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A Systematic Review of the Literature on Mobile Learning in Higher Education in Last Decade

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ABSTRACT

The purpose of this systematic review of the literature is to provide an overview of mobile learning (M-Learning) research trends in higher education in the last decade. The results helped identify the names of journals publishing on this topic, the number of articles published yearly, the countries where research was conducted, the research purpose, and findings related to M-Learning. The paper provides an overview of the systematic reviews methodology including the databases searched and keywords used, inclusion criteria, and review process. A total of 44 peer-reviewed articles met the inclusion criteria set and were then included in the review process. The findings indicate that the most frequent journals publishing M-Learning research are the Computers & Education (C&E) and the International Journal of Interactive Mobile Technologies (IJIT). Additionally, 2018 had the highest frequency of publications on the topic of M-Learning. Most research is conducted in the United States (U.S.). Last, the findings suggest that a large number of studies focus on attitudes and views of stakeholders, primarily undergraduate and graduate students, in relation to the use of M-Learning. Findings are categorized based on the type of population under investigation allowing for a deeper understanding of the M-Learning literature and potential knowledge gaps.

Keywords: Mobile Learning; Higher Education; Mobile Devices, Systematic Review.

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Introduction

Due to the advancements in mobile technologies, a new paradigm of teaching and learning with technology known as mobile learning (M-Learning), has arisen (Chee et al., 2017). It can be stated that M-Learning would not be possible without two of the twentieth century's most major breakthroughs, the Internet, and mobile phones (Todoranova et al., 2020). M-Learning is a relatively recent phenomena, yet this mechanism's efficacy in terms of high-quality education and learning process is limitless (Qureshi et al., 2020). Because of the multi-functionality of mobile devices, M-Learning has become a common instructional method in particular in higher education (Biswas, Roy & Roy, 2020). As a result of advances in mobile technology, the majority of individuals today carry their own personal small computers with exceptional computing power, such as laptops, tablets, cell phones, and e-book readers (Sung et al., 2016).

M-Learning allows students to collaborate, seek information, and increase engagement and communication with their instructors (Chee et al., 2017). In a learner-centered approach, students can generate knowledge using mobile devices (Robb & Shellenbarger, 2012). M-Learning represents remote a) teaching approaches for instructors and b) learning strategies for students since it allows them to study any time and from any location (Biswas, Roy & Roy, 2020). Learners can receive and access instructions through a variety of platforms, including mobile applications, web-based learning environments, and integrated M-Learning environments (Oyelere et al., 2018).

Educators started experimenting with methods to incorporate M-Learning and mobile computing into higher education after seeing the rising usage and overall potential of mobile devices (Bose & Lowenthal, 2016). Briz-Ponce et al. (2017) stated that many universities are embracing M-Learning to enable flexibility and to educate students for the rapidly evolving digital environment. Although there are challenges with Internet access, the use of social networks, and the usage of mobile devices in contemporary education, the use of mobile technology is growing rapidly in education (Criollo-C et al., 2021). With this in mind, the aim of this investigation is to examine trends in the area of M-Learning in higher education within the last 10 years.

Literature Review

According to Crompton & Burke (2018), M-Learning is defined as “learning across multiple contexts, through social and content interactions, using personal electronic devices” (p. 53).
M-Learning emerges as a result of person-to-person interactions through mobile devices (Bidin & Abu Ziden, 2013). M-Learning is a method of facilitating the educational process via the use of mobile apps and wireless connection (Kuimova et

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al, 2018). “Mobile learning is one of the key current trends of educational applications for new technologies” (Wu et al., 2012, p. 818). It gives us the possibility to adapt current learning methodologies in order to provide students with a more flexible approach to controlling their learning experiences (Biswas et al., 2020).

Recent discoveries on the use of mobile devices in various learning situations have shown their capability to effectively boost students' learning knowledge (Chee et al., 2017). M-Learning is widely recognized as a technical advancement that enables rich, dispersed, and contextualized methods of learning (Khaddage et al., 2016). Furthermore, it is widely acknowledged that M-Learning is about learner mobility and how educators may engage students in active learning without limiting them to a physical place (Khaddage et al., 2016). A modern generation of educators who grew up with computers and the Internet is more receptive to designing pedagogy that incorporates mobile devices (Morris & Sarapin, 2020). M-Learning activities are often conducted on a flexible schedule and are specifically designed to fit the diverse learning preferences and approach of students (Kuimova et al., 2018).

In higher education, M-Learning has become an essential instructional technology component (Al-Rahmi et al., 2021). The use of mobile technology in higher education, in combination with training objectives, is gaining traction (Hamidi & Ghavoshi, 2018). Instructors using M-Learning strive to increase the use of mobile technology in higher education institutions while staying faithful to their instructional goals (Al-Emran et al., 2016). El-Sofany & El-Haggar (2020) found “M-Learning is capable of improving traditional learning through effective applications that facilitate interaction in a formal learning environment to allow interactive learning resources in a conducive virtual environment for life-long learning.” (p. 5-6). M-Learning transforms traditional lecture-based education into effectively integrated components of information technology, with instructors aiming to utilize the Internet to investigate, organize papers, produce presentations using software, and integrate other technological activities (Cheng et al, 2016).

While some studies found no significant changes in students' attitudes toward mobile-based learning depending on their academic majors (Al-Emran et al., 2016), other studies found that students' attitudes regarding the long-term usage of mobile technology in the learning process are influenced by their academic majors (Al-Rahmi et al., 2021). Recent research has shown that employing mobile devices in student learning has a good impact (Khan et al., 2019). For example, accessing the learning management systems (LMS) by using mobile devices to review and access learning resources, discuss ideas among peers, keep up with the newest news, and connect with peers and professors has become a regular habit among university students (Khan et al., 2019). Mobile learning has the potential to increase student engagement and achievement while helping in their education (Suartama et al., 2019).

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A study of higher education students' perspectives of learning using mobile tablets found that mobile technology facilitated collaborative learning settings, allowing students to discuss ideas, debate problems, and gain knowledge collaboratively (Willemse et al., 2019). Willemse, Jooste & Bozalek (2019, p. 70) stated that "the influence of motivational determinants indicated that students' intention to agree to an M-Learning initiative was because of social, affective and cognitive needs". Al-Emran, Elsherif & Shaalan (2016) claimed that M-Learning in higher education provides numerous possibilities for both students and academics in a ubiquitous way, as it improves student autonomy by accessing online learning resources and supports academics in the delivery of knowledge in anytime-anywhere settings.

Research Purpose and Research Questions

The purpose of this investigation is to conduct a systematic understanding of M-Learning research in higher education settings. The following research questions guided this investigation:

- RQ1. What are the trends in publication of literature reviews focused on the topic of M-Learning in the last 10 years?
- RQ2. What are the trends in publication of studies focused on M-Learning with university students as participants in the last 10 years?
- RQ3. What are the trends in publication of studies focused on M-Learning with undergraduate students as participants in the last 10 years?
- RQ4. What are the trends in publication of studies focused on M-Learning with graduate students as participants in the last 10 years?
- RQ5. What are the trends in publication of studies focused on M-Learning with faculty as participants in the last 10 years?

Methods

This study uses a systematic review approach to explore the literature on M-Learning in higher education. In recent years, the number of systematic reviews used to synthesize findings from primary investigations has increased (Martin el al., 2020). A systematic review is defined as "the application of scientific strategies that limit bias by the systematic assembly, critical appraisal and synthesis of all relevant studies on a specific topic" (Wright et al., 2007, p. 23). Systematic reviews are useful for evaluating and informing discipline domains (Reeves et al., 2010). While reviews synthesize the results of separate studies to offer a more complete picture of the evidence, they also indicate gaps in the field and prospective avenues for research (Reeves et al., 2010). For this investigation, the following subsections provide an overview of the systematic reviews methodology including the databases searched and keywords used, inclusion criteria, and review process.

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Keywords and Databases Searched

To conduct the systematic review the researchers explored the literature using various research databases. The keywords used to find articles included “mobile learning in higher education”, “mobile technology in the classroom”, “mobile learning in teaching and learning”, “mobile learning and undergraduate”, “adoption of mobile learning", and “mobile learning and graduate education”. The databases explored included Google Scholar, Academic Search Complete, and Education Resources Information Center (ERIC).

Inclusion Criteria

An inclusion criterion was used as part of the systematic review. To be included in this systematic review each peer-reviewed journal article had to be a) original research, b) written in English, c) focused on a higher education context, and d) published between 2012 and 2022. A total of 44 peer-reviewed articles met the inclusion criteria set and were then included in the review process.

Review Process

The review process of each journal article started with the creation of a spreadsheet to organize the information related to each manuscript. The information reviewed and acquired from each article included:

- The type of population under investigation (i.e., university students, undergraduates’ students, graduate students, or faculty)
- The type of methodology used (i.e., literature review, quantitative research, or qualitative research)
- The link to the article
- The name of the journal
- The year of publication
- The country where the investigation was conducted.
- The number of participants (if applicable)
- The research purpose
- Findings from the investigation

Afterwards, the researchers categorized and sorted the articles based on the following groupings: a) literature review focused on M-Learning, b) articles focused on M-Learning with “university students” as participants, c) articles focused on M-Learning with undergraduate students as participants, d) articles focused on M-Learning with graduate students as participants, and e) articles focused on M-Learning with faculty members as participants. The categorization of the findings based on the type of population under investigation allowed for a deeper understanding of the M-Learning literature and potential knowledge gaps.

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Findings and Discussion

Literature Reviews

Names of Journals. The journals that have published literature review articles in the last 10 years included the British Journal of Educational Technology (BJET) (n = 1), Review of Educational Research (RER) (n = 1), Computers & Education (C&E) (n = 3), Procedia - Social and Behavioral Sciences (PSBS) (n = 1), Journal of Educational Technology & Society (JETS) (n = 2), Turkish Online Journal of Educational Technology (TOJET) (n = 1), International Journal of Interactive Mobile Technologies (IJIT) (n = 1), Applied Sciences (AS) (n = 1), Technology, Educational, Management, Informatics Journal (TEM) (n = 1), International Journal of Emerging Technologies in Learning (IJET) (n = 1), and TechTrends (TT) (n = 1).

Years of Publications. The analysis of the data indicated that the years of publications of literature review articles focused on M-Learning were as follows: 2012 (n = 1), 2013 (n = 2), 2015 (n = 1), 2016 (n = 2), 2017 (n = 2), 2018 (n = 2), 2019 (n = 2), 2020 (n = 1), and 2021 (n = 1). There were a total of 14 journal articles published that were M-Learning literature reviews.

Country of Research. In the last 10 years, literature review articles focused on M-Learning were conducted in the following countries: United States (n = 3), Taiwan (n = 3), Malaysia (n = 3), Canada (n = 1), Australia (n = 1), Spain (n = 1), Russia (n = 1), and Indonesia (n = 1).

Research Methodology. The analysis of the publications revealed that the methodologies in this category included literature reviews (n = 4), systematic reviews (n = 5) and meta-analysis (n=4).

Research Purpose and Outcomes. The analysis of the literature reviews focused on M-Learning published in the last 10 years suggest the following purpose and outcomes:

- The influence of using mobile technology to support collaborative learning (Hsu & Ching, 2013; Sung et al., 2017): The findings of these studies indicated that effective use of mobile-computer-supported collaborative learning required efficient learning methods.
- The use of mobile devices in higher education (Sung et al., 2016; Chee et al., 2017; Bidin & Abu Ziden, 2013; Khaddage et al., 2016): The findings of these studies indicated that there is extensive use of mobile devices in education and there is a need for more sophisticated instructional design innovations in order to fully leverage the educational advantages of mobile devices.
- Trends in M-Learning (Wu et al., 2012; Qureshi et al., 2020; Crompton & Burke,

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2018; Bai, 2019): The findings of this study indicated that although mobile phones are now the most popular devices for mobile learning, they may be replaced by newer technology. The findings of these studies also indicated that mobile learning research is conducted globally and there is a need for using mobile learning in remote education.

- The challenges and the benefits of mobile learning (Alrasheedi & Capretz, 2015; Criollo-C et al., 2021; Kuimova et al., 2018): The findings of this study indicated that despite the challenges with mobile technology (e.g., cost, security, and privacy) attempts to incorporate M-Learning into the educational paradigm are expanding daily. Also, studies indicated that major advantages of M-Learning are the collaboration during study time, the potential of ubiquitous learning regardless of place or time, and the promotion of lifelong learning.
- Mobile blended learning design (Suartama et al., 2019): The findings of this study indicated that instructional designs make mobile blended learning more appealing.

Studies Focused on University Students as Participants

Names of Journals. The journals that have published peer-reviewed articles on studies focused on M-Learning with university students as the research population included Nurse Educator (NE) (n = 1), Aquademia (n = 1), International Journal of Education and Development Using Information and Communication Technology (IJEDICT) (n = 1), Sustainability (n = 1), The Internet and Higher Education (IHE) (n = 1), International Journal of Interactive Mobile Technologies (IJIT) (n = 1), SAGE open (n = 1), Telematics and Informatics (T&I) (n = 1), and British Journal of Educational Technology (BJET) (n = 1).

Years of Publications. The analysis of the data indicated that the years of publications of peer-reviewed articles on studies focused on M-Learning with university students as the research population were as follows: 2012 (n = 1), 2013 (n = 1), 2016 (n = 1), 2018 (n = 1), 2019 (n = 2), 2020 (n = 2), and 2021 (n = 1). There were 8 journal articles published that were research studies on M-Learning with university students as participants.

Country of Research. In the last 10 years, research studies on M-Learning with university students as the research population were conducted in the following countries: United States (n = 2), Bangladesh (n = 2), China (n = 1), Malaysia (n = 1), Bulgaria (n = 1), Iran (n = 1), and Uganda & Australia (n = 1).

Research Methodology. The analysis of the publications revealed that the methodologies in this category included quantitative (n = 4), qualitative (n = 4), and mixed methods (n = 1) studies.

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Research Purpose and Outcomes. The analysis of research studies on M-Learning with university students as the research population published in the last 10 years suggest the following purposes and outcomes:

- The effects of implementing mobile phones in the classroom (Robb & Shellenbarger, 2012; Todoranova et al., 2020): The findings of these studies indicated that using mobile phones to improve teaching and learning gives students the chance to incorporate technology and acquire critical skills.
- Students' perceptions of mobile learning (Biswas et al., 2020; Al-Rahmi et al., 2021; Wong & Wong, 2016; Gikas & Grant, 2013; Khan, Abdou & Gregory, 2019): The findings of these studies indicated that students are aware of the usefulness and pedagogical practices using mobile learning. The results of these investigations suggest learners have experience advantages as well as frustrations from learning with mobile technology.
- The factors for the adoption of mobile learning in higher education (Hamidi & Chavoshi, 2018): The findings of this study indicated that the context in which M-Learning is implemented can have a direct effect on the perceived ease of use and usefulness. Trust and culture of using M-Learning were also identified as a factor that influences the behavioral intention of the learners.
- The features of mobile learning usage and acceptance in higher education in industrialized and developing nations (Kaliisa et al., 2019): The findings of this study indicated that M-Learning in higher education is still in its early stages in both developed and developing countries.

Studies Focused on Undergraduate Students as Participants

Names of Journals. The journals that have published peer-reviewed articles on studies focused on M-Learning with undergraduate students as the research population included Turkish Online Journal of Distance Education (TOJDE) (n = 1), Education and Information Technologies (EIT) (n = 1), Computers in Human Behavior (CHB) (n = 1), IEEE Transactions on Education (IEEE) (n = 1), Nurse Education Today (NET) (n = 1), International Review of Research in Open and Distributed Learning (IRRODL) (n = 1), and International Journal of Interactive Mobile Technologies (IJIT) (n = 1).

Years of Publications. The analysis of the data indicated that the years of publications of peer-reviewed articles on studies focused on M-Learning with undergraduate students as the research population were as follows: 2015 (n = 1), 2017 (n = 2), 2018 (n = 2), 2019 (n = 1), and 2020 (n = 1). There were a total of 7 journal articles published on studies focused on M-Learning with undergraduate students as the research population.

Country of Research. In the last 10 years, research studies focused on M-Learning with undergraduate students as the research population were conducted in the following countries: Thailand (n = 1), Nigeria (n = 1), Portugal (n = 1), Taiwan (n =

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1), South Africa (n = 1), Jordan (n = 1), and Saudi Arabia (n = 1).

Research Methodology. The analysis of the publications revealed that the methodologies in this category included quantitative (n = 5), qualitative (n = 1), and mixed methods (n = 1) studies.

Research Purpose and Outcomes. The analysis of research studies focused on M-Learning with undergraduate students as participants, published in the last 10 years, suggest the following purpose and outcomes:

- Gender differences in using mobile phones for language learning and attitude (Hilao & Wichadee, 2017): The findings of this study indicated that male and female students did not vary significantly in their use and attitudes regarding mobile phone use for language study.
- The influence of MobileEdu, a mobile learning application that aims to facilitate learning of computer science courses, on students' attitudes towards studying system analysis and design courses, as well as learning outcomes after using the application (Oyelere et al., 2018). The findings of this study indicate that the MobileEdu application aided students' learning outcomes. The mobile learning application proved to support learners, provide positive pedagogical experiences, and improve their learning attitudes toward computing education.
- The elements that influence students to use M-Learning (Briz-ponce et al., 2017; Al-Adwan et al., 2018): The findings of this study indicated that various elements impact students to embrace M-Learning, including complexity, social influence, perceived pleasure, and self-management of learning.
- The use of 5E (engagement, exploration, explanation, elaboration, and evaluation) mobile inquiry learning (Cheng et al., 2015): The findings of this study indicated that while traditional lecture-based inquiry activities can help students develop the ability to search for information, the integration of a mobile-based 5E inquiry instructional model can further assist students in actively observing scientific phenomena.
- The effectiveness of using mobile learning to improve learning outcomes in higher education (El-Sofany & El-Haggar, 2020;):The findings of this study indicated that M-Learning has been supported at universities and helped change conventional learning techniques by incorporating M-learning methodologies as a learning management system that delivers mobile learning services to students and instructors at any time and from any place. Additionally, findings indicated that mobile devices provided a learning platform, enhanced engagement, made learning easier, and flexibility in time to complete tasks.

Studies Focused on Graduate Students as Participants

Names of Journals. The journals that have published peer-reviewed articles on studies focused on M-Learning with graduate students as the research population included: Educare (n = 1), International Technology and Education Journal (ITEJ) (n

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Volume (54) - November 2026
العدد (54) - نوفمبر 2026

= 1), Journal on School Educational Technology (JSET) (n = 1), Journal of Graduate Medical Education (JGME) (n = 1), International Journal of Multicultural and Multireligious Understanding (IJMMU) (n = 1), Journal of Literacy and Technology (JLT) (n = 1), Language Learning & Technology (LLT) (n = 1), and Computers & Education (C&E) (n = 1).

Years of Publications. The analysis of the data indicated that the years of publications of peer-reviewed articles on studies focused on M-Learning with graduate students as the research population were as follows: 2012 (n = 1), 2013 (n = 1), 2014 (n = 2), 2015 (n = 1), 2017 (n = 1), and 2018 (n = 2). There were a total of 8 journal articles published focused on studies focused on M-Learning with graduate students as participants.

Country of Research. In the last 10 years, research studies focused on M-Learning with graduate students as the research population were conducted in the following countries: India (n = 2), Jordan (n = 1), Turkey (n = 1), United States (n = 3), Indonesia (n = 1), and Netherlands (n = 1).

Research Methodology. The analysis of the publications revealed that the methodologies in this category included quantitative (n = 4), qualitative (n = 1), and mixed methods (n = 2) studies.

Research Purpose and Outcomes. The analysis of research studies focused on M-Learning with graduate students as the research population, published in the last 10 years, suggest the following purpose and outcomes:

- Graduate students' attitudes toward M-Learning (Fouzdar & Behera, 2017; Korucu & Bicer, 2018; Thiyagu, 2012; Hanif & Asrowi, 2018; Kim et al., 2013): The findings of these studies indicated that there are disparities in graduate students' attitudes toward M-Learning. There are positive perceptions regarding opportunities for practice, portability of devices, and convenience of use. Graduate students believed that the use of mobile technology would increase their willingness to adopt new technologies in their own lives. Yet, there are perceived challenges related to access to mobile technologies and devices.
- The application of smartphone technology in graduate medical education (GME) (Short et al., 2014): The findings of this study indicated that incorporating mobile technology into GME may increase learner knowledge, patient care, and communications.
- The use of mobile devices to support learning (Foti & Mendez, 2014; Tabuenca et al., 2015): The findings of this study indicated that students are utilizing their mobile devices to improve their experiences learning outside the classroom (i.e., online learning communities in social media) and for academic purposes such as adaptation of course content. The findings also indicated that mobile alerts could be created and motivated students in online courses to engage in self-regulated learning.

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العدد (54) - نوفمبر 2026

Studies Focused on Faculty as Participants

Names of Journals. The journals that have published peer-reviewed articles on studies focused on M-Learning with faculty as the research population included: International Journal of Social Media and Interactive Learning Environments (IJSMILE) (n = 1), Journal of Media Literacy Education (JMLE) (n = 1), Computers in Human Behavior (CHB) (n = 1), Educational Technology Research and Development (ETRD) (n = 1), The International Journal of Information and Learning Technology (IJILT) (n = 1), and Interactive Learning Environments (ILE) (n = 1) were among the journals that published articles in which faculty participated.

Years of Publications. The analysis of the data indicated that the years of publications of peer-reviewed articles on studies focused on M-Learning with faculty as the research population were as follows: 2016 (n = 2), 2020 (n = 2), and 2022 (n = 2). There were a total of 6 journal articles published focused on M-Learning with faculty as the participants.

Country of Research. In the last 10 years, research studies focused on M-Learning with faculty as the research population were conducted in the following countries: United States (n = 2), UAE & Oman (n = 1), Sri Lanka (n = 1), and China (n = 1). Two studies referred to general data collection regions, instead of specific countries: North America (n = 1) and Europe & Asia (n = 1).

Research Methodology. The analysis of the publications revealed that the methodologies in this category included quantitative (n = 4) and qualitative (n = 2) studies.

Research Purpose and Outcomes. The analysis of research studies focused on M-Learning with faculty as the research population, published in the last 10 years, suggest the following purpose and outcomes:

- Instructors' experiences and perspectives of incorporating mobile devices into their classes (Bose & Lowenthal, 2016): The findings of these studies indicated that instructors utilized mobile devices to generate material, interact, save, and exchange data.
- The use of mobile devices in higher education (Morris & Sarapin, 2020): The findings of this study indicated that instructors allow mobile phones in the classroom for basic tasks, but there is no meaningful integration with teaching and learning.
- Investigating students and instructors' attitudes towards the use of mobile learning in higher education (Al-Emran et al., 2016): The findings of this study focused on gender comparisons, which did not yield any significant results. The findings also highlighted that based on academic rank (i.e., instructor, assistant professor, associate professor, and professor) and academic experience (i.e., less than 5 years of experience, between 5 and 10 years of experience, and more than 10 years of experience) there were no differences in attitudes towards M-Learning.

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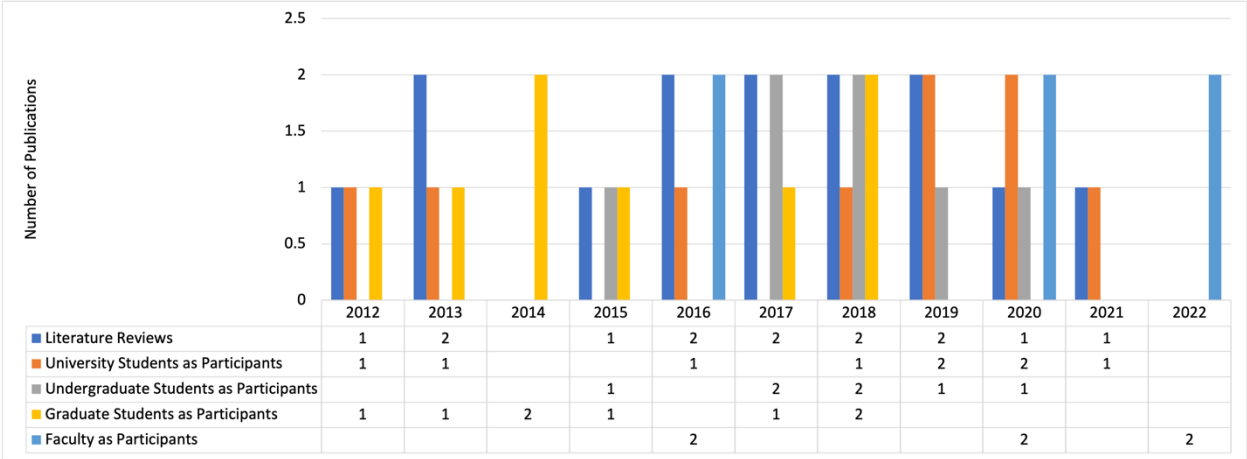
- The issues associated with incorporating mobile learning into teaching and learning in K-12, higher education, and industry (Popov et al., 2020): The findings of this study indicated that challenges such as: capacity of experimentation and change, resources for information, using M-Learning in pedagogical sound ways, and infrastructure were identified across all sectors. However, there was greater alignment between challenges in K-12 and higher education (i.e., digital divide, equal access, student use of mobile devices during class, teacher's mindset, school leader's support, parental support), compared to challenges in industry (i.e., bring your own device versus company liable-device).
- Explore mobile learning frameworks in higher education (Dolawattha et al., 2022; Jie & Sunze, 2022): The findings of this study indicated that a new mobile pedagogical framework should be considered in higher education that considers: technology, policy, pedagogy, student, online resources, and mobile devices. Also, a machine learning system that is economically and pedagogically sustainable was developed. Results suggested the system considers technological, social, economic, political, and pedagogical sustainability dimensions and factors terms.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Literature Reviews	1	2		1	2	2	2	2	1	1	
University Students as Participants	1	1			1		1	2	2	1	
Undergraduate Students as Participants				1		2	2	1	1		
Graduate Students as Participants	1	1	2	1		1	2				
Faculty as Participants					2				2		2

Fig 1. Publications on M-Learning in Higher Education per Year in the Last Decade

This systematic review shows that Computers & Education (C&E) and the International Journal of Interactive Mobile Technologies (IJIT) are the most frequent journals contributing to M-learning research. Based on the findings of this investigation, the highest number of publications on mobile learning were published in 2018 (see Figure 1). In 2018, 7 out of the 44 articles were published. The United States (U.S) was the leading country in M-Learning research, which coincides with the findings of Hwang and Tsai (2011) in a previous systematic review of the literature on this topic. Analysis of the publications revealed that attitudes and perceptions of M-Learning as well as the usage of mobile devices in the classroom are the primary research purpose and outcome of the studies reviewed in this investigation. Last, a range of research methods are used to explore M-Learning in

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Volume (54) - November 2026
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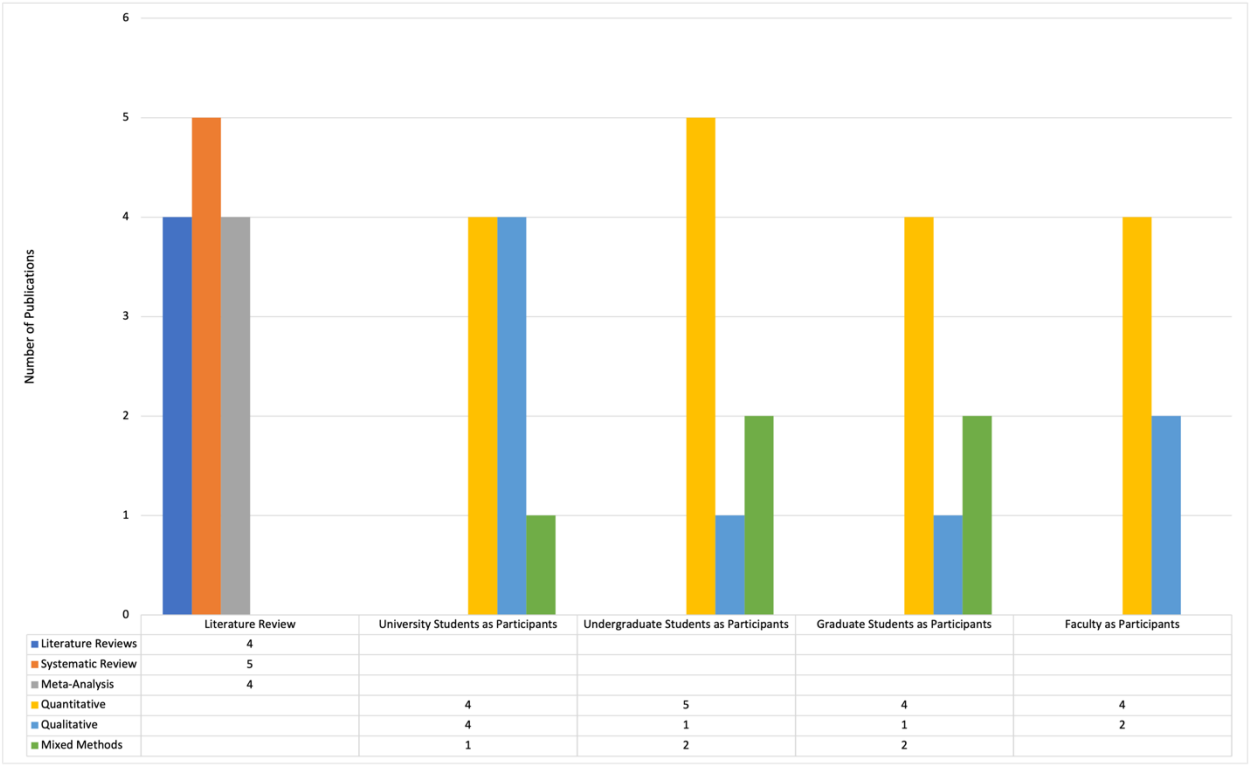
higher education including meta-analysis, systematic reviews, literature reviews, qualitative and mixed methods (see Figure 2). However, in the last 10 years, quantitative methodologies are the primary way to examine and analyze research related to M-Learning.



	Literature Review	University Students as Participants	Undergraduate Students as Participants	Graduate Students as Participants	Faculty as Participants
Literature Reviews	4				
Systematic Review	5				
Meta-Analysis	4				
Quantitative		4	5	4	4
Qualitative		4	1	1	2
Mixed Methods		1	2	2	

Fig 2. Research Methodologies used to Investigate M-Learning in Higher Education

Systematic reviews play an important role in the generation of research knowledge and in the process of evaluating and implementing research results to benefit society (Gough et al., 2017). Our systematic review is useful for academics seeking a comprehensive overview of the research on mobile learning in higher education. It helps identify gaps in the literature that need to be further explored. For example, the results determined that in the last 10 years, only 6 journal article publications have focused on faculty as participants in research related to M-learning in higher education. This low number of publications considering university faculty as participants, is of major significance given faculty's role as designers of learning experiences who can potentially use mobile learning in their courses. Instead, the majority of the studies analyzed in this investigation focused on students.

Another major finding from this investigation is that the literature analyzed related to mobile learning in higher education had a global context (see Figure 3). Many of these studies were conducted in countries across various continents (e.g., Taiwan,

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Malaysia, Canada, Australia, Spain, Portugal, South Africa, Nigeria, Saudi Arabia, Oman, and many others). Although the majority of the investigations analyzed in this study were conducted in the United States, there was also a large representation of mobile learning data and participants in an international setting. This shows that mobile learning is a global matter in teaching and learning.



Fig 3. Countries Conducting M-Learning Research in Higher Education in the Last Decade

Mobile Learning has been identified as an impactful educational innovation (Chee et al., 2017). Higher education has seen an increase in M-Learning because it promotes engagement, flexibility, facilitates collaborative learning, and provides anytime, anywhere learning. Mobile learning applications include not just text and videos, but also lessons that demonstrate real procedures (Qureshi et al., 2020). These applications are becoming the new age of acquiring skills in any profession and enhancing the learning process (Qureshi et al., 2020). M-Learning enriches learning and inspires students to seek lifelong education. It seems that in the future, mobile learning won't be an option (Criollo-C et al., 2021). The utilization of portable electronics is going to turn into an absolute need in the educational system (Criollo-C et al., 2021).

Limitations

The results of this investigation do not include published proceedings. It primarily focused on peer-reviewed journal articles. As a result, the results of this study may not represent all the current research trends. Additionally, this research analyzed M-

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Learning papers in the last decade that were gathered from the Google Scholar, Academic Search Complete, and ERIC databases at the time using the previously mentioned search keywords. Future research could consider the use of additional or different search phrases to build on these results.

References

1. Al-Adwan, A. S., Al-Madadha, A., & Zvirzdinaite, Z. (2018). Modeling students' readiness to adopt Mobile Learning in higher education: An empirical study. International Review of Research in Open and Distributed Learning, 19(1), 221-241.
2. Al-Emran, M., Elsherif, H. M., & Shaalan, K. (2016). Investigating attitudes towards the use of mobile learning in higher education. Computers in Human behavior, 56, 93-102.
3. Al-Rahmi, A. M., Al-Rahmi, W. M., Alturki, U., Aldraiweesh, A., Almutairy, S., & Al-Adwan, A. S. (2021). Exploring the factors affecting mobile learning for sustainability in higher education. Sustainability, 13(14), 7893, 1-22.
4. Alrasheedi, M., & Capretz, L. F. (2015). Determination of critical success factors affecting mobile learning: A meta-analysis approach. The Turkish Online Journal of Educational Technology, 14(2), 41-51.
5. Bai, H. (2019). Pedagogical practices of mobile learning in K-12 and higher education settings. TechTrends, 63(5), 611-620.
6. Bidin, S., & Ziden, A. A. (2013). Adoption and application of mobile learning in the education industry. Procedia-social and behavioral sciences, 90, 720-729.
7. Biswas, B., Roy, S. K., & Roy, F. (2020). Students' perception of mobile learning during COVID-19 in Bangladesh: university student perspective. Aquademia, 4(2), 1-
9. Bose, D., & Lowenthal, P. R. (2016). Integrating mobile devices into the classroom: a qualitative case study of a faculty learning community. International Journal of Social Media and Interactive Learning Environments, 4(4), 319-332.
8. Briz-Ponce, L., Pereira, A., Carvalho, L., Juanes-Méndez, J. A., & García-Peñalvo, F. J. (2017). Learning with mobile technologies–Students' behavior. Computers in human behavior, 72, 612-620.
9. Chee, K. N., Yahaya, N., Ibrahim, N. H., & Hasan, M. N. (2017). Review of mobile learning trends 2010-2015: A meta-analysis. Journal of Educational Technology & Society, 20(2), 113-126.
10. Cheng, P. H., Yang, Y. T. C., Chang, S. H. G., & Kuo, F. R. R. (2015). 5E mobile inquiry learning approach for enhancing learning motivation and scientific inquiry ability of university students. IEEE Transactions on Education, 59(2), 147-153.
11. Criollo-C, S., Guerrero-Arias, A., Jaramillo-Alcázar, Á., & Luján-Mora, S. (2021). Mobile learning technologies for education: Benefits and pending issues. Applied Sciences, 11(9), 4111.
12. Crompton, H., & Burke, D. (2018). The use of mobile learning in higher education: A systematic review. Computers & Education, 123, 53-64.
13. Dolawattha, D. M., Premadasa, H. S., & Jayaweera, P. M. (2022). Evaluating sustainability of mobile learning framework for higher education: a machine learning

DOI: https://doi.org/10.33193/JEAHS.54.2026.834
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Journal of Educational and Human Sciences
www.jeahs.com
Volume (54) - November 2026
العدد (54) - نوفمبر 2026

approach. Computers in human behavior, 39(3) 266-281.
14. El-Sofany, H., & El-Haggar, N. (2020). The effectiveness of using mobile learning techniques to improve learning outcomes in higher education. International Journal of Interactive Mobile Technologies, 14(8), 4-18.
15. Foti, M. K., & Mendez, J. (2014). Mobile learning: how students use mobile devices to support learning. Journal of Literacy and Technology, 15(3), 58-78.
16. Fouzdar, K., & Behera, S. K. (2017). Attitude of Post Graduate Students towards Mobile Learning. Educare, 9(2), 111-120.
17. Gikas, J., & Grant, M. M. (2013). Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. The Internet and Higher Education, 19, 18-26.
18. Gough, D., Oliver, S., & Thomas, J. (Eds.). (2017). An introduction to systematic reviews. Sage.
19. Hamidi, H., & Chavoshi, A. (2018). Analysis of the essential factors for the adoption of mobile learning in higher education: A case study of students at the University of Technology. Telematics and Informatics, 35(4), 1053-1070.
20. Hanif, M., & Asrowi, A. (2018). Mobile Learning Perception of Graduate Student Teachers: A Case Study in Magister Program of Educational Technology of University of Sebelas Maret. International Journal of Multicultural and Multireligious Understanding, 5(1), 84-91.
21. Hilao, M. P., & Wichadee, S. (2017). Gender differences in mobile phone usage for language learning, attitude, and performance. Turkish Online Journal of Distance Education, 18(2), 68-79.
22. Hsu, Y. C., & Ching, Y. H. (2013). Mobile computer-supported collaborative learning: A review of experimental research. British Journal of Educational Technology, 44(5), 111-114.
23. Hwang, G. J., & Tsai, C. C. (2011). Research trends in mobile and ubiquitous learning: A review of publications in selected journals from 2001 to 2010. British Journal of Educational Technology, 42(4), 65-70.
24. Jie, Z., & Sunze, Y. (2022). A mobile pedagogical framework for enhancing online teaching and learning in higher education. Interactive Learning Environments, 1-14.
25. Kaliisa, R., Palmer, E., & Miller, J. (2019). Mobile learning in higher education: A comparative analysis of developed and developing country contexts. British Journal of Educational Technology, 50(2), 546-561.
26. Khaddage, F., Müller, W., & Flintoff, K. (2016). Advancing mobile learning in formal and informal settings via mobile app technology: Where to from here, and how? Journal of Educational Technology & Society, 19(3), 16-26.
27. Khan, M. S. H., Abdou, B. O., Kettunen, J., & Gregory, S. (2019). A phenomenographic research study of students' conceptions of mobile learning: An example from higher education. Sage Open, 9(3), 1-17.
28. Kim, D., Rueckert, D., Kim, D. J., & Seo, D. (2013). Students' perceptions and experiences of mobile learning. Language Learning & Technology, 17(3), 52-73.
29. Korucu, A. T., & Bicer, H. (2018). Investigation of post-graduate Students'

DOI: https://doi.org/10.33193/JEAHS.54.2026.834
e-ISSN: 2709-071X
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Journal of Educational and Human Sciences
www.jeahs.com
Volume (54) - November 2026
العدد (54) - نوفمبر 2026

attitudes towards Mobile learning and opinions on mobile learning. International Technology and Education Journal, 2(1), 21-34.
30. Kuimova, M., Burleigh, D., Uzunboylu, H., & Bazhenov, R. (2018). Positive effects of mobile learning on foreign language learning. TEM journal, 7(4), 837-841.
31. Martin, F., Dennen, V. P., & Bonk, C. J. (2020). A synthesis of systematic review research on emerging learning environments and technologies. Educational Technology Research and Development, 68(4), 1613-1633.
32. Morris, P. L., & Sarapin, S. (2020). Mobile phones in the classroom: policies and potential pedagogy. Journal of Media Literacy Education, 12(1), 57-69.
33. Oyelere, S. S., Suhonen, J., Wajiga, G. M., & Sutinen, E. (2018). Design, development, and evaluation of a mobile learning application for computing education. Education and Information Technologies, 23(1), 467-495.
34. Popov, V., Jiang, Y., & So, H. J. (2020). Shared lessons in mobile learning among K-12 education, higher education and industry: an international Delphi study. Educational Technology Research and Development, 68(3), 1149-1180.
35. Qureshi, M. I., Khan, N., Hassan Gillani, S. M. A., & Raza, H. (2020). A Systematic Review of Past Decade of Mobile Learning: What we Learned and Where to Go. International Journal of Interactive Mobile Technologies, 14(6), 67-81.
36. Reeves, S., Goldman, J., Burton, A., & Sawatzky-Girling, B. (2010). Synthesis of systematic review evidence of interprofessional education. Journal of Allied Health, 39(3), 198-203.
37. Robb, M., & Shellenbarger, T. (2012). Using technology to promote mobile learning: engaging students with cell phones in the classroom. Nurse Educator, 37(6), 258-261.
38. Short, S. S., Lin, A. C., Merianos, D. J., Burke, R. V., & Upperman, J. S. (2014). Smartphones, trainees, and mobile education: implications for graduate medical education. Journal of graduate medical education, 6(2), 199-202.
39. Sung, Y. T., Chang, K. E., & Liu, T. C. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. Computers & Education, 94, 252-275.
40. Sung, Y. T., Yang, J. M., & Lee, H. Y. (2017). The effects of mobile-computer-supported collaborative learning: Meta-analysis and critical synthesis. Review of Educational Research, 87(4), 768-805.
41. Suartama, I. K., Setyosari, P., & Ulfa, S. (2019). Development of an instructional design model for mobile blended learning in higher education. International Journal of Emerging Technologies in Learning, 14(16), 4-22.
42. Tabuenca, B., Kalz, M., Drachsler, H., & Specht, M. (2015). Time will tell: The role of mobile learning analytics in self-regulated learning. Computers & Education, 89, 53-74.
43. Thiyagu, K. (2012). Perception towards Mobile Learning Activities among Post Graduate Students. Journal on School Educational Technology, 8(1), 35-40.
44. Todoranova, L., Nacheva, R., Sulov, V., & Penchev, B. (2020). A model for mobile learning integration in higher education based on students' expectations. International Journal of Interactive Mobile Technologies, 14(11), 171-182.

DOI: https://doi.org/10.33193/JEAHS.54.2026.834
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Journal of Educational and Human Sciences
www.jeahs.com
Volume (54) - November 2026
العدد (54) - نوفمبر 2026

45. Willemse, J. J., Jooste, K., & Bozalek, V. (2019). Experiences of undergraduate nursing students on an authentic mobile learning enactment at a higher education institution in South Africa. Nurse education today, 74, 69-75.
46. Wong, A., & Wong, S. (2016). A cross-cohort exploratory study of a student perceptions on mobile phone-based student response system using a polling website. International Journal of Education and Development using ICT, 12(3), 58-78.
47. Wright, R. W., Brand, R. A., Dunn, W., & Spindler, K. P. (2007). How to write a systematic review. Clinical Orthopedics and Related Research (1976-2007), 455, 23-29.
48. Wu, W. H., Wu, Y. C. J., Chen, C. Y., Kao, H. Y., Lin, C. H., & Huang, S. H. (2012). Review of trends from mobile learning studies: A meta-analysis. Computers & Education, 59(2), 817-827.