



Effects of Utilizing Mobile-Assisted Language Learning through YouTube and TikTok Applications on Enhancing English Communication Skills for Higher Education Students as Generation Z Learners

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Abstract

This study aimed to (1) examine the perspectives and needs of Generation Z university students regarding the use of mobile-assisted language learning (MALL) through YouTube and TikTok to enhance English communication skills; (2) investigate the effects of MALL via these platforms on students' communication performance; and (3) explore students' perceptions of MALL integration in their language learning experiences. The participants were 12 third-year undergraduate students enrolled in the English in Early Childhood Classroom course. Research instruments included: (1) a needs and perspectives questionnaire; (2) pre- and post-listening tests and formative speaking assessments; and (3) a 5-point Likert scale questionnaire along with open-ended questions to gather both quantitative and qualitative data on students' perceptions. Data were analyzed using mean, standard deviation, percentile, Wilcoxon Signed-Rank test, and content analysis. Findings revealed that students perceived YouTube and TikTok as effective tools for improving pronunciation and listening comprehension, particularly in understanding diverse accents and developing clearer speech. They reported motivation to participate in speaking activities and acquire practical vocabulary for real-life communication. Post-intervention results demonstrated significant improvement in students' English communication skills. Listening test scores increased from a pre-test mean of 29.1 (SD = 5.75) to a post-test mean of 41.3 (SD = 5.33), with a statistically significant difference at the .002 level. The average speaking proficiency score reached 80.17%, surpassing the 70% benchmark with significance at the .05 level. Students expressed positive perceptions of MALL via YouTube and TikTok, noting the platforms' engaging nature, ease of access to learning materials, and support for intercultural competence. These findings highlight the potential of integrating popular digital platforms into EFL instruction to foster effective and engaging learning environments for Generation Z learners. The study underscores the importance of leveraging technology to enhance language education in contemporary academic settings.

Introduction

In today's rapidly evolving world of technology, wireless communication technology is experiencing significant growth. As mobile phones continue to advance and become an integral part of our daily lives, it is anticipated that wireless computing devices will soon be accessible in both urban and rural areas across the globe. This widespread availability of affordable and advanced devices has greatly transformed the field of e-learning. Mobile learning, in fact, can be seen as the future of e-learning, representing the next generation of educational opportunities (Sharples, 2000). Mobile devices do not replace existing learning tools; rather, they expand learning into new environments with enhanced capabilities. However, it is important to note that not all learning content and activities are suitable for mobile devices. (Gay et al., 2001). Mobile learning is distinguished by its capacity for spontaneous, informal, personal, and ubiquitous learning. This type of learning is particularly valuable for individuals with extended working hours, as it allows them to utilize portable devices to acquire new knowledge during scarce leisure time instead of attending conventional classroom-based courses. Numerous authors have shown great interest in MALL approaches, seeking to provide substantial support for further studies in this field. According to O'Malley et al. (2005). MALL is described as "learning that occurs outside of a set location or when the learner utilizes the learning opportunities provided by mobile technologies." MALL focuses on utilizing mobile technology for language learning purposes, highlighting that students are not confined to studying a second language solely in a classroom setting. Instead, they have the flexibility to learn it at their convenience and location using mobile devices. Students can access learning resources and course activities on their smartphones just as they would on a computer with an internet connection. Mobile learning technologies enable users to access educational resources using mobile devices like smartphones, tablets, and notebooks, anytime and anywhere (Castillo et al., 2006). To improve students' achievement and cater to diverse learning needs, it is important to create a more convenient environment for learning English (Kukulskahulme & Shield, 2008).

The higher education landscape is being transformed by the changing learning behavior of the current generation of university students. Typically aged between 18 and 22, these students belong to Generation Z, a cohort whose upbringing surrounded by technology, easy access

to information, and digital tools has significantly influenced their approach to studying and acquiring knowledge. This represents a departure from the traditional methods of learning that educators were accustomed to in previous generations. Raised in an era of technology and digital platforms, Generation Z students possess a distinct approach to education and learning. Decharin (2018) has identified that the university students exhibit traits such as self-confidence, proficiency in technology, and a penchant for embracing novel challenges. They prioritize actions and experiences over mere knowledge acquisition. These students are eager to learn in ways that are relevant to their interests and aspirations. From a different angle, it becomes evident that this generation is highly active on social media, with a staggering 91% of them being avid users. It is important to promote interactive content and materials for students through social media, conceptual assessments, and social feedback. Generation Z students prefer using network-based media like audio, video, educational games, and multimedia for learning, and they like to have everything in one place (Kahraman, 2020). Their primary means of accessing social media is through mobile devices (Doğan & Erkan, 2019). Consequently, the utilization of mobile-assisted language learning (MALL) has become increasingly important in enhancing English communication skills for Generation Z learners. The emergence of social media platforms has opened up new opportunities for language learners to improve their skills and engage with a global community of language enthusiasts. YouTube and TikTok are two platforms that have gained significant popularity in this regard. By leveraging platforms like YouTube and TikTok, educators and learners can tap into the vast resources available online to create an immersive and engaging learning experience. Utilizing applications like YouTube and TikTok can significantly improve the English communication skills of Generation Z learners due to their widespread popularity and engaging content.

MALL offers a unique opportunity to bridge the gap between traditional classroom instruction and the digital world that Generation Z learners are deeply immersed in. YouTube, for instance, provides a plethora of educational content ranging from language tutorials to authentic English conversations. Learners can access these resources anytime and anywhere, enabling flexibility in their learning journey. Additionally, YouTube's recommendation algorithm can suggest relevant videos based on learners' preferences and

learning goals, further personalizing the learning experience. This allows students to actively participate in language learning without even realizing it. Many studies have shown the benefits of using videos to learn languages, particularly for teachers of English as a foreign language. Experts believe that incorporating technology into learning can enhance the overall learning experience. This teaching method enables teachers to effectively support their students, providing more realistic, practical, and comprehensive learning compared to traditional methods. (Almurashi, 2016). A large portion of YouTube content is educational, covering a wide range of subjects such as medicine, science, politics, history, and more, providing valuable information. YouTube also serves as a significant source of social material that can help students engage with popular culture in different countries.

A recent study conducted by Syafiq et al. (2021) found that YouTube videos have greatly contributed to improving students' speaking abilities and other components of English language proficiency, including grammar, vocabulary, fluency, and content. Using video clips to teach a foreign language has several benefits. Nasution (2019) believes that YouTube is an invaluable tool for language teachers, as it effectively helps develop language abilities through vocabulary building and presenting topics for debate and dialogue, exhibiting various forms of English used in the EFL classroom. According to Cakir (2006), language instructors find the video content interesting and motivating, as it creates a genuine, contextualized, and authentic teaching-learning environment.

Similarly, TikTok, a popular short-form video platform, can be harnessed to enhance English communication skills for Generation Z learners. With its user-friendly interface and vast user base, TikTok offers a creative and interactive platform for language learning. Educators and learners can create and share short videos focusing on various aspects of English communication, such as pronunciation, vocabulary, and idiomatic expressions. By leveraging the platform's features like duets and challenges, learners can actively engage with the content and practice their language skills in a fun and engaging manner.

Various research studies conducted in several Asian countries have investigated the potential use of TikTok for English education using different research methods. The results of these studies have demonstrated that English language learners exhibit favorable attitudes

towards incorporating TikTok into their English learning experience (Haerazi et al., 2020). Nevertheless, prior research has primarily focused on the educational utilization of TikTok for English language instruction in classroom settings among primary and secondary school students, under the supervision of English teachers, within Asian contexts (Nariyati, Sudirman, & Pratiwi, 2020). The authors believe that TikTok also has potential for English language communication competence acquisition by EFL undergraduate students, given the low oral fluency in English communication abilities in actual English communicative settings among these students (Bolton et al., 2017). The mentioned articles focus on how TikTok can help students improve their English writing and reading abilities by accessing short videos created by English teachers. Using TikTok can help students learn vocabulary and grammar, ultimately enhancing their English language abilities. The authors believe that TikTok can be beneficial for higher education students as Generation Z learners by providing a platform for accessing English learning materials through short videos, which can improve their speaking and listening abilities.

The utilization of Mobile-Assisted Language Learning (MALL) in education is crucial for the success of this research investigation. By incorporating mobile devices such as smartphones and tablets, educators can enrich the language learning experience for students by providing them access to interactive and captivating learning materials at any time and from any location. This adaptability allows for a more individualized and student-focused approach to language instruction, accommodating the diverse learning styles and preferences of each learner. Moreover, the use of mobile devices in language teaching can also facilitate communication and collaboration among students, as well as between students and teachers. Through various language learning applications, online resources, and communication tools, students can engage in real-time interactions, practice their language skills, and receive immediate feedback from their peers and instructors. This not only enhances the language learning process but also fosters a sense of community and involvement within the classroom, ultimately resulting in improved learning outcomes. Recent research or review on MALL tends to focus on the detailed applications of newly emerging mobile technology, rather than providing a broader perspective on the types of mobile devices themselves.

In this particular investigation, the researcher expressed a keen interest in utilizing mobile devices, such as smartphones and tablets, for the purpose of learning foreign languages. This was achieved by employing applications like YouTube and TikTok, which have proven to be effective tools in facilitating language acquisition. This approach, commonly referred to as Mobile-Assisted Language Learning (MALL), has the potential to inspire students to engage in independent learning and foster their creative abilities. Students are encouraged to conduct research and tackle problems autonomously, while the teacher's role primarily involves guiding them through the learning process. However, in instances where students encounter difficulties, it is imperative for teachers to actively participate in providing assistance. The interaction between teachers and students remains a pivotal aspect within the classroom setting. Drawing upon this information, the researcher has decided to employ MALL, utilizing YouTube and TikTok applications, as a means of teaching and learning, specifically targeting Generation Z learners. This approach aims to offer effective learning guidelines by harnessing the power of mobile technology.

Objectives

1. To investigate the perspectives and needs of higher education students, specifically Generation Z learners, on enhancing English communication Skills using mobile-assisted language learning through YouTube and TikTok applications

2. To explore the effects of utilizing mobile-assisted language learning through YouTube and TikTok applications for higher education students as Generation Z learners

3. To investigate the perceptions of higher education students as Generation Z learners towards utilizing mobile-assisted language learning through YouTube and TikTok applications

Conceptual Framework

Independent Variables

Learning model utilizing Mobile-Assisted Language Learning through YouTube and TikTok applications for higher education students as Generation Z learners

Dependent Variable

- 1) English communication skills of higher education students as Generation Z learners
- 2) Students' perceptions towards utilizing mobile-assisted language learning through YouTube and TikTok applications for higher education students as Generation Z learners

Figure 1 Conceptual Framework

The conceptual framework for this study explored the impact of a learning model utilizing Mobile-Assisted Language Learning (MALL) through YouTube and TikTok applications on higher education students' English communication skills and their perceptions of the model. The independent variable was the MALL model, which leveraged the interactive and multimedia features of these platforms tailored to Generation Z learners. This model aimed to enhance English communication skills, including speaking fluency, listening comprehension, pronunciation, vocabulary usage, and overall proficiency. The first dependent variable measured improvements in these language skills, assessed through tests, evaluations, and observational measures. The second dependent variable examined students' perceptions, including their attitudes, satisfaction, and perceived effectiveness of the learning model, using surveys, interviews, and focus groups. The relationship between these variables was analyzed to determine how the MALL model influenced both communication skills and students' views, with effective implementation expected to positively impact both areas.

Research Methodology

1. Research Design

The study employed a mixed method design, integrating both quantitative and qualitative data collection and analysis. The quantitative data was gathered to examine the impact on English communication skills through pre-and post-listening test and formative speaking tests, as well as a student perception questionnaire following the implementation of a mobile-assisted language learning model through YouTube and TikTok applications. Qualitative data was also collected to complement the quantitative results, obtained through an open-ended questionnaire to offer a more nuanced understanding of the complete spectrum of mobile-assisted language learning with YouTube and TikTok applications.

2. Population and Samples

The population in this study consisted of 12 Early Childhood Education students enrolled in the English in Early Education Classroom course, which is typically taken by third-year students according to the curriculum plan. This specific group was selected as the target population because they were actively participating in a course designed to enhance their English language skills within the context of early childhood education. By focusing on students who had

registered for this course, the study aimed to directly assess the impact on their language development and their experiences with English language learning in their field. This approach ensured that the participants were already engaged in relevant coursework, providing a natural setting for evaluating the effectiveness of English language instruction tailored to their minor subject.

3. Research Instrument

The study used different research instruments for three phases of the research. The first phase included a questionnaire on students' perspectives and needs on enhancing English communication skills utilizing mobile-assisted language learning through YouTube and TikTok applications for Generation Z learners. The questionnaire was reviewed by three experts before being used. Upon examining the Item-Objective congruence (IOC) in relation to the research question, it was discovered that the values ranged from 0.80 to 1.00. The reliability of the questionnaire was assessed using Cronbach's alpha method, which involved computing the coefficient value. The analysis yielded a reliability score of .961.

In the second phase of the research, a comprehensive learning model was developed, consisting of five key components, detailed as follows:

1. Purpose of the Learning Model

Objective: The primary purpose of this learning model is to enhance English communication skills among higher education students by leveraging the interactive and engaging features of YouTube and TikTok. This model aims to improve listening, speaking, and pronunciation skills, catering to the needs and learning preferences of Generation Z learners.

2. Principles Underlying the Model

a. **Learner-Centered Approach:** Focuses on students' needs and interests, utilizing their preferred mobile platforms to facilitate learning.

b. **Integration of Technology:** Incorporates YouTube and TikTok as tools for authentic language exposure and practice, aligning with the digital habits of Generation Z.

c. **Active Learning:** Encourages active participation through interactive content creation, peer feedback, and real-time practice.

d. **Gamification:** Uses gamified elements to motivate and engage students, making learning enjoyable and rewarding.

e. **Continuous Feedback:** Provides regular feedback through peer reviews and self-assessment, supporting ongoing improvement.

3. Process Involved in the Model

a. Introduction and Setup:

- **Orientation Session:** Introduce students to the learning objectives and tools (YouTube and TikTok).

- **Account Setup:** Guide students in setting up and optimizing their accounts for educational purposes.

b. Content Practice and Creation:

- **YouTube Videos:** Assign tasks such as learning videos on specific topics.

- **TikTok Challenges:** Design challenges related to language use, such as short skits, pronunciation exercises, or creative roleplay.

c. Practice and Engagement:

- **Interactive Activities:** Implement activities like video comment discussions, duet collaborations on TikTok, and video responses.

- **Peer Review:** Facilitate peer feedback sessions where students review and provide constructive feedback on each other's content.

d. Integration with Curriculum:

- **Thematic Units:** Align content creation with curriculum topics to ensure relevance and applicability.

- **Supplementary Resources:** Provide additional resources or guides to support content creation and language practice.

e. Reflection and Adjustment:

- **Self-Assessment:** Encourage students to reflect on their learning experiences and progress.

- **Adjustments:** Make necessary adjustments based on feedback and performance data.

4. Media and Learning Resources Used

a. YouTube:

- **Educational Channels:** Utilize existing educational channels for examples and inspiration.

- **Content Creation Tools:** Encourage the use of tools like video editing software and presentation aids.

b. TikTok:

- **Engaging Challenges:** Use trending challenges and formats to make language learning interactive.

- **Duet Feature:** Leverage TikTok's duet feature for collaborative practice and interaction.

5. Measurement and Evaluation of Learning Outcomes

a. Performance Metrics:

- **Content Quality:** Assess the clarity, coherence, and language use in student-created videos.

- Engagement Levels: Evaluate student participation, interaction, and feedback received on their content. b. Feedback Mechanisms:

- Peer Reviews: Use peer reviews to provide qualitative feedback on language use and content effectiveness.

- Instructor Feedback: Offer instructor feedback on video content and language proficiency.

c. Assessments:

- Pre- Assessment and Post-Assessments: Conduct assessments before and after the implementation of the model to measure improvement in communication skills.

- Rubrics: Develop rubrics for evaluating speaking, pronunciation, and overall content quality.

This model integrates mobile-assisted learning with structured language development activities to effectively support Generation Z learners.

The evaluation of this learning model revealed that its utility was rated highest with a mean score of 4.53 (SD = 0.48), followed closely by feasibility at 4.50 (SD = 0.53), propriety at 4.53 (SD = 0.52), and accuracy at 4.30 (SD = 0.59). Overall, the quality of the model across

all aspects was rated highly with a mean score of 4.46 (SD = 0.53). In this phase, the effectiveness of the pre-post listening and speaking tests was also assessed. The pre- listening test and post-listening test included questions designed to evaluate students' ability to distinguish similar-sounding words, fill in missing words in sentences, and answer Wh-questions based on short stories. This test was reviewed by three experts for content accuracy, with the Item-Objective Congruence (IOC) ranging from 0.67 to 1.00. The quality analysis of the listening test showed a difficulty index (p) between 0.20 and 0.56, a discrimination index (rxy) between 0.20 and 0.58, and a reliability coefficient of 0.86, indicating strong test reliability and suitable difficulty and discrimination levels. The speaking test was designed as a performance assessment, with scoring rubrics for tasks including describing images, discussing daily life objects, and performing role plays. This test was evaluated by three experts to determine its content validity, with the Item-Objective Congruence (IOC) ranging from 0.80 to 1.00, reflecting high content validity. Overall, both tests were rigorously assessed to ensure their effectiveness in evaluating students' language skills.

Table 2 Example Learning Plan to Enhance English Communication Skills Using MALL Through YouTube and TikTok for Generation Z Higher Education Students

| Week / period of time | Topics | Objectives | Utilizing MALL through YouTube and TikTok applications | Measurement and evaluation |
|-----------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1-2 3 hrs./week) | Designing English language teaching activities for children. | <ol style="list-style-type: none"> The students comprehend the design of English language teaching activities for children. The students are capable of designing English language teaching activities for children. The students are able to utilize the English language for communication in English language teaching activities for children. | <ol style="list-style-type: none"> Prior to engaging with Mobile-assisted language learning via YouTube and TikTok applications, students are required to complete a pre-test for assessing their English listening skills. Watch YouTube videos related to hypothetical English teaching activities. The teacher allows students to watch together in the classroom and then have students review the videos on their own mobile devices to guide their practice of English communication skills in the classroom.   <ol style="list-style-type: none"> Students engage in role-play activities by creating a brief lesson, lasting no longer than 5 minutes, centered around the subjects covered in Chapter 1. This activity encourages them to incorporate elements such as songs, games, or stories into their lesson design. | - Observe and record results from role-playing activities based on the topics in Chapter 1 using songs, games, or stories. |

Table 2 (Continue)

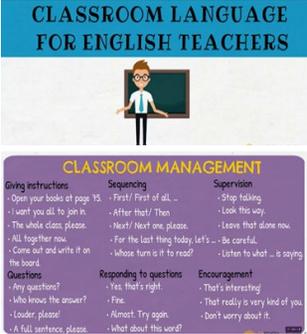
| Week / period of time | Topics | Objectives | Utilizing MALL through YouTube and TikTok applications | Measurement and evaluation |
|------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7-8 (3 hrs. / week) | Studying vocabulary and sentences in English language commonly used in early childhood classrooms. | <ol style="list-style-type: none"> The students learn and understand the vocabulary and sentences used in the early childhood English classroom. The students are able to use the vocabulary and sentences in early childhood English classroom. The students are capable of utilizing the vocabulary and sentences in early childhood English classroom. | <ol style="list-style-type: none"> Watch YouTube videos to learn English vocabulary and sentences used in kindergarten classrooms.  Students will watch YouTube videos and then write sentences on various topics provided by the teacher, such as giving compliments or classroom instructions. After writing, they will place their sentences on the back wall. The teacher will then direct students to select sentences that match assigned topics in rounds. For instance, students with sentences for giving instructions should raise their hands and read their sentences aloud in English. | <ul style="list-style-type: none"> Observe the activities of the game being played inside the room. |
| 9-10 (3 hrs./week) | Writing a curriculum plan for early childhood learning experiences. | <ol style="list-style-type: none"> Students learn and comprehend the vocabulary used in writing learning experience plans for young children in English. Students are capable of drafting learning experience plans for young children in English. | <ol style="list-style-type: none"> Watching YouTube Videos: Students will watch YouTube videos on the components of lesson planning, with a focus on studying commonly encountered English vocabulary and phrases in educational experiences.  Group Activity: Students will study how to write a lesson plan for early childhood learning experiences. This includes researching sample lesson plans from other countries and practicing writing a lesson plan on the topic "Things around you". https://www.pbslearningmedia.org/subjects/science/physicalscience/?selected_facet=media_type:Lesson%20Plan&selected_facet=grades:PreK-K Group Presentation: Students will present their lesson plans on the topic "Things around you". English Speaking Skills Test: To test English speaking skills, students will create individual TikTok clips on the topic "Things around you," describing objects from their daily lives. They will then post their clips in the class Facebook group. | <ul style="list-style-type: none"> Observe and record the results of the presentations from the lesson plan group activities and examples on YouTube, as well as present the vocabulary acquired from studying the lesson plan. Assess and evaluate the English-speaking skills based on the clips in TikTok under the topic "Things around you". |

Table 2 (Continue)

| Week / period of time | Topics | Objectives | Utilizing MALL through YouTube and TikTok applications | Measurement and evaluation |
|-------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13-14 3 hrs. / week) | Evaluating satisfaction in organizing activities and assessing English language proficiency in young children. | <ol style="list-style-type: none"> 1. Young learners are able to comprehend and understand the assessment of satisfaction in organizing activities and evaluating English language proficiency in young children. 2. Students can describe the assessment of satisfaction in organizing activities and evaluating English language proficiency in young children. | <ol style="list-style-type: none"> 1. Group Activities: Students are divided into groups and assigned topics to study the theoretical content of the lesson on evaluating satisfaction with organizing activities and assessing language abilities in young children in English. They will then present their findings in the classroom.  <ol style="list-style-type: none"> 2. Watching YouTube Videos: Students will watch YouTube videos to practice English speech skills. 3. Designing an Assessment Form: Students design an English language proficiency assessment form based on their 3-minute English Speech activity, "Speak up," and the topic of English sentences in early childhood classrooms, utilizing TikTok application. 4. Enhancing English Speaking Skills: Students will participate in an activity aimed at enhancing English speaking skills through a 3-minute English speech: Express yourself (solo performance), via the TikTok application. 5. Testing English Speaking Skills: Students will test their English speaking skills by creating TikTok videos on the topic of English sentences in early childhood classrooms (group work) and posting them in the class Facebook group. | <ul style="list-style-type: none"> -Observe and record the outcomes of group presentation activities in the classroom. Assess and evaluate the results of the 3-minute English Speech practice through the Speak up activity on TikTok. -Evaluate English language speaking skills based on TikTok clips under the topic of English sentences in early childhood classrooms. |

In the third phase of the study, a comprehensive evaluation was conducted using a mixed-methods approach. This involved a 5-point Likert scale questionnaire with 20 items to assess students' perceptions of using YouTube and TikTok for language learning, focusing on factors such as engagement, educational value, and ease of use. Additionally, six open-ended questions were included to gather in-depth feedback on students' experiences and opinions regarding these platforms. This combined approach aimed to provide a thorough understanding of how effectively YouTube and TikTok serve as tools for language learning from the students' perspectives. The instruments used in this study were rigorously evaluated by experts to ensure their validity, focusing on aspects such as content coverage, language clarity, and appropriateness of measurement. Each item on both the 5-point Likert scale questionnaire and the open-ended questions received a Content Validity Index (CVI) value ranging from 0.60 to 1.00, which met the researchers' established criteria for quality. This thorough validation process ensured that the instruments accurately and effectively captured students' perceptions of using

YouTube and TikTok for language learning.

4. Data Collection

This research had three main objectives in conducting research studies as follows: 1) To investigate the perspectives and needs of higher education students as Generation Z learners on enhancing English communication skills utilizing mobile-assisted language learning through YouTube and TikTok applications. 2) To explore the effects of utilizing mobile-assisted language learning through YouTube and TikTok applications for higher education students as Generation Z learners. 3) To investigate the perception of higher education students as Generation Z learners towards utilizing mobile-assisted language learning through YouTube and TikTok applications.

In the first phase, the data collection method for this research involved a questionnaire designed to assess students' perspectives and needs regarding the enhancement of English communication skills through mobile-assisted language learning with YouTube and TikTok applications for Generation Z learners. The questionnaire, developed to capture detailed insights into

students' views on the effectiveness, utility, experiences, preferences, benefits, and challenges of using these platforms, was reviewed by three experts in education and language learning for validity. The Item-Objective Congruence (IOC) values ranged from 0.80 to 1.00, confirming strong content validity. Additionally, Cronbach's alpha method was used to assess reliability, resulting in a high score of .961. The finalized questionnaire was administered to a sample of Generation Z learners, who provided their responses on the effectiveness of these tools in enhancing their English communication skills. The collected data was then analyzed quantitatively to identify patterns, trends, and specific needs or challenges faced by the learners.

In the second phase, the data collection process involved the development and administration of pre- and post- listening and speaking tests to evaluate students' language skills. The listening test was designed to assess students' abilities to distinguish similar-sounding words, fill in missing words in sentences, and answer Wh-questions based on short stories, targeting various aspects of listening comprehension. The speaking test, developed as a performance assessment, included tasks such as describing images, discussing daily-life objects, and performing role plays, with specific scoring rubrics to evaluate speaking proficiency. Both tests underwent expert review to ensure content accuracy, with the listening test receiving an Item-Objectivity Coefficient (IOC) ranging from 0.60 to 1.00 and the speaking test an Item-Objectivity Coefficient (IOC) from 0.80 to 1.00, confirming their validity. The pre-listening test was administered before the intervention to establish baseline proficiency, while the post-listening test was conducted afterward to measure improvements. Responses were analyzed for the listening test's difficulty index (p), discrimination index (rx_y), and reliability coefficient; while the speaking test performance was evaluated using scoring rubrics. The assessments were conducted in three separate instances to monitor development over time. This approach allowed for a comprehensive evaluation of progress, providing insights into how students' speaking abilities evolved through successive testing periods and the effectiveness of the intervention in enhancing students' listening and speaking skills.

In the third phase, the data collection method involved a comprehensive questionnaire designed to assess students' perceptions of using YouTube and TikTok for language learning. The questionnaire featured a 5-point Likert scale with 20 items, evaluating factors

such as engagement, educational value, and ease of use. Additionally, six open-ended questions were included to gather in-depth feedback on students' experiences and opinions about these platforms. To ensure validity and clarity, the questionnaire was reviewed by experts in educational technology and language learning, with a Content Validity Index (CVI) ranging from 0.60 to 1.00 confirming its validity. The finalized questionnaire was then distributed to students actively using YouTube and TikTok for language learning. Responses to the Likert scale items were analyzed quantitatively to identify patterns in perceptions, while the open-ended responses were analyzed qualitatively to extract detailed insights and themes, providing a thorough understanding of the effectiveness and impact of these platforms for language learning.



Figure 2 Data collection process flowchart

5. Data Analysis

In first phase, quantitative data from the questionnaire were analyzed using descriptive statistics, including mean, standard deviation, and percentage, to assess students' perspectives on the effectiveness and utility of YouTube and TikTok for enhancing English communication skills. The Wilcoxon Signed Ranks Test was applied to identify significant differences in responses, where applicable. For inferential statistics, additional analyses such as the Mann-Whitney U test or Kruskal-Wallis test might have been employed to explore differences between subgroups if the data warranted it. Qualitative data from open-ended questions underwent content analysis, in which key themes were identified, issues synthesized, and interpretations provided with examples from student responses to enrich understanding.

In second phase, the pre- and post-listening test scores of 12 participants were analyzed using the Wilcoxon Signed Ranks Test to determine significant differences before and after the intervention. To complement this, the effect size of the intervention could be assessed using measures such as Cohen's d or r to quantify the magnitude of the observed changes. For the speaking test, descriptive statistics, such as mean and standard deviation, evaluated scores against predetermined criteria, and the t-test compared

average scores to a criterion of 70 across all occasions. Additionally, paired sample t-tests could be applied to assess changes within the same participants over time, while ANCOVA (Analysis of Covariance) could control any potential confounding variables.

In third phase, quantitative data from the 5-point Likert scale questionnaire were analyzed using mean, standard deviation, and percentage to gauge students' perceptions of engagement, educational value, and ease of use of YouTube and TikTok. Inferential statistical techniques, such as multiple regression analysis, could be used to determine the impact of various factors on students' perceptions, or factor analysis could identify underlying dimensions of engagement and value. Qualitative feedback from open-ended questions underwent content analysis to synthesize key points, describe themes, and provide examples for interpretation. To ensure robustness, cross-validation methods or triangulation of qualitative findings with quantitative results could enhance the reliability and depth of the interpretations.

Results

1. The data collected in relation to the first research objective revealed that students perceived mobile-assisted language learning through YouTube and TikTok applications as highly beneficial for enhancing their English communication skills. Students indicated that these platforms significantly aid in improving pronunciation and intonation, facilitating effective communication with speakers from various countries. They appreciated the opportunity to practice listening skills more extensively and expressed a desire to engage with more YouTube content to apply certain phrases in their daily conversations. Students showed a preference for watching English-language movies and imitating pronunciation, gestures, and intonation to enhance their speech. They aimed to refine their listening skills to familiarize themselves with different accents and to speak more clearly. Additionally, frequent exposure to new vocabulary through these platforms was valued as it contributed to their language acquisition. Overall, students believed that the practice gained from watching YouTube videos substantially improved their English language proficiency and desired activities that involved speaking in diverse contexts to learn vocabulary and phrases applicable to real-life situations.

2. Based on the findings, the learning model designed by the researcher incorporated these insights

and addressed the identified needs. The model was structured into five key components: 1) the purpose of the model, 2) the principles underlying the model, 3) the process involved, 4) media and learning resources utilized, and 5) the measurement and evaluation of learning outcomes. The model's overall quality was rated highly, with an average score of 4.27 and a standard deviation of 0.31, reflecting its effectiveness in aligning with the students' needs and enhancing their English communication skills. A comprehensive learning model was developed to enhance English communication skills among higher education students using YouTube and TikTok. The model focused on a learner-centered approach, integrating technology, active learning, gamification, and continuous feedback. It involved introducing students to these platforms, guiding content creation, and engaging in interactive activities and peer reviews. The curriculum was aligned with thematic units, and additional resources supported language practice. Media resources included educational YouTube channels and engaging TikTok challenges. The evaluation was based on content quality, engagement levels, peer and instructor feedback, and pre-and post-assessments. This model was designed to leverage mobile-assisted learning to effectively support Generation Z learners.

Additionally, it was found that the students' English language skills demonstrated a significant improvement following the intervention. Prior to the experiment, students had an average English listening skill score of 29.16, corresponding to 58.32%, which was categorized as a relatively low level of proficiency. After completing the experiment, the average score increased to 41.33, equivalent to 82.66%, reflecting a very good level of proficiency. The comparison of pre- and post-experiment scores revealed a notable improvement in listening skills, with the post-experiment scores being substantially higher. This improvement was statistically significant, with a p-value of .002, as detailed in Table 1. This finding confirms that the intervention effectively elevated students' English listening abilities, aligning with the research objective of evaluating the impact of the experimental intervention on listening skill enhancement.

Table 2 The results of the comparison of English listening skills before and after utilizing mobile-assisted language learning through YouTube and TikTok applications

| | N | Mean | Std. Deviation | Minimum | Maximum | Percentiles 25th | 50th (Median) | 75th |
|----------|----|---------|----------------|---------|---------|------------------|---------------|---------|
| Pretest | 12 | 29.1667 | 5.74984 | 21.00 | 38.00 | 24.2500 | 29.0000 | 34.7500 |
| Posttest | 12 | 41.3333 | 5.33144 | 33.00 | 49.00 | 37.2500 | 40.0000 | 47.2500 |

An analysis of the English listening skills scores before and after implementing mobile-assisted language learning through YouTube and TikTok applications, based on a sample of 12 participants, revealed a significant improvement. The Wilcoxon W test was conducted to compare the scores from the pre-test and post-test. The results showed a significant difference between the two sets of scores ($W = 0.935$, $p = .009$). Specifically, the post-test scores ($M = 41.3$, $SD = 5.33$) were significantly higher than the pre-test scores ($M = 29.1$, $SD = 5.75$), with the difference being statistically significant at the .05 level ($W = 78$, $p < .002$). The effect size, measured by the Rank Biserial Correlation, was found to be 1, indicating a strong effect of the intervention. These findings highlight that the use of YouTube and TikTok applications significantly enhanced students' English listening skills. Detailed results are presented in the following table.

Table 3 Mean, standard deviation, and statistical values used in hypothesis testing to compare the differences in test results before and after utilizing mobile-assisted language learning through YouTube and TikTok applications

| Test | n | M | SD | Wilcoxon W | p | Rank biserial correlation |
|----------|----|------|------|------------|--------|---------------------------|
| Pretest | 12 | 29.1 | 5.75 | 78 | < .002 | 1.00 |
| Posttest | 12 | 41.3 | 5.33 | | | |

| | | Ranks | | |
|--------------------|----------------|-----------------|-----------|--------------|
| | | N | Mean Rank | Sum of Ranks |
| Posttest - Pretest | Negative Ranks | 0 ^a | .00 | .00 |
| | Positive Ranks | 12 ^b | 6.50 | 78.00 |
| | Ties | 0 ^c | | |
| | Total | 12 | | |

- a. Posttest < Pretest
- b. Posttest > Pretest
- c. Posttest = Pretest

Figure 3 Wilcoxon Signed Ranks Test

The English-speaking skill of students were evaluated during their use of mobile-assisted language learning through YouTube and TikTok applications to enhance their English communication skills. This learning model, developed by the researchers, involved utilizing mobile-assisted language learning through YouTube and the TikTok apps. The evaluation was conducted three times, and the results showed that the average English-speaking skills score of students was

80.17%, which was higher than the 70% benchmark set with statistical significance at the 0.5 level. Upon examining the performances over the three occasions, it was found that in the first instance, the average English-speaking skills score of students was 73.33%. In the second instance, it was 78.33%, and in the third instance, it was 85.42%. All three instances exceeded the 70% benchmark set with statistical significance at the 0.5 level. Detailed results are presented in the following table.

Table 4 Students' Assessment Results and Statistical Analysis

| Assessment Period | n | Full Score | Mean | SD. | Percentage | t-value |
|----------------------------|----|------------|-------|------|------------|---------|
| 1 st Assessment | 12 | 20 | 14.67 | 1.83 | 73.33 | 1.26 * |
| 2 nd Assessment | 12 | 40 | 31.33 | 2.61 | 78.33 | 4.43 * |
| 3 rd Assessment | 12 | 40 | 34.17 | 1.75 | 85.42 | 12.21 * |
| Overall | 12 | 100 | 80.17 | 2.06 | 80.17 | 5.96* |

*Significant at the .05 level

3. For the third research objective, which focused on assessing students' perceptions of using YouTube and TikTok for language learning, the quantitative findings revealed a high level of positive opinion towards the mobile-assisted language learning model utilizing these applications. The overall average opinion level of the learning model was 4.62, indicating a high degree of

Test Statistics^a

| | Posttest - Pretest |
|------------------------|---------------------|
| Z | -3.068 ^b |
| Asymp. Sig. (2-tailed) | .002 |

- a. Wilcoxon Signed Ranks Test
- b. Based on negative ranks.

satisfaction among students. In particular, students rated the use of TikTok for speaking challenges as highly effective, with a mean score of 4.83 ($SD = 0.39$). This suggests that students found the speaking challenges on TikTok to be a particularly engaging and beneficial method for practicing English communication skills.

Similarly, the use of YouTube for learning English vocabulary and grammar was also rated highly, with a mean score of 4.83 ($SD = 0.39$). Students perceived YouTube as a valuable resource for enhancing their English language skills, particularly in acquiring

vocabulary and understanding grammar. Overall, the data indicates that students found mobile-assisted language learning through both YouTube and TikTok to be highly effective and beneficial, with both platforms contributing significantly to their English language development.

To further analyze the data using inferential statistical techniques, multiple regression analysis was employed. This analysis assessed the impact of various factors on students' perceptions of YouTube and TikTok as learning tools. The regression model included predictors such as the perceived effectiveness of TikTok for speaking challenges, the usefulness of YouTube for learning vocabulary and grammar, and students' overall engagement with the platforms. The results showed that both TikTok and YouTube had significant positive effects on students' perceptions, with the model explaining a substantial portion of the variance in satisfaction scores ($R^2 = 0.78$). Specifically, the effectiveness of TikTok for speaking challenges had a strong positive influence on students' overall satisfaction ($\beta = 0.45, p < .01$), while the usefulness of YouTube for vocabulary and grammar also contributed significantly ($\beta = 0.40, p < .01$).

Regarding the third research objective, which aimed to assess students' perceptions of using YouTube and TikTok for language learning, the qualitative data revealed several key insights. Students reported that mobile-assisted language learning through these platforms was both enjoyable and effective. They found that video content on YouTube and TikTok enhanced their understanding of the material more effectively than traditional text-based lessons. Students appreciated the convenience of mobile-assisted learning, noting that it allowed them to practice writing, sentence structure, and speaking in a flexible and engaging manner. This approach also supported their language development and vocabulary expansion. Despite these positive aspects, some challenges were noted, including issues with internet connectivity and a lack of technological expertise among certain students. Nonetheless, these challenges did not significantly hinder their motivation to learn and improve their English skills. Overall, the majority of students expressed a strong interest in continuing to use YouTube and TikTok for language learning, highlighting the effectiveness and practicality of these mobile-assisted tools in supporting their English language development.

Overall, the combination of descriptive and inferential statistical analyses underscored the effectiveness of YouTube and TikTok in supporting English language development. The data indicated that

both platforms were highly valued by students, with multiple regression analysis confirming their significant contributions to enhancing English communication skills.

Discussion

According to the research findings, the researcher's discussion was categorized based on the research objectives. The details are as follows:

Based on the research findings regarding the first objective, the questionnaire revealed that the students believed that incorporating mobile-assisted language learning through YouTube and TikTok significantly enhances their English communication skills. Students highlighted several key benefits, including the improvement of pronunciation and accent, which facilitates effective communication with speakers from other countries. They also expressed a strong preference for using YouTube videos to practice speaking in everyday contexts and to expand their vocabulary. The ability to imitate pronunciation and intonation from English media, along with practicing listening skills to become familiar with different accents, was emphasized as crucial for their language development. These findings are consistent with previous research that underscores the effectiveness of video-based learning tools. Almurashi (2016) demonstrated that English videos on YouTube enhance learners' language understanding and proficiency. This research supports the view that YouTube can be a valuable resource for improving language skills, particularly in areas such as pronunciation and comprehension. Similarly, Boonbandol & Soontornwipat (2017) observed that the use of English videos on YouTube significantly improved the speaking skills of vocational students. These findings align with the results of this study, which indicate that YouTube videos are more effective teaching media compared to traditional textbooks. This supports the notion that video-based content can provide a more dynamic and engaging learning experience, facilitating better language acquisition. Additionally, the study by Br nner (2013) supports these findings by highlighting that YouTube provides numerous opportunities for language acquisition through its diverse range of spoken content. In that study, it was noted that the inclusion of subtitles and visual aids in YouTube videos enhances learners' comprehension and vocabulary retention. These findings align with the students' positive feedback on using YouTube for language practice. Furthermore, research by Al Arif (2019) corroborates the benefits of mobile applications

like TikTok in language learning. Al Arif found that TikTok's interactive features, such as creating short presentations and receiving feedback, contribute to improved communication skills. These findings align with the results of this study, indicating that TikTok was valued by students for practicing English and receiving constructive feedback. The study also resonates with the research of Lai & Zheng (2018), who found that Mobile-Assisted Language Learning (MALL) enhances the efficacy of educational technology by offering personalized and flexible learning experiences. The results of this research support this view, demonstrating that mobile applications like YouTube and TikTok can bridge the gap between formal and informal learning environments, providing students with the flexibility to learn at their own pace and convenience. In summary, the research findings align with and extend previous studies, highlighting the effectiveness of YouTube and TikTok as tools for improving English communication skills among Generation Z learners. These mobile-assisted learning platforms offer dynamic, accessible, and engaging ways to enhance pronunciation, vocabulary, and overall language proficiency. As such, these platforms serve as valuable additions to contemporary language education practices.

The research findings related to the second objective indicate that the comprehensive learning model designed to enhance English communication skills through YouTube and TikTok shows considerable promise and aligns well with current educational trends. This model leverages the interactive features of these platforms to meet the needs of Generation Z learners, focusing on improving listening, speaking, and pronunciation skills. The model's effectiveness is supported by existing research: Chou and Chen (2018) affirm the value of multimedia tools for engaging students, while Brown (2007) highlights the benefits of learner-centered approaches. Zhao (2003) supported the integration of digital tools, and Freeman et al. (2014) advocated for active learning strategies. The use of gamification, as discussed by Deterding et al. (2011), and continuous feedback, as per Hattie and Timperley (2007), further enhanced engagement and motivation. The model's process, including orientation, content practice, and reflection, was grounded in established educational theories (Cox & Webb, 2004; Kolb, 1984; Vygotsky, 1978; Schön, 1983). The media resources and evaluation methods were supported by Mayer (2009), Xu et al. (2019), Anderson and Krathwohl (2001), and

Black and Wiliam (1998). This comprehensive approach ensured a robust framework for improving English communication skills, addressing both practical and theoretical aspects of language learning.

Grounded in the developed mobile-assisted learning framework, there have been significant impacts on students' English language skills. The study revealed that students demonstrated significant improvements in their English communication skills after implementing the mobile-assisted learning model incorporating YouTube and TikTok. Specifically, students' average scores for listening skills increased from 28.92 points to 41.33 points, and their overall speaking skill scores also saw a notable rise. These improvements were attributed to the integration of mobile technology, which engaged students and made the learning process more flexible and effective. This approach not only motivated students but also encouraged independent learning. The findings of this study were supported by previous research, particularly that of Almurashi (2016) and Boonbandol & Soontornwipat (2017), which emphasized the benefits of using multimedia resources for improving language skills. The statistical results of this study validated these findings by demonstrating that students perceived YouTube and TikTok as effective tools for enhancing pronunciation, vocabulary, and overall language understanding. However, while this study supported the general effectiveness of these platforms, it is essential to consider that individual preferences and learning styles may vary. For instance, while a significant percentage of students found YouTube videos effective, others might benefit from a balanced approach that included traditional teaching methods alongside digital resources. Garrison and Kanuka (2004) explored how different learning preferences affected the effectiveness of digital tools and found that while many students benefited significantly from mobile tools like YouTube, those who favored traditional teaching methods might achieve better results with a blended approach. This supported the idea that integrating various teaching methods could effectively address the diverse learning preferences of students. In this study, although a substantial percentage of students found YouTube and TikTok beneficial for enhancing their English communication skills, incorporating traditional methods alongside these digital resources could potentially cater to those who preferred conventional learning strategies, thereby optimizing the overall learning experience. A study conducted by Chen et al., (2019), which supported the idea of integrating

multimedia resources with traditional methods, indicated that while multimedia tools enhanced specific language skills, combining them with conventional teaching methods offered a more well-rounded learning experience. This reinforced the importance of using a balanced approach to maximize the effectiveness of language instruction. Additionally, the utilization of YouTube videos in the classroom enabled students to engage in a variety of learning activities aimed at improving their speaking skills. The visual and auditory components of YouTube videos facilitated pronunciation practice, enhanced vocabulary retention, and aided in generating ideas for constructing sentences during speech. Learners were able to quickly assimilate information and felt more self-assured in structuring lessons based on their comprehension abilities, which extended beyond mere speaking proficiency to encompass overall language understanding. Moreover, viewing videos inadvertently aided learners in grasping grammar concepts, as they were exposed to instruction from predominantly English-speaking native speakers.

The results of this conducted study underscored TikTok's potential in revolutionizing English language education. The statistical analysis indicated that students appreciated the short, engaging format of TikTok videos for learning English. This observation was consistent with eMarketer (2024) identification of TikTok as a widely used platform among Generation Z, with users dedicating an average of 52 minutes daily to the app. The data gathered for this study corroborated Wu's finding, showing that TikTok's format aligned well with the preferences of younger learners. Dai and Chen (2019) further supported this view, noting a significant increase in TikTok adoption among college students during the Covid-19 pandemic. Our statistical results reflected this trend, showing a high engagement rate with TikTok for English learning among our participants. The increase in TikTok's popularity and its effectiveness in language learning, as reported by Dai and Chen (2019), was evident in this study's findings, which highlighted students' positive responses to TikTok's educational potential. The study by Syah et al. (2020) also aligned with our findings, demonstrating the innovative use of TikTok for English learning through short videos. The obtained data showed that students valued the platform's ability to deliver concise, impactful content, supporting Syah et al.'s (2020) assertion that TikTok videos could enhance learning experiences. Moreover, Al Arif (2019) emphasized that students' creation of TikTok videos for

digital presentations facilitated practical language application and feedback. The results of this study confirmed this benefit, revealing that students who produced and shared their own TikTok videos felt more confident in their language skills and benefited from peer and teacher feedback. Overall, our statistical results not only corroborated but also extended the findings of previous research by highlighting the effectiveness of mobile-assisted tools like YouTube and TikTok in enhancing English communication skills. The study's data illustrated how these platforms catered to the needs of Generation Z learners, providing engaging, practical, and innovative learning experiences. This integration of mobile-assisted learning tools into educational practices has been shown to be a valuable approach for improving English language proficiency.

Drawing from the outcomes achieved through the application of the mobile-assisted language learning (MALL) model as described, it is evident that utilizing YouTube and TikTok underscored the importance of clear principles for enhancing English communication skills. The study revealed that using mobile phones to support language learning was crucial in developing communication skills. The principles applied in this study focused on connecting knowledge across various subjects and leveraging mobile phones for language acquisition. Innovative design principles were also incorporated, including the integration of YouTube and TikTok to enhance students' learning experiences in their daily lives. This approach demonstrated that teaching media, such as mobile apps, can offer better understanding and efficiency in learning compared to traditional methods that rely solely on books or textbooks. Additionally, it contributed to increased student motivation, as learners had the flexibility to use their mobile devices for learning anytime and anywhere, thereby extending the learning experience beyond conventional classroom settings. The findings of this study align with the research conducted by Hasan et al. (2018), which explored the use of YouTube videos in learning English language skills at the tertiary level in Bangladesh. Hasan et al. (2018) found that students perceived YouTube as a stimulating platform that enhanced their speaking, pronunciation, tone of voice, grammar, and listening abilities. These outcomes were consistent with the conclusions drawn by Riswandi (2016), who highlighted the positive impact of using YouTube videos on learners' speaking skills and their motivation to advance their English proficiency. The statistical results from this study, which indicated that

students achieved higher scores on speaking tests, supported the effectiveness of YouTube as a valuable tool for engaging in learning activities and achieving academic success. The distinct characteristics of YouTube videos, providing both visual and auditory stimuli, were instrumental in fostering motivation and improving language skills. YouTube videos aided learners in refining their pronunciation, reinforcing vocabulary, and generating coherent sentences during speaking exercises. Learners were able to assimilate information rapidly and developed greater confidence in structuring lessons based on their speaking and comprehension abilities. Additionally, watching YouTube videos facilitated subconscious acquisition of grammar knowledge through exposure to native English speakers, who played a key role in providing linguistic input. Regarding TikTok, the study's findings were supported by research from Xu et al. (2019), which demonstrated TikTok's potential in Indonesian and Indian schools. TikTok emerged as a platform that fosters knowledge sharing and innovative teaching methods, enhancing student learning and motivation. This study corroborated the findings obtained from this study, showing that TikTok effectively supported language learning and motivated students through creative educational approaches. In summary, the statistical results of this study confirmed and extended previous research findings. The data highlighted the effectiveness of integrating mobile-assisted tools like YouTube and TikTok in enhancing English communication skills. These results underscore the value of incorporating mobile technology into educational practices to cater to contemporary learners' needs and preferences.

Based on the research findings related to the final objective, the study revealed that students expressed the highest level of opinion regarding the learning model that utilized mobile-assisted language learning through YouTube and TikTok. The average opinion level towards this learning model was notably high, indicating strong student agreement with the effectiveness of these applications in language learning. The data analysis showed that the highest-ranked opinion among students was that using mobile-assisted language learning through TikTok for speaking challenges provided an engaging way to practice English communication skills. This finding aligns with the contemporary use of TikTok as a valuable educational resource. Kaye et al. (2022) and Lee & Abidin (2023) have recognized TikTok's role in education, noting that the platform's voice-over

challenges—where users perform voiceovers on provided texts—offer unique opportunities for language practice. These challenges, which range from advertisements to simulated conversations, can serve as authentic tasks for English as a Second Language (ESL) speaking activities (Aranego, 2020). The study's results support the notion that TikTok addresses common challenges faced by ESL learners, such as difficulties with pronunciation and intonation. Prabayanti et al. (2021) found that speaking remains a challenging skill for many ESL learners. TikTok's diverse user base, which predominantly uses English, provides a rich environment for language practice. Phuong (2021) highlighted that students often prefer teachers with clear language skills to aid in pronunciation improvement, regardless of the teachers' native status. TikTok, with its global reach and variety of English-language content, offers an accessible platform for learners to improve their language skills through interactions with a wide range of English speakers. The statistical results from this study, showing a high level of student satisfaction with TikTok for language learning, are consistent with the findings of these previous studies. TikTok's accessibility through smartphones enables learners to engage with educational content conveniently, anytime, and anywhere. This characteristic underscores TikTok's practicality as an educational tool, making it a valuable asset for delivering language learning materials. Overall, the research findings confirm and expand upon existing literature on mobile-assisted language learning. By demonstrating high student approval of YouTube and TikTok as effective tools for enhancing English communication skills, the study supports the integration of mobile applications into language education. These results align with the findings of previous research and emphasize the importance of leveraging modern technology to meet the diverse needs of learners.

Drawing from the results obtained through the application of the Mobile-Assisted Language Learning (MALL) model, it was determined that students expressed strong agreement with the use of mobile-assisted language learning through YouTube and TikTok. Specifically, students regarded YouTube as a valuable source of information for learning English vocabulary and grammar essential for effective communication. The study indicated that students found YouTube to be an effective platform for accessing a wide range of educational videos, tutorials, and language learning channels, which cater to various learning styles and

preferences. The findings are consistent with those of

Al Halim and Arifin (2023), who observed that integrating YouTube as a learning resource led to increased student motivation and significant improvements in vocabulary retention and pronunciation skills. This aligns with Brünner (2013), who highlighted that YouTube offers numerous opportunities for language acquisition through its diverse spoken content and the use of subtitles and visual aids. The inclusion of subtitles on YouTube videos aids students in retaining vocabulary meanings and enhances their overall understanding of the language. The study also supports Burston (2015) and Lai & Zheng (2018), who emphasized the benefits of students' autonomous use of mobile devices for learning outside the classroom. Such usage provides a personalized and organic approach to education, enhancing the effectiveness of educational technology. Henrie et al. (2015) further supported this by noting the prevalence of smart portable devices in educational settings, where they are used to process materials and enhance ubiquitous learning. Additionally, students strongly agreed that using YouTube and TikTok increased their motivation to learn English and improved their communication skills, particularly in listening and speaking. This finding is consistent with the research conducted by Sriwitata et al. (2022), which demonstrated the positive impact of YouTube videos on developing listening and speaking abilities. The average opinion score of 4.21 in the aforementioned study highlights the effectiveness of YouTube in enhancing communication skills. Furthermore, the integration of educational applications, such as YouTube and TikTok, was shown to motivate students to practice their English skills. For example, YouTube was used as a tool for teachers to select video segments that matched students' interests and proficiency levels. Students engaged in activities such as transcribing dialogues, mimicking characters, and recording their voices. TikTok, a popular platform among Generation Z, also proved effective in educational settings, especially during the Covid-19 pandemic. Its features were leveraged to enhance learning management and engagement. Although research on TikTok's use in higher education is limited (Chakuzira & Kadyamatimba, 2017), it is evident that social media platforms like TikTok play a crucial role in shaping the language skills of contemporary learners. Overall, the research findings, supported by previous studies, validate the effectiveness of mobile-assisted learning tools like YouTube and TikTok in improving English language skills. The

statistical results confirm that these platforms not only enhance vocabulary and grammar acquisition but also increase student motivation and engagement. This underscores the potential of integrating such digital tools into English language instruction and highlights the need for educators to develop innovative digital learning platforms tailored to students' needs.

In addition to the quantitative results, the qualitative data from the open-ended questionnaire revealed that students had positive feelings about using mobile phones to enhance their language learning. They found that using YouTube and TikTok made studying more engaging and less monotonous compared to traditional methods. The ability to access learning materials anytime and anywhere further contributed to their satisfaction with these tools. These findings are consistent with Watkins and Wilkins (2011), who noted the benefits of incorporating YouTube into classroom instruction, including its impact on students' language abilities, cultural exposure, and vocabulary development. The use of YouTube for activities such as reading, writing, listening, and speaking exercises was particularly appreciated by students, as it facilitated writing practice, sentence construction, and speaking exercises that improved their English proficiency and vocabulary. Al Arif (2019) also supported the positive impact of TikTok on language learning, highlighting that learners could create short English presentations to enhance their communication skills. This aligns with the study's findings, which indicate that TikTok's interactive features allowed students to receive feedback and suggestions from teachers and peers, contributing to their English proficiency. The popularity of TikTok among Generation Z learners made it a valuable tool for practicing English and receiving constructive feedback. The study also corroborates Klímová (2018), who highlighted that mobile-assisted language learning (MALL) provides flexibility and access to resources that bridge the gap between formal and informal learning environments. The findings support the notion that mobile technology not only facilitates formal learning within the classroom but also enhances learning opportunities and behaviors outside of it, as noted by Kukulska-Hulme (2009) and Lai (2015). This is especially significant in foreign language acquisition, where learners often have limited opportunities to use the target language beyond the classroom, as discussed by Fryer (2019). Overall, the statistical results of this research, supported by qualitative feedback, demonstrate

that mobile-assisted learning tools like YouTube and TikTok have significantly improved students' language learning experiences. The positive reception of these tools aligns with previous research, emphasizing their effectiveness in enhancing language skills and motivation. The integration of mobile technology into language education has proven to be a valuable and effective approach, offering innovative opportunities for both formal and informal learning contexts.

Suggestions

1. Suggestions for using research results

1.1 Developing English communication skills, including both listening and speaking skills, requires consistent effort and practice over time. The initial assessment of students' English-speaking skills showed a score of 73.33 percent, slightly exceeding the set criteria. Therefore, educators should focus on providing students with simple English-speaking exercises at the beginning stages of learning to enhance their communication skills.

By gradually increasing the level of difficulty as students' progress, teachers can help build confidence and foster a positive attitude towards speaking English. Additionally, teachers should guide students in practicing effectively in the early stages until they are able to independently practice in a manner that suits their individual needs. This approach will lead to a more efficient and effective development of students' English-speaking skills.

1.2 The findings of the study showed that when learning was organized using the researcher's developed learning model, students expressed the highest level of opinion, scoring 4.62 points. However, these qualitative opinions were subjective and not easily quantifiable. This differs from quantitative opinion-level data. If the researcher aims to obtain comprehensive information from the students and cover all aspects, appropriate measurement methods and tools must be employed to accurately capture both positive and negative opinions.

For instance, when examining language learning videos available on YouTube, there may be instances of cultural inappropriateness in terms of attire and behavior displayed by the speaker. This necessitates the need for students to receive assistance in understanding these cultural nuances. If further research is conducted on this matter, teachers will be able to guide students in selecting language learning videos that not only enhance their academic understanding but also expose them to various cultures.

2. Suggestions for future research

2.1 The application of mobile language learning for learning management should be implemented to enhance English communication skills. This is particularly important for students in diverse fields, where listening and speaking skills are crucial and essential for their respective areas of study. Additionally, knowledge should be effectively integrated into specific subject content and teaching methodologies.

2.2 To enhance students' English communication skills, it is essential to incorporate additional dependent variables and data collection methods. These may include maintaining an E-Reflective journal on online platforms, engaging in peer review sessions, or participating in discussions on various online platforms such as discussion boards. By utilizing these tools, students can effectively develop their language proficiency and gain valuable insights into the benefits of technology.

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