

PAPER

Mobile Language Learning: A Digital Approach to Improving English Communication

Jaemjan Boonyopakorn¹,
Pinyaphat
Tasatanattakool¹(✉),
Prachyanun Nilsook²,
Panita Wannapiroon²

¹Rajamangala University
of Technology Suvarnabhumi,
Ayutthaya, Thailand

²King Mongkut's University
of Technology North Bangkok,
Bangkok, Thailand

pinyaphat.t@rmutsb.ac.th

ABSTRACT

A digital media platform can enhance students' motivation and help them learn new abilities to further their English communication skills. They can utilize it to improve their English communication skills through their mobile phones for lifelong learning and to integrate digital media technology into their study and work worldwide, developing 21st-century abilities and skills. This study aimed to create a digital media platform, improve students' English communication skills, and study students' satisfaction with using the digital media platform through mobile language learning. A sample of 107 students participated in the self-learning of English for Daily Life Communication course, which was selected using a simple random sampling technique. The digital media platform included videos and practices of 20 contents about English communication for daily life. The experiment was carried out for five weeks. The research instruments included digital media platform, a pre- and post-test, and a satisfaction questionnaire. The data were statistically analyzed by mean and standard deviation. The results revealed that the students improved their English communication skills at the .005 significance and were satisfied at a mean of 4.31. It concludes that the digital media platform benefits by enhancing the students based on their findings on improving their English communication skills and overall satisfaction. Additionally, both the educators and students are supported in achieving successful foreign language learning through mobile technology.

KEYWORDS

digital media platform, English communication skills, mobile language learning

1 INTRODUCTION

In the past 20 years, the conversion of traditional media to new media, which encompasses digital information, communications technology, computers, and networks, has resulted in the emergence of critical digital media as a learning resource. Every instance of acquiring knowledge necessitates alterations in the brain. Technology-based training has the potential to enhance working memory and other

Boonyopakorn, J., Tasatanattakool, P., Nilsook, P., Wannapiroon, P. (2024). Mobile Language Learning: A Digital Approach to Improving English Communication. *International Journal of Interactive Mobile Technologies (IJIM)*, 18(22), pp. 159–173. <https://doi.org/10.3991/ijim.v18i22.50001>

Article submitted 2024-05-07. Revision uploaded 2024-09-07. Final acceptance 2024-09-07.

© 2024 by the authors of this article. Published under CC-BY.

cognitive functions. Additionally, it can offer cognitive enhancement through mental stimulation as well as keep up with the latest advancements in digital media technologies, such as social media [1]. A significant number of individuals allocate a tremendous amount of their time engaging with technology, such as consuming news or watching television, as well as making purchases, including exploring subjects of interest through social media [2]. Playing games with big crowds is another aspect of social media, often known as digital media. It's become a popular pastime that makes a lot of people happy [3]. By providing convenient access to various technological resources, including computer equipment and laptops. Nevertheless, engaging with and actively using digital media platforms can have a significant influence on one's life, both in terms of physical and emotional aspects [4]. Digital media makes the sharing of information and the production of content more accessible. Through the use of descriptions, photographs, videos, audio, and other forms of media, with the goal of fostering communication within a virtual community setting that is not only simple but also offers a multitude of advantages [5].

Education is widely recognized as a pivotal factor in the economic and social progress of a nation. Enhancing the standard of education is a crucial factor in assessing and certifying institutions to attain advancements in teaching and learning [6]. The use of information and communication technology (ICT) is one of the primary motivating factors in the development of skills that have an impact on the instructional strategies employed by educators. Educators can use technology in inventive ways to influence the learning process of their students [7]. Incorporating the solution of practical problems into the development of new instructional strategies [8]. The purpose of the educational process is to improve students' ability to solve problems and make decisions, and academic institutions should be prepared to learn about new conditions in order to attain this goal [9]. The term "21st-century skills" refers to a comprehensive collection of information, abilities, work habits, and personality attributes that are considered to be essential for achieving success in the modern world. In particular, this is the case in classes taken at the university level [10]. The 21st-century abilities encompass problem-solving, creativity, innovation, metacognition, communication, and more [11]. The nature of education in the 21st century has undergone substantial transformation. Hence, the alterations that transpire pose a significant obstacle in the schooling sector [12]. In spite of this, the classroom environment is the first significant aspect that contributes to the student's acquisition of knowledge and the development of their skills. This is necessary in order to generate practical students. Here, skills modeling is utilized to measure the processes that take place in the classroom and provide learning for the students [13].

The ability to communicate in English is often regarded as an indispensable instrument as well as a competitive advantage that can open doors to the international community [14]. At the moment, the university places a significant amount of weight on organizing teaching and learning in English, as well as taking English examinations to evaluate the level of proficiency of graduates, among other things [15]. Language is mainly used for communication. It is present in different forms of media and can be utilized in educational activities to enhance the English language skills of undergraduate students, namely in speaking, reading, and writing [16]. In education, various advantages of ChatGPT have been highlighted, including enhancing students' writing skills in both their native and second languages, assisting software students in writing code in multiple programming languages, easing access to information, and supporting language learning and

development by understanding language nuances and facilitating near-human communication [17]. The use of English learning methodologies that generate passion, the assistance of students in learning English on their own, and the enhancement of their self-assurance in the process of learning the language are all necessary components [18].

The problem of Thai students is English communication ability for their study, daily life, and jobs. The main issue with English listening among Thai hotel staff when interacting with foreign customers and colleagues was generally minor, with the most frequent difficulty being understanding various English accents. Problems with English speaking when dealing with foreign customers and colleagues were the least significant [19]. Students lack practice in English communication using technology and spend limited time on self-study. They also struggle with pronunciation during English conversations in class. It is recommended that conversation classes focus on increasing students' awareness of correct English pronunciation and provide more opportunities for practicing goal-oriented, casual conversations. Additionally, students should receive explicit feedback on natural conversational mechanisms to achieve specific interactional goals [20]. It is also recommended that ESL programs should be designed to encourage students to learn English through media platforms and social interaction [21].

The researcher is an English instructor, and along with the co-researchers who have specialized in digital technology, they recognized the necessity of enhancing students' English communication skills. In this study, we have created the digital media platform that provides English communication skill improvement for students and others. This platform ensures offline accessibility without requiring an internet connection once it is downloaded and installed on mobile devices. Thus, learners can conveniently access its contents and practices anytime, anywhere, for enhancing their English communication skills. In addition, providing regular, constructive, and timely feedback, along with increasing students' access to technology and open resources during the COVID-19 period, were highlighted as significant ways to promote instructional effectiveness [19]. The students' potential in English communication is significantly amplified by utilizing mobile language learning.

2 LITERATURE REVIEW

2.1 Digital media platform

Digital media include software applications that utilize the capabilities of the Internet to disseminate information [22]. Sites are one of the most crucial forms of digital media. Web pages contain a wide variety of materials that a web browser can access. The content types encompassed in this category consist of text, photos, videos, and links. Web pages provide users the ability to retrieve information, news, entertainment, and web services. Furthermore, mobile applications play a crucial role in the realm of digital media [23]. The development of digital media platforms on mobile phones is currently underway with the goal of becoming more comprehensive and reaching people in all regions. It makes it possible for us to incorporate a wide variety of information resources, such as YouTube and Instagram, in order to accomplish our professional goals. Users can acquire a variety of abilities through YouTube, which is a video platform that is

both convenient and available [24]. As a component of the digital media platform, social media platforms that are already in existence are regarded as a place where users may engage, share content, and communicate online [23]. These program tactics will be more engaging if they combine many platforms, and behavior modification strategies that are conducted utilizing digital technology will incorporate numerous platforms. They are evaluated based on how they engage with and react to their utilization [25]. On the other hand, being exposed to and participating in the use of digital media platforms can affect people's lives, whether it be physically or emotionally [25]. Research on the subject of digital media platforms is intriguing because it has the potential to generate a lasting competitive edge for these platforms [26]. The content encompasses several subjects, such as digital learning, that focus on enhancing English language proficiency, which is crucial for both personal and professional endeavors [27]. Universities are making an effort to get students involved in activities that improve their cognitive skills while they are learning English through the use of digital gadgets and various media platforms [26]. The utilization of digital media platforms such as Google Classroom, Padlet, Quizizz, Mentimeter, and Classtool has the potential to enhance the motivation of students to further their English language education. This is the case since the pupils are eager to respond to questions and that they are pleased to acquire new information [28]. Both students and teachers stand to benefit from this development because the use of suitable digital media platforms has the potential to enhance the teaching process by shifting away from traditional approaches and towards a more learner-centered approach [28]. The digital media platform is a medium that helps students learn new abilities, such as listening, speaking, reading, and writing skills. It is a medium that adds new skills to the learning process. [24]. Therefore, digital media platforms should be the foundation upon which the future is built [30].

Artificial intelligence (AI) applications represent some of the most significant advancements in digital technology, effectively aiding learners in improving their literacy and English communication skills. Integrating digital media platforms with AI can enhance educational experiences, allowing chatbot programs such as ChatGPT to provide accurate information and quickly connect students with experts, thus saving considerable time and expense. ChatGPT, an AI language model, is considered a versatile learning tool, supporting language learning in numerous ways, such as generating text in various genres (e.g., stories, recipes, emails), translating, summarizing, solving problems, correcting content and grammar, enhancing vocabulary, and answering questions across many languages, skills, topics, and levels. Consequently, ChatGPT offers diverse learning experiences tailored to learners' needs. It can be essential for accessing and translating resources in different languages, thereby eliminating language barriers and making information accessible in languages that individuals might not otherwise be able to understand. [31]. Moreover, ChatGPT supports multiple languages, including English and Korean, and can modify the content and format of the generated text to meet the user's demands and needs while simultaneously creating a natural conversational experience [32].

2.2 English communication

Communication in English refers to the act of imparting or transmitting knowledge or information through spoken expression, written language, or other forms

of media. Communication is the act of exchanging information or engaging in interaction between individuals or cultures [14]. It is now possible to acquire the skills necessary to communicate in English through the use of technology that may be utilized both inside and outside of the English classroom through the usage of mobile devices. More significant opportunities to speak in English are afforded as a result [29]. The English language is essential in both the workplace and in life, particularly for undergraduate students who are required to communicate in English on a regular basis so that they may function effectively. Students, on the other hand, need more confidence and are afraid to engage in conversation in English for a variety of reasons [16]. Communication and presentation in English are not prioritized when there is insufficient knowledge of English vocabulary and the themes that are covered in the classroom [30]. Including the requirement for increased proficiency in the English language. This may have an impact on work chances in the future [31]. Consequently, the development of English communication skills, such as listening, speaking, reading, and writing, is a primary focus of education at the university level. It is only possible to communicate effectively in English by possessing all of these skills [31].

2.3 Mobile language learning

Mobile phones have been more accessible to users over the past few years, which has enabled them to carry out a greater variety of jobs within the context of mobile devices [33]. Mobile phones are ubiquitous in daily life due to their significance and advantages in various domains, encompassing social interactions, business activities, and educational endeavors [34]. Technology can enhance all elements of our everyday lives, including acquiring knowledge. Recent developments in smart mobile device capabilities and student penetration rates have been shown to enhance student engagement and improve learning results. This allows these devices to create suitable activities and tools that enhance student understanding and facilitate learning [35]. The study of mobile language acquisition is a relatively new area of research that has developed over the years. This helps support many aspects of learning the English language, including vocabulary, understanding, speaking, listening, and writing abilities, among others [36], [37]. One of these abilities is the capacity to compose sentences. Because of the rapid development of mobile language learning applications, there has been a paradigm shift away from learning that is centered on the teacher and toward an environment that is more focused on real-time language learning [38]. Mobile language learning applications take advantage of the portability of mobile learning features to offer access to information and interactive elements in order to create an environment that is conducive to language learning through the use of mobile phones [39]. For the purpose of assisting students in practicing all areas of English, including learning outside of the classroom through the utilization of mobile language learning applications. In order to develop English skills, it is regarded as an instructional instrument that may be used to create self-learning opportunities [40], [41]. This includes improving one's command of the English language. As a result, the process of learning English has become more flexible. It is not restricted by time or location and can be viewed at any moment of the day or night [37], [42].

2.4 PRISMA flow diagram

The systematic literature review aims to consolidate research on digital media platforms for English communication improvement through mobile language learning. The process of study selection is illustrated in the PRISMA flow diagram in Figure 1. A systematic document search was carried out in the Scopus databases following the PRISMA flow diagram. In this study, only English communication skills paper are a publication stage final, and source type journals published in the past five years, between January 2019 and April 2024, have been included. The keywords and search operators used were (TITLE-ABS-KEY (English AND communications) AND PUBYEAR > 2019 AND PUBYEAR < 2024) AND (mobile AND language AND learning) AND (digital AND media AND platform) AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (PUBSTAGE, "final")) AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "cp") OR LIMIT-TO (DOCTYPE, "re")) AND (LIMIT-TO (SRCTYPE, "j") OR LIMIT-TO (SRCTYPE, "p")).

The synthesis and associated research are depicted in Figure 2, which presents a bibliographic study of the digital media platform aimed at enhancing English communication skills through mobile language learning.

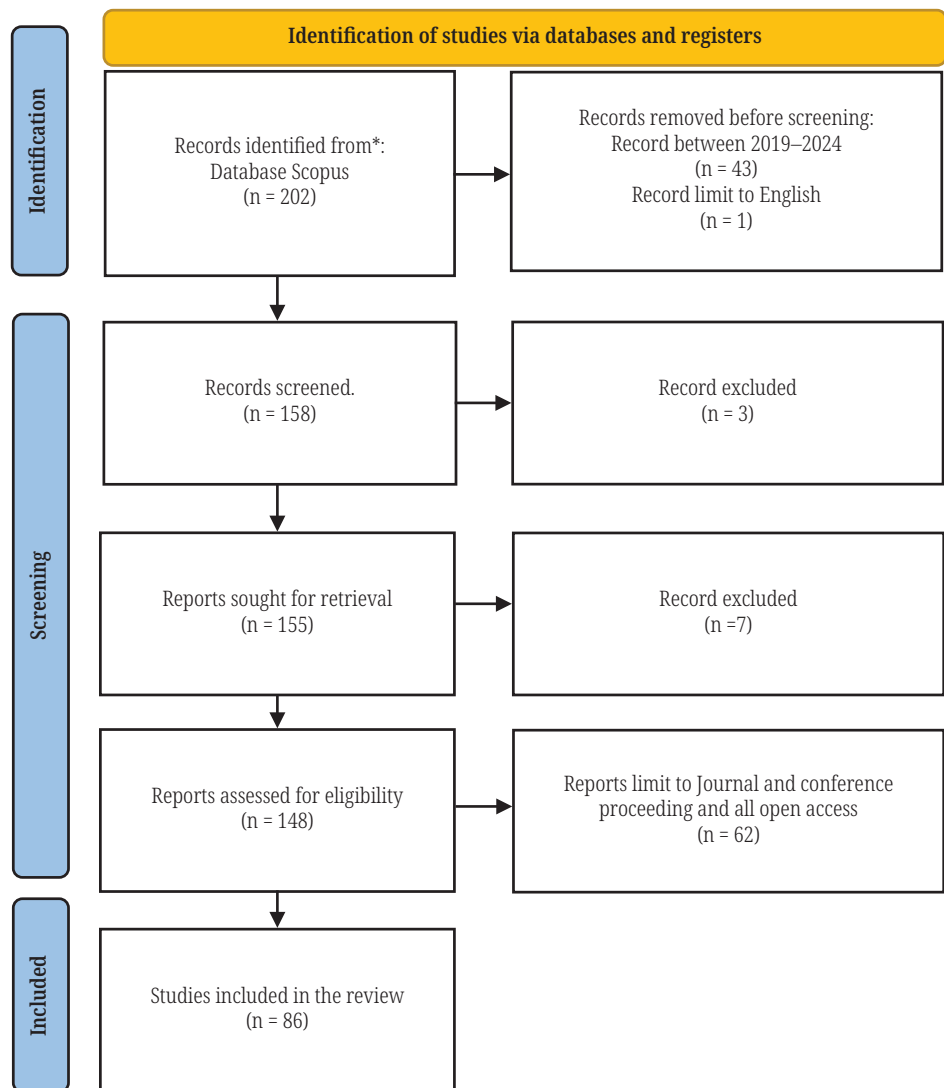


Fig. 1. PRISMA flow diagram

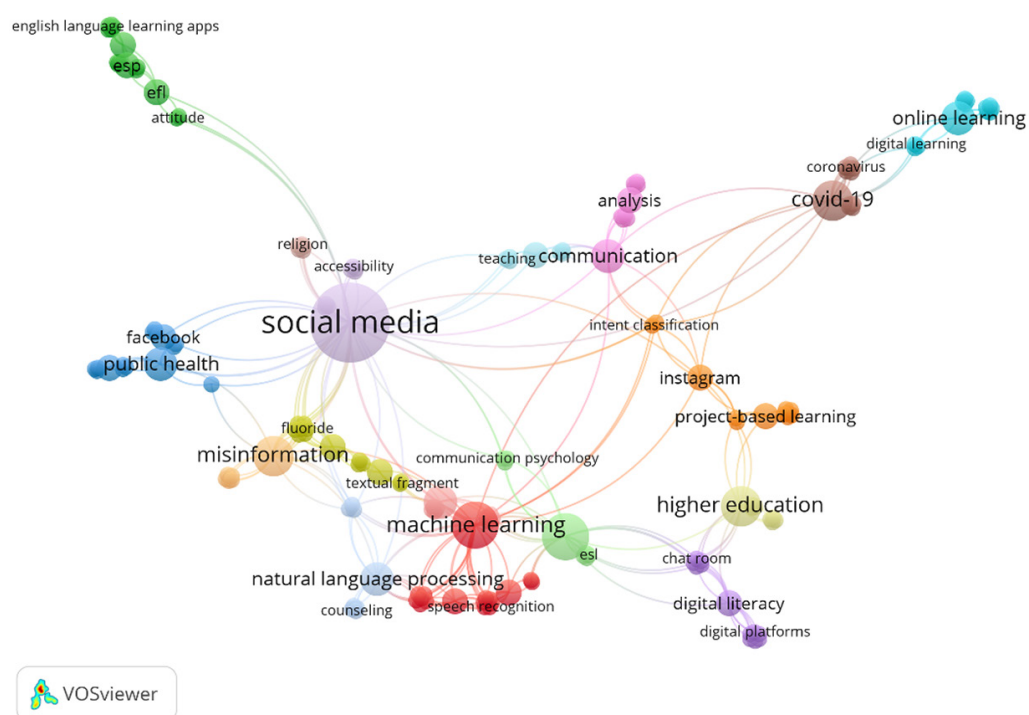


Fig. 2. A bibliographic analysis of the digital media platform on English communication improvement through mobile language learning

2.5 Architecture of the digital media platform on English communication improvement through mobile language learning

The framework of the digital media platform on English communication improvement through mobile language learning is shown in Figure 3.

1. Step 1 Input data: The researcher has established study goals and is utilizing digital technology, a contemporary medium that has garnered significant interest. They utilize vocabulary-based content and real-world scenarios to enhance English proficiency in listening, speaking, reading, and writing. These activities are conducted by using smart devices, emphasizing mobile phones, which are widely utilized in everyday life. To create the material for this digital media, expertise from English teachers will be necessary. Individuals who wish to use this digital media must be enrolled as university students and committed to utilize it consistently for five weeks and showcase digital media's efficacy.
2. Step 2 Process data: This step consists of three main processes: Step 2a. Preparing for usage of digital media platforms: 1) informing learning, 2) preparing materials for learning, and 3) doing a pre-test. Step 2b. Learning process of English communication skills: 1) Study lesson objectives 2) Create lesson format according to platform 3) Practice listening, speaking, reading, and writing, and 4) Practice according to the situations specified in the lesson. Step 2c. The measuring process is a post-test.
3. Step 3 Output data: To evaluate the digital media platform to improve English communication through mobile language learning, questionnaires should be distributed to students and professionals in information technology or computers.

- Step 4 Feedback: Responding to the evaluation results of digital media platforms to improve English communication through mobile language learning. To operate as a foundation for expanding digital media to provide students' opportunities for practicing with their English abilities.

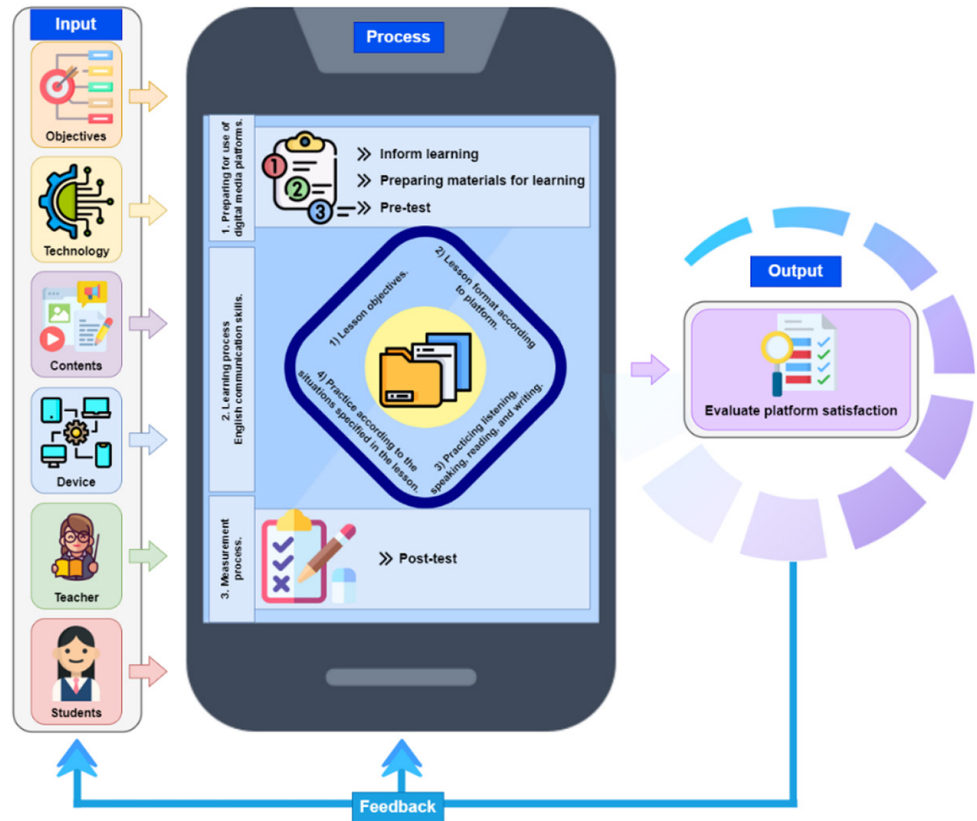


Fig. 3. The architecture of digital media platforms for English communication improvement through mobile language learning with steps

3 RESEARCH OBJECTIVES

The objectives of this study were:

- To create the digital media platform for English communication skills improvement through mobile language learning.
- To improve students' English communication skills by using the digital media platform through mobile language learning.
- To study students' satisfaction toward using the digital media platform for English communication improvement through mobile language learning.

4 RESEARCH OBJECTIVES

This is an experimental study. The researcher collected data from a sample group of university students who were interested in learning and improving their English communication by using the digital media platform through mobile language learning that is expanded from the previous researches: E-learning in various

English courses, for instance, Reading English for Learning, English for Business Communication, and English for Secretaries.

A sample of this study consisted of 107 students who were taking a self-learning course, English for Daily Life Communication, using a simple random sampling technique. They practiced English communication skills for five weeks on a digital media platform through mobile language learning. The content covered greeting, self-introduction, interest, family, daily routine, hometown, shopping, food, eating out, health, occupation, leisure, travel, fashion, opinion, relaxation, past events, future events, culture, and business. All contents have videos and practices for their self-learning on mobile phones. The study methodology is as follows:

Step 1: The researchers created a digital media platform for English communication skills which were evaluated, the contentment of nine individuals with expertise in specific fields: five specialists in computers and information technology, and four individuals who specialize in teaching English.

Step 2: The students accessed the digital media platform by downloading and installation on mobile language learning.

Step 3: The students did a pre-test, practiced with videos, and did a post-test and satisfaction questionnaire.

Step 4: The data were analyzed and overall described by mean and standard deviation.

5 RESULTS

The researcher collected data from the analysis of satisfaction of students with the digital media platform on English communication improvement through mobile language learning, and presented them in Table 1.

Table 1. Analysis of result of students' satisfaction while using a digital media platform for improvement of English communication through mobile language learning

	Satisfaction Items	Results		Satisfaction Level
		Mean	S.D.	
1	The platform facilitates the evaluation of English content.	4.42	0.69	Much
2	The platform employs digital technology to facilitate content creation.	4.29	0.70	Much
3	The platform facilitates the development of English communication proficiency.	4.28	0.78	Much
4	The platform fosters self-motivation to acquire and enhance English communication abilities independently.	4.38	0.71	Much
5	The platform facilitates independent learning and practice of English communication skills.	4.32	0.80	Much
6	The platform enhances proficiency in independent English communication.	4.22	0.73	Much
7	The platform facilitates the practical application of English communication	4.32	0.72	Much

From the Table 1, it can be concluded that the students' satisfaction with the digital media platform to improve English communication through mobile language

learning is very high, which has an average mean of 4.31 (SD = 0.73). The platform that facilitates the evaluation of English content is very high, at a mean 4.42 (SD = 0.69). The platform fosters self-motivation to acquire and enhance English communication abilities independently, which is very high at mean 4.38 (SD = 0.71).

The researcher collected data from the analysis of satisfaction from experts with the digital media platform to improve English communication through mobile language learning and presents them in Table 2.

Table 2. Analysis of results of experts' satisfaction with a digital media platform on English communication improvement through mobile language learning

Assessment Items		Results		Satisfaction Level
		Mean	S.D.	
1	The platform facilitates the evaluation of English content.	4.44	0.53	Much
2	The platform employs digital technology to facilitate content creation.	4.22	0.44	Much
3	The platform facilitates the development of English communication proficiency.	4.44	0.88	Much
4	The platform fosters self-motivation to acquire and enhance English communication abilities independently.	4.11	0.33	Much
5	The platform facilitates independent learning and practice of English communication skills.	4.22	0.44	Much
6	The platform enhances proficiency in independent English communication.	4.22	0.83	Much
7	The platform facilitates the practical application of English communication knowledge and abilities in everyday circumstances.	4.44	0.88	Much
8	An online platform designs to facilitate the independent practice of English communication skills utilizing contemporary digital technology.	4.67	0.50	Most
9	The platform facilitates the acquisition and honing of English communication abilities through independent learning and practice. Utilizing contemporary digital technology for future expansion.	4.56	0.53	Most
10	The platform possesses the capacity to proficiently communicate in the English language which can be utilized for future academic pursuits and professional endeavors.	4.67	0.50	Most
Total		4.40	0.59	Much

From the Table 2, it can be concluded that the experts' satisfaction with the digital media platform to improve English communication through mobile language learning is very high which has an average mean of 4.40 (SD = 0.59). An online platform is designed to facilitate the independent practice of English communication skills utilizing contemporary digital technology, and the platform possesses the capacity to proficiently communicate in the English language, which can be utilized for future academic pursuits and professional endeavors. The highest levels have an average mean of 4.67 (SD = 0.50). The platform facilitates the evaluation of English content, the platform facilitates the practical application of English communication knowledge and abilities in everyday circumstances, and the platform facilitates the practical application of English communication knowledge and abilities in everyday circumstances at many levels, which have an average mean of 4.44 (SD = 0.50, 0.88).

Table 3. Analysis of students' English communication improvement results with a digital media platform through mobile language learning

Items	N	\bar{X}	S.D.	t	Sig. (2-Tailed)
Pre-test	107	52.37	15.70		
				4.976	.000
Post-test	107	59.96	20.54		

Note: $P < 0.01$.

From the Table 3, it can be concluded that the students' English communication improvement with the digital media platform through mobile language learning increased at the .005 significance. The students had a post-test mean greater than the pre-test mean, showing that they improved their more English communication skills.

6 DISCUSSION AND CONCLUSION

The results showed that the students improved their English communication and had much satisfaction on digital media platforms through mobile language learning since they could practice their more English communication skills conveniently. There are also videos that make them interested in practicing their English communication skills. The more they practice, the more they improve their English communication skills. The students' English communication skills improved significantly following the use of the mobile application. The students held positive attitudes towards all aspects of the mobile application. [43] One of the positive effects they mentioned was the fact that the COVID-19 process encouraged teachers and students to learn collaboratively and experiment with innovative learning approaches. In addition, both versions of ChatGPT emphasized the importance of well-being in education, as well as the increased use of technology in education and the improvement of both teachers' and students' digital skills during the pandemic [30]. ChatGPT could act as a language learning tool and support the teaching procedure, especially for students with a refugee/migrant background [32]. The students made significant progress in overall speaking performance through AI-powered training, as evidenced by improvements in scoring reports and the length of student responses. In addition, the students managed to articulate specific statements regarding their speaking skills, develop systematic judgments concerning personal performances, and deploy targeted strategies in formulating follow-up action plans. The potential of AI-supported training in fostering positive shifts in students' language awareness within instructional context [47].

Moreover, teachers, curriculum developers, and policymakers are seeking to enhance foreign language education through cutting-edge technological interventions. Leveraging the potential of interactive mobile learning (IML) can greatly improve the educational environment and provide students with more engaging and efficient pathways to learning foreign languages [48]. Analyzing the interactions between motivated teachers and engaged students in these environments may provide crucial insights into the mechanisms behind the successful integration of mobile technology [49] that support educators and students enhancing successful foreign language learning.

7 REFERENCES

- [1] V. E. Meidasari, "The using of digital media to enhance teaching and learning English on the well-being of Indonesian students," *Journal of English Language and Culture*, vol. 6, no. 1, pp. 76–86, 2017.
- [2] J. Torous, K. J. Myrick, N. Rauseo-Ricupero, and J. Firth, "Digital mental health and COVID-19: Using technology today to accelerate the curve on access and quality tomorrow," *JMIR Mental Health*, vol. 7, no. 3, pp. 1–6, 2020. <https://doi.org/10.2196/18848>
- [3] S. Nachiappan, "Loganathan and Sivakumar's Baum test: A psychodiagnostic tool to identify internet addiction," *Jurnal Pendidikan Bitara UPSI*, vol. 15, no. 1, pp. 1–11, 2022.
- [4] B. Ytre-Arne, "Media use in changing everyday life: How biographical disruption could destabilize media repertoires and public connection," *European Journal of Communication*, vol. 34, no. 5, pp. 488–502, 2019. <https://doi.org/10.1177/0267323119869112>
- [5] M. Mądra-Sawicka, J. H. Nord, J. Paliszkievicz, and T. R. Lee, "Digital media: Empowerment and equality," *Information*, vol. 11, no. 4, pp. 1–12, 2020, <https://doi.org/10.3390/info11040225>
- [6] K. K. Juneja, "Innovative pedagogy with computer-supported collaborative learning in teaching English language," *Journal of Teaching English for Specific and Academic Purposes*, vol. 9, no. 3, pp. 551–556, 2021. <https://doi.org/10.22190/JTESAP2103551J>
- [7] T. Wrahatnolo, "21st centuries skill implication on educational system," *IOP Conference Series: Materials Science and Engineering*, vol. 296, no. 1, pp. 1–6, 2018. <https://doi.org/10.1088/1757-899X/296/1/012036>
- [8] L. Stuchlikova, "Challenges of education in the 21st century," in *2016 International Conference on Emerging eLearning Technologies and Applications (ICETA)*, 2016, pp. 335–340. IEEE. <https://doi.org/10.1109/ICETA.2016.7802072>
- [9] K. Sherouk and K. Raad, "What educational actions are urgently needed for developing e-learning and enhancing the 21st century skills," in *2020 Sixth International Conference on e-Learning (econf)*, 2020, pp. 51–54. IEEE. <https://doi.org/10.1109/econf51404.2020.9385518>
- [10] V. Tuzlukova and V. Singh, "Twenty first century skills through problem-based learning: An ESP perspective," *Journal of Teaching English for Specific and Academic Purposes*, vol. 6, no. 3, pp. 413–423, 2019. <https://doi.org/10.22190/JTESAP1803413T>
- [11] M. M. Rahman, "21st century skill 'problem solving': Defining the concept," *Asian Journal of Interdisciplinary Research*, vol. 2, no. 1, pp. 64–74, 2019. <https://doi.org/10.34256/ajir1917>
- [12] A. Ismail, S. S. Razali, S. Hashim, N. Z. Abiddin, A. Masek, and N. Abd Samad, "The integration of problem-based learning in generating 21st century skills," in *2021 IEEE 12th Control and System Graduate Research Colloquium (ICSGRC)*, 2021, pp. 19–23. <https://doi.org/10.1109/ICSGRC53186.2021.9515211>
- [13] S. Kim, M. Raza, and E. Seidman, "Improving 21st-century teaching skills: The key to effective 21st-century learners," *Research in Comparative and International Education*, vol. 14, no. 1, pp. 99–117, 2019. <https://doi.org/10.1177/1745499919829214>
- [14] S. W. Moin, T. Patra, S. Mitra, and A. Dutta, "Approaches and methods in English communication," *International Journal of English Learning & Teaching Skills*, vol. 1, no. 4, pp. 323–328, 2019. <https://doi.org/10.15864/ijelts.1408>
- [15] K. Shriganeshan, "Developing writing skills in English for specific purposes classrooms through literary texts," *Journal of Teaching English for Specific and Academic Purposes*, vol. 5, no. 3, pp. 521–527, 2017. <https://doi.org/10.22190/JTESAP1703521S>
- [16] P. T. Thong, "Developing English communication skills for undergraduate students through internal communication activities in university," in *HUFLIT International Conference on Ensuring a High-Quality Human Resource in the Modern*, 2020, pp. 113–115. <https://doi.org/10.15625/vap.2020.0069>

- [17] T. Karakose, M. Demirkol, N. Aslan, H. Köse, and R. Yirci, "A conversation with ChatGPT about the impact of the COVID-19 pandemic on education: Comparative review based on human–AI collaboration," *Educational Process: International Journal*, vol. 12, no. 3, pp. 7–25, 2023. <https://doi.org/10.22521/edupij.2023.123.1>
- [18] N. Dmitrenko, A. Petrova, O. Podzygun, and S. Nikolaeva, "Strategies in autonomous learning of professionally oriented English communication," *Journal of Teaching English for Specific and Academic Purposes*, vol. 9, no. 3, pp. 527–540, 2021. <https://doi.org/10.22190/JTESAP2103527D>
- [19] Y. Pinsirikul, W. Chuduang, T. Nunainam, L. Jantawong, and V. Tapnimit, "English communication problems and solutions of Thai hotel staff working with foreigners in Phuket Province," *Journal of Liberal Arts Prince of Songkla University*, vol. 15, no. 2, p. 269038, 2023. <https://doi.org/10.14456/jlapsu.2023.19>
- [20] K. Tantiwich and K. Sinwongsuwat, "Thai university students' problems of language use in English conversation," *LEARN Journal: Language Education and Acquisition Research Network*, vol. 14, no. 2, pp. 598–626, 2021.
- [21] D. M. Alamrani, "The significance of digital communication in ESL (English as a second language) improvement," *Middle East Journal for Scientific Publishing*, vol. 3, no. 2, pp. 10–45, 2020.
- [22] A. Miniukovich and M. Marchese, "Relationship between visual complexity and aesthetics of webpages," in *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, 2020, pp. 1–13. <https://doi.org/10.1145/3313831.3376602>
- [23] L. Elisa, "Students' perceptions of using digital media in English language learning," *Journal of Social Work and Science Education*, vol. 4, no. 3, pp. 937–949, 2023. <https://doi.org/10.52690/jswse.v4i3.525>
- [24] L. Zou and Z. Zhao, "Research on the public space of contemporary cities under the background of digital media platform technology," in *2023 IEEE World Conference on Applied Intelligence and Computing (AIC)*, 2023, pp. 912–917. <https://doi.org/10.1109/AIC57670.2023.10263834>
- [25] J. Nesi, E. H. Telzer, and M. J. Prinstein, "Adolescent development in the digital media context," *Psychological Inquiry*, vol. 31, no. 3, pp. 229–234, 2020. <https://doi.org/10.1080/1047840X.2020.1820219>
- [26] F. Sharaei and A. M. Colabi, "Sustainable competitive advantage in digital media platforms: A bibliometric review," *Media Management Review*, vol. 2, no. 3, pp. 279–298, 2023.
- [27] F. N. Maulida, W. Mardiana, and S. Irfan, "Exploring tertiary students' experience of informal digital learning of English for boosting English receptive skills," *Indonesian Journal of English Language Studies (IJELS)*, vol. 8, no. 2, pp. 93–103, 2022. <https://doi.org/10.24071/ijels.v8i2.5046>
- [28] Y. Isfahani, "Improving students' motivation in learning English using digital platform: A lesson study in SMK Muhammadiyah Bumiayu," *Journal of Lesson Study in Teacher Education*, vol. 1, no. 1, pp. 45–53, 2022. <https://doi.org/10.51402/jlste.v1i1.73>
- [29] A. A. A. Aziz, K. Nallaluthan, K. Kanapathy, F. C. Y. Kho, and M. Zainal, "The digital media platforms and students' emotional intelligence during COVID-19 pandemic in Malaysia," *Jurnal Pendidikan Bitara UPSI*, vol. 15, no. 2, pp. 1–12, 2022. <https://doi.org/10.37134/bitara.vol15.2.1.2022>
- [30] V. N. Ngugi and C. Yoshida, "Digital media platform to connect small and medium enterprises in Nairobi," in *2016 IEEE/ACIS 15th International Conference on Computer and Information Science (ICIS)*, 2016, pp. 1–6. <https://doi.org/10.1109/ICIS.2016.7550808>
- [31] K. Lavidas *et al.*, "Determinants of humanities and social sciences students' intentions to use artificial intelligence applications for academic purposes," *Information*, vol. 15, no. 6, p. 314, 2024. <https://doi.org/10.3390/info15060314>

- [32] S. Athanassopoulos, P. Manoli, M. Gouvi, K. Lavidas, and V. Komis, "The use of ChatGPT as a learning tool to improve foreign language writing in a multilingual and multicultural classroom," *Advances in Mobile Learning Educational Research*, vol. 3, no. 2, pp. 818–824, 2023. <https://doi.org/10.25082/AMLER.2023.02.009>
- [33] Z. Xiuwen and A. B. Razali, "An overview of the utilization of TikTok to improve oral English communication competence among EFL undergraduate students," *Universal Journal of Educational Research*, vol. 9, no. 7, pp. 1439–1451, 2021. <https://doi.org/10.13189/ujer.2021.090710>
- [34] E. M. Abdelgadir, "Challenges of teaching English communication to Arabic students," *English Language Teaching*, vol. 12, no. 4, pp. 179–197, 2019. <https://doi.org/10.5539/elt.v12n4p179>
- [35] A. Rungswang and K. Kosashunhanan, "The problem of using English reading strategies perceived by Thai EFL students: Implications for reading instructions," *International Journal of Research in Business and Social Science*, vol. 10, no. 4, pp. 496–505, 2021. <https://doi.org/10.20525/ijrbs.v10i4.1248>
- [36] C. Nan, "Implications of interrelationship among four language skills for high school English teaching," *Journal of Language Teaching and Research*, vol. 9, no. 2, pp. 418–423, 2018. <https://doi.org/10.17507/jltr.0902.26>
- [37] M. A. Saare, A. Hussain, O. M. Jasim, and A. A. Mahdi, "Usability evaluation of mobile tracking applications: A systematic review," *International Journal of Interactive Mobile Technologies (ijIM)*, vol. 14, no. 5, pp. 119–128, 2020. <https://doi.org/10.3991/ijim.v14i05.13353>
- [38] S. Abulhaija, S. Hattab, A. Abdeen, and W. Etaiwi, "Mobile applications rating performance: A survey," *International Journal of Interactive Mobile Technologies (ijIM)*, vol. 16, no. 19, pp. 133–146, 2022. <https://doi.org/10.3991/ijim.v16i19.32051>
- [39] Z. Karabatzaki et al., "Mobile application tools for students in secondary education. An evaluation study," *International Journal of Interactive Mobile Technologies (ijIM)*, vol. 12, no. 2, pp. 142–161, 2018. <https://doi.org/10.3991/ijim.v12i2.8158>
- [40] B. A. Kumar and M. S. Goundar, "Developing mobile language learning applications: A systematic literature review," *Education and Information Technologies*, vol. 28, no. 5, pp. 5651–5671, 2023. <https://doi.org/10.1007/s10639-022-11377-x>
- [41] M. M. Elaish, L. Shuib, N. A. Ghani, and E. Yadegaridehkordi, "Mobile English language learning (MELL): A literature review," *Educational Review*, vol. 71, no. 2, pp. 257–276, 2019. <https://doi.org/10.1080/00131911.2017.1382445>
- [42] G. J. Hwang and Q. K. Fu, "Trends in the research design and application of mobile language learning: A review of 2007–2016 publications in selected SSCI journals," *Interactive Learning Environments*, vol. 27, no. 4, pp. 567–581, 2019. <https://doi.org/10.1080/10494820.2018.1486861>
- [43] A. Aloqaily, M. K. Al-Nawayseh, A. H. Baarah, Z. Salah, M. Al-Hassan, and A. R. Al-Ghuwairi, "A neural network analytical model for predicting determinants of mobile learning acceptance," *International Journal of Computer Applications in Technology*, vol. 60, no. 1, pp. 73–85, 2019. <https://doi.org/10.1504/IJCAT.2019.099502>
- [44] L. Zhou, J. Yu, C. A. Liao, and Y. Shi, "Learning as adventure: An app designed with gamification elements to facilitate language learning," in *HCI in Business, Government and Organizations. Interacting with Information Systems: 4th International Conference (HCIBGO 2017)*, in Lecture Notes in Computer Science, F. H. Nah and C. H. Tan, Eds., Springer, Cham, vol. 10293, 2017, pp. 266–275. https://doi.org/10.1007/978-3-319-58481-2_21
- [45] Y. Ohkawa, M. Kodama, Y. Konno, X. Zhao, and T. Mitsuishi, "A study on UI design of smartphone app for continuous blended language learning," in *2018 5th International Conference on Business and Industrial Research (ICBIR)*, 2018, pp. 584–589. <https://doi.org/10.1109/ICBIR.2018.8391265>

- [46] B. M. Nehe, E. N. Mualimah, W. W. Bastaman, I. Arini, and S. Purwantiningsih, "Exploring English learners' experiences of using mobile language learning applications," *JTP-Jurnal Teknologi Pendidikan*, vol. 25, no. 1, pp. 76–90, 2023. <https://doi.org/10.21009/jtp.v25i1.34883>
- [47] N. Saengsrichan, K. Thanakong, and W. Yoodee, "Using a mobile application to enhance English communication skills of paramedic students in the English for specific purposes classroom," *LEARN Journal: Language Education and Acquisition Research Network*, vol. 17, no. 1, pp. 905–926, 2024.
- [48] T. Li, "The role of interactive mobile learning in enhancing university students' foreign language writing skills," *International Journal of Interactive Mobile Technologies (IJIM)*, vol. 18, no. 14, pp. 28–43, 2024. <https://doi.org/10.3991/ijim.v18i14.50405>
- [49] H. Pathan, S. A. Moskvitcheva, S. Khatoun, I. O. Aleksandrova, "The relationship between teachers' motivation, professional development, and mobile technology integration in language learning," *International Journal of Interactive Mobile Technologies*, vol. 18, no. 9, pp. 50–60, 2024. <https://doi.org/10.3991/ijim.v18i09.48865>

8 AUTHORS

Jaemjan Boonyopakorn is with the Rajamangala University of Technology Suvarnabhumi, Ayutthaya, Thailand.

Pinyaphat Tasatanattakool is with the Rajamangala University of Technology Suvarnabhumi, Ayutthaya, Thailand (E-mail: pinyaphat.t@rmutsb.ac.th).

Prachyanun Nilsook is with the King Mongkut's University of Technology North Bangkok, Bangkok, Thailand.

Panita Wannapiroon is with the King Mongkut's University of Technology North Bangkok, Bangkok, Thailand.