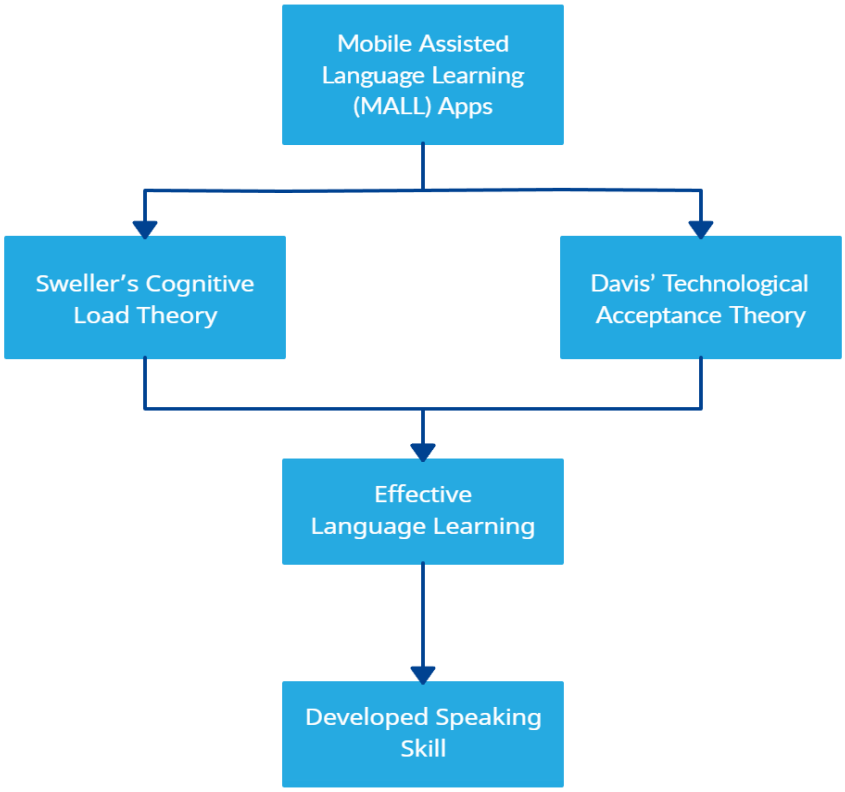


Figure 3.
The Technology Acceptance Model and Cognitive Load Theory



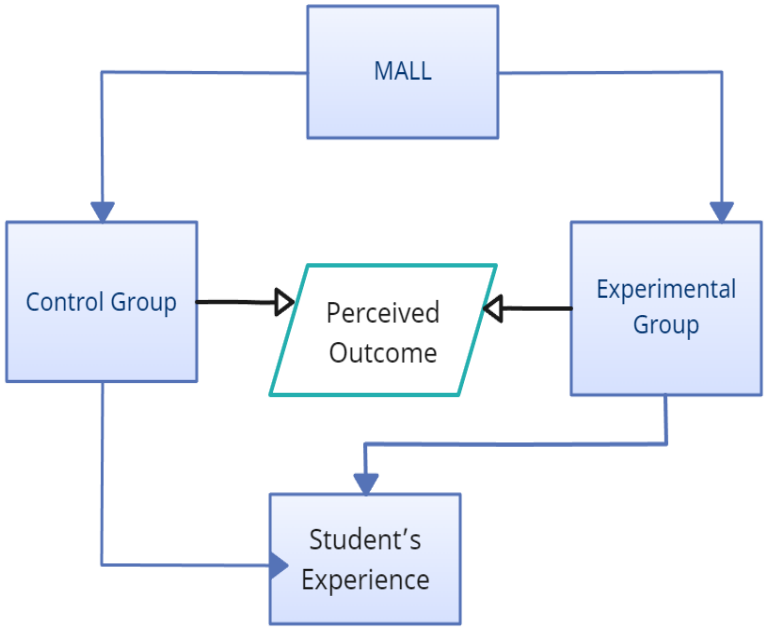
Because of the given Theoretical Framework, the theories used for the research are related and that the use of Mobile Assisted Language Learning (MALL) Apps is determined using Sweller's Cognitive Load Theory and Davis' Model of Technological Acceptance. Mobile Assisted Language Learning (MALL) Apps are determined by their effectiveness and ease of use, for proper language learning, with the rubrics given by IELTS for better speaking skills.

With the use of Sweller's theory, defines that because of the betterment of the technology, the learner's learning will be effective because it motivates them with the use of the technology's easy usage and effective language learning.

Conceptual Framework

The researchers conceptualize that with the two theories mentioned in the Theoretical Framework, the use of Mobile Assisted Language Learning (MALL) Apps, can lead to developing speaking skill in Language learning, the researchers must use a Control and Experimental group for the evidence and data gathering. The respondents will be students that are using Mobile Assisted Language Learning (MALL) Apps, and students who are not using MALL Apps, and see the difference between the two, if the students are more developed when using MALL Apps, or those who do not use MALL Apps. Finally, the researcherswill investigate more about the experience of the students when using Mobile Assisted Language Learning (MALL) Apps, the researcherswill investigate if there is a hindrance in learning English using Mobile Assisted Language Learning (MALL) apps, or if the students learned so much in using the app. The researchersmust refer to the Statement of the Problem that the researchersaims to investigate.

Figure 4. Conceptual Framework of the Researcher



Research Questions

This study aims to investigate the effectiveness of Mobile Assisted Language Learning (MALL) Applications in the Speaking Skills of High School Students Specifically, the researchers sought to answer the following questions:

1. What are the features of MALL apps that are unique?

2. How do the speaking proficiency of Control and Experimental groups compare in terms of their.
   2.1 Pre-Test
   2.2 Post-Test

3. How do the participants rate the MALL apps in terms of:
   3.1. Usability
   3.2. Personalization
   3.3. Interactivity
   3.4. Multimedia Support
4. What are the participants' experiences using Mobile Assisted Language Learning (MALL) apps to enhance their speaking fluency?

Literature Review

The Features of Mobile-Assisted Language Learning Apps

Duolingo

Luis von Ahn and Severin Hacker founded Duolingo, von Ahn and Hacker's mission is to give mobile learning in languages and to develop the best education in the world and make it universally available. A study by Shortt et al. (2021) found that research on language learning apps, particularly Duolingo, increased in popularity in 2018 and continued to rise during the COVID-19 pandemic. The researchers emphasized the importance of providing clear and descriptive information in research on language learning apps, as this will help other researchers and practitioners design their own studies more effectively. Duolingo offers approximately 95 languages to learn, and users can additionally learn in languages other than English (Duolingo About us: Approach, 2021; Viberg & Grönlund, 2012). Users start out by choosing a desired target language and can take a placement quiz if they already have some background knowledge. They set a certain amount of experience points as a daily goal and get bonuses for achieving it. Completing one lesson per day (achievement) adds one day to the Streak, which gets completely reset to zero if no lessons are completed on any given day (Shortt et al, 2021). The application sometimes offers optional challenges to the user, such as maintaining the streak for several more days, comparing experience points against others in different leagues, or offering a reward on challenge completion (fun orientation and competition) (Nah et al., 2013).

Nushi, Musa, Eqbali, and Mohamad. (2017) found out that Duolingo has different types of features, it features a lot of different exercises, including speaking exercises. The speaking exercises Each lesson contains 10 to 15 exercises, a few from each of the categories mentioned above, and learners have a progress bar on the top of their screens. Every time they get an answer right, the bar moves a little bit forward. Every time they get it wrong, the bar does not progress (Nushi, Musa, Eqbali, & Mohamad, 2017).

Memrise

Memrise was founded by Ed Cooke, Ben Whately and Greg Detre, three friends who met while studying neuroscience and psychology at Oxford. Cooke, Whately, and Detre were united by a fascination with the way humans learn and a determination to use technology to help people learn more effectively. A study by Animatun and Oktaviani (2019) in Indonesia found that Memrise is a beneficial language learning app for students, as it helps them learn business English and improve their vocabulary and grammar. According to the researcher, Memrise can be a collaborative language learning application towards the student and the teacher, since it creates a learning group for the students and the teachers to learn about a certain topic in English. In this part, teacher can create a group for their students and can monitor their students' activity by seeing the points get by students after using the application (Animatun and Oktavani, 2019).

ELSA Speak App

Created by Vu Van, ELSA Speak App aims to use technology and design to enable people around the world to speak English with confidence. Van aims to unlock greater opportunities for billions of language learners around the world. A study by Kholis (2021) found that ELSA Speak is an effective language learning app for improving students' pronunciation skills. The study also found that the app is motivating for students and can help them improve their vocabulary and grammar. A study by Samad and Ismail (2020) found that ELSA Speak is an effective app for learning grammar. A similar study from Samad and Aminullah (2019) found that ELSA Speak App is a reliable and effective app in terms of the pronunciation aspect. A study by Anggraini (2022) found that ELSA Speak is an effective app for improving students' pronunciation skills and motivation. The study also found that students can improve their English vocabulary using the app.

Babbel

According to it's website, Babbel was the world's first language-learning app and is also the best-selling. Its intuitive lessons, which have led to over 10 million subscriptions being sold, center on learning a language through real-life conversations. It was founded by Markus Witte and Thomas Holl. Babbel aims to be fluent and to feel normal in speaking the desired language. The Language Learning app wants to make the user feel natural. Vesselinov & Grego (2016) stated that Babbel according to its website, is the world's first language learning app and offers to be the shortest path to a real-life conversation. It is available on iOS, Android, and Web. Babbel has more than one million paying subscribers for its premium subscription-based service. With a world-class method at its core, Babbel offers courses to learn up to 14 different languages and teaches conversational skills learners can use straight away and with confidence. Babbel has different features, such as hours of authentic real-life content for 14 languages, it has cognitive techniques that move new vocabulary for long-term learners, the app tailors to the level of the learner's vocabulary, speech recognition for enhance speaking, and lastly, offline compatibility, meaning Babbel can be used without the use of internet connection.

Busuu

Busuu was Co-founded by Bernhard Niesner and Adrian Hilti, the aim of Busuu is to make learning more fun and engaging, and also to motivate in learning a specific language the learner wants to learn about. According to the website, Busuu focuses more on time management, because the creator of the application believed that the most important vocabulary,

key grammar, and practice with native speakers, are the key for faster fluency. The key features of the application are as follows: Interactive vocabulary and grammar lessons with audio, translation and multiple practice exercises, Audio recordings of each vocabulary item, plus example sentences and dialogues to place vocabulary and grammar in context, Voice recording and voice recognition exercises to drill pronunciation and allow students to insert their voice into a dialogue and get feedback from native speakers, Translations of key vocabulary, instructions and grammar tips into 15 languages, and Writing exercises which receive instant corrections from native speakers in the Busuu community (The Busuu Methodology to Teach and Learn a Language - Busuu, n.d.).

The Usefulness of MALL Apps

A study by Karasimos (2022) aimed to evaluate the effectiveness of different language learning apps, including Duolingo, Memrise, Busuu, LingQ, and Rosetta Stone, in improving language skills. The study involved ten native Greek speakers with proficiency in English (C1-C2 levels) who tested each app for 4-6 hours and provided their feedback. The participants were 32-44 years old, six men and four women, from various professional backgrounds. The study used a survey before the experiment to gather data. The results showed that Rosetta Stone had the highest listening score in language skill satisfaction with a score of 100, while LingQ had the lowest score of 50. Duolingo had the highest score in pronunciation which scored 80, while Busuu and LingQ had the lowest score of 50. Duolingo also had the highest score in gamification which scored 100, while Busuu had none. Based on the evaluation, the highest mean score when it comes to vocabulary acquisition goes to Duolingo and Busuu, both apps acquire a mean score of 80%. The most sufficient app is Memrise with a mean score of 80%. When it comes to application of the language, Rosetta Stone came on top when it comes to the effectiveness with a mean score of 69%. The study concluded that most participants preferred distance learning for professional and educational purposes and that cross-evaluation is needed to determine the effectiveness of Duolingo and other language learning apps in improving language skills. The study suggests that language learning apps can be useful tools for improving language skills, and the use of Duolingo and other language learning apps can benefit students' language learning.

Ekoç (2022) aimed to investigate the perceptions of Turkish adult language learners on the usefulness of mobile language learning apps and how these apps can be improved. The study used a questionnaire to gather data, and participation was voluntary. The study involved 44.2% female and 55.8% male respondents, ranging from 18-30 years old, with young adults being the most frequent users of mobile language learning apps. The study found that most respondents used one or two mobile language learning apps, with 13.5% of the respondents using three to four apps, 18.2% using five to six apps, and 26.4% using none. The study also found that 85% of the respondents used language-learning apps to learn and speak English, while 5.3% used them to learn German and 3% to learn Spanish. The respondents used language learning apps out of curiosity, to increase their vocabulary for TOEIC or TOEFL exams, or to translate unfamiliar words or phrases. The study found that 40.7% of the respondents found mobile language learning apps somewhat useful for learning, and the respondents wanted more interaction with native speakers of the language to learn more. The study concluded that language learners in Turkey, especially young adults, are active in learning languages using mobile apps and that learners

want more interaction in learning the app to be motivated to learn the language more. The study recommended that future research should focus on the learning outcomes of language learning apps with pre-and post-tests and that researchers should expand the number of participants to obtain more precise and accurate data. Polakova and Klimova (2022) investigated the effectiveness of mobile learning apps in blended English language learning among Slovak EFL students. The study used a qualitative and quantitative research design and involved 32 participants who used the Angličtina Today language learning app. The study aimed to answer three research questions related to the usefulness of the app for second language vocabulary acquisition, the perceptions of EFL students of the app, and whether the app helped students extend their vocabulary knowledge. The results showed that the app was easy to use, but only 64% of the students were satisfied with it. Additionally, only 74% of the students were motivated to learn using the app. The study concluded that while mobile learning apps have advantages, such as convenience and accessibility, they also have limitations, especially if the population of respondents is small.

Lubis, A.H., Triarisanti, R., Samsudin, D., and Ansas, V.N. (2023) in their study called: Mobile-Assisted Language Learning In Korean Language Classes: Indonesian Undergraduate Students' Experiences And Perceptions. Finds that most of the Indonesian students are using Mobile Assisted Language Learning (MALL) Apps effectively. The researchers used a Likert scale of 1-5 in the first figure the data shows that the highest mean score in students that are learning in Korean is 4.61 and the item is "Students send messages to classmates". While the lowest mean score is 4.05 and the item is "Send messages to the lecturer". The results showed that the students frequently used mobile/smartphones to send messages to their friends and. to check new notifications was the second most frequently done learning activity using mobile/smartphone, which was even higher than attending to synchronous meetings. However, they were less frequent in sending messages to their lecturers. This can be related to either the students' preferences for using laptop/desktop-based devices or the infrequent schedule for synchronous meetings (Lubis, A.H., Triarisanti, R., Samsudin, D., & Ansas, V.N. 2023). In the next Figure the data shows the usage of Mobile Assisted Language Learning Apps, with the highest being Google Classroom in a score of 4.32 while the use of online dictionaries scored 3.91, the lowest being FlipGrid with a score of 1.3. The result of the next figure was that the students who are learning Korean are using more of Google Classroom for interaction rather than self-studying in learning Korean. However, the students are facing challenges in learning Korean such as Lagging or Unstable Network, and the difficulty in signing into the app was also related to the compatibility of the smartphone in accessing and using the app. Several students added more responses in the "other" option provided in the questionnaire regarding the encountered challenges in using mobile/smartphone. First, several students admitted that technical problems were sometimes occurred especially when they were following a synchronous Teams meeting or doing the assignment. Another technical problem was evident when the battery life of their smartphones was not long enough. It was because they relied mostly on their smartphones to do the learning activities. A sudden close was also encountered by the students if they opened many tabs at the same time in doing the assignments (Lubis, A.H., Triarisanti, R., Samsudin, D., & Ansas, V.N. 2023). Second, the limited data storage could hinder the students from doing every learning activity using their mobile devices. Because they must attend to sixteen meetings in the entire course, their devices must be adjusted to be able to save large-size learning materials or assignments. Lastly, the students faced problems with the

size of the screen, especially since most of the students have smaller screens in learning. This can hinder the process, especially with poor eyesight. The researcher's findings are that the merit of MALL identified in the present study is increased interactions, motivation, and engagement toward autonomous learning. The portability of mobile devices and the spontaneity of access to learning materials enable them to interact with other people without borders of time and space (Lubis, A.H., Triarisanti, R., Samsudin, D., & Ansas, V.N. 2023). However, it can be demeriting especially if it is not carefully monitored. According to the researchers, two challenges may face in learning using MALL Apps, one the students may think that learning using MALL Apps may be one way in learning, because it will use only smartphones and secondly, the technical problems such as phone compatibility and internet connection. The researchers concluded that that MALL is beneficial for the learners to enhance their learning productivity toward increased Korean language skills as well as soft skills such as motivation, autonomy, and critical thinking. Notwithstanding, the researchers also admit that challenges are still evident in applying MALL, mostly related to technical problems, rendering demotivation and less engagement in the learning process. Hence, future research needs to investigate the results of applying the mobile computer-supported collaborative learning method to maintain the students' motivation and engagement. The results can enrich the literature toward a more comprehensive MALL design that can cater to the students' diverse characteristics and learning strategies.

The Enhancement of Student's Speaking Skills when using MALL Apps

Shortt et al. (2021) in their study: Gamification in mobile-assisted language learning: a systematic review of Duolingo literature from public release of 2012 to early 2020. Shows that the app was met with satisfactory results but some responses are negative, such as how the other languages such as Turkish, cannot be applied in real life. This study concludes that researchers need to be as clear and descriptive as possible because readers require essential context-specific information to better design their own research and practice. Without clarity, evaluating the effectiveness of Duolingo, and therefore gamification in MALL, becomes significantly more complex (Golonka et al., 2014).

Animatun and Oktaviani (2019) concluded that Memrise has given positive input for students' English vocabulary mastery, especially English for business. And that they are also concluded that most of the students agree that Memrise is easy to use, since it requires only the students to open the smartphone and use Memrise. In the table presented by Animatun and Oktaviani (2019), only 5-16% of the respondents answered disagree on the ease of use, and the enjoyment of using Memrise. The findings explained above are in accordance with some previous studies. One of them is conducted by Abarghoui and Taki (2018) which concluded that Memrise is an effective method of English language instruction that can be a supplement to state language instruction. Besides that, Fu (2013) also stated that learning through technology makes students capable of using information and data from various sources, supports student-centered and self-directed learning.

Students and lecturers are really helped by the role of technology in education. Lecturers can direct students to the relatable resources needed by students; also students can improve their way of learning. Olaore (2014) mentioned that information and communication technology provides resources and services to support the education, and it also improves the quality of

teaching and learning. In this research, students can understand the materials easier when studying in the classroom since they have already learned the materials beforehand by using. language learning application, Memrise.

A study by Kholis (2021) concluded that ELSA Speak is an effective language learning app for improving students' pronunciation skills. The study also found that the app is motivating for students and can help them improve their vocabulary and grammar. A study by Samad and Ismail (2020) found that ELSA Speak is an effective app for learning grammar. A similar study from Samad and Aminullah (2019) found that ELSA Speak App is a reliable and effective app in terms of the pronunciation aspect. A study by Anggraini (2022) found that ELSA Speak is an effective app for improving students' pronunciation skills and motivation. The study also found that students can improve their English vocabulary using the app. Anggraini (2022) Also concluded that, most of the users of ELSA Speak app, are more likely to learn more in speaking English. In a study conducted by Kholis (2021), ELSA Speak was implemented to support students' pronunciation skills in an online setting. The study used a Classroom Action Research design and used both qualitative and quantitative methods. The study was conducted in semester three, consisting of 15 meetings divided into three phases or cycles, and each cycle consisted of five meetings. The findings showed that the ELSA Speak app was effective in language learning, especially when it comes to vocabulary and grammar. The students' scores improved in each cycle, and 85% of the students liked using ELSA Speak for learning to pronounce, and 90% of the students felt motivated and improved during using it. However, the researchersconcluded that the ELSA Speak app is just a tool in teaching language, and it is up to the teacher's pedagogy to make successful teaching of grammar and vocabulary. Anggraini (2022) aimed to improve students' pronunciation skills using the ELSA Speak app. The research design used was classroom action research, with 30 students in the Basic level of the Easy English Course (EEC) as respondents. The data collection instruments used were a list of observations, questionnaires, and test and non-test techniques. The results of the study showed that the ELSA Speak app significantly improved students' pronunciation skills, as evidenced by the increase in scores from pre-tests to post-tests. The study also used triangular analysis to compare data and found that the students' fluency, accuracy in grammar, accuracy in vocabulary, appropriacy, and comprehensibility improved after using the ELSA Speak app. The study concluded that the ELSA Speak app can support and improve students' pronunciation skills and motivation, and students can improve their English vocabulary using the app.

Ozer & Kiliç (2018) conducted a research about the cognitive load and how EFL students achieve in using MALL Apps. The framework that is used is the Cognitive Load Theory integrated with the Technology Acceptance Model. The statement of the problem of this research is how students can learn using Mobile Assisted Language Learning Environment while applying the Cognitive Load Theory and Technology acceptance model. The methodology of this research is that it uses, intervention mixed methods, quantitative data collection is questionnaire while qualitative data were collected using group interview. During the data collection, the researchers use Academic Performance Test, Mobile Learning Tools Acceptance Test, and Cognitive Load Test. While the Qualitative Data Gathering uses Focus Group Interviews. The Researchers concluded that, students who are using MALL apps either positive or negative, the positive side in using MALL apps is that the app is fun and engaging, and it helped the students learn a lot. The negative aspect in the study is that most of their phones are not compatible and some of the

MALL apps uses internet connection. The researchers also concluded that with the use of MALL apps, the students are learning more during using MALL apps.

The integration of mobile devices to support language practice and facilitate language learning has also been extensively investigated. Some studies have found that mobile phones and tablets, when used appropriately, may assist students in improving academic achievement (Huang, Lin & Cheng, 2010; Ivić & Jakopec, 2016; Lu & Yang, 2018). In the modern world, most students are using Mobile phones, and searching and learning are now on the tap of a finger, but that is where the researchersconcluded and contradicts the studies that the researchershad reviewed. Most of the students using a mobile device performed significantly better on dependent variables related to achievement than the students not using mobile devices. Hwang et al.(2014) found that language students had positive perceptions and intentions toward learning activities using mobile learning tools; thus, students were motivated to practice foreign language skills more when using a mobile learning tool.

Most of the studies are conducted overseas, and countries such as Indonesia are conducting studies about Mobile Assisted Language Learning (MALL) Apps, the researchers did not find any related literature from the Philippines, so that is why, the researchers concluded that the study that the researchers conducted will also benefit for the betterment of the Language Learning of the Philippines. If Indonesia, a country on par with the Philippines conducts studies about MALL Apps, why not conduct a study on the contribution of the country's development? Another factor to consider about the studies that the researchers reviewed is the fact that in most of the MALL Apps, to be able to make the most of the Language Learning the MALL app has to offer, the user must pay for the app's services. The conclusion of this statement is that Language Learning apps should have benefits more than the current apps have to offer. If the ELSA Speak App is considered a great Mobile Assisted Language Learning App because of its tool for speech and other things such as AI assistance, why not create a study that focuses on the free-to-use part of the MALL app, most students cannot afford such a price. To conclude this literature review, the researchersfinds many relations with the topic that was reviewed, and with that literature review, the researcherswill continue to the Methodology to further explain how to find the effectiveness of the MALL Apps in terms of the speaking skill of the student. The researchersrecommends this literature review, to app developers in general, so that everyone no matter the age, class, gender, or skill can learn English.

Method

Research Design

This research was an experimental combined with a mixed methods explanatory sequential approach to comprehensively address the research questions in the study "Mobile Assisted Language Learning (MALL) Apps and its Effectiveness in the Speaking Skills of High School Students." This approach involved two distinct phases:

Quantitative Phase

In the initial quantitative phase, the researchersaimed to answer research questions 2 and 3 by collecting numerical data.

For research question 2, the researcherscompared the speaking fluency of the Control and Experimental groups in both the pre-test and post-test. This allowed the researchersto assess the impact of MALL apps on students' speaking skills by comparing the performance of the group that used MALL apps to the group that did not.

Research question 3 focused on evaluating the participants' perceptions of the MALL apps across four dimensions: usability, personalization, interactivity, and multimedia support. By collecting quantitative ratings from the participants, the researchersgained insights into the strengths and weaknesses of the MALL apps from the users' perspective.

Qualitative Phase

Following the quantitative analysis, the study transitioned to the qualitative phase to explore research questions 1 and 4 in depth.

For research question 1, the researchers conducted interviews, focus groups, or open-ended surveys to gather rich, descriptive data on the unique features of the MALL apps used in the study. This qualitative approach enabled a deeper understanding of the specific app characteristics that may have contributed to their effectiveness in enhancing speaking skills.

Research question 4 aimed to explore the participants' experiences in using MALL apps to improve their speaking fluency. The qualitative data collected through interviews and focus groups provided insights into the challenges, successes, and overall experiences of the students as they engaged with the MALL apps.

Integration of Quantitative and Qualitative Data

By combining the quantitative data on performance and perceptions with the qualitative data on experiences and app features, the explanatory sequential design allowed the researchers to develop a more comprehensive understanding of the effectiveness of MALL apps in improving high school students' speaking skills. The quantitative results highlighted the overall impact and user perceptions, while the qualitative data provided context and explanations for these findings.

Research Procedures

The research procedures for the study "Mobile Assisted Language Learning (MALL) Apps and its Effectiveness in the Speaking Skills of High School Students" were structured to effectively address the research questions (RQs) using a mixed methods explanatory sequential approach.

Obtaining Consent

The researchersfirst sought and obtained consent from the assistant principal of CEIS to conduct the data gathering for the study. This step ensured compliance with institutional protocols and ethical standards.

1. **Pre-Test Administration**

The researchersadministered a pre-test to evaluate the speaking fluency of the learners. The assessment utilized IELTS rubrics to provide a standardized measure of speaking skills. This quantitative data served as a baseline for comparing the performance of the Control and Experimental groups.

2. **Statistical Group Assignment**

After analyzing the pre-test scores, the researchersconsulted with a statistician to assign participants to the Control and Experimental groups. This random assignment was crucial for ensuring the validity of the study and mitigating selection bias.

3. **Intervention Observation**

The researchersobserved both groups over a two-month intervention period. This observation aimed to identify any changes in the students' speaking skills as they engaged with the MALL apps. The researchersdocumented qualitative notes on student interactions and engagement during this phase.

4. **Post-Test Administration**

Following the intervention, the researchersconducted a post-test to measure the speaking skills of the participants again. This assessment aimed to determine the effectiveness of the MALL apps in enhancing speaking fluency, allowing for a comparison of pre-test and post-test results.

5. **Participant Interviews**

To gain deeper insights into the participants' experiences, the researchersconducted interviews with both the highest and lowest performing students. These qualitative interviews explored the reasons behind their support or lack of support for the language learning app, addressing RQ 4 regarding participants' experiences.

6. **Data Integration and Analysis**

The researchersintegrated the quantitative data from the pre-test and post-test scores with the qualitative data from the interviews. This integration aimed to provide a comprehensive understanding of the effectiveness of MALL apps, addressing all research questions holistically.

Setting of the Study

The setting of the study took place at Centro Escolar Integrated School, where the researchersconducted his practicum training. This environment provided a valuable context for gathering data relevant to the research on Mobile Assisted Language Learning (MALL) apps and their effectiveness in enhancing the speaking skills of high school students. The choice of this setting was instrumental in facilitating access to participants and ensuring a structured environment conducive to the research objectives.

Subjects/Respondents of the Study

The respondents of the study were Senior High School students from Centro Escolar Integrated School. The participants included were the Grade 11 students from the Humanities and Social Sciences (HUMSS) and Science, Technology, Engineering, and Mathematics (STEM) tracks, comprising both male and female students. The participants were selected regardless of their fluency in English, as the researchersaimed to evaluate their speaking skills as part of the pre-test. Thus, fluency in speaking English was not a barrier at the beginning of the data gathering process.

Sampling Techniques

The sampling techniques employed by the researchersincluded purposive sampling, convenience sampling, and maximum variation sampling.

The researchersutilized purposive sampling to select two sections that would represent the broader population. These two sections were designated as the Experimental and Control groups among the respondents.

Convenience sampling was applied based on the sections available during the researcher’s practicum teaching. The selection of these sections was influenced by the subjects

and respondents outlined in the study, allowing the researchersto gather data from the most accessible groups.

Finally, maximum variation sampling was used to ensure a diverse representation of participants. The researchersselected ten highest-performing students and ten lowest-performing students from the two sections. This approach aimed to enhance the validity of the data by capturing a range of experiences and performance levels among the respondents.

By employing these sampling techniques, the researcherseffectively gathered a representative and varied sample for the study on the effectiveness of Mobile Assisted Language Learning (MALL) apps in enhancing speaking skills.

Research Instruments

The research instruments utilized in the study included a questionnaire for the quantitative component, interviews for the qualitative component, and the use of IELTS speaking rubrics for assessing speaking fluency.

Questionnaire

The researchersemployed a questionnaire in the quantitative phase of the mixed methods approach, using Google Forms to facilitate data collection. The questionnaire incorporated a Likert Scale to measure the respondents' capabilities in speaking English while using Mobile Assisted Language Learning (MALL) apps. This instrument allowed for a systematic assessment of various aspects of speaking fluency among the participants.

Interviews

In addition to the questionnaire, the researchersconducted interviews to gather qualitative data related to the experiences of the respondents when using MALL apps. These interviews focused on how the MALL apps were perceived as beneficial or otherwise in enhancing their speaking skills. The insights gained from these interviews complemented the quantitative findings, providing a richer understanding of the participants' experiences and the overall effectiveness of the MALL applications.

IELTS Speaking Rubrics

Furthermore, the researchersutilized IELTS speaking rubrics as an additional instrument to evaluate the speaking fluency of the participants. The rubrics provided a standardized framework for assessing various criteria, including fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation. This objective assessment method not only enhanced the reliability of the study's findings but also allowed for a detailed analysis of the participants' speaking performance before and after the intervention.

Validation of Instrument

The validation of the research instruments was conducted by a panel of experts comprising professionals from various relevant fields.

Two professionals with extensive backgrounds in language education were enlisted to validate the research instruments. These experts had a deep understanding of language learning principles, teaching methodologies, and assessment techniques. They reviewed the questionnaire items, interview questions, and IELTS speaking rubrics to ensure their alignment with the study's objectives and the target population's language proficiency levels.

In addition to the language education experts, the researchersalso sought the validation of a professional from the information technology field who had a background in language learning apps. This expert provided valuable insights into the usability, interactivity, and technological aspects of the MALL apps being evaluated. Their input helped refine the questionnaire items

related to the app features and ensured that the instruments adequately captured the participants' experiences with the technology.

The validation process involved a thorough review of the instruments, feedback on content, clarity, and appropriateness, and recommendations for improvements. The researchersincorporated the experts' suggestions to enhance the validity and reliability of the instruments, ensuring that they effectively measured the intended constructs and provided reliable data for the study.

Statistical Treatment

The researchersuses a likert scale as a rubric in gathering data. The researchersuses a T-test to compare the two groups in terms of the data that was gathered using the IELTS Rubrics below of the pre test and post test data between the two groups.

Score	Verbal Interpretation	Description
8 – 9	**Expert User (EU)**	**Full operational of the Language**
6 – 7	**Competent User (CU)**	**Operational Command with some inaccuracies and misunderstandings**
4 - 5	**Limited (L)**	**Basic Competence limited to familiar situations**
2 - 3	**Intermitent User (IU)**	**Great difficulty with spoken and written English**
0 - 1	**Non-user (N)**	**No ability to use the language except isolated words**

CHAPTER 4

Presentation, Analysis, and Interpretation of Data

This chapter presents the analysis, and interpretation of data in answering the research questions.

1. **The Features of Mobile-Assisted Language Learning Apps**

Mobile-Assisted Language Learning (MALL) apps have emerged as innovative tools for language acquisition, offering a variety of features that enhance the learning experience. This study explores the key features of MALL apps, focusing on popular applications such as Duolingo, ELSA Speak, Busuu, and Memrise. Each of these apps presents unique functionalities, many of which utilize artificial intelligence to facilitate language learning. For instance, while Duolingo incorporates competitive elements among users to foster engagement, Busuu and Memrise offer varying levels of accessibility and difficulty, catering to different learning needs.

Integrating mobile devices with diverse teaching and learning strategies is essential for achieving better learning outcomes (Sung, Chang & Yang, 2015). However, as Deegan (2015) noted, mobile applications are rarely developed by educators, which underscores the importance of teachers selecting apps that align with their instructional goals. This necessity led the researchersto investigate five distinct MALL applications, each with its own set of features that cater to various aspects of language learning.

1.1 Personalization and Adaptability

One of the most significant features of MALL apps is their ability to personalize the learning experience. These apps often assess users' proficiency levels and learning goals to tailor content accordingly. For instance, Duolingo employs a placement quiz that allows users to start at an appropriate level, ensuring that learners are neither overwhelmed nor underchallenged. Similarly, Babbel adapts its lessons based on the user's vocabulary level, providing a customized learning journey that promotes better retention and understanding of the language.

1.2 Gamification and Motivation

Gamification is another critical feature that enhances user engagement and motivation. MALL apps like Duolingo incorporate game-like elements, such as point systems, leagues, and streaks, which encourage users to practice regularly. This competitive aspect not only makes learning fun but also fosters a sense of achievement. Busuu emphasizes time management, allowing learners to set goals and track their progress, which further motivates them to stay committed to their language learning objectives. The applications that uses gamification sometimes offers optional challenges to the user, such as maintaining the streak for several more days, comparing experience points against others in different leagues, or offering a reward on challenge completion (fun orientation and competition) (Nah et al., 2013)

1.3 Multimodal Learning

MALL apps leverage the multimedia capabilities of mobile devices to create a multimodal learning environment. They often include various instructional materials, such as audio recordings, example sentences, and dialogues. For instance, Memrise utilizes images and mnemonics to facilitate vocabulary retention, while voice recognition exercises help learners improve their pronunciation. This variety caters to different learning styles and helps reinforce language concepts through multiple channels.

1.4 Authentic Materials and Interaction

The use of authentic materials is a hallmark of effective MALL apps. Applications like BliuBliu expose learners to real-world language through news articles and stories, allowing them to engage with content that reflects actual language use. Additionally, apps such as Busuu and Memrise incorporate writing exercises that receive feedback from native speakers, fostering interaction and practical application of language skills. This exposure to authentic language use enhances learners' ability to communicate effectively in real-life situations.

1.5 Accessibility and Flexibility

The inherent portability of mobile devices allows MALL apps to offer unparalleled accessibility and flexibility. Users can learn anytime and anywhere, making it easier to fit language practice into their busy schedules. Many apps, including Babbel, provide offline compatibility, enabling learners to continue their studies without needing an internet connection. This convenience is particularly beneficial for learners who may not have consistent access to traditional classroom settings or resources.

Table 1. The Checklist of features present in the Mobile Apps

Mobile Apps	**Personalization and Adaptability**	**Gamification and Motivation**	**Multimodal Learning**	**Authentic Materials and Interaction**	**Accessibility and Flexibility**
Duolingo	✓	✓	✓	✓	✓
Elsa Speak	✓		✓	✓	✓
Memrise	✓	✓	✓	✓	✓
Babbel	✓	✓	✓		✓
Busuu		✓	✓	✓	

2.2 The Comparison of the Speaking Fluency of the Control and Experimental Groups in Terms of Pre-Test and Post Test Scores

2.1 Pre-test

First, the researchersgave the sections Group A and Group B a pre-test, which asked the respondents to test their speaking skills and the researcherswill rate their speaking skills using the rubric from IELTS in Speaking, in which 9 was the highest and 0, the lowest score. The IELTS score for speaking has 4 parts: fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation. Below are the charts of the results that the statistician concluded, within the four parts of the IELTS Score for speaking.

	Fluency and Coherence			ɛxical source			Grammatical Range and Accuracy			Pronunciation			Overall			P Value	Sig
	X	SD	VI	X	SD	VI	X	SD	VI	X	SD	VI	X	SD	VI		
Experimental	5.36	1.56	**L**	5.64	1.56	**L**	5.71	1.35	**L**	6.71	1.78	**CU**	5.85	1.56	**L**	0.50275 >.05	Not Significant
Control	5.92	1.53	**L**	5.67	1.81	**L**	5.83	1.46	**L**	5.92	1.47	**L**	5.83	1.56	**L**		

Table 2. The Mean Results of the Pre-Test of the Two Groups

The performance data for the control and experimental groups across five key criteria—Fluency and Coherence, Lexical Resource, Grammatical Range and Accuracy, Pronunciation, and Overall performance—reveals comparable levels of proficiency for each group. The mean scores for both groups fall within a similar range, indicating that they have achieved comparable levels of competency in each area assessed.

The control group's mean scores are 5.92 in Fluency and Coherence, 5.67 in Lexical Resource, 5.83 in Grammatical Range and Accuracy, 5.92 in Pronunciation, and 5.83 overall. The experimental group's mean scores are 5.36 in Fluency and Coherence, 5.64 in Lexical Resource, 5.71 in Grammatical Range and Accuracy, 6.71 in Pronunciation, and 5.85 overall. The standard deviations for both groups are also comparable, suggesting that the variability in individual scores is similar across the groups.

The comparable standard deviations between the two groups further indicate that the variability in individual scores is similar across both cohorts. This similarity in variability

suggests that the performance distribution within each group is consistent, reinforcing the notion that both groups were well-matched at the beginning of the assessment process (Cohen et al., 2018). This comparability strengthens the validity of any differences observed in their performance, as it ensures that the groups were starting from a similar baseline. The data indicates that both groups have achieved a competent level of proficiency, with opportunities for targeted improvement based on their individual strengths and weaknesses. This analysis highlights that while the control group generally performed better across most language proficiency criteria, the experimental group's strength in pronunciation is noteworthy. These findings suggest that different instructional methods may yield varied impacts on specific language skills, warranting further investigation into effective teaching strategies tailored to enhance overall language proficiency.

The initial comparability of the groups enhances the validity of any observed differences in performance outcomes. When groups are matched on relevant characteristics, it allows for a more accurate attribution of differences to the experimental treatment rather than pre-existing disparities. In this case, since both groups started from a similar baseline, any significant differences noted post-intervention can be more confidently attributed to the effects of the treatment applied to the experimental group.

The researchersfinds this pre test with favorable results, while the control group outperformed the experimental group across all criteria assessed, both groups displayed competent language skills with identifiable areas for enhancement. The findings underscore the importance of tailored interventions aimed at addressing specific weaknesses while building on existing strengths. Additionally, understanding validity components in assessments is crucial; studies have emphasized context validity and cognitive validity as significant factors influencing language assessment outcomes (He & Jiang, 2021)

2.2 Post Test

Table 3. Mean Results of the Post Test of the two Groups

	Fluency and Coherence			Lexical Resource			Grammatical Range and Accuracy			Pronunciation			Overall			P-Value	Sig
	X	SD	VI	X	SD	VI	X	SD	VI	X	SD	VI	X	SD	VI		
Experimental Group	6.54	1.60	CU	6.89	1.47	CU	7.07	1.25	CU	7.96	1.43	CU	**7.12**	1.44	CU	0.02415 <..05	S
Control Group	6.46	1.25	CU	6.12	1.54	CU	6.33	1.34	CU	6.38	1.34	CU	**6.32**	1.37	CU		

The performance data for the control and experimental groups across five key criteria—Fluency and Coherence, Lexical Resource, Grammatical Range and Accuracy, Pronunciation,

and Overall performance—indicates notable differences in proficiency levels between the two groups. The experimental group achieved higher mean scores across all criteria, with scores of 6.54 in Fluency and Coherence, 6.89 in Lexical Resource, 7.07 in Grammatical Range and Accuracy, and an impressive 7.96 in Pronunciation, culminating in an overall score of 7.12. The standard deviations for the control group, ranging from 1.25 to 1.60, suggest a moderate level of variability in performance, yet all scores fall within the "Competent User" (CU) range, indicating a strong and consistent level of proficiency. In contrast, the control group's mean scores are lower, with 6.46 in Fluency and Coherence, 6.12 in Lexical Resource, 6.33 in Grammatical Range and Accuracy, and 6.38 in Pronunciation, resulting in an overall score of 6.32. The standard deviations for the experimental group, which range from 1.25 to 1.54, indicate slightly less variability compared to the control group. Despite both groups falling within the CU range, the data clearly illustrates that the control group demonstrates superior performance across all assessed areas. This analysis suggests that targeted interventions may be beneficial for the experimental group to enhance their proficiency, particularly in Lexical Resource and Pronunciation, where the differences are most pronounced. Overall, while both groups exhibit competency, The control group's consistently higher scores highlight their stronger command of the language skills evaluated.

The findings of the current study on language proficiency assessment align with recent literature emphasizing the importance of comprehensive evaluation methods for language learners. For instance, Vandergrift (2022) highlights that both L2 proficiency and the language of assessment significantly affect learners' performance, underscoring the need for assessments that accurately reflect learners' abilities in meaningful contexts. Similarly, Sanz and McCormick (2021) explore how L2 proficiency influences learners' attention allocation during comprehension tasks, suggesting that proficiency levels can impact overall performance in assessments. Furthermore, Scarino (2013) discusses the concept of language assessment literacy, emphasizing that teachers must understand assessment processes to effectively support language learners. This research backs up what this study found, showing that while both groups are competent, individualized interventions based on proficiency levels can improve language skills and lead to better test results. Overall, these recent studies contribute to a deeper understanding of the complexities involved in language proficiency assessment and the necessity for tailored approaches in educational settings.

3. Rating of Mobile Assisted Language Learning (MALL) Apps

After conducting tests and experiments with the two groups, the researchersadministered a questionnaire to the experimental group, as only the experimental group utilized Mobile Assisted Language Learning (MALL) apps. Following several days of waiting, responses were received from only 15 out of 24 students.

The data revealed that among the respondents, 10 students (66.7%) reported using Duolingo, while 8 students (53.3%) utilized the ELSA Speak app. The MALL apps with the least usage were Memrise and others, each used by only 1 student (6.7%), and neither Babbel nor Busuu was reported as being used by any of the respondents. The majority favored Duolingo and ELSA Speak due to their accessibility and popularity as language learning tools.

3.1 Usability

Table 4. The Students' Rating in terms of the Usability of MALL Apps

Usability	Mean	VI

Usefulness of the Application	4.20	Very Good
Not causing lags or crashes	4.33	Very Good
Stability of the Application	4.07	Very Good
Uses different types of media, such as pictures, videos, etc.	4.13	Very Good
Overall	4.18	Very Good

Overall, the dimensions of usability were perceived favorably. To score each dimension of usability, the average rating was utilised and then used to report experiences. The mean score on the usefulness of the applications was 4.20, which falls in the "Very Good" category, suggesting that the applications were useful for the purposes of users' language learning. This aligns with understanding the fact that effective usability can go a long way to increasing user satisfaction and involvement in mobile applications.

Stability was scored 4.33, which falls in the rating "Very Good." It means the technology glitches—for instance, lags and crashes—did not bother the user's activities much. Because it is considered important in building trust to make repeat use as this app has unstable experience results in annoyance and uninviting feeling among the learners. The apps utilized had a mean score of 4.07 in the variety of media they offered, which falls in the "Very Good" category. This is probably because the users appreciate the differing media formats, such as pictures and videos. offered to them, which stimulate different learning styles and bring out the best in every learning experience.

This overall mean score of the usability scores was 4.18, meaning that it proved to be effective in dealing with the needs of a learner through a user-friendly MALL app experience. High rankings across all the usability dimensions affirm that MALL apps of such characteristics would be highly enjoyed. The observation finds a correlation along a broader general direction in any research regarding usability in mobile applications: where user-friendly designs would indicate much higher satisfaction and retention in users. Such environments are most likely to be developed by ensuring that applications are stable, useful, and rich in diverse media.

The positive feedback from the experimental group indicates that these MALL apps are successfully meeting their intended goals and are effectively supporting language acquisition. This reinforces the importance of ongoing usability testing and iterative design improvements to maintain high standards in user experience.

3.2 Personalization

Table 5. The Students' Rating in terms of the Personalization of MALL Apps

Personalization	Mean	VI

The Language Learning App follows my needs	3.75	Good
The Language Learning App is portable in any device	3.75	Good
The Language Learning App uses ranks for users who studies language the most	3.75	Good
The Language Learning App rewards users who study the hardest	3.75	Good
Overall	3.75	Good

Based on Table 5, the evaluation of personalization in language learning applications shows a steady mean score of 3.75, labeled "Good" under different aspects. This therefore indicates that the users were of the view that such applications meet their personal needs adequately. Specifically, for this particular set of participants, they reported that their respective requirements in the applications of language learning were actually met appropriately by the learning apps, pointing to how a personalized experience is essential to achieve better user satisfaction and involvement.

Mean ratings received for crosswise portability on different apparatuses was 3.75, which means that it is portable since the students were able to take their learning tools with them and had an option of learning anytime from any place. This is something crucial, as present day learners have multiple duties to attend to, so many would be more receptive to learning on the move. Moreover, rating systems for the most active users of the app earned 3.75 points, indicating that gamification elements like rating can help encourage learners by creating a competition and a sense of achievement.

The apps' ability to motivate users for their effort with rewards scored similarly, that is, 3.75, which reiterates that incentives may motivate students, and therefore, this improves the students' steady learning habits. There is consistency in these scores, which means that the students find the personalization aspect helpful, but they may need to be better facilitated to reach a greater potential.

Such research findings support the fact that personalization of the learning experience is an activity that enhances learner engagement and effectiveness in learning a language. For example, AI-based tools adjust the lesson to a learner's proficiency level and preference. Real-time feedback and simulation of real-life situations also form part of such learning environments (Stefanic, 2024). Such adaptive learning not only addresses the need for individuals but also maintains the motivation through game-based strategies, such as rankings and rewards Neto (2023). While these features of personalization are beneficial, constant improvements are in place to further maximize the process of language learning for the users.

3.3. Interactivity

Table 6. The Students' Rating in terms of the Interactivity of MALL Apps

Interactivity	Mean	VI
The Language Learning App is friendly	4	Very Good
The Language Learning App notifies the user	4	Very Good

The Language Learning App is interactive to the user	4	Very Good
The Language Learning App motivates the user through games and activities	4	Very Good
Overall	4	Very Good

The findings for the interactivity rating from the experimental group as indicated in Table 6 reflect a strong positive impression having a mean score of 4, which is classified as "Very Good." This classification relates to users who use the applications since their perception of interactivity depends on the various interactions presented within the application. For instance, the language learning apps were found to be friendly, meaning users view them as intuitive and interactive. The study of (Kukulska-Hulme, 2020) has indicated that user-friendly interfaces enhanced considerably the satisfaction and retention of users in mobile applications. Interactive elements, such as quizzes, instant feedback, and gamified learning tasks, can create a more engaging environment that encourages learners to participate actively rather than passively absorb information (Deterding et al., 2011).

The average score of the apps regarding the notification feature was 4. This implies that proper notification helps the learners keep themselves updated on the study materials and, therefore, stay interested. For a learner, the notification is also a reminder for their studies. contents, and achievements, which therefore propagates constant usage patterns. The score for interactivity was at 4, meaning users were of the opinion that there was adequate opportunity for being active in their learning through the apps. Interactivity is an important aspect in education apps since it engages users more and enables the learner to retain information better.

However, when looking at the motivational intent of using the apps since they were gamified with the games and activities, there was a rating of 4 across all, suggesting that aspects of gamification are improving motivation and learning in an entertaining manner. In that respect, it would imply that gamification factors help to increase the level of engagement by the users for further interaction with the application as a result of rewarding and challenging a gamified experience. Altogether, the average score from all dimensions indicates that this MALL learning environment is both interactive and engaging.

These findings support broader trends in mobile app development toward interactivity and user engagement in educational contexts. Evidence shows that interactive features not only improve learning experiences but also increase the level of satisfaction and loyalty of users. Thus, although the features of interactivity are found to be positive, further enhancements in the current features could result in more optimized user engagement and learning outcomes.

3.4. Multimedia Support

Table 7. The Students' Rating in terms of the Multimedia Support of MALL Apps

Multimedia Support	Mean	VI
The Language Learning App uses AI to help the user	4	Very Good

The Language Learning App uses audio for listening exercises	4	Very Good
The Language Learning App uses video to learn	4	Very Good
The Language Learning App uses tips to help the user learn	4	Very Good
Overall	4	Very Good

The survey results regarding multimedia support in language learning apps provide a nuanced understanding of user experiences and preferences. Below is a detailed interpretation of the findings, supported by relevant literature on language learning technologies. The survey revealed that 8 students rated AI support as "very good," 6 as "excellent," and 1 as "poor." This indicates a generally positive reception towards AI features, which are increasingly integrated into language learning platforms to personalize learning experiences. The single "poor" response suggests that not all users find AI equally beneficial, which aligns with research indicating that the effectiveness of AI in education can vary based on user familiarity and expectations (Kukulska-Hulme, 2020). The respondent who rated AI poorly may have had different expectations or experiences with the specific app's capabilities. For listening exercises, 10 respondents rated them as "excellent," while 5 rated them as "very good." This strong positive feedback highlights the importance of audio components in language acquisition. Research has shown that listening skills are critical for language proficiency, and audio resources can significantly enhance learners' ability to understand spoken language (Vandergrift & Goh, 2012). The prevalence of audio in popular apps like Duolingo supports this finding, as these platforms often prioritize auditory learning to improve comprehension and pronunciation. Regarding video recordings, the responses were more varied: 4 rated them as "excellent," 7 as "very good," 3 as "good," and 1 as "fair." This suggests that while video content can be beneficial, its effectiveness is inconsistent across different applications. Research indicates that video can enhance engagement and provide contextual learning opportunities (Guo et al., 2014), yet its impact may depend on how well it is integrated into the overall learning experience. The mixed ratings imply that some apps may not utilize video effectively, which could limit its potential benefits. The results concerning tips provided to users were also favorable, with 8 students rating this feature as "excellent" and 7 as "very good." This suggests that many language learning apps successfully offer useful guidance, which is essential for learner motivation and progress. Apps like Duolingo and ELSA Speak are noted for providing tailored tips that help users navigate their language learning journey (Hockly, 2018). The ability to receive contextual advice in both English and the user's native language enhances understanding and application of new concepts.

The usage of the language learning app led to positive experiences, but of course there are some who lack experience in using language learning apps because sometimes in an application of the technology there is still some flaws that need to be addressed, like lagging and crashes towards the applications, especially with a smartphone that has very low speculations, because it might lead to the user not using the app. On the other hand, when it comes to the learning process, the language learning app is very interactive toward the user.

Table 8. The Students' Rating in terms of the Experience in using Mobile-Assisted Language Learning Apps.

Experience	Users

Excellent	4
Very Good	9
Good	2

9 of the respondents answered very good while 4 answered excellent, and 2 answered good. The experiences of the respondents in using language learning app leaded to positive results, because the respondents can access the language learning app through the respondent's smartphones. Despite the smartphones that the respondents use, the learning progress of learning a language also suggests that the experience is very good and sometimes bad but not frequently.

The respondents' ability to access language learning apps via smartphones likely contributes to their positive experiences. Research has shown that mobile devices facilitate language learning by allowing users to engage with content anytime and anywhere, which is crucial for consistent practice (Stockwell, 2010). The findings suggest that while most users report a very good experience, there are instances of occasional dissatisfaction. This could be attributed to factors such as app usability or content relevance, which can vary widely among different language learning platforms (Hockly, 2018).

Several researchers have identified potential reasons for these mixed experiences. Hockly (2018) notes that app usability and content relevance can significantly impact user satisfaction. For instance, if an app is difficult to navigate or if its content does not align well with users' learning goals, this can lead to frustration and a less favorable experience. Additionally, individual differences among learners—such as prior knowledge, learning styles, and personal preferences—can also affect how users perceive and interact with language learning applications (Reinders & White, 2011). In summary, while the majority of respondents report a very good experience with language learning apps, the presence of occasional dissatisfaction highlights areas for improvement. The accessibility provided by smartphones is a significant factor contributing to positive experiences; however, attention must be paid to usability and content relevance to ensure that all users can benefit fully from these educational tools.

Table 9. The Students' Rating in terms of the Recommendation in using Mobile Assisted Language Learning apps.

Recommendation on using MALL Apps	Users
Yes	14
No	0
Maybe	1

14 respondents recommended using language learning apps to improve speaking skills, 1 respondent, vocabulary, answered maybe, the reason behind the answer is that it only widens the

respondent's vocabulary but the app does not enhance the respondent's speaking skills, but even if the answer is neutral, the respondent still highly suggests using the language learning app, if the user thinks that it will enhance the user's vocabulary.

Interestingly, one respondent rated the app's effectiveness for vocabulary enhancement as "maybe," suggesting that while the app may broaden vocabulary knowledge, it does not necessarily translate to improved speaking skills. This perspective is crucial as it highlights a common critique of many language learning apps: they often focus heavily on vocabulary and grammar rather than practical speaking practice (Hockly, 2018). The respondent's neutral stance indicates an awareness that while vocabulary acquisition is important, it alone may not suffice for developing fluency or conversational competence. Despite this mixed feedback regarding speaking skills, the respondent still highly recommends the app for vocabulary improvement. This reflects a broader trend in language learning where users value the foundational knowledge provided by apps, even if they feel additional resources or methods are needed for developing speaking proficiency (Stockwell, 2010).

Table 10. Students' Perspectives on the Need for Innovation in Language Learning Apps

Do you think Mobile Assisted Language Learning Apps should Innovate?	Users
Yes	14
No	0
Maybe	1

14 respondents answered yes when it comes to innovating mobile-assisted language learning apps. But again, one respondent answered maybe. There are three suggestions that the respondents answered in terms of areas of improvement. Users emphasize the need for features that specifically target speaking proficiency. Research indicates that interactive speaking activities are crucial for developing fluency and confidence in language learners (Hwang et al., 2024). Non-native speakers often struggle with pronunciation, and effective MALL apps should incorporate features that provide immediate feedback and practice opportunities (Kukulska-Hulme, 2020). The ability to access learning materials anytime and anywhere is a significant advantage of mobile apps. Users appreciate this flexibility, as it aligns with their lifestyles and learning preferences (Stockwell, 2010). A notable concern raised by respondents is the existence of paywalls for accessing AI features within these apps. One respondent expressed that while they see value in the app for vocabulary enhancement, the additional costs associated Unlocking full AI capabilities could be a barrier to effective learning. This aligns with findings that suggest financial barriers can limit access to educational resources, particularly in technology-enhanced learning environments (Hockly, 2018).

Respondents recommend that developers eliminate paywalls for AI functionalities related to speaking skills, advocating for equitable access to all users. This recommendation is supported by literature indicating that removing financial barriers can enhance user engagement and learning outcomes (Deterding et al., 2011).

4. The participants' experiences using Mobile Assisted Language Learning (MALL) apps to enhance their speaking fluency?

After administering the questionnaire, the researchersanalyzed the respondents' answers and selected six students for follow-up interviews, consisting of five high-performing and one low-performing respondent. The researcherssprepared a set of questions focused on the participants' experiences using Mobile Assisted Language Learning (MALL) apps. The interviews were conducted via Zoom, scheduled according to each respondent's availability. The interview questions were as follows:

1. What has been your experience using Mobile Assisted Language Learning apps? Which specific apps have you used?
2. Have you encountered any difficulties while using these apps?
3. What features of the Mobile Assisted Language Learning apps do you find most useful or appealing?
4. Would you recommend using these Mobile Assisted Language Learning apps to others?

Respondent 1 stated that while language learning apps are not entirely suitable for enhancing their overall English learning capabilities, using these apps to improve vocabulary was both challenging and a valuable experience. Respondent 1 acknowledged that AI and technology play a significant role in education and found the AI components of language learning apps effective. Specifically, the apps provide constructive feedback on pronunciation in English and other languages.

Respondent 2 found language learning apps effective, particularly praising the ELSA Speak app for its use of AI and real-time feedback when practicing speaking. Respondent 2 did not encounter any difficulties using the app, aside from their own speaking skills. They recommended ELSA Speak to fellow students because it improves grammar and helps users correctly pronounce unfamiliar words.

Respondent 3, the lowest-performing participant and a foreigner from Mainland China, primarily used Google Translate due to nationalistic views related to their country. However, Respondent 3 reported difficulties with Google Translate, noting that translations were sometimes inaccurate, leading them to rely on body language or drawings to communicate. Respondent 3 also expressed that language learning apps are generally unnecessary for Chinese people, attributing this to strong nationalistic sentiments and cultural resistance towards Americans. The researchersinterprets these views as reflecting nationalistic issues rather than the effectiveness of the apps themselves. For learning English, Respondent 3 prefers face-to-face interaction, believing it will better prepare them for studying in the United States.

Respondent 4, one of the top-performing respondents, identified a speech issue involving frequent use of fillers like "ums" and "ahs." Respondent 4 uses Duolingo but not primarily for learning English, as it was introduced in their school curriculum. They found Duolingo sometimes complicated for advanced language learning but recommended it for beginners to learn the basics. However, Respondent 4 does not recommend Duolingo for advanced English or other language learning.

Respondent 5 uses both ELSA Speak and Duolingo, with a preference for ELSA Speak to learn English. Respondent 5 described their experience with ELSA Speak as highly effective, noting that the AI-powered app tailors learning to the user's needs and enhances speaking skills beyond average levels. They did not experience any problems using the apps. The features they

appreciated most were the AI-based interaction, which creates an immersive experience by simulating conversation with a real person. Respondent 5 recommended ELSA Speak to other students but noted the app's paywall as a limitation. They suggested that future app developers create similar AI-powered language learning apps without paywalls to allow full access to language learning features.

CHAPTER 5

Conclusions and Recommendations

Summary of Findings

1. Key Features of MALL Apps

Mobile-Assisted Language Learning (MALL) apps have become innovative tools that enhance language acquisition through a variety of features tailored to learners' needs. These apps, such as Duolingo, ELSA Speak, Busuu, and Memrise, often use artificial intelligence to personalize learning by assessing proficiency levels and adapting content accordingly. This ensures that learners receive lessons that are neither too easy nor too difficult, promoting better retention and engagement.

Gamification is a key element in many MALL apps, incorporating points, leagues, streaks, and challenges to motivate users and encourage consistent practice. Such features create

a fun and competitive environment, fostering a sense of achievement and helping learners stay committed to their goals. Additionally, MALL apps leverage the multimedia capabilities of mobile devices by offering audio, images, dialogues, and mnemonics, which support different learning styles and reinforce language concepts through multiple sensory channels.

The use of authentic materials and interactive exercises is another important feature of MALL apps. Platforms like BliuBliu expose learners to real-world language through news articles and stories, while others such as Busuu and Memrise provide opportunities for writing practice with feedback from native speakers. This practical engagement helps learners develop effective communication skills in real-life contexts. Furthermore, the portability of mobile devices allows learners to study anytime and anywhere, with many apps offering offline functionality to accommodate users with limited internet access. Overall, MALL apps combine personalization, motivation, multimodal content, authentic interaction, and accessibility to create flexible and effective language learning environments.

2. **The Comparison of the Speaking Fluency of the Control and Experimental Groups in Terms of Pre-Test and Post Test Scores**

2.1 Pretest

The pre-test results comparing the speaking fluency of the control and experimental groups reveal that both groups demonstrated similar levels of language proficiency across the assessed criteria: fluency and coherence, lexical resource, grammatical range and accuracy, pronunciation, and overall performance. This baseline equivalence strengthens the validity of the study, as it ensures that any differences observed in subsequent assessments can be more confidently attributed to the instructional methods applied rather than pre-existing disparities. While the control group generally outperformed the experimental group across most language proficiency areas, the experimental group's strength in pronunciation highlights the potential for different teaching approaches to impact specific language skills differently. These findings emphasize the need for tailored interventions that address individual weaknesses while leveraging existing strengths to enhance overall language proficiency.

2.1 Posttest

The post-test results reveal notable differences in language proficiency between the experimental and control groups across key criteria: fluency and coherence, lexical resource, grammatical range and accuracy, pronunciation, and overall performance. The experimental group consistently achieved higher mean scores across all areas, demonstrating superior performance with an overall score of 7.12 compared to the control group's 6.32.

While both groups demonstrated competency, the experimental group exhibited less variability in performance, as indicated by slightly lower standard deviations. The control group's higher scores highlight their stronger command of the language skills, suggesting that the experimental group could benefit from targeted interventions, particularly in lexical resource and pronunciation, where the differences were most pronounced.

3. **Rating of Mobile Assisted Language Learning (MALL) Apps Towards its Features**

In terms of usability, the experimental group rated the apps very favorably across all dimensions, including usefulness, stability, and multimedia support, with overall mean scores falling within the "Very Good" range. Students appreciated the reliability of the apps, their ability to function without frequent lags or crashes, and their use of diverse media formats such as audio, video, and images.

The apps also scored well on personalization, with users reporting that the apps generally met their individual learning needs and offered flexibility through portability and gamified elements like rankings and rewards.

Interactivity and multimedia support were also highly rated, with students highlighting the value of interactive features such as notifications, instant feedback, and gamified activities. The integration of AI, audio, and video was particularly well received, though some variation in ratings suggested that not all multimedia features were equally effective across different apps. Nonetheless, the overall experience was described as engaging and supportive of language acquisition.

4. **The participants' experiences using Mobile Assisted Language Learning (MALL) apps to enhance their speaking fluency?**

The majority of students in the experimental group rated their experience with Mobile Assisted Language Learning (MALL) apps as very good or excellent, highlighting the usefulness, stability, interactivity, and multimedia features of popular apps like Duolingo and ELSA Speak. These apps were praised for their accessibility via smartphones, allowing flexible and consistent language practice. Personalization and gamification elements were also positively received, though some respondents noted occasional issues such as app lags or content misalignment. Overall, 14 out of 15 students recommended using MALL apps to improve speaking skills, with only one respondent expressing a more neutral view, suggesting that while vocabulary improved, speaking proficiency was less affected. The findings suggest that MALL apps are effective and well-liked, but ongoing improvements in usability and content relevance are needed to maximize their benefits for all learners.

Conclusions

Based on the findings, the following conclusions were derived:

1. MALL apps are highly usable, stable, and accessible, leading to positive learning experiences for most high school students.
2. Personalization features in MALL apps, such as adaptive content and gamification, are valued for their ability to address the diverse needs and preferences of language learners.
3. Interactivity and multimedia support (including AI, audio, and video) significantly boost student engagement and motivation in language learning.
4. Usability issues, device limitations, or misalignment between app content and user needs can contribute to occasional dissatisfaction with Mobile Assisted Language Learning (MALL) apps.
5. Mobile Assisted Language Learning (MALL) apps are effective tools for improving language skills, particularly for expanding vocabulary and supporting speaking practice.

Recommendations

1. School Administration should ensure that students have access to reliable internet connections and user-friendly Mobile Assisted Language Learning (MALL) apps on up-to-date devices to effectively support the development of language skills among learners.
2. App developers should collaborate with Language Institutions to customize and adapt Mobile Assisted Language Learning (MALL) app content, ensuring it is relevant to students' specific learning goals and cultural backgrounds.
3. App Providers should continue to innovate by expanding interactive and multimedia features in MALL apps and regularly incorporate user feedback to improve app design and content.
4. Government should support digital literacy initiatives and provide funding or subsidies to help schools and students access quality devices and training necessary for effective use of MALL apps.

5. Researchers should conduct further studies to develop and evaluate MALL app features that specifically target speaking fluency, ensuring that future apps address both vocabulary development and oral communication skills.

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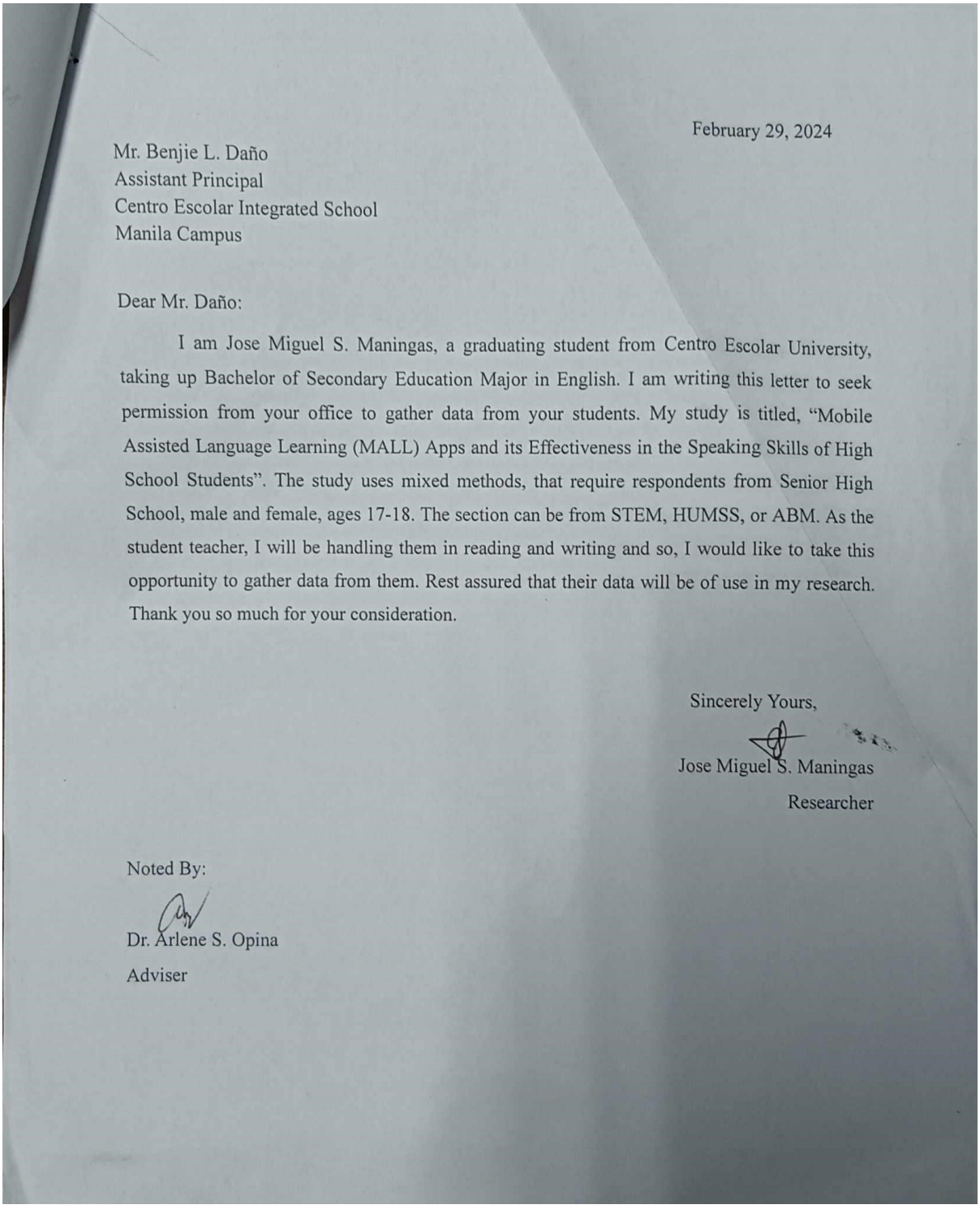
Appendices

Letter of request for permission to companies, schools, agencies, institutions, etc.



February 29, 2024

Mr. Benjie L. Daño
Assistant Principal
Centro Escolar Integrated School
Manila Campus

Dear Mr. Daño:

I am Jose Miguel S. Maningas, a graduating student from Centro Escolar University, taking up Bachelor of Secondary Education Major in English. I am writing this letter to seek permission from your office to gather data from your students. My study is titled, "Mobile Assisted Language Learning (MALL) Apps and its Effectiveness in the Speaking Skills of High School Students". The study uses mixed methods, that require respondents from Senior High School, male and female, ages 17-18. The section can be from STEM, HUMSS, or ABM. As the student teacher, I will be handling them in reading and writing and so, I would like to take this opportunity to gather data from them. Rest assured that their data will be of use in my research. Thank you so much for your consideration.

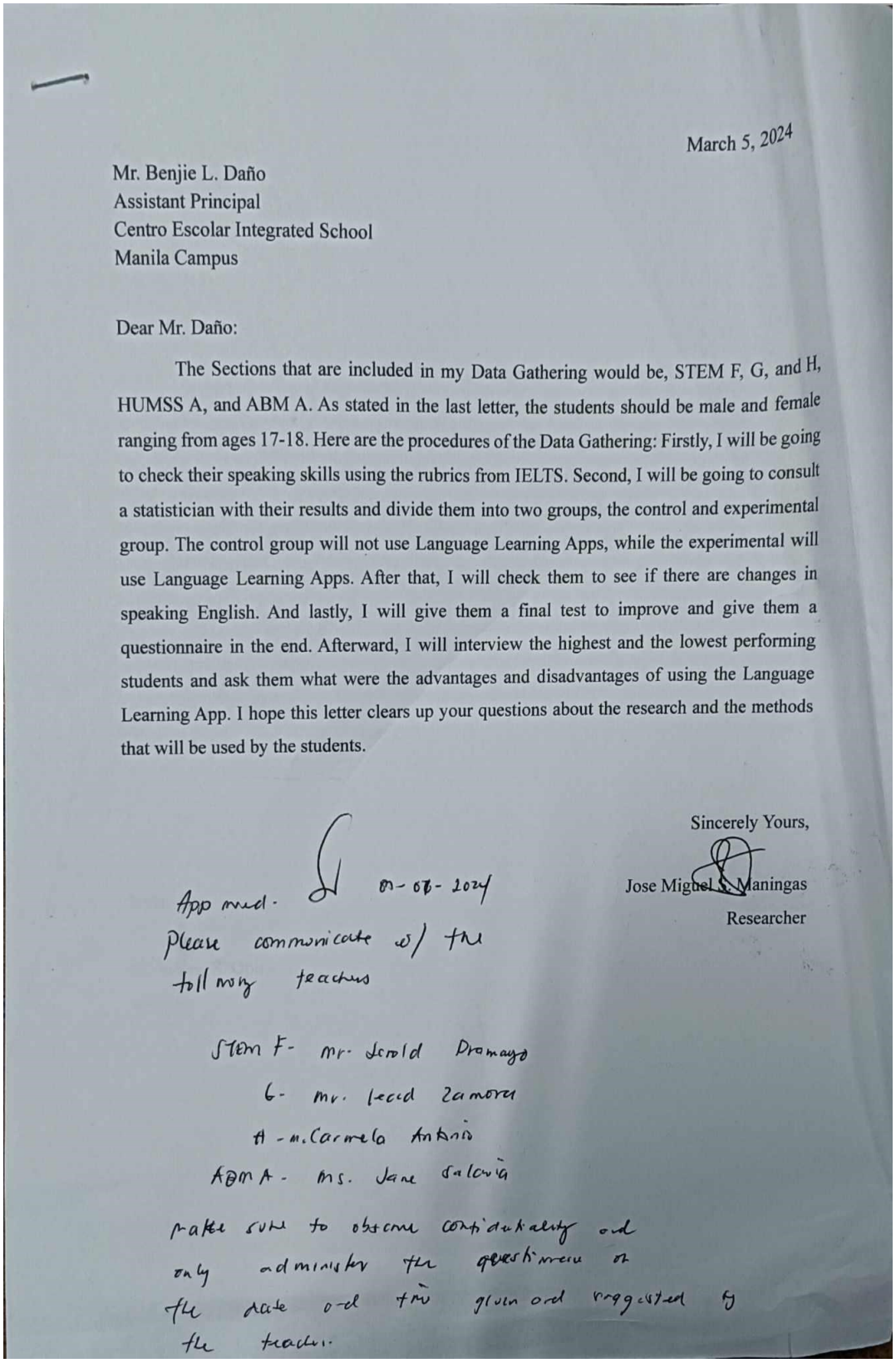
Sincerely Yours,

Jose Miguel S. Maningas
Researcher

Noted By:

Dr. Arlene S. Opina
Adviser

Informed Consent



March 5, 2024

Mr. Benjie L. Daño
Assistant Principal
Centro Escolar Integrated School
Manila Campus

Dear Mr. Daño:

The Sections that are included in my Data Gathering would be, STEM F, G, and H, HUMSS A, and ABM A. As stated in the last letter, the students should be male and female ranging from ages 17-18. Here are the procedures of the Data Gathering: Firstly, I will be going to check their speaking skills using the rubrics from IELTS. Second, I will be going to consult a statistician with their results and divide them into two groups, the control and experimental group. The control group will not use Language Learning Apps, while the experimental will use Language Learning Apps. After that, I will check them to see if there are changes in speaking English. And lastly, I will give them a final test to improve and give them a questionnaire in the end. Afterward, I will interview the highest and the lowest performing students and ask them what were the advantages and disadvantages of using the Language Learning App. I hope this letter clears up your questions about the research and the methods that will be used by the students.

Sincerely Yours,

Jose Miguel S. Maningas
Researcher

App mved. 03-06-2024
Please communicate w/ the
following teachers

STEM F- Mr. Jerold Dramayo
G- Mr. Jecid Zamora
H - M. Carmela Antonio
ABM A - Ms. Jane Salonga

make sure to observe confidentiality and
only administer the questionnaires on
the date and time given and suggested by
the teacher.

IELTS Lickert Scale Table

IELTS Speaking Band Descriptors

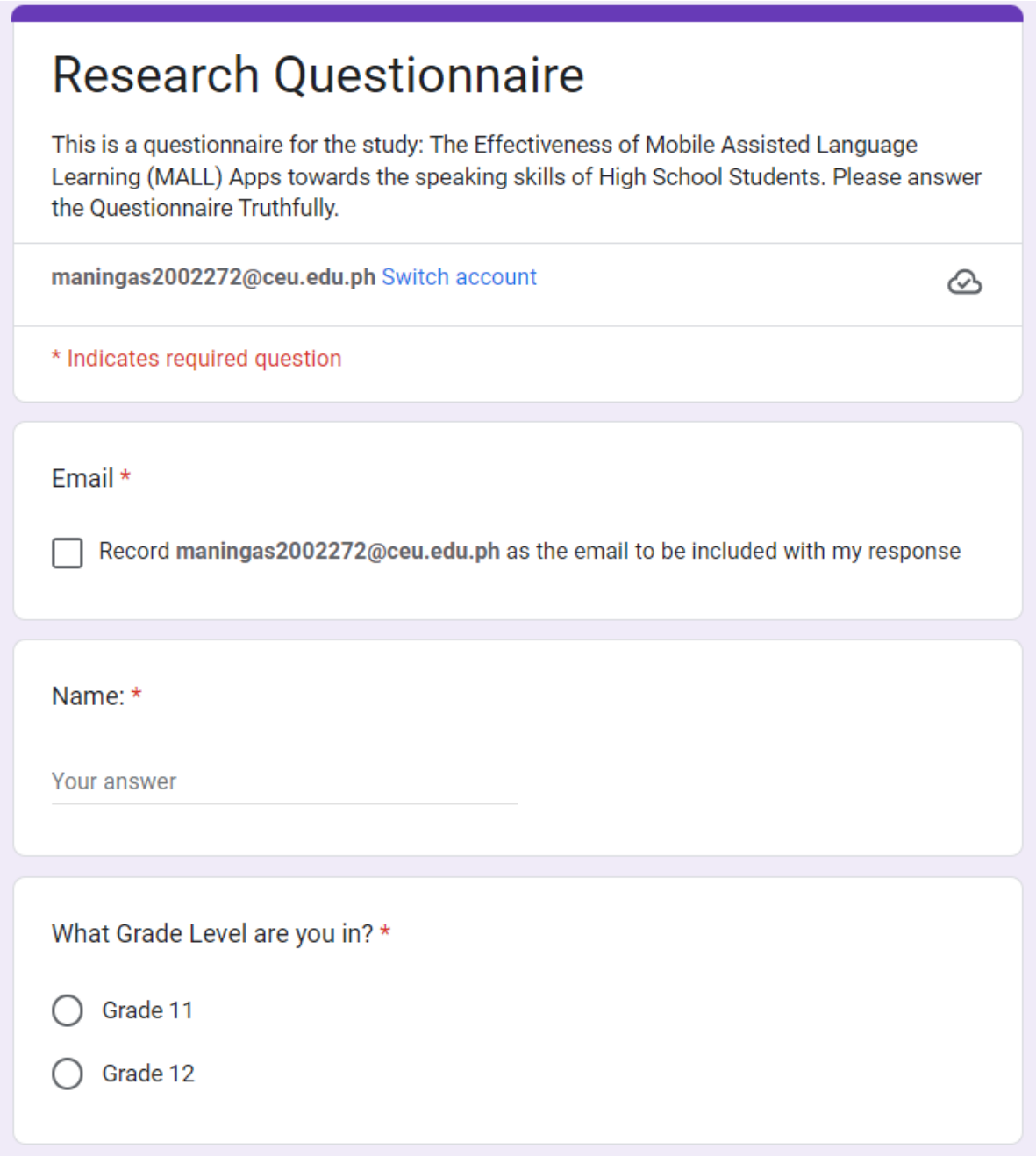
Scoring criteria for Academic and General Training tests

Band Score	Fluency and coherence	Lexical resource	Grammatical range and accuracy	Pronunciation
9	Fluent with only very occasional repetition or self-correction. Any hesitation that occurs is used only to prepare the content of the next utterance and not to find words or grammar. Speech is situationally appropriate and cohesive features are fully acceptable. Topic development is fully coherent and appropriately extended.	Total flexibility and precise use in all contexts. Sustained use of accurate and idiomatic language.	Structures are precise and accurate at all times, apart from 'mistakes' characteristic of native speaker speech.	Uses a full range of phonological features to convey precise and/or subtle meaning. Flexible use of features of connected speech is sustained throughout. Can be effortlessly understood throughout. Accent has no effect on intelligibility.
8	Fluent with only very occasional repetition or self-correction. Hesitation may occasionally be used to find words or grammar, but most will be content related. Topic development is coherent, appropriate and relevant.	Wide resource, readily and flexibly used to discuss all topics and convey precise meaning. Skilful use of less common and idiomatic items despite occasional inaccuracies in word choice and collocation. Effective use of paraphrase as required.	Wide range of structures, flexibly used. The majority of sentences are error free. Occasional inappropriacies and non-systematic errors occur. A few basic errors may persist.	Uses a wide range of phonological features to convey precise and/or subtle meaning. Can sustain appropriate rhythm. Flexible use of stress and intonation across long utterances, despite occasional lapses. Can be easily understood throughout. Accent has minimal effect on intelligibility.
7	Able to keep going and readily produce long turns without noticeable effort. Some hesitation, repetition and/or self-correction may occur, often mid-sentence and indicate problems with accessing appropriate language. However, these will not affect coherence. Flexible use of spoken discourse markers, connectives and cohesive features.	Resource flexibly used to discuss a variety of topics. Some ability to use less common and idiomatic items and an awareness of style and collocation is evident though inappropriacies occur. Effective use of paraphrase as required.	A range of structures flexibly used. Error-free sentences are frequent. Both simple and complex sentences are used effectively despite some errors. A few basic errors persist.	Displays all the positive features of band 6, and some, but not all, of the positive features of band 8.

Band Score	Fluency and coherence	Lexical resource	Grammatical range and accuracy	Pronunciation
6	Able to keep going and demonstrates a willingness to produce long turns. Coherence may be lost at times as a result of hesitation, repetition and/or self-correction. Uses a range of spoken discourse markers, connectives and cohesive features though not always appropriately.	Resource sufficient to discuss topics at length. Vocabulary use may be inappropriate but meaning is clear. Generally able to paraphrase successfully.	Produces a mix of short and complex sentence forms and a variety of structures with limited flexibility. Though errors frequently occur in complex structures, these rarely impede communication.	Uses a range of phonological features, but control is variable. Chunking is generally appropriate, but rhythm may be affected by a lack of stress-timing and/or a rapid speech rate. Some effective use of intonation and stress, but this is not sustained. Individual words or phonemes may be mispronounced but this causes only occasional lack of clarity. Can generally be understood throughout without much effort.
5	Usually able to keep going, but relies on repetition and self-correction to do so and/or on slow speech. Hesitations are often associated with mid-sentence searches for fairly basic lexis and grammar. Overuse of certain discourse markers, connectives and other cohesive features. More complex speech usually causes disfluency but simpler language may be produced fluently.	Resource sufficient to discuss familiar and unfamiliar topics but there is limited flexibility. Attempts paraphrase but not always with success.	Basic sentence forms are fairly well controlled for accuracy. Complex structures are attempted but these are limited in range, nearly always contain errors and may lead to the need for reformulation.	Displays all the positive features of band 4, and some, but not all, of the positive features of band 6.
4	Unable to keep going without noticeable pauses. Speech may be slow with frequent repetition. Often self-corrects. Can link simple sentences but often with repetitious use of connectives. Some breakdowns in coherence.	Resource sufficient for familiar topics but only basic meaning can be conveyed on unfamiliar topics. Frequent inappropriacies and errors in word choice. Rarely attempts paraphrase.	Can produce basic sentence forms and some short utterances are error-free. Subordinate clauses are rare and, overall, turns are short, structures are repetitive and errors are frequent.	Uses some acceptable phonological features, but the range is limited. Produces some acceptable chunking, but there are frequent lapses in overall rhythm. Attempts to use intonation and stress, but control is limited. Individual words or phonemes are frequently mispronounced, causing lack of clarity. Understanding requires some effort and there may be patches of speech that cannot be understood.

Band Score	Fluency and coherence	Lexical resource	Grammatical range and accuracy	Pronunciation
3	Frequent, sometimes long, pauses occur while candidate searches for words. Limited ability to link simple sentences and go beyond simple responses to questions. Frequently unable to convey basic message.	Resource limited to simple vocabulary used primarily to convey personal information. Vocabulary inadequate for unfamiliar topics.	Basic sentence forms are attempted but grammatical errors are numerous except in apparently memorised utterances.	Displays some features of band 2, and some, but not all, of the positive features of band 4.
2	Lengthy pauses before nearly every word. Isolated words may be recognisable but speech is of virtually no communicative significance.	Very limited resource. Utterances consist of isolated words or memorised utterances. Little communication possible without the support of mime or gesture.	No evidence of basic sentence forms.	Uses few acceptable phonological features (possibly because sample is insufficient). Overall problems with delivery impair attempts at connected speech. Individual words and phonemes are mainly mispronounced and little meaning is conveyed. Often unintelligible.
1	Essentially none. Speech is totally incoherent.	No resource bar a few isolated words. No communication possible.	No rateable language unless memorised.	Can produce occasional individual words and phonemes that are recognisable, but no overall meaning is conveyed. Unintelligible.
0	Does not attend			

Sample Questionnaire



Research Questionnaire

This is a questionnaire for the study: The Effectiveness of Mobile Assisted Language Learning (MALL) Apps towards the speaking skills of High School Students. Please answer the Questionnaire Truthfully.

maningas2002272@ceu.edu.ph Switch account

* Indicates required question

Email *

Record **maningas2002272@ceu.edu.ph** as the email to be included with my response

Name: *

Your answer

What Grade Level are you in? *

Grade 11

Grade 12

Which Language Learning App do you often use? *

- [ ] Duolingo
- [ ] Busuu
- [ ] ELSA Speak App
- [ ] Memrise
- [ ] Babbel
- [ ] Other: _____

How would you rate the Language Learning Apps that you are using in terms of Usability: *

	5 - Excellent	4 - Very good	3 - Good	2 - Fair	1 - Poor
Usefulness of the Application	◯	◯	◯	◯	◯
Not causing lags or crashes	◯	◯	◯	◯	◯
Stableness of the Application	◯	◯	◯	◯	◯
Uses different types of Media, such as pictures, videos, etc.	◯	◯	◯	◯	◯

How would you rate the Language Learning Apps that you are using in terms of Personalization: *

	5 - Excellent	4 - Very good	3 - Good	2 - Fair	1 - Poor
The Language Learning App follows my needs	◯	◯	◯	◯	◯
The Language Learning App is portable in any device	◯	◯	◯	◯	◯
The Language Learning App uses ranks for users who studies language the most	◯	◯	◯	◯	◯
The Language Learning App rewards more on users who studies the hardest	◯	◯	◯	◯	◯

How would you rate the Language Learning Apps that you are using in terms of Interactivity: *

	5 - Excellent	4 - Very good	3 - Good	2 - Fair	1 - Poor
The Language Learning app is friendly	◯	◯	◯	◯	◯
The Language Learning app notifies the user	◯	◯	◯	◯	◯
The Language Learning app is interactive to the user	◯	◯	◯	◯	◯
The Language Learning app motivates the user through games and activities	◯	◯	◯	◯	◯

How would you rate the Language Learning Apps that you are using in terms of Multimedia Support: *

	5 - Excellent	4 - Very good	3 - Good	2 - Fair	1 - Poor
The Language Learning App uses A.I to help the user	◯	◯	◯	◯	◯
The Language Learning App uses audio for listening exercises	◯	◯	◯	◯	◯
The Language Learning App uses video to learn	◯	◯	◯	◯	◯
The Language Learning App uses tips to help the user learn	◯	◯	◯	◯	◯

How would you rate the experience on using Language Learning Apps? *

- ◯ 5 - Excellent
- ◯ 4 - Very Good
- ◯ 3 - Good
- ◯ 2 - Fair
- ◯ 1 - Poor

Would you recommend using Language Learning Apps in enhancing your speaking skills? *

- ◯ Yes
- ◯ No
- ◯ Maybe

If answered No or Maybe, why?

Your answer

Do you think Language Learning apps should innovate? *

- ◯ Yes
- ◯ No
- ◯ Maybe

Why should Language Learning Apps should innovate or not? *

Your answer

What are your suggestions in Language Learning Apps? *

Your answer

Control Group Pre-Test and Post Test Results

Fluency and Coherence

Name	Pre Test	Post Test
Student 1	6	6
Student 2	7	7
Student 3	8	8
Student 4	6	6
Student 5	7	7
Student 6	5	5
Student 7	4	4
Student 8	5	6
Student 9	8	7
Student 10	7	8
Student 11	6	7
Student 12	9	6
Student 13	7	9
Student 14	5	7
Student 15	5	5
Student 16	5	5
Student 17	6	7
Student 18	6	6
Student 19	8	6
Student 20	6	8
Student 21	5	7
Student 22	3	8
Student 23	5	5
Student 24	3	5

t-Test: Paired Two Sample for Means

	Pre Test	*Post Test*
Mean	5.916666667	6.45833
Variance	2.34057971	1.56341
Observations	24	24
Pearson Correlation	0.384493833	
Hypothesized Mean Difference	0	
df	23	
t Stat	-1.70125441	
P(T<=t) one-tail	0.051188832	
t Critical one-tail	1.713871528	
P(T<=t) two-tail	0.102377665	
t Critical two-tail	2.06865761	

Ho: Post-Test Mean = Pre-Test Mean
H1: Post-Test Mean > Pre-Test Mean

DECISION		
P Value (1-tailed)		Alpha
0.051188832	>	0.05
DO NOT REJECT Ho		

The Post-Test results are equal to the Pre-Test Results

Lexical Resource

Name	Pre Test	Post Test
Student 1	6	6
Student 2	4	4
Student 3	7	7
Student 4	6	6
Student 5	5	5
Student 6	5	5
Student 7	4	4
Student 8	6	6
Student 9	9	7
Student 10	8	9
Student 11	5	8
Student 12	9	5
Student 13	6	9
Student 14	8	6
Student 15	7	8
Student 16	6	7
Student 17	4	6
Student 18	7	4
Student 19	2	7
Student 20	6	5
Student 21	5	5
Student 22	3	8
Student 23	4	6
Student 24	4	4

t-Test: Paired Two Sample for Means

	Pre Test	*Post Test*
Mean	5.666666667	6.125
Variance	3.275362319	2.375
Observations	24	24
Pearson Correlation	0.171476009	
Hypothesized Mean Difference	0	
df	23	
t Stat	-1.036389243	
P(T<=t) one-tail	0.155397357	
t Critical one-tail	1.713871528	
P(T<=t) two-tail	0.310794714	
t Critical two-tail	2.06865761	

Ho: Post-Test Mean = Pre-Test Mean
H1: Post-Test Mean > Pre-Test Mean

DECISION		
P Value (1-tailed)		Alpha
0.155397357	>	0.05
DO NOT REJECT Ho		

The Post-Test results are equal to the Pre-Test Results

Grammatical Range and Accuracy

Name	Pre Test	Post Test
Student 1	6	6
Student 2	6	6
Student 3	8	8
Student 4	7	7
Student 5	6	6
Student 6	5	5
Student 7	5	5
Student 8	5	6
Student 9	7	7
Student 10	7	8
Student 11	5	7
Student 12	9	5
Student 13	6	9
Student 14	7	6
Student 15	5	7
Student 16	5	5
Student 17	6	6
Student 18	8	6
Student 19	4	8
Student 20	6	5
Student 21	5	7
Student 22	3	8
Student 23	6	6
Student 24	3	3

t-Test: Paired Two Sample for Means

	Pre Test	*Post Test*
Mean	5.833333333	6.33333
Variance	2.144927536	1.7971
Observations	24	24
Pearson Correlation	0.118107719	
Hypothesized Mean Difference	0	
df	23	
t Stat	-1.313392554	
P(T<=t) one-tail	0.101001455	
t Critical one-tail	1.713871528	
P(T<=t) two-tail	0.202002911	
t Critical two-tail	2.06865761	

Ho: Post-Test Mean = Pre-Test Mean

H1: Post-Test Mean > Pre-Test Mean

DECISION		
P Value (1-tailed)		Alpha
0.101001455	>	0.05

DO NOT REJECT Ho

The Post-Test results are equal to the Pre-Test Results

Pronunciation

	Name	Pre Test	Post Test
2	Student 1	5	5
3	Student 2	5	5
4	Student 3	7	7
5	Student 4	6	6
6	Student 5	6	6
7	Student 6	5	5
8	Student 7	5	5
9	Student 8	6	6
10	Student 9	8	8
11	Student 10	7	8
12	Student 11	6	7
13	Student 12	9	6
14	Student 13	8	9
15	Student 14	5	8
16	Student 15	7	6
17	Student 16	5	7
18	Student 17	6	6
19	Student 18	6	6
20	Student 19	8	6
21	Student 20	5	8
22	Student 21	6	6
23	Student 22	3	8
24	Student 23	5	6
25	Student 24	3	3

t-Test: Paired Two Sample for Means

	Pre Test	*Post Test*
Mean	5.916666667	6.375
Variance	2.166666667	1.80978
Observations	24	24
Pearson Correlation	0.345814712	
Hypothesized Mean Difference	0	
df	23	
t Stat	-1.39067679	
P(T<=t) one-tail	0.088816863	
t Critical one-tail	1.713871528	
P(T<=t) two-tail	0.177633726	
t Critical two-tail	2.06865761	

Ho: Post-Test Mean = Pre-Test Mean
H1: Post-Test Mean > Pre-Test Mean

DECISION		
P Value (1-tailed)		Alpha
0.088816863	>	0.05
DO NOT REJECT Ho		

The Post-Test results are equal to the Pre-Test Results

Experimental Group Pre-Test and Post Test Results

Fluency and Coherence

Name	Pre Test	Post Test
Student 1	9	9
Student 2	6	6
Student 3	6	4
Student 4	7	8
Student 5	6	6
Student 6	6	6
Student 7	2	2
Student 8	6	5
Student 9	4	7
Student 10	5	7
Student 11	6	8
Student 12	4	8
Student 13	5	5
Student 14	5	8
Student 15	4	8
Student 16	4	7
Student 17	6	7
Student 18	5	4
Student 19	2	6
Student 20	6	5
Student 21	5	9
Student 22	4	6
Student 23	8	7
Student 24	5	7
Student 25	7	6
Student 26	6	7
Student 27	4	7
Student 28	7	8

t-Test: Paired Two Sample for Means

	Pre Test	*Post Test*
Mean	5.357142857	6.53571
Variance	2.46031746	2.55423
Observations	28	28
Pearson Correlation	0.334535067	
Hypothesized Mean Difference	0	
df	27	
t Stat	-3.4137931	
P(T<=t) one-tail	0.00101867	
t Critical one-tail	1.703288446	
P(T<=t) two-tail	0.00203734	
t Critical two-tail	2.051830516	

Ho: Post-Test Mean = Pre-Test Mean
H1: Post-Test Mean > Pre-Test Mean

DECISION		
P Value (1-tailed)		Alpha
0.001	<	0.05
REJECT Ho		

The Post-Test results are better than the Pre-Test Results

Lexical Resource

Name	Pre Test	Post Test
Student 1	9	9
Student 2	5	5
Student 3	7	7
Student 4	7	9
Student 5	6	6
Student 6	7	7
Student 7	3	3
Student 8	6	8
Student 9	4	6
Student 10	5	7
Student 11	6	8
Student 12	6	8
Student 13	5	5
Student 14	4	8
Student 15	7	7
Student 16	5	5
Student 17	6	6
Student 18	4	4
Student 19	3	8
Student 20	4	6
Student 21	8	8
Student 22	5	8
Student 23	8	7
Student 24	5	8
Student 25	6	7
Student 26	5	7
Student 27	4	8
Student 28	8	8

t-Test: Paired Two Sample for Means

	Pre Test	*Post Test*
Mean	5.642857143	6.89286
Variance	2.46031746	2.17328
Observations	28	28
Pearson Correlation	0.479367697	
Hypothesized Mean Difference	0	
df	27	
t Stat	-4.25481472	
P(T<=t) one-tail	0.000112428	
t Critical one-tail	1.703288446	
P(T<=t) two-tail	0.000224855	
t Critical two-tail	2.051830516	

Ho: Post-Test Mean = Pre-Test Mean
H1: Post-Test Mean > Pre-Test Mean

DECISION		
P Value (1-tailed)		Alpha
0.0001	<	0.05
REJECT Ho		

The Post-Test results are better than the Pre-Test Results

Grammatical Range and Accuracy

Name	Pre Test	Post Test
Student 1	9	9
Student 2	6	6
Student 3	5	7
Student 4	7	8
Student 5	7	7
Student 6	7	7
Student 7	5	5
Student 8	6	8
Student 9	4	6
Student 10	5	7
Student 11	7	8
Student 12	6	8
Student 13	5	5
Student 14	4	8
Student 15	5	8
Student 16	5	5
Student 17	6	6
Student 18	4	4
Student 19	4	8
Student 20	5	6
Student 21	6	8
Student 22	5	7
Student 23	8	8
Student 24	5	8
Student 25	7	8
Student 26	5	7
Student 27	4	8
Student 28	8	8

t-Test: Paired Two Sample for Means

	Pre Test	*Post Test*
Mean	5.714285714	7.07143
Variance	1.841269841	1.55026
Observations	28	28
Pearson Correlation	0.450961078	
Hypothesized Mean Difference	0	
df	27	
t Stat	-5.25470247	
P(T<=t) one-tail	7.68587E-06	
t Critical one-tail	1.703288446	
P(T<=t) two-tail	1.537175E-05	
t Critical two-tail	2.051830516	

Ho: Post-Test Mean = Pre-Test Mean
H1: Post-Test Mean > Pre-Test Mean

DECISION		
P Value (1-tailed)		Alpha
0.000007	<	0.05
REJECT Ho		

The Post-Test results are better than the Pre-Test Results

Pronunciation

Name	Pre Test	Post Test
Student 1	9	9
Student 2	6	6
Student 3	8	9
Student 4	8	9
Student 5	8	8
Student 6	8	8
Student 7	6	6
Student 8	8	9
Student 9	6	8
Student 10	5	9
Student 11	8	8
Student 12	8	9
Student 13	5	5
Student 14	6	9
Student 15	8	9
Student 16	8	8
Student 17	8	8
Student 18	3	3
Student 19	7	9
Student 20	4	7
Student 21	8	9
Student 22	3	8
Student 23	8	8
Student 24	5	9
Student 25	8	8
Student 26	6	8
Student 27	4	8
Student 28	9	9

t-Test: Paired Two Sample for Means

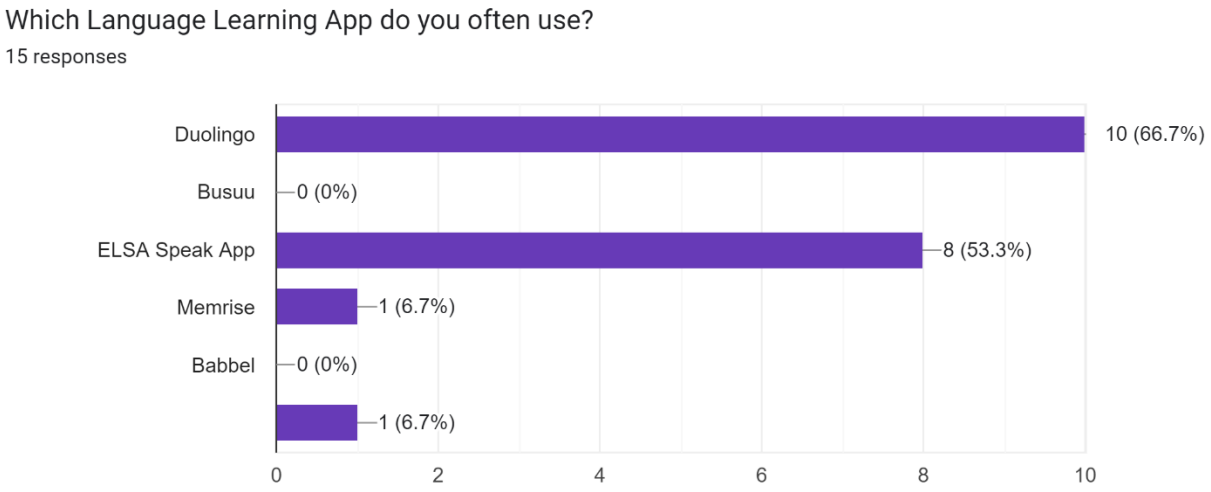
	Pre Test	*Post Test*
Mean	6.714285714	7.96429
Variance	3.174603175	2.03571
Observations	28	28
Pearson Correlation	0.549463676	
Hypothesized Mean Difference	0	
df	27	
t Stat	-4.25481472	
P(T<=t) one-tail	0.000112428	
t Critical one-tail	1.703288446	
P(T<=t) two-tail	0.000224855	
t Critical two-tail	2.051830516	

Ho: Post-Test Mean = Pre-Test Mean
H1: Post-Test Mean > Pre-Test Mean

DECISION		
P Value (1-tailed)		Alpha
0.000112428	<	0.05
REJECT Ho		

The Post-Test results are better than the Pre-Test Results

Chart Result of the Control Group on what Mobile Assisted Language Learning Apps they are using



Curriculum Vitae

JOSE MIGUEL S. MANINGAS

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Santa Cruz, Manila 1003, Philippines
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jmiguelmaningas@gmail.com

OBJECTIVE

To obtain a full-time position as an employee that would enable me to apply my knowledge, talents, and skills and contribute to society's betterment.

EDUCATION

Centro Escolar University – Manila
9 Mendiola St, San Miguel, Manila
Bachelor of Secondary Education major in English
August 2020 – July 2024

Centro Escolar Integrated School – Manila
9 Mendiola St, San Miguel, Manila
June 2018 – April 2020

St. Rita College – Manila
Plaza del Carmen, Quiapo, Manila
June 2014 – March 2018

WORK EXPERIENCE

E-commerce, Home Gallery
January - March 2023

- Learned how to communicate effectively and quickly.
- Utilizing different writing skills
- Learned how to use persuasion as a tool in communication.

Copywriting, Home Gallery
November-December 2022

- Learned how to communicate effectively and quickly.
- Utilizing different writing skills
- Learned how to use persuasion as a tool in communication.

Work Immersion, Manila City Hall
November 2019

- Devised various activities and instructional materials to use in class.
- Motivated students to do well in class despite difficulties.

EXTRA-CURRICULAR ACTIVITIES

Centro Escolar University – English Guild
Member, Secretary, 2021 – 2022
Member, President, 2022 – 2023
Member, 2021 - 2024

- Served as a secretary to the English Guild of Centro Escolar University – Manila
- Actively Participated in the activities and meetings held by the organization.
- Served as a president to the English Guild of Centro Escolar University – Manila

Archconfraternity of Saint Stephen – Manila Chapter

Member, December 2019 – present

- Served at the Holy Sacrifice of the Mass as an Altar Server
- Actively participated in the activities and meetings held by the organization

Augustinian Recollect Student Crusaders

Member, High School Legislative Board, 2013 – 2014

- Served as a role model of an Augustinian Recollect Student-leader

SEMINARS/TRAININGS ATTENDED

KONGRESO NG GURONG MAG-AARAL (K-GuMa) PARA SA EDUKASYONG KULTURAL, PAMBANSANG KOMISYON PARA SA KULTURA AT MGA SINING PHILIPPINE CULTURAL EDUCATION PROGRAM, September 6, 2023

April Series: All About Google Education, April 29-30, 2021

Forensic Linguistics and Authorial Contribution Analysis: From Unabomb to Three Staged Suicidal Cases, University of Santo Tomas, España, Manila, Metro Manila, Philippines, April 27, 2021

STYLE LANG!: A Webinar on Stylistics, Department of English, University of Santo Tomas, España, Manila, Metro Manila, Philippines, January 27, 2021

SKILLS AND ACTIVITIES

- Computer and Web: Microsoft Office
- Work: Able to handle precision work
- Communication: Obtained skills through professional learning environments and working activities
- Language: Fluent in oral and written English and Filipino
- Utilizing different styles of writing
- Computer and Web: Google Docs, Sheets, Forms, etc.
- Computer and Web: Paint, and Canva

REFERENCES

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