


# Investigating Students' Intention to Use M-Learning: The Mediating Role of Mobile Usefulness and Intention to Use

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## ABSTRACT

Mobile learning (M-learning) has become a crucial tool for both students and educators. The unified theory of acceptance and use of technology (UTAUT), the technology acceptance model (TAM), and outside factors were all included in this study's integrative review approach to examine the variables affecting university students' intention to use M-learning and mobile effectiveness. A study at King Faisal University examined the viewpoints of 364 undergraduate and graduate students using a random sampling technique to have better understand the impact of such technological innovation on teaching. Participants in the study were invited to complete a survey created expressly for this study in order to find out if they would still be open to using M-learning to advance the cause of sustainable education. The paradigm of the study was evaluated using a structural equation modeling (SEM) approach and was based on the UTAUT and TAM technology adoption models. The findings demonstrated that each element of the research model had a positive influence on learners' behavioral intention to use M-learning (BIM); it also demonstrated the impact of that intention on long-term educational sustainability. The link between independent characteristics and users' enjoyment and adoption of M-learning is moderated by mobile usability and behavioral control to utilize M-learning. The results also showed that BIM and the utility of mobile devices increased the degree to which M-learning is liked. Mobile usability and BIM both favorably affect sustainable education in terms of user satisfaction and M-learning adaptation. These findings suggest that mobile usability and behavioral intention to utilize M-learning are the main factors influencing the adoption of M-learning in Saudi Arabia's higher education.

## KEYWORDS

Adoption of Use of M-Learning, M-Learning, Mobile Usefulness, Perceived Psychological Readiness, Perceived Skills Readiness, University Management Support

DOI: 10.4018/IJICTE.337136

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## INTRODUCTION

The definition of mobile learning (M-learning) is “learning that takes place when students have access to information whenever and wherever they are using mobile technology to engage in genuine actions as part of their learning” (Al-Rahmi et al., 2021a; Martin & Ertzberger, 2013). M-learning presents a unique chance to draw on learners’ formal and informal learning experiences (Alturki & Aldraiweesh, 2022; Granić & Marangunić, 2019). Mobile computing devices’ mobility and flexibility enable learners to contextualize their learning in a useful way, apply what they learn to real-world challenges, and customize their learning (Sánchez-Prieto et al., 2019; Viberg et al., 2021). Since the idea of M-learning first emerged, information systems (IS) and educational specialists have examined ways to incorporate it into instructional practices. The fact that M-learning systems enable students to access their course materials over wireless networks “anytime, anywhere” is the basis for those researchers’ steadfast insistence on the importance of M-learning (Al-Emran & Teo, 2020; Al-Rahmi et al., 2021b). Notwithstanding this enthusiasm, investing in M-learning technologies calls for an appreciation of students’ low incentive to use them for educational purposes (Aguilera-Hermida, 2020). Students must be aware of its benefits and incorporate it into their academic lives in order for M-learning platforms to be used for educational practices (Alghazi et al., 2021).

M-learning can be utilized to lessen the problems related to schooling, according to a number of studies (Al-Rahmi, et al., 2022a; Hill et al., 1977; Kong, 2018; Qashou, 2021). According to Al-Rahmi, Shamsuddin, Wahab, Al-Rahmi, Alismaiel, et al. (2022b), M-learning transforms an instructional strategy into a student-focused one that can foster meaningful, holistic learning experiences. Additionally, M-learning gives teachers access to a wide range of pedagogies, including group work, quizzes, and educational games, all of which may be used to cater to the unique learning preferences of students (Alturki & Aldraiweesh, 2022). The availability of instructional and evaluation materials at all times and locations is made possible through M-learning (Almaiah et al., 2019). M-learning makes it possible to use graphical science experiments, which can help learners better comprehend science ideas and provide comprehensive explanations of those subjects (Liu et al., 2021). M-learning enhances lecturers’ participation in their students’ education, which in turn enhances students’ drive and achievement in STEM-related topics, according to Gamage et al. (2022) and Kong (2018).

Many theoretical models, including the theory of reasoned action (TRA; Al-Emran et al., 2018), the technology acceptance model (TAM), the unified theory of acceptance and use of technology (UTAUT; Alghazi et al., 2021), and the theory of planned behavior (TPB; Ajzen, 1985), were used to comprehend the factors influencing the adoption of M-learning. Due to its simplicity, versatility, and soundness, TAM is thought to be one of the most often used theoretical models for forecasting the adoption of various technologies (Liu et al., 2021). More particularly, it was recently discovered that TAM was the most frequently utilized theoretical model for comprehending the adoption of M-learning (Aburub & Alnawas, 2019). TAM’s effective explanatory ability and successful validation using a number of measurement scales were other considerations (Al-Emran et al., 2018). The TAM’s fundamental variables, “perceived ease of use” and “perceived usefulness,” which examine how people embrace various technologies, have good empirical backing, increasing the model’s applicability across disciplines (Aburub & Alnawas, 2019; Hamidi & Chavoshi, 2018).

## RELATED WORK IN M-LEARNING

Even though higher education institutions have significantly invested in M-learning initiatives, many universities still struggle to reap the benefits of these initiatives (Gamage et al., 2022; Hill et al., 1977; Kong, 2018). According to numerous studies, a successful M-learning system must be enthusiastically embraced by students in order to succeed (Qashou, 2021). In order to ensure the effectiveness of M-learning technology in educational environments, it is therefore

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