

CHAPTER II

REVIEW OF RELATED LITERATURE

A. Theoretical Description

1. Mobile Assisted Language Learning (MALL)

a. Definition of MALL

Along with the times, mobile devices are increasingly developing into tools for education, especially in the learning process. The learning tool is called mobile learning (mLearning). Mobile learning is a medium for acquiring various knowledge and skills by using mobile technology anywhere and everywhere to produce behavioral changes.¹ In addition, the development of technology has also penetrated language learning by using a tool called MALL. In the 1980s, MALL was first operated by Twarog and Pereszlenyi, involving telephones for distance language learning.² MALL is a branch of mobile-based learning that uses mobile technology in language learning.

MALL is defined as a reference to language learning activities facilitated, mediated or enhanced by mobile devices.³ The definition of MALL, according to Kukulska-Hulme, is a mobile technology such as smartphones in language learning where the device offers various advantages and portability.⁴ It can be said that MALL can be used to learn any language using portable

¹Simon Geddes, "Mobile Learning in The 21st Century: Benefit for Learners," *Knowledge Tree E-Journal* 30, no. 3 (2004): 214–28, <https://hdl.voced.edu.au/10707/383787>.

²Dorota Czerska-Andrzejewska, "Mobile Assisted Language Learning," *Zeszyty Glottodydaktyczne* 6 (2014): 43–52.

³Tayebeh Mosavi Miangah, "Mobile-Assisted Language Learning," *International Journal of Distributed and Parallel Systems* 3, no. 1 (January 31, 2012): 309–19, <https://doi.org/10.5121/ijdps.2012.3126>; Debra Hoven and Agnieszka Palalas, "(Re)Conceptualizing Design Approaches for Mobile Language Learning," *CALICO Journal* 28, no. 3 (May 30, 2011): 699–720, <https://doi.org/10.11139/cj.28.3.699-720>; K E Valarmathi, "Mobile Assisted Language Learning," no. 2 (2011).

⁴Agnes Kukulska-Hulme, "Mobile-Assisted Language Learning," in *The Encyclopedia of Applied Linguistics*, ed. Carol A. Chapelle, 1st ed. (Wiley, 2020), 1–9, <https://doi.org/10.1002/97811405198431.wbeal0768.pub2>.

mobile devices. Some of these devices can be cell phones/smart phones/mobile phones, MP3 or MP4 players, pads, PDAs or handheld devices that can be used for texting, voice calls/video chats, playing mp3s/ mp4s, web browsing, and so forth.

In its use, MALL has a solutive role in language learning in terms of time and place. This can happen because learners only need a mobile device without the need to sit in a classroom or in front of a computer to receive learning materials. With personal and portable devices, the application of MALL can provide a new learning atmosphere and create continuous interaction with different contexts of use. Students can interact with peers or teachers more easily to achieve collaborative learning.⁵ In addition, MALL can encompass formal learning in traditional classrooms as well as informal learning.⁶This can improve access to learning activities and tasks for both in-class and out-of-class learning activities.

b. Types of MALL

Below are several types of MALLs, including:⁷

1. Mobile Phone-based Applications

It is an early language learning program designed specifically for use on mobile devices. Research by Brown began using this program in 2001 using e-mail, voice, and voice-recognition to train vocabulary, quizzes, word translations and phrases. There were also experiments conducted by UK researchers who used the text messaging feature of

⁵Yueh-Min Huang et al., "A Ubiquitous English Vocabulary Learning System: Evidence of Active/Passive Attitudes vs. Usefulness/Ease-of-Use," *Computers and Education* 58, no. 1 (January 2012): 273–82, <https://doi.org/10.1016/j.compedu.2011.08.008>.

⁶Yueh-Min Huang and Po-Sheng Chiu, "The Effectiveness of a Meaningful Learning-based Evaluation Model for Context-aware Mobile Learning," *British Journal of Educational Technology* 46, no. 2 (March 2015): 437–47, <https://doi.org/10.1111/bjet.12147>.

⁷Agnieszka Palalas and Mohammed Ally, *The International Handbook of Mobile-Assisted Language Learning* (China Central Radio and TV University Press Co. Ltd., 2016).

cell phones via a wireless application protocol (WAP) link to an interactive TV system to hone learners' listening skills. The experiment involved an interactive TV system that allowed learners to access program summaries, vocabulary and annotations in real-time.

2. PDA-based Applications

Before the advent of smartphones, applications based on Personal Digital Assistants (PDAs) were already popular for language learning, including content delivery, practice, and assessment. PDAs represented an early form of MALL before smartphones emerged and were widely used. These systems feature touchscreens with cameras, stylus pens, and basic multimedia capabilities, making language learning interactive and portable. In addition, PDAs are equipped with wireless phone connectivity capable of storing and distributing information to connect to online dictionaries to facilitate language translation activities.

3. Media Player Applications

Media for language learning is growing along with the times, so the iPod emerged as a media in education. iPod provides features to distribute MP3 audio files or videos online and record sound. In addition, iPods are useful for creating personalized English audio dictionaries, podcasts, and vodcasts. It can help learners improve their listening skills and enrich their language understanding.

4. Web-based Applications

Web-based MALL applications emerged and began to be developed after basic cell phones could access the internet. Some web-based applications began to target vocabulary, grammar, listening, reading and pronunciation skills. In addition, these applications have given rise to web-based text blogs and web-based audiobooks, along with a platform for oral assignment submission with instructor feedback.

5. Smartphone Applications

Over the years, the programming capabilities of mobile phone operating systems have increased, leading to the development of several stand-alone MALL applications. Most of these apps are form-focused, audio-lingual, and test-based in nature. But there is nothing new that smartphones can do that has not been done on mobile devices before pedagogically. The MALL implemented on smartphones replicates what previously existed on PDAs, MP3 players, and regular cell phones.

6. Phone-based Communication Applications

The app allows users to communicate with teachers and learners through chat rooms, phone calls, video conferencing and project-based collaboration. The aspects of learning offered are highly developed, such as vocabulary, grammar, and even culture.

c. Advantages and Disadvantages of MALL

There are several advantages to the application of MALL in foreign language learning, some of which include:

1. Flexibility, Portability, and Mobility

Mobile devices' small, lightweight, and portable nature allows users to access the MALL anytime and anywhere. In addition, by using MALL-based learning, teachers can also provide various tasks without the limitation of time or location. This factor supports the language learning process as being flexible and movable and can be adjusted to the needs of learners.⁸

2. Social Connectivity and Interactivity

MALL presents features allowing users to connect with others in real-time. With no connectivity limitations, students have the opportunity to obtain

⁸Lung-Hsiang Wong and Chee-Kit Looi, "What Seems Do We Remove in Mobile-Assisted Seamless Learning? A Critical Review of the Literature," *Computers and Education* 57, no. 4 (December 2011): 2364–81, <https://doi.org/10.1016/j.compedu.2011.06.007>.

education globally.⁹ This can help learners share information and collaborate with fellow students or teachers from different countries.

3. Immediacy

MALL is designed to provide direct, instant and quick access to learning materials. It makes it easy for its users to access learning materials from various sources that are relevant to their preferences. Easily accessible learning resources allow learners to do independent learning anywhere and anytime. Besides, learners' learning experience and motivation are increased due to the advantages of MALL in supporting learning resources.¹⁰

4. Individuality

In contrast to traditional learning, learning involving MALL focuses more on individuality. Each user is provided with an account that can be personalized and adapted to each learner's needs, learning interests, learning styles, and learning speed.¹¹ In addition, MALL provides a platform for feedback so that each individual's learning progress can be well regulated.

However, besides the advantages of MALL described above, there are also disadvantages of using MALL in the learning process. These disadvantages include:

1. Pedagogical Limitation

In using MALL, learners are fully responsible for their activities during the learning process. The lack of a teacher's role in the learning process causes

⁹Solihin Solihin, "Using Mobile-Assisted Language Learning (MALL) to Teach English in Indonesian Context: Opportunities and Challenges," *VELES Voices of English Language Education Society* 5, no. 2 (October 28, 2021): 95–106, <https://doi.org/10.29408/veles.v5i2.3150>.

¹⁰George M Chinnery, "Going to the MALL: Mobile Assisted Language Learning," *Emerging Technologies*, n.d.

¹¹Yao-Ting Sung, Kuo-En Chang, and Je-Ming Yang, "How Effective Are Mobile Devices for Language Learning? A Meta-Analysis," *Educational Research Review* 16 (October 2015): 68–84, <https://doi.org/10.1016/j.edurev.2015.09.001>.

learners to lack support or guidance. In addition, the advantage of MALL which multiple devices can operate, is that it can be two blades that can make students cheat when carrying out assignments or learning tests. Teachers cannot monitor directly, so the answers sent cannot be accounted for authenticity. Moreover, the lack of a clear pedagogical framework and a genuine learning atmosphere can decrease learners' interest in learning.¹²

2. Technical Problems

Several technical issues may arise when applying MALL to learning. These problems are incompatible devices to download learning applications, limited connectivity, and user data security issues that cause leakage of learners' data. These three issues can hinder learners' overall access to learning materials and affect the effectiveness of MALL in the learning process.¹³

3. Distractions

During the learning process, learners sometimes experience distractions or things that can divert their attention. These distractions can be application notifications outside of learning, such as social media or text messages (chat), distracting learners' learning activities and disrupting their concentration. In addition, distraction can occur because students lack motivation to learn with mobile technology. Therefore, teachers must pay attention to learning design that can better attract students' interest and motivation when using MALL.¹⁴

¹²D Praveen Sam, R Shalini, and Research Scholar, Department of English, SSN College of Engineering, Chennai, India., "Limitations and Advantages in Implementing MALL in the Tertiary ESL Classrooms: A Review," *International Journal of Recent Technology and Engineering (IJRTE)* 9, no. 5 (January 30, 2021): 27–32, <https://doi.org/10.35940/ijrte.E5097.019521>.

¹³Nur Sürüç Şen, "A Critical Review on the Mobile Assisted Language Learning with a Focus on Empirical Studies," 2021.

¹⁴Okny Apriani S, Widi Syahtia Pane, and Godefridus Bali Geroda, "Teacher' and Student's Perspective on the Use of Mall (Mobile-Assisted Language Learning) in English Learning" 01, no. 02 (April 2023): 193–202.

4. Screen Size and Keypad

Screen size and resolution play an important role in learning and knowledge acquisition effectiveness. A relatively small screen on a mobile device may still be able to support watching videos or viewing text in a short time. However, learning activities that require a relatively long time can tire learners' eyes and make them uncomfortable. In addition, the small keypad can also make it difficult to type to find information or other learning activities. It can be concluded that the screen size and keypad affect the user experience when using the MALL.¹⁵

5. Internet Access and Connection

Stable connection and internet data play a big role in determining the quality of learning that relies on mobile devices. Each region has a different internet connection speed. Internet access may be very smooth for developed countries, so it does not affect MALL-based learning. But for areas still lacking internet access facilities, of course, it becomes a problem in learning. In addition, the internet quota is still quite expensive for some students in Indonesia.¹⁶

6. Lack of face-to-face communication

The lack of face-to-face communication is one of the shortcomings of MALL, especially regarding learners' speaking skills. Some studies state that the lack of face-to-face communication can affect learners' ability to practice their language skills, especially in the context of L2 learners. In addition, the absence of face-to-face interaction affects learners' confidence, motivation and discussion engagement.¹⁷

¹⁵Osama Salameh, "A Multimedia Offline Cell Phone System For English Language Learning" 2, no. 1 (2011).

¹⁶Solihin, "Using Mobile-Assisted Language Learning (MALL) to Teach English in Indonesian Context."

¹⁷Jaroslav Kacetyl and Blanka Klímová, "Use of Smartphone Applications in English Language Learning—A Challenge for Foreign Language Education," *Education Sciences* 9, no. 3 (July 11, 2019): 179, <https://doi.org/10.3390/educsci9030179>.

d. MALL Implementations in EFL Learning

Implementing MALL provides a significant variation in language learning models, especially English, in the context of EFL learning. MALL can benefit its users greatly, such as abundant and easily accessible learning resources anywhere and anytime. Learners can learn independently and flexibly without being bound by time, place and rigid learning atmosphere, so the existence of the MALL greatly helps them.¹⁸ In addition, integrating MALL with various teaching strategies will produce better output than traditional lecture learning.¹⁹

In Indonesia, teachers are also integrating MALL as a strategy to achieve cutting-edge teaching and learning approaches. In a recent study, MALL has been applied in English language teaching to access online dictionaries, collect assignments, conduct quizzes, and explore information related to learning materials.²⁰ Inggita also stated that teachers and students showed positive attitudes and favorable perceptions when implementing MALL in language classes. Overall, if MALL is implemented using the right procedures or strategies, it can benefit language learning.

Although MALL has become a trend in Indonesia, especially since distance learning was introduced, its use in speaking classes is still uneven and not optimized. This is because there are still many limitations from teachers, students, institutions, and MALL to involve MALL in language learning. Cooperation between students, teachers, government, and other education stakeholders is needed to overcome the shortcomings in implementing MALL in Indonesia. Teachers and students can help by

¹⁸Bin Zou, Hui Li, and Jiaying Li, "Exploring a Curriculum App and a Social Communication App for EFL Learning," *Computer Assisted Language Learning* 31, no. 7 (September 3, 2018): 694–713, <https://doi.org/10.1080/09588221.2018.1438474>.

¹⁹Sung, Chang, and Yang, "How Effective Are Mobile Devices for Language Learning?"

²⁰Narendra Dyah Inggita, Francisca Maria Ivone, and Ali Saukah, "How Is Mobile-Assisted Language Learning (MALL) Implemented by Senior High School English Teachers?" 7, no. 3 (2019).

understanding and developing their ability to use MALL. At the same time, the government can make laws and provide funds or budgets to develop the implementation of MALL in national education.²¹

2. The Concept of Speaking Skills

a. Definition of Speaking Skills

There are many definitions of speaking skills, according to experts. Chaney and Burk define speaking skills as constructing and sharing meaning through verbal or non-verbal symbols in diverse contexts.²² The process of speaking is closely related to what is seen, felt, heard, and expressed in the form of words.²³ Meanwhile, Rees revealed that speaking skills are basic human communication skills that involve various aspects, from pronunciation to grammar.²⁴ These aspects are phonological system, fluency, accuracy, vocabulary, grammar, and pronunciation. Therefore, speaking skills are called very complex language skills.

According to Arsjad and Mukti, speaking skills are one of the language abilities used to say a sentence and express their feelings, accompanied by inner contact with the listener through nods, eye contact, or smiles.²⁵ In addition, according to Thornburry, speaking skill is an oral communication activity involving two or more people where speakers and listeners need the ability to work together and lexical expression at high speed.²⁶ This definition is following what Wilson said: that speaking

²¹Solihin, "Using Mobile-Assisted Language Learning (MALL) to Teach English in Indonesian Context."

²²A. L. Chaney and T. L. Burk, *Teaching Oral Communication in Grades K-8* (Boston: Allyn and Bacon, 1998).

²³Ladouse, *Evaluation of Speaking* (Urbana: National Council of Teachers of English, 1991).

²⁴Charlotte Rees, Charlotte Sheard, and Amy McPherson, "Medical Students' Views and Experiences of Methods of Teaching and Learning Communication Skills," *Patient Education and Counseling* 54, no. 1 (July 2004): 119–21, [https://doi.org/10.1016/S0738-3991\(03\)00196-4](https://doi.org/10.1016/S0738-3991(03)00196-4).

²⁵Arsjad, G. Maidar, and U.S. Mukti, *Pembinaan Keterampilan Berbicara Bahasa Indonesia* (Jakarta: Erlangga, 1993).

²⁶S Thornburry, *How to Teach Speaking* (UK: Pearson, 2005).

has the purpose of creating communication by expressing it in a creative form.²⁷

Brown stated that when a person speaks a language fluently and clearly, then that person can have a competent conversation. He also argues that the ability to interact with other language speakers measures one's success in language acquisition.²⁸ Therefore, it can be said that speaking skills are one of the most important language skills to master. From some of the experts' opinions above about speaking skills, it can be concluded that speaking skills are one of the oral language skills used to express one's thoughts, ideas, or feelings through symbols and aspects of language.

b. Speaking Skills in CEFR

The Common European Framework of Reference (CEFR) is a framework for establishing consistent standards in teaching, learning, and assessment at the level of language skills and language descriptors on an international scale. To describe skill progress, the CEFR has six levels grouped into three broad categories: Basic user (A1 and A2), Independent user (B1 and B2), and Proficient User (C1 and C2).²⁹ In the context of the CEFR, overall speaking skills fall into the category of production activities. The production of overall speaking skills is divided into three macro functions, namely interpersonal, transactional and evaluative, and two more specialized genres, namely public announcements and addressing audiences.

Based on the survey results by the EF English Proficiency Index (EF EPI) in 2023, Indonesia is ranked 79th out of 113 countries and provinces worldwide and 13th out of 23 in Asia. With a score of 473 and a low proficiency group level, Indonesia is still far behind the Netherlands, which has a very high level of ability and

²⁷S. Wilson, *Living English Structure* (London: Longman, 1983).

²⁸D. H. Brown, *Principles of Language Learning and Teaching* (Englewood Cliffs; New Jersey: Prentice-Hall, Inc., 2001).

²⁹Council of Europe, *Common European Framework of Reference for Languages: Learning, Teaching, Assessment*, 2018.

holds the first position with a total score of 647. The scoring of the EF standardized English test in this survey has been adapted to the provisions of the CEFR, where the language ability of test takers has been designed and classified into one of the six CEFR levels. The CEFR levels in the EF EPI score results are explained in the table below:³⁰

Table 2. 1 CEFR Levels in EF EPI Score Results

CEFR	EF EPI Score	EF EPI Band
C2	700-800	Very high
C1	600-699	Very high
B2	550-599 500-549	High Moderate
B1	450-499 400-449	Low Very low
A2	300-399	Very low
A1	200-299	Very low
Pre-A1	1-199	Very low

Table 2.1 above shows that Indonesia, which has an average score of 473, is at the low proficiency level and falls into CEFR level B1. Examples of achievable tasks for individuals in the low proficiency group (EF EPI score 450-499) include being able to travel in an English-speaking country as a tourist, make small talk with colleagues, and understand simple emails from colleagues. In addition, Jakarta has the highest EF EPI score of all cities in Indonesia, with a score of 531 and an intermediate proficiency group level and CEFR B2 level.

The graph of English proficiency levels in Indonesia has been observed to slope in the last ten years. This is reinforced by data on the average EF EPI scoring results in 2014, which reached 506, at CEFR level B2 down to level B1, with a score of 473 in 2023. From this data, it can be concluded that overall, English language skills in Indonesia, especially in speaking skills, have

³⁰ “About EF EPI” January 5, 2024. <https://www.ef.com/wwen/epi/about-epi/>

decreased. This decrease puts the CEFR level in Indonesia at level B1 (independent user). In the category of overall spoken production at CEFR level B1, it is described as ‘being able to maintain a straightforward description of one of the various subjects in his field of interest and present it as a series of linear points quite fluently.’³¹

c. The Importance of Speaking Skills

One of the abilities needed to achieve success and goals in the current era of globalization is the ability to communicate with others. The ability to communicate is closely related to speaking skills, which play an important role and are often assessed in the field or the real world. As the position of English as a global communication language strengthens, the need for English-speaking skills is increasing.³² Speakers must be equipped with qualified speaking skills to run any system smoothly. Therefore, among the four main language skills (listening, speaking, writing, and reading), speaking skills are considered the most important and useful in human life.

According to experts, speaking skills are one of the most important and difficult skills to master among the four language skills for learners.³³ This skill is useful for learners to maximize social interactions, improve careers, develop businesses, build confidence, obtain brilliant job opportunities, make public speeches, develop creativity, maximize group discussions or debates, attend interviews, present something, and many more.³⁴ In

³¹Council of Europe, *Common European Framework of Reference for Languages: Learning, Teaching, Assessment*, 2018.

³²Situjuh Nazara, “Students’ Perception on EFL Speaking Skill Development,” *JET (Journal of English Teaching)* 1, no. 1 (February 1, 2011): 28, <https://doi.org/10.33541/jet.v1i1.50>.

³³A. D. Madrid Bueno, *TEFL in Secondary Education* (Granada: Editorial Universidad de Granada, 2006).

³⁴Shamim Akhter et al., “Exploring the Significance of Speaking Skill for EFL Learners,” 2020; Parupalli Srinivas Rao, “The Importance of Speaking Skills in English Classrooms” 2, no. 2 (2019): 6–18.

addition, learners who master speaking skills well can perform effectively in real-life social situations. Given the importance of speaking skills and the myriad benefits of mastering them, EFL learners struggle to master them.

d. Teaching and Learning Speaking Skills for L2 Learners

English language teaching and learning is essential for L2 learners to equip them in diverse contexts and transfer them to other situations later.³⁵ Despite the importance of speaking skills, teaching these skills is still underestimated in language classrooms. Teachers only focus on productive skills such as writing and reading skills in learning. Poor methods of learning to speak are also the reason why many learners are lacking in speaking skill acquisition. In class, they are only crammed with materials and assignments that make students become passive listeners. In the process of speaking, most of them lack confidence and feel embarrassed because they are not fluent in English. Therefore, many L2 learners think learning English is scary and have problems with speaking skills.³⁶ To overcome these problems, learners should be given as many opportunities as possible in language classes to speak and practice the target language in meaningful contexts and situations.³⁷

Harmer mentioned that there are four things learners need to learn a new language, namely by recognizing it, knowing its meaning, understanding its form, and practicing it.³⁸ Teachers have the main task of introducing language to learners so that it can be useful someday. In the context of L2 learners, English is a new language because, in reality, L2 learners are less exposed

³⁵Noprianus Tammu Batang, "Teaching Speaking of English As A Foreign Language: Problems and Solutions" 2 (2016): 105–28.

³⁶Bueno, *TEFL in Secondary Education*.

³⁷David Nunan, *Language Teaching Methodology: A Textbook for Teachers* (New York: Prentice Hall, 1991).

³⁸Harmer, *How to Teach Language: An Introduction to the Practice of English Language Teaching* (Addison Wesley Longman Limited, 1998).

to the English language and its culture. Therefore, in English teaching and learning, teachers can communicate only in English so that students can be more exposed to English and maximize the quantity and quality of input. Language exposure is the main source of success in foreign language acquisition.³⁹

3. Systematic Review

a. Definition of Systematic Review

A systematic review is a review of evidence on formulating clear questions using systematic and explicit methods to identify, select, and critically assess relevant primary studies and then extract and analyze data from these studies.⁴⁰ A review is systematic if it is based on a formulated question, a process of identifying relevant studies and assessing their quality, and summarizing the evidence using explicit research methods. Newman and Gough defined systematic review as a research approach combining primary studies' findings or so-called secondary-level analysis to answer research questions using methods.⁴¹

From the two definitions above, it can be concluded that a systematic review is a review of existing research using an explicit and accountable methodology. This method aims to synthesize and assess all relevant existing studies and of high quality to answer research questions.⁴² The review questions influence important decisions about what types of studies to include, where to

³⁹Nuril Huda, *Language Learning and Teaching: Issues and Trends* (Malang: IKIP Publisher, 1999).

⁴⁰Anju Sinha, Geetha R. Menon, and Denny John, *Beginner's Guide for Systematic Reviews: A Step by Step Guide to Conduct Systematic Reviews and Meta-Analysis (An ICMR Publication)* (Indian Council of Medical Research, 2022).

⁴¹Olaf Zawacki-Richter et al., *Systematic Reviews in Educational Research; Methodology, Perspectives and Application* (Wiesbaden: Springer Fachmedien Wiesbaden, 2020), <https://doi.org/10.1007/978-3-658-27602-7>.

⁴²Mark Vrabel, "Preferred Reporting Items for Systematic Reviews and Meta-Analyses," *Oncology Nursing Forum* 42, no. 5 (September 1, 2015): 552–54, <https://doi.org/10.1188/15.ONF.552-554>.

look, how to assess the quality of the studies, and how to combine the findings of multiple studies.

b. Procedures of Systematic Review

The majority of systematic reviews have a common set of procedures. The procedure is divided into different but still interrelated stages. The key stages of a systematic review include developing a research question, designing a conceptual framework, establishing construction criteria, developing a search strategy, selecting studies that fit the criteria, coding, assessing study quality, synthesizing the results of each study to get the answer to the research question, reporting findings.⁴³ These steps show that rigor and consistency are important in obtaining valid findings.

For more details, Khan explained the procedure for conducting a systematic review, which is divided into five steps:⁴⁴

1. Developing questions for the review

Before starting a systematic review, researchers need to develop clear, structured, and unambiguous research questions. The review questions give a specific structure to each review and make it easier for researchers to decide what studies to include, where to look for them, how to assess their quality, and how to combine their findings. Overall, this process results in a conceptual framework that explains the main issues to be researched.

2. Identifying relevant studies

The search for studies should be done extensively. Before identifying, researchers must establish selection criteria (inclusion or exclusion criteria) to provide boundaries for the study review.

⁴³Mark Newman and David Gough, "Systematic Reviews in Educational Research: Methodology, Perspectives and Application," in *Systematic Reviews in Educational Research*, ed. Olaf Zawacki-Richter et al. (Wiesbaden: Springer Fachmedien Wiesbaden, 2020), 3–22, https://doi.org/10.1007/978-3-658-27602-7_1.

⁴⁴Khalid S Khan et al., "Five Steps to Conducting a Systematic Review" 96 (2003).

Identifying studies needs to pay attention to how the search strategy is carried out, such as selecting search sources and search terms (keywords or controlled terms) that will be used to search the bibliographic database. After finding relevant studies, the researcher needs to do coding to find the details of the study to map the studies, find how the research was conducted to assess the quality of the study and its relevance to the research question and find the results of each study which are then synthesized to answer the review question.

3. Assessing the quality of the study

Critical appraisal is the process of assessing study quality in a systematic review. General critical appraisal guidelines and design-based quality checklists are used to assess the quality of the selected studies. Three elements need to be considered in the critical appraisal: the appropriateness of the study design to the review question, the quality of the research methods and their relevance to the review question. These three elements aimed to explore heterogeneity, inform decisions on the appropriateness of the criteria, and help assess the strengths of the findings and recommendations for future research.

4. Summarizing the evidence

The process of summarizing evidence from studies is certainly not easy to do. When synthesizing data, it is necessary to pay attention to the tabulation of study characteristics and quality and use statistical methods to review the differences between studies and combine their effects. Exploration of heterogeneity and sources must also pay attention to planning.

5. Interpreting the findings

The above four procedures must be fulfilled before interpreting the findings. After that, the risk of research bias and related biases should be explored further. Exploration of heterogeneity helps researchers determine whether the summary of evidence from quality studies is reliable. In addition, the findings are used to generate conclusions and recommendations

that are assessed based on the strengths and weaknesses of the study evidence.

B. Theoretical Framework

Mobile-assisted language learning (MALL) is becoming a trend as technology develops. Researchers have also mentioned that using MALL is effective as a medium or method of language learning. Access to abundant learning resources and ease of operation in terms of time and place are among the myriad benefits offered by MALL. In addition, MALL also significantly impacts on the language skills of L2 learners, especially their speaking skills, as it is known that speaking skills are one of the most needed skills for L2 learners and are the key to successful language acquisition.

The theoretical framework is a conceptual model of how theories relate to various factors identified as important problems in a study.⁴⁵ In this study, the systematic review method was conducted to analyze the use of MALL on the speaking skills of L2 learners with publication years 2019 to 2023. The author used Publish or Perish software to support the primary data search process. The Systematic Literature Review (SLR) method was applied in this study concerning PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) 2020 guidelines and checklists for selecting studies. The following is a chart of the theoretical framework to guide this research:

⁴⁵Sugiyono, *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, Dan RandD)* (Bandung: CV Alfabeta, 2013).

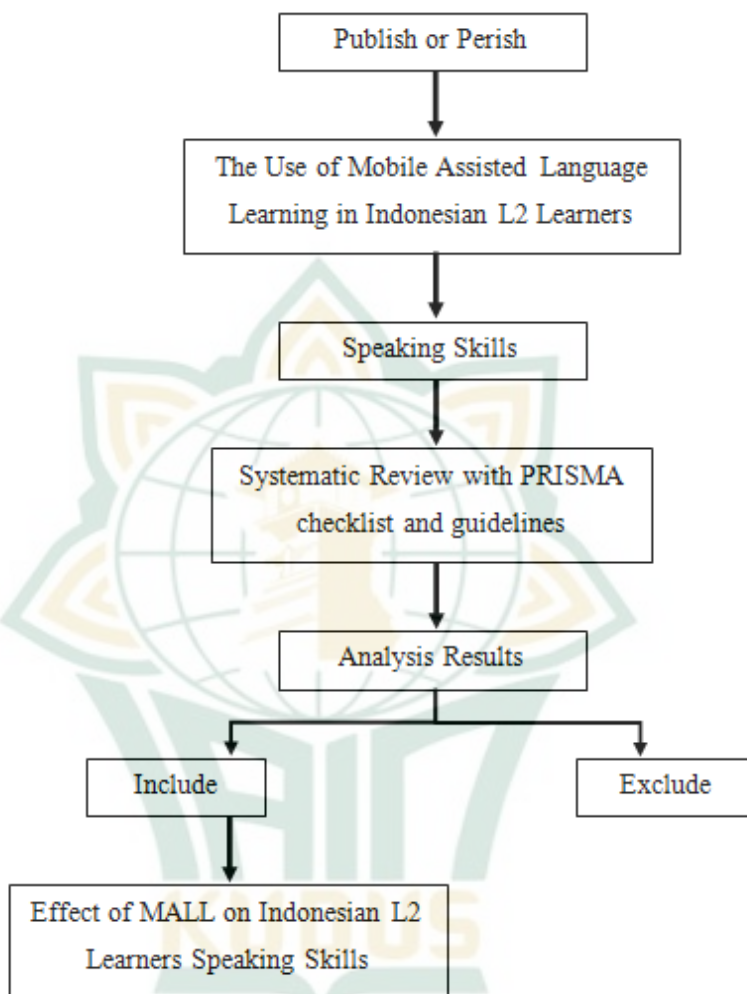


Figure 2. 1 Theoretical Framework

Publish, or Perish software is used in the research to obtain literature data. The selected literature topic in this research data source is the implementation of MALL in ELT to improve the speaking skills of L2 learners. The keywords used in the data search are Mobile Assisted Language Learning, MALL, Speaking skills, ELT, L2 learners, and Indonesia. The selection of keywords is based on providing boundaries and focusing the study data on this research topic. In searching,

filtering, and selecting studies, researchers report these stages using the PRISMA 2020 diagram reference to get relevant data identification.

After screening the titles and abstracts, the researcher was further screened using the inclusion and exclusion criteria. The inclusion criteria for this study are journal articles that focus on using MALL to improve the speaking skills of Indonesian L2 learners, with a publication range of 2019 to 2023. In other words, literature other than journal articles, such as books, book chapters, conference proceedings, thesis, and dissertations, are included in the exclusion criteria. This research data source excluded articles with meta-analysis, systematic review or literature review methods. In addition, the language used in the study must be English. Therefore, this study aims to explore the effects of MALL on the speaking skills of Indonesian L2 learners.

C. Review of Previous Study

The first previous study is the article published in 2021 by Ziyi Zhou titled “A Systematic Review on the Use of Mobile-Assisted Language Learning (MALL) for Enhancing Speaking Skills in Chinese EFL Context.” In this study, the authors analyzed and synthesized research articles on MALL on speaking skills of ESL and EFL learners in China from 2017 to 2021. In addition, the author synthesized the articles' findings to identify the theories and frameworks used and found mobile device tools and digital mobile applications (APPs) that can be used to improve learners' speaking skills in China. A holistic and balanced picture is presented in this study of MALL's progress in improving the English-speaking skills of Chinese EFL learners across different timelines and contexts. The method used in this study was a systematic review that adopted the PRISMA principles and guidelines by Moher et al.⁴⁶ Various databases were used in this study to search for relevant articles, including Scopus, WOS, Wileys, Proquest, ERIC, Jstor, Emerald and Taylor and Francis. The findings of this

⁴⁶D. Moher et al., “Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement,” *BMJ* 339, no. jul21 1 (July 21, 2009): b2535–b2535, <https://doi.org/10.1136/bmj.b2535>.

study show that the main forms of research design often applied in some of these publications are pre-experimental and quasi-experimental research. In addition, the theories of using MALL in speaking skills are task-based learning, flipped learning, and social-cultural.⁴⁷

The similarity between Zhou's and the author's research is using MALL to improve EFL learners' English speaking skills. In addition, the same method is used, namely the systematic review method, to analyze empirical research studies. However, the difference in this research is in the year of study publication for the source of the analyzed data. Zhou used publications from 2017 to 2021, while the author chose publications with publication years spanning the last five years (2019-2023). There are also differences in the focus on the subject and sample of the data source research. In this study, the data focuses on Chinese EFL learners in China, while the author chooses a data source that focuses on Indonesian L2 learners in Indonesia.

The second previous study is the article journal published in 2015 by Guler Duman, Günseli Orhon, and Nuray Gedik titled "Research Trends in Mobile Assisted Language Learning from 2000 to 2012". The purpose of this study is to analyze the research published from 2000 to 2012 by examining the characteristics and development trends of MALL in recent years, including language learning topics, theoretical framework, learning environment, methodologies, types of research, and research design and showing the extent to which MALL is operated to assist language learning in these publications. This study uses a literature review to investigate trends in MALLs from 2000 to 2012, focusing on the learning environment, content delivery, technology utilization, and the use of MALLs in the learning process. Publications in International Journals Indexed in the Social Science Citation Index (SSCI) were selected due to strict review criteria and high impact in the field. The results of this study show that field

⁴⁷Ziyi Zhou, "A Systematic Literature Review on the Use of Mobile-Assisted Language Learning (MALL) for Enhancing Speaking Skills in Chinese EFL Context," *International Journal of Frontiers in Sociology* 3, no. 15 (2021), <https://doi.org/10.25236/IJFS.2021.031502>.

research since 2008 has increased rapidly and in 2012 has reached its peak. The findings show that the main topics in the analyzed publications are vocabulary teaching and using MALL in the English classroom environment.⁴⁸

The similarity of the research By Duman et al. with the author's research is the method used in conducting research, namely using the systematic review method. However, there are several differences between this study and the author's research. The most prominent difference is the focus on research objectives. The research conducted by Duman et al. focuses on examining the characteristics and research trends in MALL. In contrast, the author focuses on using MALL to improve the speaking skills of Indonesian L2 learners. In addition, the year of publication of the study for the source of the analyzed data also has a significant difference. Duman et al. used publications from 2000 to 2012, while the author chose data sources from 2019-2023 to gain novelty.

The third previous study is the article journal published in 2021 by Panagiotis Arvanitis and Penelope Krystally titled, "Mobile Assisted Language Learning (MALL): Trends from 2010 to 2020 Using Text Analysis Technique". The widespread use of MALL as a pedagogical tool for learning languages, especially English, is the background for this research. This study aims to analyze the main topics of published research over the past decade (2010-2020) and uncover whether the research focus on MALL has shifted to certain issues. Text analysis techniques and tools were used in this study to obtain the desired results and findings. The author used the Google Scholar database to search for journal articles, articles in conference proceedings, and book chapters or books. More than 340 publications were retrieved and analyzed based on their year of publication, title, and topic. The findings of this study revealed that research topics related to MALLs have been of interest to researchers for the last five years. These topics include pronunciation, speaking skills, listening skills,

⁴⁸Guler Duman, Günseli Orhon, and Nuray Gedik, "Research Trends in Mobile Assisted Language Learning from 2000 to 2012," *ReCALL* 27, no. 2 (May 2015): 197–216, <https://doi.org/10.1017/S0958344014000287>.

vocabulary skills, perception, attitudes, learner engagement, motivation, and autonomy.⁴⁹

Research from Arvanitis and Krystally with the author's research have similarities in using the systematic review method and analyzing publications within a ten-year time frame. However, the author's research selected studies for 2019 to 2023, while Arvanitis and Krystally chose studies for 2010-2020. Another difference lies in the research focus and the study's criteria to be analyzed (data source). This research focuses on trends in academic studies that discuss MALLs. In addition, Arvanitis and Krystally included journal articles, reviews in conference proceedings, and book chapters or books as data sources. Meanwhile, the author's research focuses on using MALL in Indonesian L2 learners' speaking skills and only uses journal articles and conference proceedings papers as primary data sources.

The fourth previous study is the journal article published in 2021 written by Thirumangai Rajendran and Melor Md Yunus with the title, "A Systematic Literature Review on the Use of Mobile-Assisted Language Learning (MALL) for Enhancing Speaking Skills among ESL and EFL Learners." This study aims to synthesize and analyze publications related to MALL on speaking skills of EFL and ESL learners in the period 2016-2020. In this study, Rajendran and Yunus used the systematic review method with the strategy adopted by Khan et al.⁵⁰ In searching for data sources, they found 15 articles that fit the inclusion criteria from two leading databases, Google Scholar and Educational Resources Information Center (ERIC). The results of this study suggest that the use of MALL has greatly impacted the speaking skills of EFL and ESL learners. In addition, the application of MALL propagates the concepts of constructivism theory (collaborative learning, active learning, contextual learning, and authentic learning), promotes an enjoyable English language learning environment without the

⁴⁹Panagiotis Arvanitis and Penelope Krystalli, "Mobile Assisted Language Learning (MALL): Trends from 2010 to 2020 Using Text Analysis Techniques," *European Journal of Education* 4, no. 1 (April 1, 2021): 13–22, <https://doi.org/10.26417/ejls-2019.v5i1-191>.

⁵⁰Khan et al., "Five Steps to Conducting a Systematic Review."

burden of stress, supports independent learning and is easy to use.⁵¹

The similarity of the research by Rajendran and Yunus with the author's research is that both examined the use of MALL to improve EFL learners' English speaking skills. In addition, the same method was used, namely the systematic review method adopted by Khan et al. as a guide in analyzing data sources. However, several things distinguish this research from the author's. The author uses Publish or Perish software to get data sources so that the data coverage is wider than that of the study by Rajendran and Yunus, which relies only on Google Scholar and ERIC databases. The period of publication of data sources is also different. This study only analyzes publications published in 2016-2020, while the author's research includes publications published in the last five years (2019-2023). In addition, the focus on the data source study by Rajendran and Yunus is still general, namely EFL and ESL learners. Meanwhile, the author focuses on Indonesian L2 learners.

The fifth previous study is the journal article published in 2021 by Irudayasamy, Uba, and Hankins titled "Exploration and Exploitation of Mobile Apps for English Language Teaching." This study explores the potential use of MALL in education, especially in ELT, from research published in 2015 to 2020. The method used was a literature review, which was done by selecting several publications from Google Scholar, ScienceDirect, SAGE, and IEEEExplore. A total of 13 articles, according to the inclusion criteria, were obtained and coded based on the technology used, pedagogical practices, research methodologies, and context of usage. This study's findings show that mobile technology is increasing in language learning, especially English. Moreover, MALL is said to help learners achieve learning goals, enrich English vocabulary, and increase their confidence in acquiring English.⁵²

⁵¹Thirumangai Rajendran and Melor Md Yunus, "A Systematic Literature Review on the Use of Mobile-Assisted Language Learning (MALL) for Enhancing Speaking Skills among ESL and EFL Learners," *International Journal of Academic Research in Progressive Education and Development* 10, no. 1 (March 23, 2021): Pages 586-609, <https://doi.org/10.6007/IJARPED/v10-i1/8939>.

⁵²Julius Irudayasamy, SaniYantanduUba, and Carmel Antonette Hankins, "Exploration and Exploitation of Mobile Apps for English Language Teaching: A

The similarity between the research by Irudayasamy et al. and the author's research is that both discuss the use of mobile applications for English language learning. However, many things distinguish this research from the author's research. The significant difference is the research focus and the methods used in both studies. The study by Irudayasamy et al. uses the critical review method and focuses on mobile applications and mobile technology used in ELT, which is still general. On the other hand, the author's study used the systematic review method and focused on using MALL by L2 learners in Indonesia. In addition, the year of publication of the article for the data source analyzed by this study is different from the author's research. Irudayasamy et al. used publications from 2015 to 2020, while the authors chose data sources from 2019-2023.

The sixth previous study is the journal article published in 2021 by Mitchell Shortt et al. titled "Gamification in Mobile-Assisted Language Learning: A Systematic Review of Duolingo Literature from Public Release of 2012 to Early 2020". The purpose of this study is to summarize studies related to gamification in Duolingo published in 2012-2020. Shortt et al. analyzed these publications based on the methods, frameworks, settings, and research samples used to assess Duolingo's design and its impact on learning outcomes. The method used was a systematic review and meta-analysis guided by the PRISMA coding scheme guidelines. The method was chosen to select articles from several databases, including EBSCOHost, Web of Science, Scopus, ProQuest, JSTOR, and Electronic Journal Center. The results of this study show that most of the research from 2012-2020 used design-focused, quantitative, and non-probability sampling methods. In terms of effectiveness, gamification elements in Duolingo provide mixed results on student learning outcomes.⁵³

Critical Review," *English Language Teaching* 14, no. 4 (March 24, 2021): 43, <https://doi.org/10.5539/elt.v14n4p43>.

⁵³Mitchell Shortt et al., "Gamification in Mobile-Assisted Language Learning: A Systematic Review of Duolingo Literature from Public Release of 2012 to Early 2020," *Computer Assisted Language Learning* 0, no. 0 (2021): 1-38, <https://doi.org/10.1080/09588221.2021.1933540>.

Shortt et al. and the author's research have similarities in using the systematic review method and grouping data source analysis. The difference between these two studies lies in the focus of the research locus, data source period, and data source inclusion criteria. The author's research is more about the use of MALL on Indonesian L2 learners' speaking skills, while Shortt et al. focus more on the use of gamification on MALL in the context of ESL learners from all over the country. Another difference is the period and inclusion criteria of publications used as data sources. This study reviewed publications published from 2012 to 2020 covering articles in various languages (English, Spanish, Russian, Portuguese, Mandarin, or Hindi). Meanwhile, the authors reviewed articles from the last five years (2019-2023) and only reviewed articles in English.

The seventh previous study is the journal article published in 2019 by Jen-Jiun Lin and Huifen Lin titled "Mobile-Assisted ESL/EFL Vocabulary Learning: A Systematic Review and Meta-Analysis." This study aims to synthesize findings from quasi-experimental studies published from 2005 to 2018. Lin and Lin examined whether there is a relationship between MALL use and ESL/EFL learners' word retention. The quantitative meta-analysis and systematic review methods were used in this study to synthesize those adopted by Cooper.⁵⁴ A total of 33 eligible studies met the criteria and then went through the coding process to get the findings. The result of this study states that MALL has a positive and large effect on L2 learners' word retention. However, it is mentioned that SMS/MMS mode has a more positive effect on L2 learners' vocabulary knowledge than mobile apps.⁵⁵

The similarity of this study with the author's research is that both use the systematic review method in conducting literature research. In addition, these two studies explore almost the same topic related to using L2 learners' MALL. However, several things distinguish this study from the research

⁵⁴Harris M. Cooper, *Research Synthesis and Meta-Analysis; A Step-by-Step Approach* (Thousand Oaks: SAGE Publications, 2017).

⁵⁵Jen-Jiun Lin and Huifen Lin, "Mobile-Assisted ESL/EFL Vocabulary Learning: A Systematic Review and Meta-Analysis," *Computer Assisted Language Learning* 32, no. 8 (November 2, 2019): 878-919, <https://doi.org/10.1080/09588221.2018.1541359>.

conducted by the author. The authors focus on the speaking skills of L2 learners in Indonesia, while Lin and Lin focus more on vocabulary learning for EFL learners in general. The period of publication of the data sources is also different. This study only analyzes publications published between 2005 and 2018, while the author's research covers publications published in the last five years, from 2019 to 2023. In addition, data sources that are qualitative and use questionnaires are exclusion criteria in this study. Meanwhile, the author includes all quantitative and qualitative studies as primary data sources.

The last previous study is the journal article published in 2023 by Made Hening Ayu Arsari, Sri Sumarni, and Darmahusni titled "Mobile Assisted Language Learning (MALL) in English Language Education." This study aims to analyze the role of MALL in English language learning towards improving learners' receptive and productive skills in studies published in the vulnerable years 2018-2022. The method used is a systematic review that refers to PRISMA and an adaptation of Khan's method.⁵⁶ The author used reputable journals in the Google Scholar and ERIC databases to search for articles. Only 27 articles that fit the inclusion and exclusion criteria were then analyzed based on the methods of each study, whether quantitative, qualitative, or mixed methods. The result of the findings in this study is the improvement of four main language skills, namely listening, speaking, reading, and writing, in Indonesian L2 learners after integrating MALL into their language learning.

The author's and Arsari et al.'s research are comparable in that they both examine the effects of MALL on the language proficiency of Indonesian L2 learners. The systematic review approach that Khan et al. used to examine data sources is also employed. Furthermore, the subjects in the study that served as data sources had a similar focus—L2 learners in Indonesia. Nonetheless, this research differs from the author's findings in a few ways. Unlike the study by Arsari et al., which solely depends on the Google Scholar and ERIC databases, the author obtains data sources using the Publish and Perish software, which increases the data coverage. The publication year of data

⁵⁶Khan et al., "Five Steps to Conducting a Systematic Review."

sources is also different. Unlike the author's research, which covers publications published within the last five years (2019–2023), this analysis solely examines publications published between 2018 and 2022. Arsari et al.'s data source study also has a broad focus, covering all four language skills—listening, speaking, reading, and writing—including productive and receptive skills. However, the author's research on the speaking abilities of Indonesian L2 learners is the only emphasis.⁵⁷

From the eight studies mentioned, it can be concluded that research related to the use of MALL has been massively implemented and has various focuses.⁵⁸ The focus of these studies ranges from MALL trends from year to year to the effect of MALL on EFL/ESL learners' language skills. However, none of the eight studies above have reviewed using MALL to improve Indonesian L2 learners' speaking skills. Therefore, to fill this gap, the author presents a systematic literature review of relevant studies published from 2019 to 2023, especially in the context of foreign language learners in Indonesia.

⁵⁷Made Hening Ayu' Arsari, Sri Sumarni, and Darmahusni, "Mobile Assisted Language Learning (MALL) in English Language Education," *English Language* 6, no. 1 (n.d.).

⁵⁸Zhou, "A Systematic Literature Review on the Use of Mobile-Assisted Language Learning (MALL) for Enhancing Speaking Skills in Chinese EFL Context"; Duman, Orhon, and Gedik, "Research Trends in Mobile Assisted Language Learning from 2000 to 2012"; Arvanitis and Krystalli, "Mobile Assisted Language Learning (MALL)"; Rajendran and MdYunus, "A Systematic Literature Review on the Use of Mobile-Assisted Language Learning (MALL) for Enhancing Speaking Skills among ESL and EFL Learners"; Irudayasamy, Uba, and Hankins, "Exploration and Exploitation of Mobile Apps for English Language Teaching"; Shortt et al., "Gamification in Mobile-Assisted Language Learning: A Systematic Review of Duolingo Literature from Public Release of 2012 to Early 2020"; Lin and Lin, "Mobile-Assisted ESL/EFL Vocabulary Learning"; Arsari, Sumarni, and Darmahusni, "Mobile Assisted Language Learning (MALL) in English Language Education."