

Mobile Learning in EFL Classroom: Barriers and Prospects in Sikka

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Abstract: The integration of internet-based learning systems, particularly mobile learning (M-learning), in English education has shown promising potential in enhancing students' academic performance and engagement. However, its optimal implementation remains a challenge, especially in the Sikka regency of East Nusa Tenggara province. This study aims to uncover the challenges and opportunities associated with M-learning encountered by participants in Sikka regency. The research employed a quantitative method. Data collection was carried out through the distribution of questionnaires. The obtained data was subsequently analyzed using descriptive analysis techniques. The result of this study identifies several key barriers, including inadequate internet access in remote areas, limited technological proficiency among educators, and concerns regarding students' exposure to inappropriate online content, cyberbullying, and digital exploitation. Furthermore, the insufficient ability of teachers to effectively integrate m-learning into their teaching practices hinders the optimal utilization of m-learning's potential. Therefore, to fully leverage the advantages of m-learning within the educational environment, it is crucial for stakeholders, particularly government agencies and educational organizations, to address the identified challenges.

Keywords: Mobile Learning; EFL; Barrier and Prospect

Abstrak: Integrasi sistem pembelajaran berbasis internet, khususnya pembelajaran mobile (m-learning), dalam pendidikan bahasa Inggris menunjukkan potensi yang menjanjikan dalam meningkatkan kinerja akademik dan keterlibatan siswa. Namun, implementasinya yang optimal masih menjadi tantangan, terutama di kabupaten Sikka, provinsi Nusa Tenggara Timur. Penelitian ini bertujuan untuk mengungkap tantangan dan peluang yang terkait dengan M-learning yang dihadapi oleh peserta di kabupaten Sikka. Metode yang digunakan dalam penelitian ini adalah kuantitatif. Pengumpulan data dilakukan melalui distribusi kuesioner. Selanjutnya, data yang terkumpul dianalisis menggunakan metode analisis deskriptif. Hasil penelitian ini menunjukkan bahwa beberapa hambatan utama, termasuk akses internet yang tidak memadai di daerah terpencil, keterbatasan kemampuan teknologi di kalangan pendidik, serta kekhawatiran mengenai paparan siswa terhadap konten *online* yang tidak pantas, perundungan siber, dan eksploitasi digital. Selain itu, kurangnya kemampuan guru dalam mengintegrasikan m-learning secara efektif ke dalam praktik pengajaran mereka, menghambat pemanfaatan potensi m-learning secara maksimal. Oleh karena itu, untuk memaksimalkan manfaat m-learning dalam lingkungan pendidikan, sangat penting bagi para pemangku kepentingan, terutama lembaga pemerintah dan organisasi pendidikan, untuk mengatasi tantangan-tantangan yang telah diidentifikasi.

Kata Kunci: Mobile Learning; EFL; Tantangan dan Peluang

INTRODUCTION

The rapid pace of technological development has heightened the focus on aligning technology with the needs of individuals. Over the past several decades, advancements in technology have occurred at an extraordinary speed. Innovations

such as smartphones, the internet, cloud computing, and numerous other creations are transforming every aspect of our daily lives. Areas including communication, business, government, travel, fundraising, and agriculture have all been influenced. Mobile devices have fundamentally altered how we obtain information and engage with the world around us. In 2021, the global count of mobile users reached 7.1 billion, with projections indicating an increase to 7.26 billion by 2022 and 7.49 billion in 2025 (Karetsos et al., 2022). It is anticipated that the number of mobile users worldwide will rise to 7.49 billion. The ease and portability of mobile devices have established them as the preferred means for internet browsing, content consumption, and online shopping.

Mobile technologies have increasingly become integral to the creation of seamless learning environments within the educational sector. Known as mobile learning or M-learning, this innovative approach allows individuals to access educational content through mobile devices, enabling learning to occur anytime and anywhere, provided there is internet connectivity. Akhmetova, Akhmetzhanova and Imambayeva (2024) elucidates that there has been a rise in the popularity of digital resources, such as learning applications, online platforms, and multimedia tools, among both young students and adults. Hsu (2017), highlighted that over the past decade, M-learning has garnered significant attention from both practitioners and researchers, driven by rapid advancements in telecommunications technology and its application to portable devices such as smartphones, tablets, and Personal Digital Assistants (PDAs). M-learning is recognized as a highly effective tool across various sectors, particularly in education, where it supports independent, collaborative, and lifelong learning. Klimova (2021) pointed out that the widespread adoption of mobile applications in higher education is unsurprising, given the prevalence of smartphones and their convenience for use at any location and time. Furthermore, the compact and portable nature of these devices enhances their accessibility for learners.

English as a Foreign Language (EFL) education is no exception to the global emphasis on language proficiency. As noted by Shadiev, Hwang and Liu (2018), English is the most commonly utilized language worldwide, making proficiency in it essential for maintaining a competitive edge on the international stage. Consequently, numerous nations prioritize the significance of EFL, aiming to enhance awareness and sensitivity towards English language learning across various educational levels. Nevertheless, learners of English encounter several challenges, including a shortage of qualified instructors, issues related to absenteeism, cultural obstacles, and motivational factors (Elaish et al., 2017). In response to these challenges, extensive research on mobile learning (m-learning) has been conducted to enhance the quality of both formal and informal teaching and learning experiences.

Research studies focusing on mobile learning (M-learning) primarily emphasize either content or design aspects. Content-oriented research typically examines formal educational settings where mobile-assisted language learning is implemented. This type of study is predominantly concerned with academic learning and the methods through which pedagogical content is conveyed via mobile devices, aiming to enhance learners' language proficiency and attitudes. Numerous significant investigations have been conducted regarding the content-based approach utilizing mobile applications in language education. Conversely, design-focused research



addresses the realm of independent mobile-assisted language learning within informal educational contexts.

The diverse range of theoretical frameworks and research methodologies contributes significantly to understanding the perspectives and effects of mobile learning (M-learning) within English as a Foreign Language (EFL) classroom. Furthermore, Mobile-Assisted Language Learning (MALL) applications and tools provide engaging learning experiences that foster increased motivation and improved language proficiency (Alisoy & Sadig, 2024). The accessibility of mobile technologies allows students to engage with learning materials irrespective of time and location. Nevertheless, the growing reliance on mobile technologies presents various challenges for higher education institutions, such as the evolving nature of knowledge and the changing characteristics of students. Common obstacles associated with M-learning, including issues related to device compatibility, limited internet connectivity, and data security concerns (Jinot, 2019). In the context of eastern Indonesia, particularly in Sikka regency where this research was conducted, Kristiani and Mole (2021) noted that significant challenges include teachers' proficiency in utilizing mobile technology and integrating it into their teaching practices, alongside the uneven availability of internet facilities in certain regions.

The rapid advancement of information and communication technologies has profoundly transformed their role in everyday life, establishing them as a standard and essential component of modern existence. This evolution is encapsulated in the concept of 'digital literacy,' which necessitates that individuals acquire the skills to effectively utilize technologies such as computers and the internet, thereby fostering their digital competencies in the contemporary digital landscape (Vaiopoulou et al., 2023). Consequently, digital literacy serves as a benchmark for assessing educators' proficiency in employing digital technologies to access, manage, and integrate digital resources. Nevertheless, there remains a paucity of research examining how digital literacy impacts the perceptions and acceptance of m-learning specifically in Eastern Indonesia.

The attitudes of educators towards mobile technology play a crucial role in their acceptance of such innovations. For certain individuals, the implementation of mobile technology can evoke significant anxiety. According to Setyarini (2015), ICT anxiety is characterized by feelings of discomfort, apprehension, and fear associated with the use of ICT tools, leading to a reluctance to acquire new ICT skills due to the anticipation of negative outcomes. Despite this, there remains a scarcity of research examining how ICT anxiety impacts the perceptions and acceptance of mobile learning in Eastern Indonesia.

Self-efficacy in teaching with mobile learning refers to educators' confidence in their ability to effectively instruct students using this technology. Hatlevik and Hatlevik (2018) highlighted that self-efficacy is a critical factor in implementing effective teaching practices. Furthermore, Tarman, Kilinc and Aydin (2019) noted that a positive attitude towards mobile learning and the ability to integrate it into classroom settings are essential and quantifiable elements. Digital self-efficacy reflects confidence in utilizing technological tools efficiently. This form of self-efficacy not only mitigates digital anxiety but also influences teaching performance and encompasses teachers' specific beliefs regarding their capabilities in employing instructional tools.



This research intends to thoroughly investigate the challenges and prospects of M-learning within English as a Foreign Language (EFL) classrooms in Sikka regency, East Nusa Tenggara. The primary objective is to pinpoint the significant obstacles that impede the successful implementation of M-learning, as well as to explore the potential advantages it presents for both educators and learners. Given that Sikka regency is categorized as an underdeveloped area according to Presidential Regulation Number 131 of 2015 of the Republic of Indonesia, the educational environment is significantly affected by economic limitations and restricted access to technological resources. Although many educators in the region possess experience with digital teaching tools, they still face considerable challenges, such as issues with technology integration and technical difficulties, even with IT support available. Consequently, this study emphasizes three vital factors that affect the adoption of M-learning: (1) teachers' digital literacy, which indicates their proficiency in utilizing digital technology; (2) ICT anxiety, which encompasses the perceived challenges and efforts involved in mastering new technologies; and (3) teaching self-efficacy, which relates to their confidence and capability to effectively incorporate M-learning into their instructional methods. By examining these elements, this research aims to offer valuable insights into optimizing M-learning to improve language learning outcomes and enhance teacher effectiveness in underdeveloped educational settings.

RESEARCH METHODOLOGY

The research employed a quantitative methodology, involving a sample of 18 English as a Foreign Language (EFL) teachers selected from various Madrasah Tsanawiyah, or Islamic Junior High Schools, throughout the Sikka regency in East Nusa Tenggara province. The participants' ages ranged from 24 to 49 years, comprising 8 males and 10 females. All participants held bachelor's degrees, and none had previously undergone training in mobile learning, nor were they significantly familiar with the concept prior to the study. Data collection was conducted through a modified survey questionnaire tailored to the m-learning context of the research. The questionnaire was divided into three sections. First, adapted from the work of (Kennedy et al., 2008), included 14 items aimed at assessing the mobile literacy of the teachers. The 14 items can be found in the table below.

Table 1. 14 Items Aimed at Assessing the Mobile Literacy of the Teachers

No.	Mobile Literacy Items	Description
1	Using mobile devices to access educational information	Teachers can search for and read learning materials via mobile devices.
2	Operating mobile-based learning applications	Teachers can use educational apps such as Google Classroom, Moodle, or similar platforms.
3	Using social media to support learning	Teachers utilize platforms like WhatsApp, Telegram, or Facebook Groups for academic communication.
4	Downloading and installing educational applications from Play Store/App Store	Teachers can search for, download, and install apps that support the learning process.
5	Sharing learning materials via mobile devices	Teachers can upload and share documents, videos, or links with students through mobile devices.
6	Using mobile devices to interact with students	Teachers can conduct online discussions or provide guidance to students via messages or video calls.
7	Utilizing cloud storage to store and share documents	Teachers can use Google Drive, OneDrive, or Dropbox to store and share learning materials.



8	Using mobile devices to create and edit documents	Teachers can use applications such as Microsoft Word, Google Docs, or Notepad to prepare learning materials.
9	Using mobile devices to watch educational videos	Teachers can access and utilize educational videos from YouTube or other platforms.
10	Using mobile devices to participate in online training	Teachers can attend webinars, online courses, or digital training sessions via mobile devices.
11	Using mobile devices to create and manage learning assessments	Teachers can create quizzes, exams, or surveys using Google Forms, Kahoot, or similar applications.
12	Using mobile devices to read and respond to academic emails	Teachers can communicate with students, colleagues, or school administrators via email.
13	Using mobile devices to edit multimedia content	Teachers can use simple photo/video editing applications to create engaging learning materials.
14	Understanding digital security and ethics in mobile device usage	Teachers understand the importance of data security, privacy, and ethics in using mobile devices for education.

The second section contained 10 items designed to evaluate mobile anxiety. The third section, derived from (Mueller et al., 2008), consisted of 9 items measuring the respondents' self-efficacy regarding m-learning. Participants responded to the items using a self-rated 5-point Likert-type scale, ranging from (1) strongly disagree to (5) strongly agree. The data were analyzed individually and presented with varying levels of strength and percentage highlights.

RESULT AND DISCUSSION

Mobile Literacy

The result of the study shows that the average is only 20% of teachers have the ability of using mobile to access, organize and integrate digital learning resources. 25% of them strongly agreed that adopting and integrating digital learning resources is very important for lecturers while 24% of them agreed, 20% of them were undecided, 18% of them disagreed and 13% of them strongly disagreed. In a contrast comparison to the continuing growth of M-learning and the massive proliferation of mobile phones in EFL context, M-learning in the regions has been relatively weak (20%). One of the main factors seems to be the impact of mobile literacy due to a lack of participants' resource capacity. The finding showed only 25% of 18 EFL teachers who use a mobile phone to access information/services on the web represents beyond the lack of mobile devices available for EFL teachers but also many schools in the regions do not provide technical support to fix technology in the event of these inevitable difficulties. This argument is supported by the condition where there are many areas across the region do not have internet access for either educators or students which is connectivity restrictions almost in all areas and the limited availability of 4G network connections.

A relevant studied by Amer, Musawi and Muhammad (2022) about the barriers of using education technology for optimizing the educational experience of learners confirmed this finding. The barriers of technology faced by students was poor digital skills and a lack of availability of access along with lack of motivation due to poor social skills, a lack of time and class time and a lack of motivation and social awareness and school culture. The lack of mobile devices, especially who lives in poorer communities, forms another barrier of m-learning in the region. The finding of only 12% of 18 teachers who use mobile phone to access storage device (like Google Drive, Drop Box etc.) and 33% of them use mobile phone to access reading



apps (downloading and reading e-books). It is no coincidence that the region is one of the few regions that has not deregulated its telecommunications sector, has one of the lowest rates of mobile phone use in eastern Indonesia.

The finding about only 11% of 18 teachers who use mobile phone to access online programs (Moodle, WizIQ etc) and 13% of EFL teachers who use mobile phone to access brainstorming applications (iThought, Popplket lite etc) showed that EFL teachers and students who has or has access to mobile devices, faced another barrier of older version mobile devices or lower-end features with limited function mobile devices, lack of screen size and resolution standards; didn't support various types of audio and video formats; internet browsers incompatibility; and small memory sizes. The other concerned were the inadequacy of curriculum resources that integrating m-learning. This finding is supported by Sakka *et al.* (2022) who stated that m-learning suffered from technological constraints as well as serious pedagogical shortcomings. Furthermore, he said that the lack of programmable phones equipped with memory cards and capable of graphics and video display as well as audio playback and recording, now provide a platform can support language learning activities hitherto reserved for computer applications. A rapid advancement of m-learning and the declining costs of mobile devices including the data plans have driven the development of mobile learning in the region. Also, the gradual progress of telecommunications sector supported further growth in the mobile devices industry. The use of mobile technologies has phenomenally increased over the last two years. Until about ten years ago, mobile devices were seen in the hands of the elite only. This is not the case anymore and a strong indication of the tremendous popularity of mobile phone use. Such high penetration of mobile phones certainly means more opportunities for m-learning.

Mobile Anxiety

The barriers of mobile anxiety show the average is 20%. 29% of them strongly agreed that applying mobile technology generates high levels of anxiety while 21% of them agreed, 21% of them were undecided, 14% of them disagreed and 15% of them strongly disagreed. The barriers of mobile anxiety show the average is 29% of 18 EFL teachers. The finding showed that 28% of EFL teachers strongly agreed that mobile tools are very difficult to use which apparently make them to resist in adopting m-learning. Most of them are from old generation of teachers in communities who made movement of anti m-learning sentiments forms a significant barrier to m-learning across the region. Their negative concerns toward m-learning mainly from the media about some school age teenager's negative attitudes caused by mobile phones. Their inappropriate behaviors place them especially young girls in at risk, such as cyber-bullying and sexual abuse in mobile chat platforms contributed to a growing panic about m-learning. These arguments were supported by the finding that 28% of teachers had negative experiences with mobile. It shows that the first aspect shown to influence the adoption of new technology is the beliefs held by the lecturers (Chau, 2017) (Hasan, 2021). Specifically, it is the perceived value of the new technology (perceived usefulness) and perceived effort needed to learn to use the new technology (perceived ease of use) that have been established as playing a major role in the adoption of technology. A positive action of Indonesian government which established E-safety Committees to raise awareness and promote security of m-learning. In 2020, Indonesian Ministry of Education launched a campaign to free



students' networking signals and jam student's mobile devices during examinations to prevent cheating, indicating that the problem of both network connection and cheating during examinations could be prevented using technology. If such case could be adopted as measurements, m-learning is acceptable. Taking into considerations, the student's online behavior on mobile environment should be taught.

Teaching Self-Efficacy

The barriers of teaching self-efficacy toward m-learning show the average 20%. There are 21% of 18 teachers strongly agreed that they are able to teach their students using m-learning effectively, 25% of 18 teachers agreed that they are able to teach their students using m-learning effectively, 24% of 18 teachers undecided while 16% of 18 teachers disagreed and 14% strongly disagreed. The finding of Teaching Self-Efficacy concern about EFL teacher's proficiency in applying m-learning. For many EFL teachers, the integration of mobile literacy and curriculum far from representing their required formal education. Furthermore, some EFL teachers across the region asserted that they lack of opportunities to grow their m-learning pedagogical skills in the classroom. The finding showed that only 16% of 18 EFL teachers strongly agreed with teaching and learning become more interesting using m-learning and surprisingly 33% of them strongly agreed that m-learning makes them anxious. In the other hand, lack of mobile resources and internet access at home restrain them to be interacted effectively in a classroom setting. Hashim *et al.* (2017) and Tayebinik and Puteh (2012) confirmed the finding and suggesting that teachers may need further support and ideas before they can help their learners take advantage of their mobile devices for language learning.

CONCLUSION

The implementation of internet-based learning systems, particularly mobile learning (m-learning) in English education, has begun to show promising effects on enhancing students' academic performance and engagement in the classroom. Nevertheless, the optimal application of m-learning in educational institutions, particularly in the Sikka regency of East Nusa Tenggara province where this research was conducted, remains a challenge. This situation is largely attributed to various obstacles encountered by both educational institutions and individual educators. Key challenges encompass inadequate internet access in isolated areas, notably within island communities, a lack of technological skills among educators, particularly those with extensive experience, and apprehensions about the adverse effects of mobile phone usage among students. These concerns include the risk of exposure to inappropriate conduct, cyberbullying, and sexual exploitation. Additionally, the inadequate capability of teachers to effectively integrate m-learning into their teaching practices poses a significant barrier. Given the substantial advantages that m-learning can offer to educational settings, it is imperative for all stakeholders, particularly government bodies and educational organizations, to actively address these challenges. Efforts should focus on improving internet access and services across the region, providing training programs for teachers on the effective use of mobile technology in the classroom, and implementing educational initiatives for



students to raise awareness about the potential risks associated with mobile technology usage.

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