

MOBILE BANKING ADOPTION AMONG UNIVERSITY STUDENTS: A SYSTEMATIC LITERATURE REVIEW

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Abstract

This study systematically reviews the literature on mobile banking adoption among university students to identify the key determinants and barriers shaping adoption decisions, the theoretical frameworks most commonly applied, and directions for future research. Following the PRISMA 2020 protocol, 46 peer-reviewed studies published between 2010 and 2024 were identified, screened, and synthesized. The review shows that perceived usefulness, trust, social influence, ease of use, and financial literacy are the principal drivers of adoption, while lack of awareness, technological constraints, and security concerns remain the main barriers. Most reviewed studies draw on the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), are cross-sectional, concentrate on business or information-technology students, and are concentrated in Asia and Africa. These findings suggest that universities and financial institutions should prioritize targeted digital-literacy and trust-building initiatives, particularly for students outside business and technology disciplines, while future research should adopt more diverse, longitudinal designs to capture how adoption evolves over time

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INTRODUCTION

The emergence of financial technology (FinTech), particularly mobile banking, has significantly transformed the banking sector. Mobile banking, defined as the ability to conduct financial transactions through mobile devices, aligns effectively with the expectations of younger, technologically literate demographic groups such as university students. This group, often regarded as digital natives, exhibits several characteristics that favour mobile banking use, including widespread smartphone adoption, growing financial independence, and a pressing need for efficient financial management solutions (Phan et al., 2020; Sultana et al., 2024).

Beyond these individual level drivers, mobile banking adoption is also shaped by the institutional environment in which students pursue their studies. Higher-education institutions have begun integrating mobile banking as an essential service within their operational frameworks. This integration covers various functions, such as facilitating tuition-fee payments and digital-wallet systems, thereby enhancing the overall student experience (Navavongsathian et al., 2020). However, mobile banking adoption among university students is inconsistent across contexts. Many factors shape students' acceptance, including technological infrastructure, social dynamics, and perceived

usefulness and ease of use, as outlined by the Technology Acceptance Model (TAM) (Nuangjamnong, 2021; Rehman et al., 2019). Empirical evidence shows that ease of use and perceived benefit remain central to students' decisions to use mobile banking services (Baabdullah et al., 2019; Dergol-Dery, 2017).

Despite these insights, the literature reveals a fragmented understanding of the factors influencing mobile banking adoption among university students across different regions and institution types. For instance, while research confirms that ease of use is a significant driver of satisfaction and intention to use banking applications, different cultural contexts introduce varying factors that facilitate or hinder adoption (Deventer, 2017). This contextual variability raises questions about the stability and transferability of findings across different settings, an issue that has not yet been addressed systematically in the existing literature (Elhajjar & Ouaida, 2019).

Methodologically, existing research lacks uniformity, drawing on a variety of theoretical models, including UTAUT and Diffusion of Innovation Theory. This heterogeneity often produces inconsistent conclusions regarding the barriers and facilitators of mobile banking adoption (Akhter & Baqui Khalily, 2020; Singh, 2020). For example, although perceived security and social influence have been shown to affect adoption intention, these factors may manifest differently across socio-economic environments (Magar et al., 2023; Siahaan et al., 2021). Furthermore, several studies find that perceived risk significantly discourages mobile banking use among students even when awareness of its existence is high (Deventer, 2017; Tan & Lau, 2016).

Mobile banking refers to the use of a mobile device, such as a smartphone or tablet, to carry out financial transactions and access banking services, including fund transfers, bill payments, balance inquiries, and digital-wallet functions, without visiting a physical bank branch (Sultana et al., 2024). As an extension of internet and electronic banking, mobile banking is distinguished by its portability, real-time accessibility, and integration with other mobile-based services, which together make it particularly well suited to the always-connected lifestyle of younger users (Phan et al., 2020).

University students represent a demographic segment characterized by high smartphone penetration, growing financial independence, and frequent exposure to digital services introduced by their institutions, such as tuition-fee payment portals and campus digital wallets (Navavongsathian et al., 2020). As “digital natives,” students are generally expected to adopt mobile financial technologies readily; however, their adoption behaviour is also shaped by institutional support, peer influence, and the financial-literacy levels attained during their studies, which makes higher education a distinctive context for studying technology adoption rather than a simple extension of general consumer behaviour (Bećirović et al., 2023).

The Technology Acceptance Model (TAM) explains individual acceptance of information systems through two core constructs: perceived usefulness, the degree to which a person believes that using a system will enhance their performance, and perceived ease of use, the degree to which a person believes that using the system will be free of effort (Davis, 1989). Within mobile banking research, TAM is the most frequently applied framework, and is often extended with additional constructs such as trust, perceived risk, and social influence to better capture the specific behaviour of student users (AlAli & AlAli, 2020; Riza & Hafizi, 2019).

The Unified Theory of Acceptance and Use of Technology (UTAUT) synthesizes eight earlier technology-acceptance models into four core determinants of behavioural intention and use: performance expectancy, effort expectancy, social influence, and

facilitating conditions, moderated by factors such as age, gender, and experience (Venkatesh et al., 2003). Its extended version, UTAUT2, adds constructs such as hedonic motivation, price value, and habit, and has been widely adopted in mobile banking studies to account for the voluntary, consumer-driven nature of student adoption decisions (AlAli & AlAli, 2020; Singh & Srivastava, 2018).

Building on these theoretical foundations, this study aims to systematically review the existing literature on mobile banking adoption among university students. Although prior systematic reviews have examined mobile banking adoption among general consumers or bank customers, few have specifically synthesis evidence from the higher-education population using a PRISMA-compliant protocol, and none appear to have jointly evaluated the determinants, theoretical frameworks, and methodological trends unique to student adopters across multiple regions (Hosseini et al., 2015). This review addresses that gap by identifying the key determinants and constraints, evaluating the theoretical frameworks employed, analyzing methodological trends, and offering recommendations for future research. As academics work to strengthen financial inclusion through digital banking services, these findings are expected to benefit a range of stakeholders, including university policymakers, financial-service providers, and researchers in the fields of FinTech and education (Mujahed et al., 2020).

RESEARCH METHODS

This systematic review applies the PRISMA 2020 guidelines (Page et al., 2021), together with the Publish or Perish application to ensure methodological rigor in exploring mobile banking adoption among university students. The key determinants, theoretical frameworks, adoption barriers, and gaps present in the existing literature were examined through a structured approach comprising clearly defined research questions, a careful search strategy, precise inclusion and exclusion criteria, a systematic screening and selection process, and comprehensive data extraction and synthesis. The PRISMA 2020 protocol structures the review process into four sequential stages, identification, screening, eligibility, and inclusion, with the number of records retained or excluded reported transparently at every stage, thereby ensuring a reproducible and auditable review process.

Research Questions

This review is guided by four key research questions:

- RQ1. What factors influence university students' decisions to adopt mobile banking?
- RQ2. Which theoretical frameworks have been used to explain mobile banking adoption among students?
- RQ3. What barriers hinder the adoption and use of mobile banking in higher-education settings?
- RQ4. What methodological gaps and limitations characterise the existing body of research on this topic?

Search Strategy

Scopus was selected as the sole search database because of its broad multidisciplinary coverage, rigorous journal-indexing standards, and its established use as a primary source in comparable high quality systematic reviews of technology adoption, thereby ensuring that only rigorously peer-reviewed, indexed sources were included in the synthesis. A comprehensive search was conducted using the Publish or

Perish application to query the Scopus database. The search parameters were set as follows: (a) search field: [title, abstract, and author keywords]; (b) publication years: 2010–2024; (c) document types: [journal articles and conference papers]; (d) language: English; (e) maximum number of records retrieved per query. Publish or Perish was used only to retrieve and export bibliographic records; it was not used to judge the quality of the retrieved studies. Terms such as “mobile banking,” “university,” and “adoption” were used to identify relevant studies (Balogun & Olaleye, 2022; Khaleel et al., 2023). Table 1 presents the search strings constructed for each research question.

Table 1. Search string identification by research question

No.	Research question	Keywords
1	What factors influence university students' decisions to adopt mobile banking?	("mobile banking" OR "m-banking" OR "mobile financial services") AND ("university student*" OR "college student*" OR "higher education") AND ("adoption" OR "acceptance" OR "intention to use") AND ("factor*" OR "determinant*" OR "driver*")
2	Which theoretical frameworks have been used to explain mobile banking adoption among students?	("mobile banking" OR "m-banking") AND ("student*" OR "higher education") AND ("Technology Acceptance Model" OR "TAM" OR "UTAUT" OR "theoretical framework")
3	What barriers hinder the adoption and use of mobile banking in higher-education settings?	("mobile banking" OR "m-banking") AND ("student*" OR "university") AND ("barrier*" OR "challenge*" OR "obstacle*" OR "resistance")
4	What methodological gaps and limitations characterise the existing body of research on this topic?	("mobile banking" OR "m-banking") AND ("student*" OR "university") AND ("methodology" OR "research design" OR "cross-sectional" OR "longitudinal" OR "mixed methods")

Source: Author's own construction (2025), based on the search terms reported in the reviewed methodology.

Inclusion and Exclusion Criteria

Inclusion criteria were strictly limited to peer-reviewed articles and conference papers that specifically addressed mobile banking within the higher-education context, using quantitative, qualitative, or mixed-methods research approaches (Hassan & Nika, 2022; Khaleel et al., 2023). Conversely, articles that discussed mobile banking in general terms without a university focus, or that were published in a language other than English, were excluded (Baabdullah et al., 2019; Priya et al., 2018). To further safeguard scientific quality, eligible studies were additionally required to be indexed in Scopus, which applies rigorous, publisher-independent peer review and editorial quality checks to the journals and conference proceedings it covers, thereby excluding predatory or non-indexed outlets from the synthesis.

Screening and Selection Process

The initial search yielded a large number of articles, which were then narrowed down through systematic screening by independent reviewers, ensuring compliance with the specified eligibility criteria and culminating in the identification of the studies that most effectively answered the research questions (Baabdullah et al., 2019; Hassan & Nika, 2022). Figure 1 summarize this identification, screening, and eligibility process in accordance with the PRISMA 2020 flow diagram.

The PRISMA flow diagram is included for three purposes. First, it makes the review process transparent and reproducible: it shows, stage by stage, how many records were identified, screened, assessed for eligibility, and finally included, so that readers can trace how the initial set of Scopus records became the 46 studies

synthesised here. Second, it reports the number of records removed or excluded at each stage, with the reasons for exclusion at the full-text stage, which allows readers to judge whether the eligibility criteria were applied consistently and whether the selection could be repeated. Third, it follows the reporting standard expected of a systematic review (Page et al., 2021). The diagram is a reporting device: it documents what was done at each stage and does not assess the quality of the individual studies.

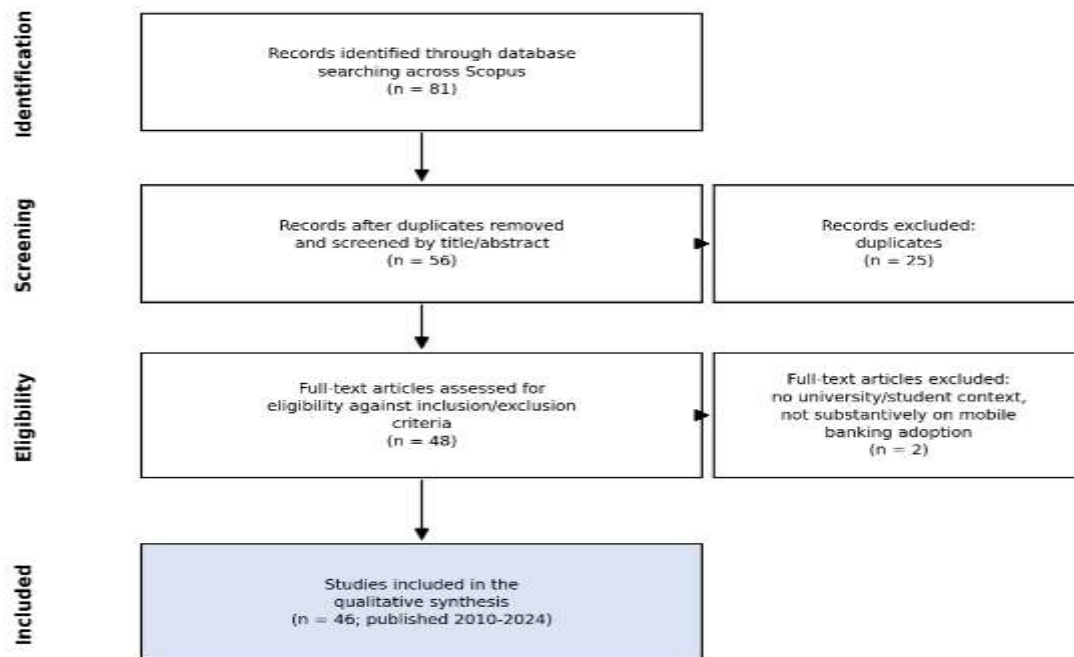


Figure 1. PRISMA 2020 flow diagram

During the identification stage, 81 records were retrieved from the Scopus database using the search strings in Table 1. After 25 duplicate records were removed, the remaining 56 records were screened by title and abstract; following further full-text retrieval and preliminary relevance checks, 48 articles were assessed in full against the inclusion and exclusion criteria, of which 2 were excluded for lacking a university/student context or for not substantively addressing mobile banking adoption. This process yielded a final set of 46 studies, published between 2010 and 2024, that were retained for the qualitative synthesis presented in this review.

Data Extraction and Synthesis

Data extraction captured key information, including author details, year of publication, sample characteristics, methodology used, reported barriers, and principal findings. A narrative synthesis approach was then applied to identify patterns and trends across the body of research on mobile banking adoption (Palshkov et al., 2024; Pokhrel, 2022; Thaker et al., 2019).

RESULTS AND DISCUSSION

Overview of Included Studies

This systematic review encompasses a total of 46 studies published between 2010 and 2024, curated through the screening process described above. The majority of these studies originate from developing countries such as India, Indonesia, Nigeria, and Pakistan, reflecting strong academic interest in mobile financial services within

emerging economies (Makanyeza, 2017; Muchandigona & Kalema, 2023; Rahman et al., 2020). By contrast, a smaller share examine contexts in developed countries, particularly the United States and the United Kingdom, offering comparative insight into mobile banking adoption across different economic environments (Nnaomah et al., 2024). In terms of publication type, the majority (65%) are peer-reviewed journal articles, while conference proceedings account for the remaining 35%. The methodologies employed vary considerably; the dominant approach is quantitative (76%), followed by qualitative (17%) and mixed-methods designs (7%) (Chawla & Joshi, 2019; Ezie et al., 2023; Saji & Paul, 2018).

Theoretical Frameworks Applied

The reviewed studies draw on a variety of theoretical models to analyse mobile banking adoption, with the Technology Acceptance Model (TAM) standing out as the most frequently used framework, appearing in a large share of the studies. The Unified Theory of Acceptance and Use of Technology (UTAUT and UTAUT2) follows closely behind (AlAli & AlAli, 2020; Singh & Srivastava, 2018). Other models, such as the Diffusion of Innovation (DOI) theory and the Theory of Planned Behaviour (TPB), are also referenced, albeit less frequently (Ibrahim et al., 2022; Sharma et al., 2017). Many studies extend these foundational models by incorporating external variables such as trust, perceived risk, financial literacy, and social influence, enriching their analysis of behavioural intention and actual use of mobile banking services.

Drivers of Mobile Banking Adoption

The evidence on drivers is uneven, and the study counts below refer to the studies cited in Table 2 as supporting evidence for each factor, not to an exhaustive tally of all 46 included studies. Perceived usefulness and perceived ease of use, the core TAM constructs, are the best-supported drivers, with three studies (AlAli & AlAli, 2020; Riza & Hafizi, 2019; Shetty & Nikhitha, 2022). Their prominence is partly a consequence of the dominance of TAM itself: because most studies adopt TAM as their starting model, these constructs are measured almost by default, which can overstate how consistently they predict adoption relative to factors that are measured less often. For students who are already fluent smartphone users, perceived usefulness (saving time and accessing banking services from anywhere) is a more plausible source of motivation than perceived ease of use, although this interpretation still needs direct testing. Trust, together with concerns about data privacy and transaction security, is supported by two studies (Arif et al., 2016; Rahman et al., 2020). It matters because a mobile transaction cannot be verified directly by the user: trust substitutes for that missing verification and lowers the perceived risk of fraud and data breaches. It therefore works more as a precondition for adoption than as an additional benefit, and perceived usefulness is unlikely to translate into intention when trust is absent.

Social influence is reported in two studies (Deswanto, 2020; Makanyeza, 2017). Its relevance for students lies in tightly connected peer groups and social media, where recommendations reduce uncertainty about an unfamiliar service; however, it remains unclear whether this effect reflects normative pressure or information sharing, which limits causal interpretation. Financial literacy, also supported by two studies (Abdulganiyu & Dambo, 2023; Deswanto, 2020), matters because functions such as transfers, savings, and bill payments require users to understand fees, risks, and account management. Students with higher financial knowledge can judge the benefits

and risks of these services more accurately and use them beyond basic balance checks, so financial literacy shapes the depth of use as well as the decision to adopt. Mobile-application quality, covered by two studies (Chavali & Kumar, 2018; Farida, 2019), including usability, aesthetics, and performance, shapes engagement and satisfaction after the first adoption decision. It is therefore better interpreted as a driver of continued use than of initial adoption, a distinction that is rarely made explicit because most studies measure intention at a single point in time. Overall, only perceived usefulness and ease of use reach three supporting studies, while each of the other drivers rests on two. Conclusions about the relative strength of these drivers should therefore be treated as tentative, and the prominence of the TAM constructs may reflect research attention rather than greater explanatory power.

Table 2. Factors influencing mobile banking adoption among university students

Category	Dimension	Key indicators and supporting studies
Drivers	Perceived Usefulness & Ease of Use	Core TAM constructs; the strongest and most consistent predictors of adoption intention (AlAli & AlAli, 2020; Riza & Hafizi, 2019; Shetty & Nikhitha, 2022)
	Trust, Privacy & Security	Confidence in data protection and transaction security (Rahman et al., 2020; Arif et al., 2016)
	Social Influence	Peer recommendations and social-media exposure (Makanyeza, 2017; Deswanto, 2020)
	Financial Literacy	Higher financial knowledge associated with greater adoption and more effective use (Deswanto, 2020; Abdulganiyu & Dambo, 2023)
	Mobile Application Quality	Usability, aesthetics, and performance of the banking app (Chavali & Kumar, 2018; Farida, 2019)
	Institutional Facilitation	University-provided digital payment options and financial-app orientation (Koenait et al., 2019; Aldiabat et al., 2019)
	Demographic Factors	Gender, field of study, and age (Makanyeza, 2017; Tashtamirov, 2023; Carandang, 2023)
Barriers	Perceived Risk	Fear of fraud, technical failure, and data breaches (Arif et al., 2016; Shetty & Nikhitha, 2022)
	Lack of Awareness	Limited understanding of services and benefits, especially among lower-income groups (Riley & Shonchoy, 2020)
	Technological Infrastructure Constraints	Limited internet connectivity and smartphone access, particularly in rural areas (Nnaomah et al., 2024; Muchandigona & Kalema, 2023)
	Resistance to Change	Reliance on traditional banking methods and parental influence on decision-making (Ezie et al., 2023; Sun et al., 2017)
	Security & Privacy Concerns	Worries over personal data and financial-transaction safety (Rahman et al., 2020; Khaleel et al., 2023; Shareef et al., 2018)
	Digital Inequality	Limited financial literacy or device access among disadvantaged students (Fall et al., 2020; Shaikh et al., 2022; Karmacharya, 2023)

Source: Author's own synthesis (2025) of factors reported across the 46 reviewed studies.

Barriers to Adoption

Rather than operating independently, these barriers appear causally linked. Perceived risk is frequently rooted in low digital and financial literacy: students who do not understand how transaction security works are less able to evaluate real threats accurately, which amplifies fear of fraud beyond what the objective risk would warrant (Arif et al., 2016; Shetty & Nikhitha, 2022). This uncertainty is compounded in under-resourced settings, where poor technological infrastructure does not merely

inconvenience users but actively prevents them from building the routine, hands-on familiarity that would otherwise reduce perceived risk over time (Muchandigona & Kalema, 2023; Nnaomah et al., 2024). Limited awareness, in turn, is less a standalone barrier than a downstream consequence of weak institutional communication: where universities do not actively promote mobile banking services, students default to the traditional banking practices modelled by their families, reinforcing resistance to change through parental influence rather than personal risk assessment (Ezie et al., 2023; Riley & Shonchoy, 2020; Sun et al., 2017). Read together, these findings suggest that barriers to adoption are mutually reinforcing: infrastructural gaps sustain low familiarity, low familiarity sustains perceived risk, and the absence of institutional intervention allows traditional norms to persist by default.

Contextual and Demographic Insights

Demographic evidence is thinner and more contested than the evidence on psychological drivers, and each factor below rests on two studies. Gender differences are reported in two studies (Deswanto, 2020; Makanyeza, 2017), which attribute the greater propensity of male students to adopt to their higher exposure to technology and their role in financial decision-making. These explanations point to unequal access and socialisation rather than to an inherent difference, so the gap is better read as a marker of structural inequality that may narrow where smartphone access and financial autonomy are more equal. Field of study, examined in two studies (Carandang, 2023; Tashtamirov, 2023), shows higher engagement among business and IT students than among students in the humanities or the arts. This most plausibly reflects greater exposure to financial concepts and digital tools in their curricula, so field of study overlaps with financial literacy and technology familiarity rather than operating as an independent driver. Institutional influence, also reported in two studies (Aldiabat et al., 2019; Koenaitie et al., 2019), is notable because universities that facilitate digital payments or provide orientation on financial applications report higher adoption among their students, which indicates that adoption can be shaped by institutional design and not only by student characteristics. Because each of these findings rests on only two studies, they should be treated as context-bound indications rather than generalisable conclusions.

Identified Research Gaps

Although the existing literature is extensive, several limitations emerge clearly from this review. A geographic bias has been noted, with an overrepresentation of studies from South Asia and Africa, leaving a significant gap in research from Latin America, Central Asia, and small island states (Mandari et al., 2020; Muchandigona & Kalema, 2023). In addition, most studies employ a cross-sectional design, which limits insight into how user behaviour evolves over time. The limited use of qualitative methodologies restricts deeper exploration of the psychological or contextual factors that influence adoption (Evans & Pirchio, 2015). Furthermore, only a small number of studies examine the potential role of educational institutions as facilitators of financial-technology literacy and engagement, indicating an area that warrants further research (Prina, 2015; Singh & Srivastava, 2018).

DISCUSSION

A systematic review of mobile banking adoption in higher education reveals a

convergence of behavioural drivers and context-specific barriers that shape mobile banking use among university students. A number of studies show that perceived ease of use, trust, social influence, and financial literacy are important determinants of students' willingness to use mobile banking services. This is consistent with foundational frameworks such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), both of which underscore the importance of user perceptions and external influences on technology adoption (Alalwan et al., 2017; Shareef et al., 2018).

From the evidence gathered, it becomes clear that traditional acceptance models may not fully capture the complexity of mobile banking adoption in educational institutions. Institutional policies related to integrating mobile banking into university frameworks, such as providing digital tuition-payment options or mobile-friendly campus services, remain underexplored in the existing literature (Rawat, 2023; Sultana et al., 2024). Furthermore, emerging behavior dynamics such as peer culture, social-media influence, and gamified financial applications suggest the need to broaden conceptual models to include not only technology-acceptance factors but also socio-cultural and institutional context, which may explain dimensions that are often overlooked in the literature (Habriyanto et al., 2022; Huseynov et al., 2024; Wazid et al., 2019).

Geographically, the reviewed studies reflect a significant concentration in South and Southeast Asia, as well as Africa, highlighting how mobile banking functions as an important alternative to traditional banking in regions with limited access to financial institutions (Bala et al., 2021; Bongomin et al., 2016; Rawat, 2023). Here, students tend to adopt mobile banking out of necessity, driven by the lack of physical banking infrastructure. In more developed countries with robust financial ecosystems, by contrast, the motivation to adopt mobile banking often center on user experience, security measures, and the integration of mobile banking with broader digital solutions, such as digital-identity systems and e-wallets (Bala et al., 2021; Rawat, 2023). This disparity is best understood as a function of underlying banking-market structure rather than technological readiness alone: in markets with low branch density and historically limited financial inclusion, mobile banking substitutes for absent infrastructure, and adoption is therefore need-driven and largely unconditional, whereas in mature, branch-dense banking markets it competes with well-established channels and adoption becomes conditional on incremental gains in convenience, security, and interoperability. This structural distinction implies that adoption strategies transferred directly from developed-market studies may be poorly suited to infrastructure-scarce contexts, and vice versa, underscoring the need for market-structure-sensitive theory rather than a single universal adoption model.

Methodologically, the research landscape shows significant gaps, with most existing studies being cross-sectional and largely focused on student populations in business or IT disciplines. This focus may introduce bias, pointing to the need for greater diversification in research design. Future research should encompass broader academic demographics and incorporate qualitative approaches that probe more deeply into the psychological and cultural factors shaping students' attitudes toward mobile banking (Fakhrunnas & Anto, 2024). A concrete methodological remedy would be to adopt stratified or quota-sampling designs that allocate minimum sample quotas to non-business and non-IT faculties (e.g., health sciences, education, humanities, and the social sciences), combined with multi-site data collection across institutions with

differing levels of digital-infrastructure maturity; this would allow adoption drivers to be compared across disciplinary and institutional strata rather than inferred from a self-selected, technologically inclined subsample.

Finally, the practical implications derived from this review underscore the importance of institutional support in increasing mobile banking adoption. University administrators should incorporate financial-literacy modules into student orientation programs and provide robust support for mobile financial transactions, addressing user concerns about security and ease of use (Widarjono et al., 2022). For mobile banking providers, tailoring products to the specific needs and preferences of student users can significantly increase user engagement and adoption rates (Rawat, 2023).

In summary, although mobile banking is becoming increasingly relevant in the higher-education context, its adoption is shaped by a complex interplay of technological, individual, social, and institutional factors. Addressing the existing gaps in methodological approaches and theoretical frameworks can provide a deeper understanding of mobile banking adoption trends among university students.

Future Research Directions

This systematic review highlights significant gaps in the understanding of mobile banking adoption within the university context, prompting several recommendations for future research. These proposed directions can significantly advance scholarly inquiry by addressing theoretical, methodological, demographic, and contextual factors. *Expanding theoretical and conceptual frameworks.* Existing models such as TAM and UTAUT provide fundamental insight into technology adoption; however, they may not fully capture the complexity of mobile banking behavior among students who are already accustomed to digital technology. Integrating perspectives from behavior economics, such as nudging and loss aversion, could offer additional insight into financial decision-making processes in the digital era. Moreover, drawing on digital-inclusion and financial-wellbeing frameworks could situate mobile banking within the broader socio-economic challenges faced by students (Farah et al., 2018). Socio-cultural models that account for generational values, norms, and identity could further enrich analysis of how diverse student populations experience mobile banking differently (Behera et al., 2023), producing nuanced findings that reflect the varied nature of technology acceptance across diverse educational settings (Sasidharan & Venkatakrishnan, 2024).

Methodological diversity. The current literature consists largely of qualitative and quantitative surveys, which, while useful, limit the depth of understanding achieved. Future studies should incorporate longitudinal methodologies to observe how adoption behavior evolves over time, capturing dynamics that are often missed in cross-sectional designs (Purohit & Arora, 2021). Qualitative methods, including focus groups and ethnographic studies, can probe the psychological and social motivations behind students' adoption of, or resistance to, mobile banking, revealing contextual nuances that surveys often overlook (Çelik & Özköse, 2023). Experimental designs can further provide empirical evidence on the effectiveness of interventions designed to increase adoption, such as educational programs targeting financial literacy (Zeya, 2022).

Diversifying populations and contexts. An overly heavy focus on business and technology students from urban universities creates a narrow scope. Future research needs to involve participants from a wider range of disciplines, such as the humanities and social sciences, to capture a broader spectrum of attitudes and behaviors toward

mobile banking (Ruano-Arcos et al., 2020). Exploring adoption patterns among students in rural or underserved areas could reveal disparities, particularly in low-income countries where mobile banking can play a vital role in financial inclusion (Khaleel et al., 2023). Engaging other actors within the university ecosystem, including teaching staff and administrative personnel, would further enrich understanding of the systemic factors influencing mobile banking adoption (Kyei & Opoku, 2023).

Examining the role of institutions in shaping adoption. Research on how university policies, infrastructure, and digital ecosystems influence mobile banking adoption remains limited. Future research should assess the influence of institutional initiatives, such as integrating mobile payment systems and educational programs designed to enhance financial literacy (Aldiatat et al., 2019). Cross-institutional comparisons could highlight best practices and contextual factors that increase mobile banking adoption, potentially shaping policy across different educational contexts (Singh & Srivastava, 2018).

Exploring technological trends and innovation. The rapid evolution of mobile banking technology requires close examination of how innovations such as biometric security and AI-based applications affect user trust and adoption intention (Zhang et al., 2018). Future research should analyze how students interact with comprehensive financial platforms that encompass multiple functions, ensuring that researchers remain aligned with this continuously evolving landscape (Arcand et al., 2017). Understanding data-privacy issues and the role of cybersecurity in user adoption will be critical as institutions navigate this complexity (Purwati et al., 2018).

Cross-country and comparative studies. The existing literature lacks substantial comparative studies examining mobile banking adoption across different countries or cultural contexts. Future research should involve cross-country analyses to clarify how differences in financial systems, digital infrastructure, and cultural attitudes shape the adoption process (Köksal, 2016). International collaboration would standardize measurement approaches and foster a global understanding of mobile banking practices among university students (Pokhrel, 2022).

In summary, these recommendations for advancing scholarly research on mobile banking adoption in university settings provide a strong foundation for future research efforts. Addressing these six interrelated aspects will enable researchers to build a more comprehensive and contextually relevant understanding of mobile banking behavior, thereby informing policy and practice in educational institutions.

CONCLUSION

This review set out to identify the factors that influence university students' adoption of mobile banking, the theoretical frameworks used to explain it, the barriers that hinder it, and the methodological gaps that character the existing literature. In answer to these questions, perceived usefulness, trust, social influence, ease of use, and financial literacy emerge as the principal drivers of adoption, while perceived risk, limited awareness, poor technological infrastructure, and resistance to change remain the main barriers. Most reviewed studies frame these relationships through the Technology Acceptance Model and the Unified Theory of Acceptance and Use of Technology, though neither framework alone fully captures the institutional and socio-cultural dynamics specific to student adopters. Methodologically, the literature remains predominantly cross-sectional, geographically concentrated in South Asia and Africa,

and skewed toward business and information-technology students, limiting the general of current findings and pointing to a clear need for the longitudinal, mixed-methods, and disciplinarily diverse research designs outlined earlier in this review.

Practical Implications

Beyond its theoretical contributions, this review carries direct implications for practice. For mobile banking application developers, the finding that perceived risk stems more from unfamiliarity than from actual product failure suggests that transparent security communication and low-friction onboarding flows that let students practice transactions in a low-stakes environment are likely to accelerate adoption more effectively than functional enhancements alone.

For higher education administrators, mobile banking literacy should be treated as an institutional responsibility rather than left to individual students or external providers. Embedding basic digital-financial-literacy content into orientation programs, and formally partnering with banking providers to support campus-based digital-payment infrastructure, would directly address the institutional-facilitation gap identified in this review and reduce reliance on informal, family-based learning that currently sustains resistance to change.

Research Limitations

As with most systematic literature reviews, this study's conclusions are bounded by the quality, scope, and language of the published work it draws on, and by its reliance on records indexed in Scopus; findings from non-English publications, grey literature, or databases outside this scope may therefore not be reflected here. In addition, no study-level quality appraisal was undertaken; quality was screened only at the level of the source, through Scopus indexing, so every included study carries equal weight in the synthesis and findings from methodologically weaker studies may be included. Future work extending this review to a longitudinal, mixed-methods, and more geographically diverse evidence base, as outlined above, would help address this limitation.

Statement on the Use of Artificial Intelligence.

The authors acknowledge the use of Grammarly AI as a language editing aid during the preparation of this manuscript, used to support grammar checking and sentence clarity. All ideas, analyses, interpretations, and conclusions presented in this study remain entirely the authors' responsibility.

Conflicts of interest

The authors declare no conflict of interest.

Author contributions

Conceptualization, Author1 and Author2; methodology, Author1; data collection and screening, Author1 and Author1; formal analysis, Author1; writing, original draft preparation, Author1; writing, review and editing, Author2; supervision, Author2 All authors have read and approved the final version of the manuscript.

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