

**MOBILE LEARNING IN READING: STUDENTS'
ATTITUDES, READINESS AND CHALLENGES
IN PRIVATE SCONDARY SCHOOLS
IN PERAK**

MOHANDAS NAIDU PERUMAL

SULTAN IDRIS EDUCATION UNIVERSITY

2025



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**DISSERTATION TO QUALIFY FOR A MASTER'S DEGREE IN EDUCATION
(TEACHING ENGLISH AS SECOND LANGUAGE)
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Signature of the Supervisor

DR. HEMA VANITA KESEVAN
Senior Lecturer
Department of English Language and Literature
Faculty of Languages and Communication
Universiti Pendidikan Sultan Idris
Tanjong Malim, Perak



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ABSTRACT

This study investigates students' attitudes, readiness, and challenges associated with implementing mobile learning for reading in private secondary schools in Perak. A survey research approach was employed to address the research objectives. The study involved 120 upper secondary students selected through purposive sampling from two private schools located in Ipoh and Teluk Intan. Quantitative data were collected using questionnaires and analysed using percentage frequency distribution to identify trends in attitudes and readiness levels. For qualitative insights, 24 students were randomly selected from the survey participants for semi-structured interviews. The qualitative data were analysed thematically to uncover recurring patterns and deeper insights into students' experiences and challenges. The findings reveal that students generally exhibit a positive attitude towards mobile learning, recognizing its potential to enhance reading skills. A notable level of readiness was observed, with students expressing confidence in using mobile devices for educational purposes. The interviews provided context to these findings, highlighting the significant role of teachers in fostering a supportive environment for mobile learning adoption. This study underscores the potential of mobile learning as a tool to improve reading skills in secondary education. It also emphasizes the importance of addressing the identified challenges through targeted strategies, including structured training for students and teachers, minimizing distractions, and adopting a balanced integration of mobile learning into existing pedagogical practices. The findings contribute to the growing body of research on mobile learning in education and provide practical recommendations for enhancing its effectiveness in reading.





**INTEGRASI TEKNOLOGI MUDAH ALIH DALAM PEMAHAMAN
BACAAN: SIKAP, KESEDIAAN DAN CABARAN PELAJAR
DALAM KALANGAN PELAJAR SEKOLAH
MENENGAH SWASTA DI PERAK**

ABSTRAK

Kajian ini bertujuan untuk meneliti sikap, tahap kesediaan, dan cabaran yang dialami pelajar dalam pelaksanaan pembelajaran menggunakan peranti mudah alih dalam di sekolah menengah swasta di Perak. Pendekatan penyelidikan soal selidik digunakan untuk memenuhi objektif kajian ini. Kajian ini melibatkan 120 pelajar tingkatan atas yang dipilih melalui pensampelan bertujuan daripada dua sekolah swasta di Ipoh dan Teluk Intan. Data kuantitatif dikumpulkan menggunakan soal selidik dan dianalisis menggunakan pengagihan kekerapan peratusan bagi mengenal pasti trend dalam sikap dan tahap kesediaan. Untuk mendapatkan pandangan kualitatif, 24 pelajar dipilih secara rawak daripada peserta tinjauan untuk ditemubual secara separa berstruktur. Data kualitatif dianalisis secara tematik untuk mengenal pasti corak berulang dan mendapatkan pemahaman yang lebih mendalam tentang pengalaman dan cabaran pelajar. Dapatan kajian menunjukkan bahawa pelajar secara umumnya mempunyai sikap positif terhadap pembelajaran mudah alih dan mengiktiraf potensinya dalam meningkatkan kemahiran membaca. Tahap kesediaan yang ketara turut diperhatikan, di mana pelajar menunjukkan keyakinan dalam menggunakan peranti mudah alih untuk tujuan pendidikan. Temu bual memberikan konteks kepada dapatan ini, dengan menonjolkan peranan penting guru dalam mewujudkan persekitaran yang menyokong penerapan pembelajaran mudah alih. Kajian ini menekankan potensi pembelajaran mudah alih sebagai alat untuk meningkatkan kemahiran membaca dalam pendidikan menengah. Ia juga menegaskan kepentingan menangani cabaran yang dikenal pasti melalui strategi yang disasarkan, termasuk latihan berstruktur untuk pelajar dan guru, meminimumkan gangguan, serta mengintegrasikan pembelajaran mudah alih secara seimbang ke dalam amalan pedagogi sedia ada. Dapatan ini menyumbang kepada peningkatan badan penyelidikan mengenai pembelajaran mudah alih dalam pendidikan dan memberikan cadangan praktikal untuk meningkatkan keberkesannya dalam pembacaan.



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CHAPTER 1

INTRODUCTION



Today's students belong to a generation that has grown up surrounded by advanced technologies, which have seamlessly integrated into their everyday lives. These digital natives are highly accustomed to using digital tools, particularly mobile phones, which have become indispensable. In Malaysia, especially in urban areas, students frequently own multiple digital devices. Among these, mobile phones stand out as the most widely used and essential tool (Osman et al., 2021).

In 1973, mobile phones were invented to enhance communication among people. Its creation has truly improved and simplified communication among people, and over time, additional features were gradually introduced to satisfy the needs and desires of the users starting from the brick phones of the past to today's smart mobile phones, the primary function of a mobile phone has evolved from merely connecting

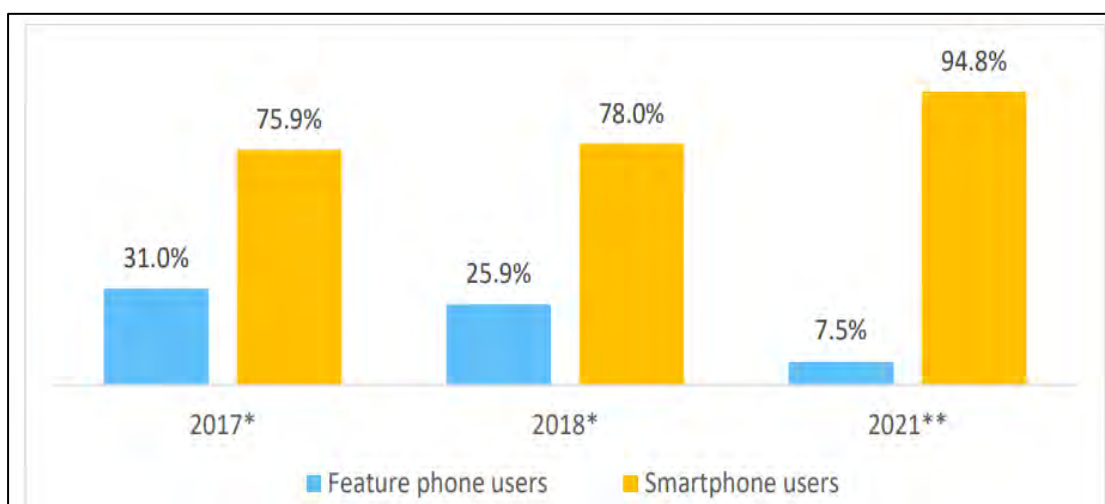


people to managing office tasks, providing entertainment, overseeing finances and accounts and facilitating the exchange of information. The Malaysian Communication and Multimedia Commission (MCMC) in Handphone Users Survey 2021 reported that the number of smartphone users in Malaysia has increased 100% during the Covid-19 pandemic. An in-depth investigation on the penetration rate of mobile users showed that 96.2% rural inhabitants and 92.3% urban dwellers stated they were using smart mobile phones.

The presence of the Internet has extended communication means through social media platforms such as Facebook, Instagram, Snapchat, WhatsApp, Telegram, YouTube, Twitter and more allowing people to stay connected and share their regular updates frequently based on the activeness of the user. The MCMC report confirms that people have started moving to using smartphones from feature phones for its ubiquity.

Figure 1.1

Percentage Distribution of Smartphone and Feature Phone Users

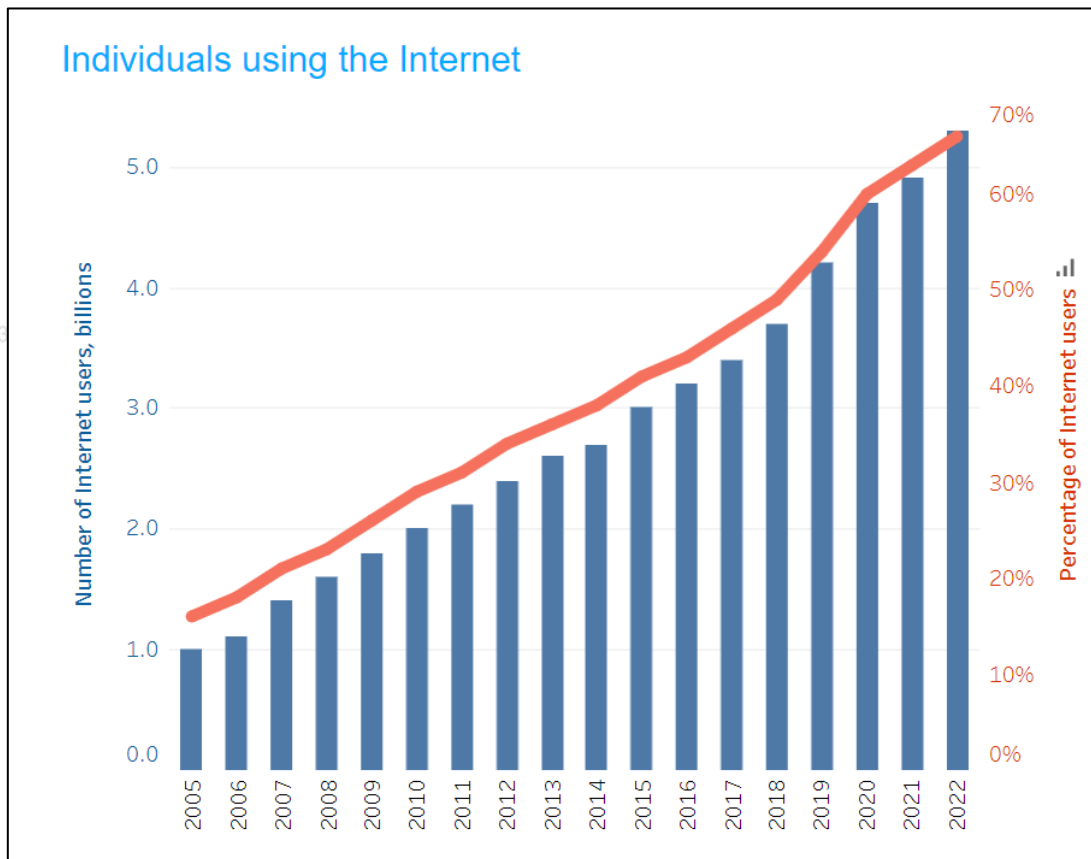


Mudasir Khazer (2019) states that a person feels incomplete without a smartphone, which has transformed every aspect of human development such

Education and Research, Business, Health, Sports, Entertainment and more. Anderson et al (2006) claimed that there were an estimated number of 2 billion people across the globe using handphones with more than 680 million mobile phones were sold. ITU's report in 2018 shows that the percentage of people using Personal Digital Assistant (PDA) and laptop with Wireless Fidelity (Wi-Fi) has doubled since 2006.

Figure 1.2

Individuals using the Internet



With the presence of smart mobile phones, the percentage of internet users have inclined drastically over the years. This is directly proportional to students learning at schools. With the latest added features in the smart mobile phones, students are offered with many educational facilities which has forced the integration of Mobile Learning (M-Learning) in classrooms. Research shows that M-learning can assist students learn



in various subjects especially in information technology (Hamidi & Chavoshi, 2017), business (K Mac Callum & Jeffrey, 2013), and education (Y. Liu, Li, & Carlsson, 2010).

As mobile phones become indispensable tools for learning both within and beyond the classroom, they have catalyzed the emergence of an enhanced version of e-learning, referred to as 'M-learning.' This approach promotes autonomous and active learning, enabling learners to access educational content anytime and anywhere, embodying the concept of ubiquitous learning. According to Nikolopoulou (2018), mobile learning leverages the portability, connectivity, and multifunctionality of mobile devices to create flexible, personalized, and interactive learning environments, which are increasingly favored by modern learners.



Gael and Elmiana (2021) emphasize Mobile-Assisted Language Learning (MALL) as a crucial extension of Computer-Assisted Language Learning (CALL), tailored specifically for mobile platforms. MALL facilitates on-the-go learning by enabling language learners to engage in practices such as vocabulary building, pronunciation exercises, and contextual communication in real-time. The rising ubiquity of smartphones among students has led to the development of Smartphone-Assisted Language Learning (SPALL), introduced by Leis et al. (2020), which integrates advanced smartphone functionalities like augmented reality, gamified learning apps, and multimedia tools to enhance student engagement and language proficiency.





Smartphones offer opportunities to extend learning far beyond traditional classrooms. Recent studies by (Sisouvong & Pasanchay, 2024) suggest that mobile technologies provide dynamic learning experiences through features like personalized feedback, immediate content access, and peer-to-peer interaction. Furthermore, mobile learning aligns with learner-centered education, fostering independence and accommodating diverse learning styles. This adaptability positions smartphones as critical instruments in the evolution of modern education, offering solutions to bridge gaps in traditional methodologies and improve overall learning outcomes.

Recent research reinforces these advantages: a meta-analysis by Hennessy et al. (2022) found a moderate-to-strong effect size (Hedges' $g \approx 0.88$) for MALL on L2 achievement, though with noted methodological risks. Belardi et al. (2021) demonstrated that integrating spacing, corrective feedback, and testing within mobile vocabulary learning apps improved retention by about 29%. In the Malaysian context, Abd Karim (2025) reported positive perceptions toward smartphone-based English learning among undergraduates, while IJEPC (2022) found that mobile learning platforms such as WhatsApp, Telegram, and Google Classroom supported creativity, collaboration, and inclusive participation during COVID-19, despite challenges in readiness and infrastructure. Policy initiatives like Malaysia's JENDELA (2021–2025) are actively enhancing 4G coverage and mobile broadband speeds, strengthening the feasibility of nationwide mobile learning. Conceptually, Mercan et al. (2024) highlight a shift toward personalized, context-aware mobile learning ecosystems that integrate formal and informal learning spaces.





For centuries, education has traditionally taken place in formal classroom environments where students interact directly with their teachers, making each exchange significant and impactful. However, the advent of mobile phones, computers, and communication technologies such as desktops and laptops has significantly simplified the learning process. Since the introduction of mobile phones in the 1980s, these devices have gained widespread popularity among people of all ages worldwide (Huet and Tcheng, 2010). It can be argued that the world is becoming increasingly mobile; mobile phones are no longer just communication tools but also personal and portable technological assets. Today, computing devices, including smartphones, have become essential to daily life, to the point where many feel incomplete without them. Smartphones have transformed nearly every aspect of human development (Mudasir Khazer, 2019). Modern society relies heavily on technology, particularly mobile devices. According to Campbell (2005), the use of mobile phones has become a global trend and an integral part of the lives of the younger generation.

According to Rosenberg (2001), "the largest growth in the internet will lead to one of the most significant agents of change." This statement was made by John Chambers. Malaysia must prioritize integrating mobile devices into classroom instruction if it is to stay competitive and relevant in the global educational landscape. Malaysian schools can develop creative, inclusive, and student-centered learning experiences that equip students for the needs of a digital future by utilizing mobile technology.

Recent research reinforces these points. Meta-analyses confirm MALL's positive effects, with a moderate-to-strong impact (Hedges' $g \approx 0.88$) on L2





achievement compared to traditional methods, though caution is urged due to high bias risks (Hennessy et al., 2022). Studies integrating spacing, feedback, and multimodality into mobile learning have shown up to a 29% improvement in retention (Belardi et al., 2021). Malaysian undergraduates express positive perceptions toward smartphone-based English learning, indicating readiness for broader adoption (Abd Karim, 2025). Reviews of the COVID-19 period highlight that mobile platforms such as WhatsApp, Telegram, and Google Classroom fostered creativity, collaboration, and engagement, despite infrastructure challenges (IJEPC, 2022). The ongoing JENDELA initiative (2021–2025) has significantly expanded 4G coverage and speeds, strengthening the foundation for nationwide mobile learning (Wikipedia, 2025). Theoretical advances emphasize learner-centered, context-aware mobile learning, integrating formal and informal environments for personalized experiences (Mercan et al., 2024).



Hence, with the increasing ubiquity of mobile technologies, teaching and learning have become deeply intertwined with digital advancements. Mobile technology has revolutionized education by enabling access to vast networks of resources and fostering flexible learning environments. In Malaysia, the adoption of mobile technology in education is gaining momentum, supported by widespread access to green campus Wi-Fi services across most public universities. Schools, too, must embrace this progressive shift to ensure that the education system keeps pace with global advancements.





1.2 Background of the Study

The education sector is undergoing a significant transformation, and traditional methods, such as physical classrooms, are gradually being phased out. Mobile technology has started to influence the education field, making learning more accessible and adaptable to diverse needs. Prensky (2004) predicted that mobile phones might soon become a dominant educational tool in higher education, reaching a point where it would be as indispensable as the pen. Similarly, Suwantarathip and Orawiwatnakul (2015) highlighted that the use of mobile phones for learning has gained widespread recognition and adoption, particularly in language teaching institutions. Recent studies have confirmed this trend, showing that mobile-assisted learning significantly improves ESL learners' reading comprehension and vocabulary acquisition, especially when gamified elements are included (Al-Emran, Malik, & Al-Kabi, 2021).

Studies have explored key factors impacting the quality of online education, such as communication, technology, time management, pedagogy, and assessment (Bassoppo-Moyo, 2006; Eston & Schmit, 2005; Ko & Rossen, 2010; Limperos et al., 2015). Furthermore, the COVID-19 pandemic has accelerated the global adoption of mobile learning. During this period, teachers and students were compelled to rely on mobile devices for remote teaching and learning. The advancement of modern digital technologies has become a driving force in education, with information and communication technologies (ICT) playing a vital role. Mobile applications as educational tools have enabled teaching and learning to be conducted effectively and efficiently. Research between 2020 and 2024 has highlighted that mobile-assisted





language learning not only increases student engagement but also fosters greater autonomy in ESL learning contexts (Chen, Zou, & Xie, 2022; Rahman & Islam, 2024).

Mobile learning (M-learning) focuses on transforming traditional education into a teaching and learning process that is no longer constrained by geographic barriers (Sharples, Taylor & Vavoula, 2005). In developed nations, M-learning has been shown to positively impact cognitive development, attitudes, and motivation. The availability of mobile applications has made teaching and learning more convenient, allowing educators and learners to access materials anytime and anywhere, removing the need for traditional desktop setups (Nagata & Abad, 2017; Yadegaridehkordi & Alaa, 2017). Recent evidence from Malaysian ESL classrooms demonstrates that mobile reading applications significantly improve reading fluency and comprehension among secondary students (Nguyen & Le, 2023).

In Malaysia, M-learning gained significant traction during the COVID-19 pandemic. The crisis prompted countries, including Malaysia, to implement drastic measures such as the Movement Control Order (MCO) beginning March 18, 2020, to curb the virus's spread. Following the MCO, the Malaysian Ministry of Education introduced the Home Teaching and Learning Policy (PdPR) to ensure continuity in education. Educators across all levels, from kindergarten to higher education, utilized e-learning platforms such as WhatsApp, Telegram, Google Classroom, Zoom, and Google Meet to facilitate remote learning. To address accessibility, educational television programs were also broadcast for two hours daily. By April 22, 2020, Malaysia ranked third globally in Google Classroom usage during the MCO and fifth for overall use in the previous 12 months (Kim and Bog, 2021). Studies in the





Malaysian context have shown that ESL students using mobile apps such as Quizlet and Kahoot reported higher motivation and improved reading outcomes (Hashim, Yunus, & Hashim, 2021).

Essentially the Covid-19 had formed a new teaching and learning paradigm in Malaysian classroom, where the focus has shifted from traditional chalk and talk method to online learning. Although at present the teaching and learning process has fully resumed to classroom settings, M-learning is still widely used in teaching and learning process in ESL classrooms. Students at private schools are allowed to bring smart mobile phones to school for academic learning purposes although all students are back in school for face-to-face learning.



In ESL learning, reading is considered as a crucial receptive skill to be mastered. The development of reading skill is deemed essential as it serves as a basic building block for learning process (Baker & Wigfield, 2000). Following the result of Overview of the Economic Assessment of Malaysia (ODEC, 2022) our students have achieved below average score on PISA for reading. In comparison to global average score against other countries, Malaysia is far below international standard. Many ESL students still struggle to master reading and exhibit low motivation when it comes to reading. With that, a new learning strategy is needed to improve students' interest and motivation to cultivate reading habit, and master reading skill. Many mobile phone-based applications are available in the market focusing on the mastery of reading. As the current school-aged generation shows great interest in utilizing M-learning in learning process, this research will be significant in addressing students' attitudes, readiness and challenges in using mobile technologies in reading. Recent findings suggest that





integrating M-learning into reading instruction is particularly effective in blended learning settings, where students can reinforce classroom lessons through self-paced mobile activities (Rahman & Islam, 2024).

1.2.1 Definition and Theory of Mobile Learning

M-learning refers to a learning approach that leverages mobile technologies for teaching and learning activities between teachers and students. Its flexible mobility allows learning to occur anytime and anywhere, transcending constraints of time, location, and distance (Taylor and Sharples, 2006). Sharples et al. (2005) emphasize that learning should be unbounded, enabling students to actively contribute to discussions on various topics. For M-learning to be effectively implemented, teachers should provide guidance while encouraging students to engage in knowledge acquisition through discussions, group activities, and collaborative learning. This approach fosters interaction, enhances understanding, and improves communication between teachers and students, ultimately increasing student motivation (DeWitt and Siraj, 2010; Rafidatul Suib and Johari Surif, 2013).

Vavoula et al. (2005) suggest that teachers should prioritize using technological tools to enrich and expand students' knowledge through collaborative efforts with peers and teachers. Moreover, students should be encouraged to explore beyond a single content area, broadening their learning context and avoiding reliance on limited information. The integration of new technologies in education has become increasingly prevalent, supporting learning in various disciplines, including English. Researchers





find these technologies particularly useful for investigating their impact on student academic performance. While M-learning and e-learning share similarities in that both utilize electronic and internet-based tools for education, M-learning stands out for its mobile-specific capabilities.

1.2.2 Development of M-learning in Malaysia

In Malaysia, M-learning has become a familiar concept, particularly in universities and colleges offering distance learning programs. This approach caters to working adults who wish to further their studies but are unable to attend physical classes. Gibbons et al. (2018) describe how various mobile technologies have been employed to enhance communication. Over the past decade, advancements in technology have enabled educators to integrate online games into foreign language teaching, which keeps learners engaged, improves focus, and fosters an active learning environment (Abrams & Walsh, 2014; Yürük, 2019; Chiang, 2020; Zou, 2020; Resmayani & Putra, 2020). A 2023 systematic review of mobile-assisted vocabulary learning in ESL/EFL contexts noted that digital gamified environments, when aligned with pedagogical goals, significantly improved learners' vocabulary retention and engagement (Nawaz, Ganapathy, Manzoor, Ezzy, & Farooqi, 2025).

In Malaysia, particularly in urban areas, students have grown accustomed to using games as instructional tools. These games are practical and engaging resources that motivate learners positively and create meaningful educational experiences (San Millán & Priego, 2014). Recently, M-learning has taken a significant step forward with





the introduction of gaming into education. While traditional physical games like Scrabble, Snakes and Ladders, and Monopoly remain effective and engaging tools in language classrooms, mobile phone-based games tend to captivate students more, making the learning process more enjoyable and interactive. Gamified classrooms offer students opportunities to collaborate in dynamic environments that move away from traditional lecture-and-exam setups. Instead, students experience innovative, motivating methods that encourage learning and practice (Hanus & Cruz, 2018). Frontiers et al. (2025) reported that gamified EFL classrooms significantly improved students' reading proficiency and foreign language learning enjoyment, with game-based reading tasks fostering deeper engagement and collaborative learning.

Research supports the positive impact of gamification in education. Göksün and Gürsoy (2019) found that using Kahoot as a formative assessment tool significantly improved academic performance and student engagement over a semester. Similarly, Iwamoto, Hargis, Taitano, and Vuong (2017) demonstrated that mobile applications in lessons helped students prepare for high-stakes exams, with findings indicating improved exam performance. However, systematic reviews caution that gamification's benefits sometimes decline over time due to the "novelty effect"; long-term learning gains depend heavily on thoughtful design and scaffolds, not on superficial game mechanics (Rodrigues et al., 2022; Frontiers in EFL/ESL review, 2022).

The COVID-19 pandemic in 2020 accelerated the adoption of M-learning in Malaysia when schools closed, and distance learning became the norm. During this period, mobile learning seamlessly integrated with e-learning as the dominant mode of





education, requiring minimal changes to content while adapting interfaces to mobile platforms.

Online games have also gained popularity in English language classrooms across Malaysia. Reading-focused applications such as Read Theory, Breaking News English, and ReadWorks are now portable and can be installed on mobile devices. These apps, with their simple interfaces and user-friendly designs, have made learning more accessible. Additionally, the integration of artificial intelligence (AI) into M-learning has provided a significant advantage, offering personalized feedback and adaptive worksheets or assignments tailored to individual student levels. This shift away from a "one-size-fits-all" model highlights the flexibility and effectiveness of M-learning, which gained widespread momentum following the government-mandated Movement Control Order during the pandemic. A longitudinal study in 2023 found that mobile-assisted reading materials initially boosted children's lexical diversity in the first post-test but aligned with traditional materials in later assessments, suggesting mobile support may have early advantages that require continued stimulus to sustain (Liu, Ni, & Liu, 2023).

1.2.3 Differences between e-learning and M-learning

Sharpley et al. (2005) describe M-learning as a subset of E-learning. It transforms the E-learning experience by enabling learning to occur anytime and anywhere. Keegan (2002) highlights that mobile learning represents the future of education, with learning environments shaped by wireless technologies. Similarly, Barbosa and Geyer (2005)





suggest that as learners move, they essentially carry their learning environments with them, allowing education to be seamlessly integrated into their daily lives (as cited in Laouris & Eteokleous, 2005). In a similar vein, Saedah (2004) states that there are seven distinguish differences between M- and E-learning and all of the aspects play an important role to differentiate the difference of both types learning which does not involve the physical presence in the class during the pandemic.

Table 1.1

A Comparison between Aspects of e-learning and M-learning

No	Aspect	E-Learning	M-learning
1	Ownership	Owned by an individual, institution or organization	Belong to specific individuals
2	Devices used	Refers to the use of desktop computers, chrome book in schools, institutions, organisations or personal computers at home.	Personal mobile devices such as laptops, netbooks, tablet computers, and smartphones that comes with internet facility
3	Forms of learning	Learning is behaviourism, cognitivism for the majority of students. Students access courseware and materials online for learning	Personalized learning, situational learning, and authentic learning, discovery, access, and knowledge creation
4	Mobility for students	Students can access learning materials using a Local Area Network (LAN) or a compact disc.	Students access learning materials without time and place from the internet.
5	Learning Context	Formal learning in the classroom and at home	Formal and informal learning in the office, school, while traveling. In developing countries.
6	Ingredients organization	Learning materials in the form of courseware are delivered via LAN or CD ROMs or other storage devices and learning materials in the form of objects via a Learning Management System (LMS) on the internet.	Learning materials in the large capacity form are sent via LMS via the internet or short message service (SMS). Students also generate content through discussion and interaction.
7	Knowledge	Knowledge is gained through cognitive processes and inquiry	Knowledge is constructed through peer interaction and learning content materials.





Agah Tugrul Korucu & Ayse Alkan (2011) described the common misconception people have about M-learning and E-learning which is M-learning is an evolution of E-learning. Although E-learning is a form of distance learning, it is no different to traditional learning in a formal or classroom setting. M-learning however, though it uses applications evolved from E-learning, has a characterized technology and its own terminology. E-learning for example uses words such as multimedia, interactive, hyperlinked, media-rich environment while M-learning uses terms like spontaneous, intimate, situated, connected, informal, lightweight is among the terminology of m-learning. M-learning can happen 24/7 instantaneously and assignments or tests can be individualized according to the child's need, (Sharma & Kitchens, 2004). Unlike E-learning, M-learning offers flexible time to work and receive instant feedback upon submission.



1.3 Statement of Problem

Education in Malaysia continues to evolve as the Ministry of Education (MOE) undertakes significant efforts to enhance its quality. This includes reforming the curriculum, transitioning from the Integrated High School Curriculum (KBSM) to the Standard Curriculum for Secondary Schools (KSSM) and from the Integrated Elementary School Curriculum (KBSR) to the Standard Curriculum for Primary Schools (KSSR). In line with these reforms, the MOE has collaborated with FrogAsia (2014) and Google Classroom (2019) under the DELIMA platform to introduce virtual and blended learning environments in schools. Information and Communication Technology (ICT) plays a crucial role in these efforts, extending beyond science and





mathematics to include language subjects like Bahasa Melayu (Jamaludin & Mohamed Amin, 2013). Recent evidence suggests that the integration of mobile learning within such reform frameworks has boosted student engagement and aligned well with blended delivery models (Pedraja-Rejas, Muñoz-Fritis, Rodríguez-Ponce, & Laroze, 2024).

As Nuryanto (2013) explained, ICT combines complex hardware and software to offer high-capacity solutions at relatively low costs, enabling consumers to select mobile devices suited to their needs and budgets. During the COVID-19 pandemic, the Malaysian education system adapted to fully virtual learning. Teachers, parents, and students relied on mobile devices and internet connectivity for lessons conducted via platforms such as Google Classroom, Google Meet, Zoom, YouTube, Quizizz, WhatsApp, Telegram, and Kahoot. These tools facilitated exercises, notes, educational videos, chats, virtual debates, and ongoing teacher instructions. Despite these advancements, the shift required financial, mental, and physical readiness to navigate the challenges of virtual education. A bibliometric analysis of Malaysian online learning research from 2020 to 2022 revealed a notable surge in studies, reflecting rapid adoption and scholarly interest in remote and mobile learning strategies (Mustapha, Awang, Mahmud, Paris, Zakaria, & Ibrahim, 2024).

Critics often attribute the lack of success in widespread ICT adoption to insufficient resources and facilities in many schools. However, the real barrier was the reliance on and comfort with traditional classrooms. Resistance to change among some teachers, coupled with a lack of platform training, further hindered progress. Nevertheless, the pandemic marked a turning point. The widespread necessity for online education demonstrated the importance of embracing mobile technology in





teaching and learning. This sentiment is echoed in recent Malaysian research emphasizing that teacher digital competency and institutional readiness remain critical for effective ICT integration, beyond infrastructure alone (Murad, Jusoh, & Rahman, 2024).

Harsha R. (2020) identified key challenges faced during this transition. First, many students, especially in rural areas, struggled with limited internet connectivity and lacked access to 4G-compatible devices for streaming lessons. Even students with high-spec devices encountered poor learning experiences due to buffering and lag caused by weak internet signals. Second, the abrupt shift from physical to online learning was difficult for many students, requiring them to adapt quickly to a completely new system. Despite these obstacles, the government prioritized the use of online platforms, as lockdowns made in-person learning impossible. A qualitative study of Malaysian university students found that emergency remote teaching during the pandemic significantly impacted students' satisfaction and psychological well-being, indicating that emotional and motivational support is essential in online/mobile learning contexts (Ainin et al., 2023).

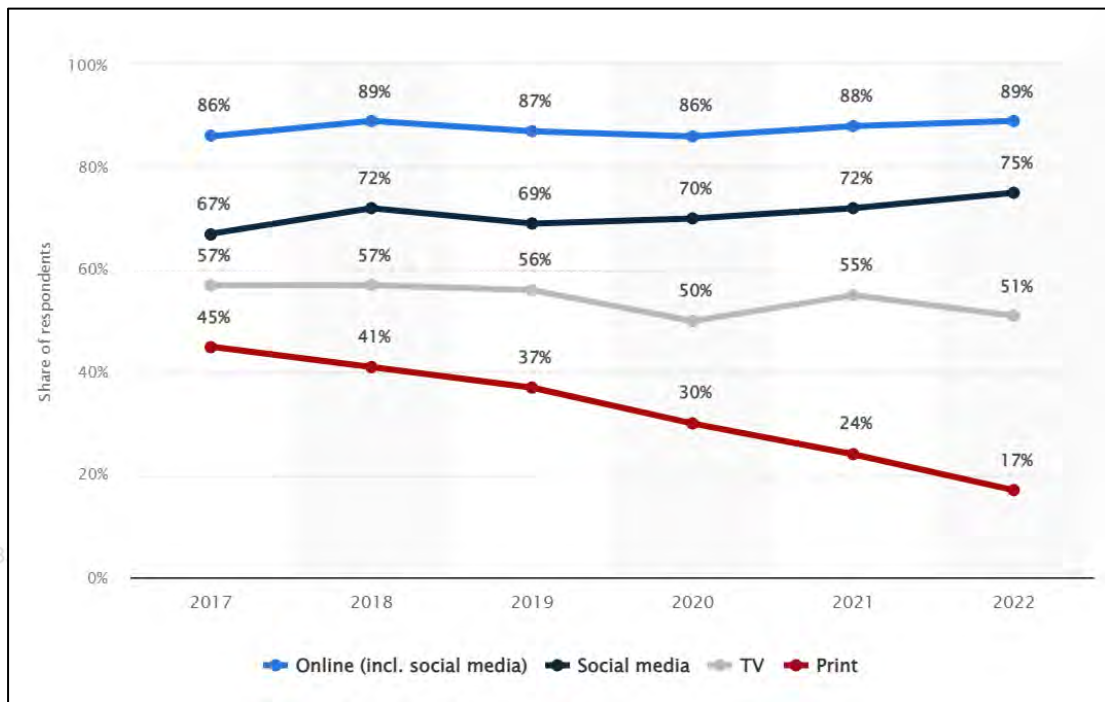
Today, mobile apps in language learning primarily serve as supplementary tools for language acquisition. The shift in reading habits among Malaysians reflects the broader changes brought by digitalization. Over the past five years, newspaper readership has declined while the use of online resources and social media for news and updates has surged. This trend suggests a generational preference for online materials, which offer free access, diverse perspectives, and interactive features such as comments



and replies. These changes highlight the potential of digital resources to reshape learning and engagement in the education sector.

Figure 1.3

Percentage of Online Resource Preference vs Printed Materials



As evidenced in the table above, online resources preferred over printed materials for reading. In schools, the use of mobile technology in learning is on the rise, overall, despite the hurdles. One of the reasons is over the last ten years, online games have been integrated into language teaching and learning in class by teachers to keep learners engaged, improve attention and create active learning environment (Abrams & Walsh, 2014; Yuruk, 2019; Chiang, 2020, Zou, 2020; Resmayani & Putra, 2020). Reading is one of the fundamental skills one has to master in order to master a language. However, reading habits among Malaysians are becoming poorer, this is parallel with the PISA score achieved by Malaysian in 2024. Although in school level, NILAM program is implemented to promote reading habit among students, it just sees the



number of books students read over the quality of reading. Hence, with the aid of the artificial intelligence supported mobile applications such as ReadTheory, EnglishMaven, EnglishForEveryone.org, and Lit2go, not only students get to access to texts in interactive way but also specific texts according to students' potentials. This ensures students are challenged with texts that suits them. However, the question that arises is are students ready for this as reading is seen as a time-consuming activity by students.

Therefore, inside and outside classrooms, the blended learning (BL) approach (a combination of face-to-face instruction and online learning) is the best to be implemented in relation to their use (Klimova, B.; Prazak, P, 2019). Overall, the blended learning approach appears to be more effective than the use of only traditional instruction (Klimova, B.; Prazak, P, 2019). A recent Malaysian study underscores that blended learning models, when combining web-based tools and careful instructional design, significantly enhance ESL learners' 21st-century competencies and motivation (Hanin, 2024). Hence, with plenty of resources available online, M-learning should enhance learners' reading skills.

1.4 Purpose of the Study

The purpose of this study is primarily to investigate the attitude, readiness and challenges faced by the students in using mobile technologies in reading. The readiness of students for M-learning needs to be assessed, as its implementation in Malaysia is still relatively new and was hastily introduced during the Covid-19 pandemic.





Broskoske and Harvey (2000) found that many high schools were not adequately prepared to adopt online learning. Similarly, recent studies in Malaysia indicate that while students generally possess mobile devices, gaps remain in digital literacy, internet stability, and pedagogical integration for effective M-learning adoption (Rasidi, Arifin, & Hashim, 2022). Despite the passage of time and the widespread use of mobile phones in everyday life, transitioning to online teaching, particularly M-learning, remains a relatively fresh concept. Statista (2016) reported that there are 6.648 billion smartphone users worldwide, representing 83.07% of the global population. More recent data highlights that smartphone penetration in Malaysia has surpassed 96%, yet readiness for academic use still varies significantly by socioeconomic status and geographic location (Malaysian Communications and Multimedia Commission [MCMC], 2023). This figure highlights the significant potential for utilizing mobile technology in education, even as institutions work to meet the demands of M-learning. Basically, smartphones have become a part of life for majority of human being and it has directly impacted us in many ways, such as interest, performance, motivation and preferences. This study also explores the impact of students' motivation and learning environment as key factors in their readiness to embrace M-learning. Recent findings emphasize that motivation, self-regulation, and teacher support are decisive factors for sustaining student engagement in mobile-based reading activities (Yusof & Aziz, 2024). Motivation and self-discipline are critical challenges faced by students, making this examination particularly vital. The findings of this research will provide valuable insights into the extent to which students are motivated to use mobile technologies for learning. Ultimately, in an era of rapid change, it is inevitable that traditional schools will eventually give way to a ubiquitous learning model, where education occurs anytime and anywhere through mobile technologies.





In order to investigate students' attitudes, readiness and challenges in m-learning focusing on reading skills, this study focuses on two private secondary schools in the state of Perak; Ipoh (urban) and Teluk Intan (semi-urban). Furthermore, having results from two schools from different settings will give us a more accurate findings with regard to this study. A number of 120 students from these schools are recruited to participate in this study.

1.5 Research Objectives

The research aims to achieve the following objectives:

1. To examine the attitude of the students in using of mobile technology in reading.
2. To assess the readiness of the students towards the use of mobile technology in reading.
3. To examine the possible challenges in using mobile technologies in the process of improving reading by students.

1.6 Research Questions

This research intends to provide an answer to the three research questions;

1. What are the students' attitudes towards the use of M-learning in reading skill?
2. What is the level of readiness of the students to the implementation of M-learning in reading skill?





3. What are the possible challenges students face during the implementation of M-learning in reading skill?

1.7 Definition of Terms

i. Mobile technology

Mobile technology refers to any portable device equipped with reliable internet connectivity, enabling users to access information and services from virtually any location. Currently, this category includes devices such as smartphones, tablets, certain iPods, and laptops. As technology continues to advance, this list is expected to expand further in the coming years.



ii. M-learning

M-learning or mobile learning is a learning approach that emerged from the integration of mobile technology and e-learning. It allows learners to access e-learning content anytime and anywhere, making use of dynamically created resources and enabling communication with others. M-learning serves as a valuable tool to complement both traditional classroom learning and distance learning methods.

iii. Reading

Reading is an active, purposeful process that goes beyond merely looking at words on a page. It involves interacting with the text, recognizing when comprehension breaks





down, and employing strategies to restore understanding. According to Richards and Schmidt (2010), reading is a complex cognitive process where symbols are decoded to derive meaning, serving as a means for language acquisition and effective communication. Pearson et al. (1992) further emphasize that reading requires the integration of prior knowledge and context to construct meaning actively. Goodman (1967) describes reading as a psycholinguistic guessing game where thought and language interplay to enable comprehension. Additionally, Gough and Tunmer (1986) highlight that reading requires the simultaneous recognition of symbols, understanding their meaning, and integrating this information with existing knowledge. Together, these definitions underscore reading as an intricate skill that blends cognitive, linguistic, and contextual elements.



iv. **Ubiquitous learning**



Ubiquitous learning refers to a learning environment integrated into daily life, supported by mobile and embedded computing devices, as well as wireless networks (Ogata et al., 2009). Its primary goal is to provide learners with access to content and interactive learning opportunities anytime and anywhere (Hwang et al., 2008).

v. **Challenges**

The integration of mobile technology in learning, while promising, presents a multifaceted set of challenges that extend beyond mere technical access. These challenges represent significant barriers that can hinder effective implementation, adoption, and sustained use, potentially negating the pedagogical benefits. According





to Crompton and Burke (2020), a primary challenge persists in the pedagogical domain, where educators often lack the professional development necessary to move beyond basic substitution uses of technology towards pedagogically sound practices that truly leverage the unique affordances of mobility, collaboration, and personalization. This is compounded by what Ng and Cumming (2020) identify as a critical digital divide challenge, which encompasses not only inequitable access to devices and reliable internet but also a gap in the digital literacy skills required to use mobile tools effectively for academic purposes. Furthermore, Sailin and Mahmor (2020) emphasize the socio-cultural challenge, noting that negative perceptions of mobile devices as distractions, alongside concerns about cyber wellness and classroom management, can create significant institutional resistance. Additionally, Klimova and Pikhart (2020) highlight ongoing structural challenges, including issues of data privacy, security, and the cognitive overload that students can experience when navigating between multiple applications and unstructured digital content. Together, these recent scholarly perspectives underscore that the challenges of mobile learning are not merely logistical but are deeply rooted in pedagogical, socio-economic, and cognitive factors that require comprehensive and strategic solutions. In this research, the main challenges that will be focused are the acquired knowledge and skills for using mobile technology in reading.

vi. Readiness

Readiness refers to a state of comprehensive preparedness, encompassing the necessary technological infrastructure, digital competencies, pedagogical alignment, and strategic support required for the successful integration of an innovation. In the context of





education, assessing readiness for mobile learning is a critical diagnostic step that enables institutions to identify gaps, allocate resources effectively, and mitigate the risk of implementation failure. According to Ally (2009), conducting a thorough readiness assessment is a fundamental yet often overlooked prerequisite, as it provides a realistic snapshot of the existing capabilities and attitudes within an educational ecosystem. This assessment must be multi-faceted. As West (2012) argues, true readiness extends beyond simple device ownership to include technological readiness (robust network infrastructure, device compatibility), financial readiness (sustainable models for cost and maintenance), and content readiness (the availability of learning materials designed for mobile interfaces). Critically, this technological capacity must be matched by human capital. Parsazadeh et al. (2018) emphasize that human and cultural readiness—the confidence of instructors and their acceptance of mobile devices as legitimate learning tools—is equally vital for success. Furthermore, Cheon et al. (2012) specify that student readiness involves not only technical skills but also positive attitudes and the self-regulatory strategies needed to manage the distractions inherent in mobile devices. Ultimately, as framed by UNESCO (2013), this collective assessment forms the empirical foundation for strategic policy development, ensuring that mobile learning initiatives are scalable, equitable, and sustainable rather than ad-hoc and fragmented. Together, these perspectives construct a holistic view of readiness as an essential, multi-dimensional foundation upon which the success of mobile learning is built.





vii. Attitudes

Ardies, De Maeyer, Gijbels, and van Keulen (2014) suggested that attitudes towards educational technology can serve as a measure of how willing students and educators are to use the technology, as well as whether it has positive or negative effects on the learning environment. In line with E-learning communities (Dascalu, Bodea, Lytras, De Pablos, & Burlacu, 2014), M-learning has the potential to improve collaboration among learners and encourage greater interaction between them and their educators.

1.8 Summary

In conclusion, this chapter briefly explains the background, research and objective for this research. This research intends to investigate the readiness, attitudes of and challenges faced by students in secondary schools in adapting the mobile technologies in learning as a method of ubiquitous learning. The literature review will be discussed in the following chapter.

