

## **Role of Digital Financial Literacy for Mobile Banking Adoption in Digital Era**

Sonu Pradhan, Monica Sainy

### **ABSTRACT**

Western Odisha, like many other regions in the country, is currently experiencing significant growth in both financial services and smartphone ownership. This accelerate development highlights the increasing importance of digital financial literacy in influencing the adoption and utilization of mobile banking services. The purpose of this study is to investigate how digital financial literacy impacts the use of mobile banking in Western Odisha. To understand the complex relationship between digital financial literacy and mobile banking behavior, a multifaceted approach was taken, including in-depth interviews. A total of 400 samples were collected from four districts in Western Odisha (Bargarh, Bolangir, Boudh, Kalahandi). The findings of the study reveal the intricate connections between financial literacy, digital literacy, digital financial literacy, and mobile banking behavior.

It is crucial to address issues such as the rising rate of cybercrimes, the needs of senior citizens, and urban-rural disparities in terms of network coverage and technical infrastructure to promote equal access to mobile banking services. By addressing these challenges, we can fully leverage the potential of digital financial technologies for economic empowerment.

Key words- digital financial literacy, mobile banking adoption. digital literacy

### **INTRODUCTION**

Digital financial literacy is crucial for individuals to navigate and utilize digital tools and platforms effectively in managing their finances. It plays an important role in promoting financial inclusion, encouraging responsible financial behaviors, and empowering individuals to make informed decisions in today's digital age. As digital technologies continue to advance, the significance of digital financial literacy will only increase, making it a necessary skill for financial well-being in the contemporary world. Digital financial literacy provides individuals with the knowledge and skills needed to efficiently utilize mobile banking applications. This enables them to conduct a variety of financial transactions conveniently, including checking balances, transferring funds, paying bills, and accessing financial information at any time and from anywhere (Ahn & Nam, 2022).

Digital literacy significantly influences the usage behavior of Mobile Banking. Tony and Desai (2020) have determined that digital finance knowledge is closely related to financial literacy but with the incorporation of digital aspects, which can affect individuals' utilization of Mobile Banking. Digital Financial Literacy plays a crucial role in driving the adoption of mobile banking by equipping users with the necessary knowledge, skills, and confidence to effectively utilize digital financial services. As mobile banking continues to progress and expand on a global scale, enhancing DFL is crucial for maximizing the advantages of financial technology and promoting financial inclusion and economic development. There has been a noticeable rise in mobile phone adoption worldwide. These advancements in mobile technologies necessitate an examination of how the elderly population may embrace, utilize, and benefit from these innovations (Nikou, 2015). Maresova and Kilomova (2016) suggest that m-commerce offers diverse opportunities for the elderly. Lenka and Barik (2018) emphasize that the expansion of mobile and electronic financial services, such as electronic banking, mobile banking, and mobile money transfers, has the potential to

enhance access to financial services for individuals, thereby supporting their financial inclusion. In this modern age, where digitalization permeates all aspects of our lives, from financial endeavors such as investment decisions to non-financial tasks like internet searches and social media interactions, the importance of digital literacy cannot be overstated. The COVID-19 pandemic accelerated the adoption of digital methods, regardless of individual preparedness. This transition affected all sectors of society, businesses, governmental institutions, and social organizations, all of which were compelled to establish a digital presence to remain relevant in their respective fields (Candy et al., 2022).

Digital Financial Literacy plays a crucial role in driving the uptake of mobile banking by equipping individuals with the knowledge, skills, and confidence needed to effectively use digital financial services. As mobile banking continues to grow worldwide, improving DFL is essential to fully utilize financial technology and promote financial inclusion and economic development. The increasing global trend in mobile phone usage necessitates an examination of how older individuals can adopt, utilize, and benefit from these technological advancements (Nikou, 2015). Maresova and Kilomova (2016) suggest that m-commerce offers numerous opportunities for the elderly. Lenka and Barik (2018) emphasize that the expansion of mobile and electronic financial services like electronic banking, mobile banking, and mobile money transfers has the potential to enhance citizens' access to financial services and contribute to their financial inclusion. In a digital age where technology impacts various aspects of our lives, including financial decisions and online activities like internet browsing and social media, the importance of digital literacy cannot be overstated. The COVID-19 pandemic accelerated the adoption of digital methods, affecting all sectors of society, businesses, government entities, and social organizations, all of which needed to establish a digital presence to remain relevant in their respective fields (Candy et al., 2022).

Lenka and Barik (2018) emphasize that the rise of mobile and electronic financial services like electronic banking, mobile banking, and mobile money transfers can help improve people's access to financial services and promote financial inclusion. In today's digital age, where technology is a part of almost every aspect of our lives, including financial decisions and online activities like social media and web searches, having digital skills is crucial. The COVID-19 pandemic accelerated the use of digital tools, even for those who were not fully prepared. This shift affected all sectors of society, including businesses, government agencies, and social organizations, as they all had to establish an online presence to stay relevant (Candy et al., 2022). Digital literacy, which refers to a person's ability to effectively use digital devices such as smartphones and computers, access the internet, and utilize digital tools like search engines and apps, plays a vital role in this new digital era (Gilster, P. 1997). Financial literacy, which used to focus mainly on retirement planning, now needs to cover the wide range of modern investment opportunities like the stock market and financial technology (Hung et al., 2009). It helps individuals set and plan financial goals in real-time, make online investments in stocks and mutual funds, and purchase insurance products (Lyons et al., 2021).

Digital literacy, an individual's capacity to effectively utilize digital devices like smartphones and computers, access the internet, and employ digital tools such as search engines and applications, plays a vital role in this modern digital era (Gilster, P. 1997). Financial literacy, traditionally focused on retirement planning, has had to adapt to encompass the intricate landscape of contemporary investment opportunities, including stock markets and financial technology innovations (Hung et al., 2009). It equips individuals with tools that facilitate real-time financial goal setting and planning, online investments such as stocks and mutual funds, and the acquisition of insurance products (Lyons et al., 2021).

Fintech, financial technology, digital finance, and occasionally digital banking are terms that are often used interchangeably to describe innovation within the financial sector utilizing cutting-edge technologies. This innovation can lead to enhanced availability, reduced costs, increased convenience, and improved financial inclusion (Pant, S.K. 2020).

India stands as a global frontrunner in the fintech industry, boasting the fastest-growing market in fintech adoption, particularly in the realm of digital payments which reigns as the most favored and widely used product (Global fintech adoption. 2019). This paper scours into the correlation between digital literacy, financial literacy, and fintech adoption in India. The research endeavors to uncover the obstacles that individuals may face when engaging with digital financial platforms. In doing so, it presents valuable insights to fintech companies, banks, financial institutions, and other stakeholders seeking to grasp customer perspectives on fintech adoption.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Digital financial literacy (DFL) encloses the knowledge and skills necessary to effectively utilize digital technologies in navigating financial services. It builds upon traditional financial literacy by integrating digital features and understanding how to leverage financial technology (fintech). As highlighted by Tony and Desai (2020), the proliferation of digital financial products and services necessitates a higher level of financial literacy among consumers. This integration not only enhances convenience but also promotes efficiency in managing financial transactions and accessing various platforms.

One significant aspect of DFL is its role in promoting gender equality in financial access. Organizations such as Women's World Banking (2021) and the Center for Financial Inclusion (2021) emphasize that digital financial literacy empowers women by providing them with the skills to use digital financial services effectively. This mandate contributes to broader financial inclusion goals by reducing barriers and enhancing accessibility.

Mobile banking stands out as a prominent example of how DFL facilitates efficient financial management. Individuals with a strong grasp of digital financial literacy can seamlessly navigate mobile banking platforms to monitor account balances, conduct transactions, and engage with other financial services concurrently (Ahn & Nam, 2022). This capability underscores the practical benefits of DFL in everyday financial activities, emphasizing its relevance in an increasingly digital financial landscape.

Tony & Desai, 2020 define DFL as the ability to access, understand, and use digital financial services effectively. It combines traditional financial literacy with digital skills, enabling individuals to navigate fintech innovations such as mobile banking, digital wallets, and online investments (Tony & Desai, 2020)

DFL is increasingly recognized as essential for financial inclusion and economic empowerment. It empowers individuals, particularly women and marginalized groups, by reducing barriers to accessing financial services (Women's World Banking, 2021; Center for Financial Inclusion, 2021).

As per (OECD, 2020) Research highlights disparities in DFL based on demographics (age, gender, education), geographic location (urban vs. rural), and socioeconomic status. These disparities affect access to and utilization of digital financial services, influencing financial outcomes and economic mobility.

Effective educational programs and interventions play a crucial role in enhancing DFL. These initiatives focus on improving knowledge of digital financial products, building skills in using digital platforms securely, and fostering confidence in financial decision-making (World Bank, 2019).

Adoption of digital financial services is influenced by factors such as perceived usefulness, ease of use, trust in technology, and regulatory environment. Understanding these factors helps in designing user-friendly and inclusive fintech solutions (ITU, 2020).

Studies of (Ahn & Nam, 2022) explore how DFL influences financial behaviours, including savings habits, investment decisions, and financial planning. Individuals with higher DFL are more likely to engage in proactive financial management and benefit from fintech innovations.

According to (IMF, 2021) Policymakers focus on creating an enabling environment for DFL through regulatory frameworks that promote consumer protection, data privacy, and financial literacy initiatives. These policies aim to foster innovation while ensuring fair and transparent access to digital financial services.

Despite the benefits, challenges such as cybersecurity concerns, digital literacy gaps, and resistance to change among certain demographic groups persist. Addressing these challenges requires continuous efforts in education, infrastructure development, and policy adaptation to create an inclusive and supportive ecosystem for mobile banking (UNESCO, 2023).

## MOBILE BANKING ADOPTION

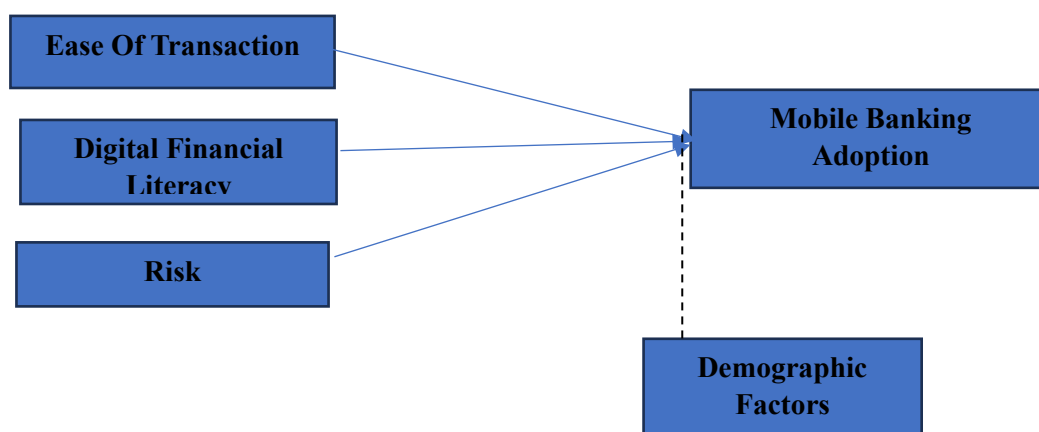
Mobile banking adoption as a multifaceted phenomenon influenced by technological advancements, user perceptions, regulatory frameworks, digital literacy, and behavioural factors. Continued efforts in research, policy development, and education are crucial for maximizing the potential of mobile banking in promoting financial inclusion and economic development globally. Mobile banking serves as a powerful tool for promoting financial inclusion by providing access to financial services for underserved populations, including those in rural areas and low-income groups (UNESCO, 2023).

The ability to perform basic financial transactions via mobile devices, such as payments, transfers, and account management, has expanded financial access and reduced barriers related to physical distance and traditional banking infrastructure (Tony & Desai, 2024).

According to IMF (2024) indicates that positive user experiences and word-of-mouth recommendations are significant drivers of adoption, highlighting the importance of user-centric design and customer support and User perceptions of mobile banking are influenced by factors such as perceived usefulness, ease of use, reliability, security concerns, and trust in financial institutions.

Digital literacy, particularly digital financial literacy (DFL), is essential for effective mobile banking adoption. Individuals with higher DFL are more confident in using mobile banking apps, understanding financial products, and managing their finances digitally (Ahn & Nam, 2024)

Educational initiatives and awareness campaigns play a crucial role in improving DFL and promoting the benefits of mobile banking among different demographic groups (Center for Financial Inclusion, 2021).



## RESEARCH OBJECTIVES

- 1-To see the need of digital financial literacy in our digital era.
- 2-To know the role of digital financial literacy in mobile banking adoption.

## HYPOTHESES

- Digital Financial Literacy positively affects Mobile Banking adoption.
- Risk partially has a significant effect on the adoption of mobile banking.
- Ease of transactions partially has a significant effect on the adoption of mobile banking

## RESEARCH METHODOLOGY

To construct a multiple linear regression analysis to assess the impact of independent variables (transaction convenience, digital proficiency, financial acumen) on the dependent variable of mobile banking uptake.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Y is The Use Of Mobile Banking Adoption Variable

X<sub>1</sub> is the first independent variable (ease of transaction)

X<sub>2</sub> is the second independent variable (digital financial literacy).

X<sub>3</sub> is the third independent variable (Risk).

β<sub>0</sub> is the intercept (constant).

β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub> are the coefficients of the independent variables X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>. X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, respectively, representing the expected change in Y for a one-unit change in each independent variable, holding other variables constant.

ε is the error term, representing the variability in Y that cannot be explained by the independent variables.

Table-1 regression analysis

Model	F-Value	Sig
Regression	1.2537	0 .000.

Source: Primary data processed, spss software

As per these findings, it was observed that the f-table value exceeded 2.84 and the significance value was less than 0.05. Consequently, it can be inferred that all independent variables collectively had a notable influence on the adoption of mobile banking.

The research methodology in this investigation involved the utilization of the t-test (partial), f-test (simultaneous), and the coefficient of determination. The t-test (partial) is a statistical technique employed to ascertain the extent of impact that an individual independent variable exerts on the dependent variable.

Table 2. Heteroscedasticity Test Results

Variable	Sig
Easy Transaction (X1)	0. 368
Digital Financial Literacy (X2)	0. 701
Risk (X3)	0 .734

Source: Primary data

Moreover, in the linearity assessment, each of the independent variables exhibited a significance level greater than 0.05, indicating a clear linear relationship between the independent and dependent variables.

Table .3 T-Test result

Variable	T-Value	Sig
Easy Transaction (X1)	2.141	0.039
Digital Financial Literacy (X2)	2.458	0.019
Risk (X3)	6.745	0.000

The partial t-test conducted on the independent variable of transaction ease yielded a significance value of 0.039. A significance value of  $<0.05$  indicates that the ease of transaction variable had a discernible impact on the utilization of mobile banking. Similarly, the t-test conducted on the digital financial literacy variable produced a significance value of  $0.019 < 0.05$ , signifying that the digital literacy variable influenced the adoption of mobile banking.

Lastly, the t-test conducted on the risk variable resulted in a value of  $0.000 < 0.05$ , indicating that financial literacy played a role in the utilization of e-banking. These results revealed that the financial literacy variable had a



t-table value  $> 2.021$  with a sig value  $< 0.05$ , thereby supporting the researcher's hypothesis that financial literacy partially impacts the usage of mobile banking.

The final analysis conducted was a t-test on the risk variable, yielding a result of  $0.000 < 0.05$ . This indicates that financial literacy indeed impacts the utilization of e-banking services. The findings revealed that the financial literacy variable displayed a t-table value  $> 2.021$  and a significant value  $< 0.05$ . Therefore, the researcher's hypothesis suggesting that financial literacy partially influences the use of mobile banking can be confidently accepted.

## FINDINGS

The followings are the findings of this study

- In the linearity test, all independent variables had a significance value  $> 0.05$ , which means that there was linearity between the independent and dependent variables
- The value of f-table  $> 2,84$  and the value of sig  $< 0.05$ . it can be concluded that all independent variables simultaneously had a significant impact on mobile banking adoption.
- The t-test (partial) on the ease of transaction independent variable showed the number of 0,039 as a significance value. With a significance value  $< 0.05$  it means e ease of transaction variable had an effect on the use of mobile banking.
- Furthermore, for the t-test on the digital financial literacy variable, it showed a significance value of 0.019  $< 0.05$  indicates that digital literacy variable had an effect on the use of mobile-banking so that the digital literacy variable affected the adoption of mobile banking.
- The last was the t-test on the risk variable with the results of  $0,000 < 0,05$ , which means t financial literacy had an effect on the use of e-banking. From these results, it showed that the financial literacy variable had a t-table value  $> 2.021$  and a sig value  $< 0.05$ , so that the hypothesis put forward by the researcher that financial literacy partially has a significant effect on the use of mobile-banking can be accepted.

The results underscore the intricate relationship among financial literacy, digital literacy, digital financial literacy, and mobile banking behavior. It is essential to consider factors such as the prevalence of cybercrimes, the age demographic (specifically senior citizens), and the disparities between urban and rural areas, taking into account the quality of network connectivity and the availability of technical resources in digital financial literacy. This is crucial in ensuring fair and equal access to mobile banking services and maximizing the benefits of digital financial technologies for economic empowerment.

## LIMITATIONS AND SUGGESTIONS

Conduct longitudinal studies to monitor fluctuations in digital financial literacy levels and mobile banking behavior over time, particularly in underprivileged regions. Assess the efficacy of educational interventions and infrastructure enhancements in reducing the digital financial literacy gap and boosting mobile banking adoption rates. Future research avenues encompass delving into the enduring effects of DFL on financial well-being, evaluating the effectiveness of educational interventions, tackling digital disparities, and incorporating DFL into more extensive digital literacy frameworks.

## CONCLUSION

Digital Financial Literacy plays a crucial role in boosting the uptake of mobile banking in the modern digital age by empowering users, enhancing financial capabilities, and fostering inclusivity. It lays the groundwork for utilizing mobile technology to improve financial accessibility, efficiency, and security, thus contributing to overall economic empowerment and growth. In summary, this research offers valuable insights into the pivotal importance of financial literacy, digital literacy, and digital financial literacy in influencing mobile banking behavior. It is imperative to address gender disparities and regional variances in digital financial literacy through targeted interventions and policy actions to promote inclusive and sustainable financial inclusion in western Odisha and similar areas.

## REFERENCES

- Affandi, Y., Ridhwan, M. M., Trinugroho, I., & Adiwibowo, D. H. (2024). Digital adoption, business performance, and financial literacy in ultra-micro, micro, and small enterprises in Indonesia. *Research in International Business and Finance*, 70, 102376.
- Al-Fahim, N. H., Ateeq, A. A., Abro, Z., Milhem, M., Alzoraiki, M., Alkadash, T. M., & Nagi, M. (2024). Factors influencing the mobile banking usage: mediating role of perceived usefulness. In *Digital Technology and Changing Roles in Managerial and Financial Accounting: Theoretical Knowledge and Practical Application* (Vol. 36, pp. 115-128). Emerald Publishing Limited.
- Amnas, M. B., Selvam, M., & Parayitam, S. (2024). FinTech and Financial Inclusion: Exploring the Mediating Role of Digital Financial Literacy and the Moderating Influence of Perceived Regulatory Support. *Journal of Risk and Financial Management*, 17(3), 108.
- Arora, P., Rupali, A., Sharma, N., & Singh, A. B. (2024). Impact of Social Media Influencer Credibility on M-Banking Acceptance: The Moderating Role of Financial Literacy. In *Revolutionizing Customer-Centric Banking Through ICT* (pp. 146-168). IGI Global.
- Ferilli, G. B., Palmieri, E., Miani, S., & Stefanelli, V. (2024). The impact of FinTech innovation on digital financial literacy in Europe: Insights from the banking industry. *Research in International Business and Finance*, 69, 102218.
- Islam, K. A., & Khan, M. S. (2024). THE ROLE OF FINANCIAL LITERACY, DIGITAL LITERACY, AND FINANCIAL SELF-EFFICACY IN FINTECH ADOPTION.
- Kass-Hanna, J., Lyons, A. C., & Liu, F. (2022). Building financial resilience through financial and digital literacy in South Asia and Sub-Saharan Africa. *Emerging Markets Review*, 51, 100846.
- Komara, E., & Utami, D. T. (2024). The Effect of Customer Satisfaction, E-Word of Mouth, and Initial Trust on Livin's Mobile Banking Adoption Interest. *Jurnal Manajemen (Edisi Elektronik)*, 15(1), 194-203.
- Lyons, A. C., & Kass-Hanna, J. (2021). A methodological overview to defining and measuring “digital” financial literacy. *Financial Planning Review*, 4(2), e1113.
- Morgan, P. J., & Trinh, L. Q. (2020). *Fintech and financial literacy in Viet Nam* (No. 1154). ADBI Working Paper Series.
- Tomasi, M. (2024). Mobile Banking Adoption: A Closer Look at the Role of Online Convenience Dimensions. *International Journal of Business Science & Applied Management*, 19(1).
- Zhang, Y., & Fan, L. (2024). The nexus of financial education, literacy and mobile fintech: unraveling pathways to financial well-being. *International Journal of Bank Marketing*.