



Digital Financial Literacy In India: A Review And Need Analysis

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Abstract: Various policy initiatives launched by the Government of India, such as Digital India, have facilitated the integration of the economy. The complexities of the financial landscape have significantly increased with the development of digital financial services and technology. In response to increased digitalization and the emergence of Fintech, the term "Digital Financial Literacy" has gained popularity. This new financial landscape, characterized by digital financial products, services, and channels, presents unique advantages, risks, and challenges. Consequently, financial consumers need the knowledge and skills to navigate these emerging risks and concerns. This paper provides an in-depth literature review, discussing key issues related to financial literacy in the context of the digital economy. The growing importance of financial education in the digital era is examined, particularly in the context of India's evolving financial landscape. Additionally, Opportunities, and Challenges analysis is conducted to highlight the key aspects of digital financial education in India.

Key Words: Digital India, Digital Financial Literacy, Financial literacy, Financial Education

I. Introduction

According to Panos and Wilson (2020), a key indicator of one's ability to make sound financial decisions is their level of financial literacy, encompassing five core competencies: earning, saving and investing, spending, borrowing, and protecting. However, in the 21st century, digital skills are crucial for leveraging fintech to achieve better financial well-being. Therefore, financial education programs and adult educators must integrate digital competencies with financial principles to create a robust fintech curriculum. Inclusive fintech literacy training should equip learners with the digital tools and confidence to use fintech effectively and efficiently, thereby enhancing their financial decision-making abilities (Lusardi, 2019).

In the financial world, one thing is certain: change is constant. What existed a century ago has drastically evolved. Ten years ago, withdrawing money required a visit to the bank and filling out a form. Today, with just one click, you can access money anywhere in the world. This transformation, driven by digitalization, has revolutionized our economy by converting information into digital form, simplifying many processes. Digitalization is propelling the world to new heights, and India is not lagging behind. From withdrawing money to loan payments, almost everything in India is now digitalized. As of 2021, India ranks 49th in the inclusive internet index (Arora, 2021).

The Digital India initiative, launched in 2015 by the Prime Minister, aims to enable every citizen to conduct transactions digitally. However, it is often said that to gain something, one must lose something. In the case of digitalization, understanding the basics of the digital world is essential before it can be effectively utilized. In India, digital practices are not widely adopted primarily due to a lack of knowledge and skills. Understanding financial information is crucial to fully leveraging digital technology. Financial digital literacy is the key ingredient in this process; without it, the benefits are diminished.

The demonetization event in November 2016 underscored the urgency of digital financial literacy in India. Cashless transactions became essential, and the use of digital transactions is now a necessity for every citizen. This paper delves into the facts that if digitalization is the main motive of India which is globally known, then what privileges and difficulties are faced by the people. The following parts discuss the meanings and various dimensions of the DFL. Also the challenges and opportunities have been discussed in detail.

What is Digital Financial Literacy?

Digital financial literacy, much like digital literacy and financial literacy, is a multi-faceted concept. While previous literature, such as OECD (2017), has outlined various components of digital financial literacy, a standardized definition remains absent.

Digital financial literacy encompasses the knowledge and skills required to effectively manage one's financial affairs using digital tools and platforms. It involves using technology to access financial services, make informed decisions, and safeguard against financial fraud. This literacy includes understanding how to use online banking platforms, mobile payment systems, and digital wallets. It also involves the use of financial planning software and apps to manage expenses, savings, and investments. Importantly, it covers knowledge of digital security practices such as protecting personal information and preventing identity theft.

Dimensions of Digital Financial Literacy

According to Zait and Berteau (2014), financial literacy incorporates multiple dimensions, where the focus cannot be only on the knowledge itself and/or the ability to gain and use the knowledge. We propose that digital financial literacy encompasses several dimensions, including knowledge of digital financial products and services, awareness of digital financial risks, knowledge of digital financial risk control, and an understanding of consumer rights and redress procedures.

The first dimension pertains to knowledge of digital financial products and services. This involves a fundamental understanding of digital financial offerings accessible through the internet and mobile platforms. Such products and services are categorized into four primary groups, although overlaps exist:

- Payments: Electronic money, mobile phone wallets, crypto assets, remittance services.
- Asset Management: Internet banking, online brokers, robo-advisors, crypto asset trading, personal financial management, mobile trading.
- Alternative Finance: Crowdfunding, peer-to-peer (P2P) lending, online balance sheet lending, invoice and supply chain finance.
- Others: Internet-based insurance services.

Beyond mere awareness, individuals should be able to assess the advantages and disadvantages of various digital financial services (DFS). This knowledge is crucial for understanding the fundamental functions of different DFS, whether for personal or business use.

The second dimension is awareness of digital financial risks. It is essential for both individuals and firms to recognize the diverse and often subtle risks associated with DFS, which extend beyond those of traditional financial products and services. Users should be vigilant about online fraud and cybersecurity threats, such as:

- Phishing: When attackers impersonate legitimate institutions to extract personal data, like usernames or passwords, via emails or social networks.
- Pharming: When malware redirects users to counterfeit websites, leading to the disclosure of personal information.
- Spyware: When malicious software infiltrates a user's device, transmitting personal data.
- SIM Card Swap: When an attacker impersonates a user to obtain their SIM card and access private data.

Users must also be aware that their digital footprint, including the information provided to DFS providers, poses additional risks. Potential threats include:

- Profiling: Users might be denied access to certain services based on their online behavior.
- Hacking: Cybercriminals may steal personal data from online activities, such as social networks.

Additionally, the ease of accessing credit through fintech can lead to overborrowing or encountering high interest rates, especially if DFS providers are inadequately regulated. This overborrowing can negatively impact credit ratings and exacerbate socio-economic disparities. Users need to thoroughly understand the terms and conditions of digital contracts with DFS providers, recognizing the potential risks. They should be aware that DFS providers might use their personal information for purposes such as credit evaluation, advertising, and calculating credit needs. Understanding these financial risks is crucial to avoid overborrowing.

The third dimension focuses on digital financial risk control. DFS users should be knowledgeable about protective measures against risks such as spamming and phishing. They need to know how to safeguard personal identification numbers (PINs) and other sensitive information when using digital financial services. The fourth dimension involves knowledge of consumer rights and redress procedures. In cases where DFS users fall victim to fraud or other losses, it is vital they understand their rights and know how to seek redress. This includes understanding their rights regarding personal data and the procedures for addressing unauthorized use.

II. Literature Review

Digital financial literacy combines two concepts: digital literacy and financial literacy (Tony and Desai, 2020). Digital literacy involves the knowledge, awareness, and skills needed to use digital information, while financial literacy encompasses the knowledge, awareness, and utilization of financial information. Both aim to enhance human knowledge and simplify life. Financial literacy is not a new concept; it was first introduced in 1787, with John Adams recognized as a founding figure. Over time, financial literacy has evolved into digital financial literacy. Now, people need guidance on digital financial literacy, building on their knowledge of traditional financial literacy (Gupta, 2019). Although digitalization has reached rural areas, its impact is limited due to inadequate digital financial literacy. In India, many believe digital financial literacy is primarily for adults, but it is equally essential for older individuals who may find it difficult to visit banks for cash transactions.

T. Ravikumar, B. Suresha, N. Prakash, Kiran Vazirani, and T.A. Krishna conducted a study on “Digital Financial Literacy Among Adults in India: Measurement and Validation.” Their findings indicate that digital knowledge, financial knowledge, knowledge of digital financial services (DFS), awareness of digital finance risks, digital finance risk control, knowledge of customer rights, product suitability, product quality, gendered social norms, practical application of knowledge and skills, self-determination to use knowledge and skills, and decision-making are key determinants of digital financial literacy (DFL) among adults in India. They also highlight that users of DFS without adequate DFL may face numerous challenges, such as inability to complete transactions, financial loss, and privacy breaches. Therefore, the study concludes that DFL is a prerequisite for the effective use of DFS (Ravikumar et al., 2024).

Additionally, N.P. Abdul Azeez and S.M. Jawed Akhtar studied “Digital Financial Literacy and Its Determinants: Empirical Evidence from Rural India.” This research focuses on socio-economic demographic factors as determinants of digital financial literacy, employing ordinary least squares and multiple regression models. Their analysis reveals that various independent variables, including age, gender, income, religion, social groups, family size, marital status, educational level, and occupation, significantly influence respondents' digital financial literacy. The study is based on primary data collected from 500 samples in the rural areas of the Aligarh district (Azeez & Akhtar, 2024).

III. Impact of the COVID-19 Pandemic on Digital Financial Literacy in India

The COVID-19 pandemic significantly accelerated the adoption of digital payments globally, including in India. According to the Global Findex Database 2021, the use of digital merchant payments surged in India during and after the pandemic-induced lockdowns (Demirgüç-Kunt et al., 2022). Many households in India conducted digital transactions for the first time during this period (Reserve Bank of India, 2022). The pandemic prompted both the government and the private sector to increase their use of digital payments, employing mobile money and digital wallets alongside traditional bank accounts to channel pandemic support (Klapper & Miller, 2021).

The COVID-19 pandemic significantly accelerated digital financial literacy in India, driven by a surge in the adoption of digital financial services such as online banking, digital payment platforms, and e-commerce. Lockdowns and social distancing measures necessitated a shift from cash transactions to digital ones, pushing many to quickly adapt to these new tools. In response, the Indian government and financial institutions

launched various initiatives and campaigns to promote digital transactions and educate the public about their benefits and security features.

The pandemic induced a behavioral shift towards more frequent use of digital payments and online banking, a trend likely to persist post-pandemic, indicating a long-term impact on financial habits and literacy. The fintech sector in India experienced substantial growth, providing innovative financial solutions that included educational resources to help users understand and utilize these services effectively.

IV. Digital Financial Literacy Initiatives in India

Several initiatives in India are underway to promote digital financial literacy, reflecting the country's commitment to transforming into a digitally empowered society and knowledge economy. A cornerstone of this effort is the Digital India program, launched by the Indian government in 2015. This program aims to provide universal access to digital services and promote digital literacy across various sectors.

Key initiatives under the Digital India umbrella include the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme, which seeks to ensure that every household in the country has access to a bank account. As of 2024, the PMJDY has successfully opened over 450 million bank accounts, significantly enhancing financial inclusion and providing a gateway for digital financial literacy. Another notable initiative is the Bharat Interface for Money (BHIM) app, a mobile payment application launched by the government to facilitate quick, secure, and reliable cashless payments. The BHIM app supports multiple Indian languages and has seen widespread adoption, with billions of transactions processed annually.

India has made substantial progress in financial inclusion, especially following the launch of the Pradhan Mantri Jan Dhan Yojana in 2014, which increased the number of deposit accounts. The demonetization in 2016 further boosted the uptake of digital finance. Initiatives like no-frill accounts, Electronic Benefits Transfer, and MUDRA banks have also played crucial roles in enhancing financial inclusion. Despite these efforts, many bank accounts remain inactive, highlighting a gap in the effective use of financial services (Barik & Sharma, 2019).

India's digital financial infrastructure, which includes the Aadhaar biometric identity system and the Unified Payments Interface (UPI), has been instrumental in expanding financial inclusion. UPI facilitates both person-to-person (P2P) and person-to-merchant (P2M) payments, accessible via smartphones and USSD-based feature phones, and offers features like balance inquiries (Reserve Bank of India, 2021).

Furthermore, initiatives like the Payments Infrastructure Development Fund aim to expand digital payment infrastructure in smaller towns and rural areas. The Aadhaar-enabled payment system (AePS) has been particularly effective in improving payment coverage in rural regions. Additionally, the establishment of Small Finance Banks and Payments Banks aims to reduce the proportion of the financially excluded population.

Recent examples highlight the growing importance and impact of digital financial literacy in India. The Unified Payments Interface (UPI), an instant real-time payment system developed by the National Payments Corporation of India (NPCI), has revolutionized digital transactions. With over 10 billion transactions recorded in May 2023 alone, UPI has become a cornerstone of India's digital payment ecosystem, enabling seamless and secure money transfers across the country.

The Reserve Bank of India (RBI) has also taken significant steps to enhance digital financial literacy. In 2021, the RBI launched the Financial Literacy Week, focusing on "Go Digital, Go Secure." This initiative aimed to educate the public on the benefits and risks of digital financial services, emphasizing the importance of secure digital transactions.

Furthermore, private sector initiatives have played a critical role in promoting digital financial literacy. For instance, major financial institutions like State Bank of India (SBI) and ICICI Bank have developed comprehensive digital literacy programs. These programs offer workshops, webinars, and online resources to educate customers on using digital banking services, understanding cybersecurity threats, and managing personal finances digitally.

Another significant development is the government's push for digital financial literacy through the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA). Launched to make six crore rural households digitally literate, PMGDISHA focuses on teaching people how to use digital devices for banking and financial purposes, thereby bridging the digital divide in rural areas.

In the realm of fintech, companies like Paytm and PhonePe have introduced educational campaigns and user-friendly interfaces to encourage digital transactions and enhance users' understanding of digital financial tools. These platforms not only offer services like mobile recharges, bill payments, and online shopping but also provide educational content to help users navigate digital financial services safely.

Digital financial literacy is crucial in today's digital age, as it empowers individuals to manage their finances effectively and make informed decisions. Enhanced digital financial literacy can help individuals access financial services more efficiently, reduce the risk of fraud and financial loss, and increase financial security and wellbeing. As digital financial services continue to evolve, ongoing education and awareness efforts will be essential to ensure that all segments of the population can benefit from the opportunities offered by digital finance.

V. Importance of Digital Financial Literacy

Digital financial literacy is a critical necessity in India due to several key factors. Firstly, as India transitions rapidly into a digital economy, the adoption of digital financial services such as mobile banking, digital wallets, and online payment platforms has surged. This shift necessitates that individuals possess the requisite knowledge and skills to use these services effectively, securely, and efficiently.

- **Enhancing Financial Inclusion:** Digital financial literacy plays a pivotal role in enhancing financial inclusion in India. A significant portion of the Indian population, particularly those in rural and underserved areas, lacks access to traditional banking services. Digital financial services provide an avenue for these individuals to engage with the financial system. Initiatives like the Pradhan Mantri Jan Dhan Yojana (PMJDY) have opened over 450 million bank accounts, many of which are accessible via digital platforms. Digital financial literacy ensures that these new users can navigate and utilize digital financial services effectively, thereby fostering greater financial inclusion and economic participation.
- **Empowering Informed Financial Decisions:** Informed financial decision-making is another crucial benefit of digital financial literacy. With the right knowledge and skills, individuals can better compare and select financial products and services, manage their money more effectively, and make informed decisions about investments and savings. Understanding the nuances of digital financial products enables individuals to choose options that best meet their needs and financial goals.
- **Protection Against Fraud and Financial Crimes:** Digital financial literacy also serves as a bulwark against fraud and other financial crimes. As the use of digital financial services grows, so too does the incidence of cybercrime and financial fraud. In 2023, India saw a significant rise in phishing attacks and SIM swap frauds, targeting users of digital banking and payment platforms.

VI. Challenges of Digital Financial Literacy in India

Digital financial literacy, defined as the ability to use digital financial services effectively and safely, is essential for fostering economic inclusion and growth. Despite significant strides in expanding digital financial services, India faces numerous challenges that hinder the widespread adoption and effective use of these services. These challenges can be broadly categorized into awareness, infrastructure, financial literacy, security concerns, language barriers, trust issues, and regulatory challenges.

- **Lack of Awareness:** Many individuals in India, particularly in rural areas, remain unaware of digital financial services and their benefits. This gap in awareness hinders the adoption of digital financial services, limiting economic opportunities and financial inclusion.
- **Limited Digital Infrastructure:** Access to necessary digital infrastructure, such as smartphones, internet connectivity, and digital payment systems, is still limited in many parts of India. Rural and remote areas are particularly affected, where basic digital amenities are often lacking, exacerbating the digital divide.
- **Low Levels of Financial Literacy:** A significant portion of the Indian population has limited understanding of basic financial concepts such as interest rates, credit scores, and savings. This low level of financial literacy impedes individuals' ability to make informed decisions about digital financial services, further entrenching economic disparities.
- **Security Concerns:** The prevalence of cyber threats, including phishing, malware, and hacking, poses a significant barrier to the adoption of digital financial services. According to the Indian Computer Emergency Response Team (CERT-In), India experienced 1.391 million reported cyber fraud cases in 2022. Many users lack the knowledge and skills to protect themselves from cyber fraud, leading to hesitancy in using digital financial services.

- **Rural Adoption:** In rural and semi-urban areas, awareness and understanding of security practices related to digital payments are often limited. Ensuring that these users are educated about safe transaction practices is crucial for expanding digital financial literacy.
- **Connectivity Problems:** Despite improvements in mobile internet penetration, many areas in India still suffer from unreliable or limited connectivity. This digital divide is stark, with only 15% of rural households having access to good internet services compared to 42% in urban areas. Women, particularly in poorer households, are disproportionately affected by digital illiteracy.
- **Technology Disruptions:** Digital financial systems, including the Unified Payments Interface (UPI), can experience technical glitches and downtimes, disrupting transactions and causing inconvenience. Network congestion during peak usage times can also lead to delays and failed transactions.
- **Dependency on Smartphones:** The reliance on smartphones for UPI transactions excludes individuals who do not own these devices or are uncomfortable using digital technology. This dependency poses a significant barrier to universal digital financial literacy.
- **Limited Language Support:** Digital financial services often rely heavily on English, which is not widely spoken or understood in many parts of India. The lack of multilingual support creates a language barrier, preventing non-English speakers from effectively accessing these services.
- **Lack of Trust in Financial Institutions:** Many Indians have a low level of trust in financial institutions, which can deter them from using digital financial services. This distrust is often rooted in perceptions of corruption and inefficiency within these institutions.
- **Fake Apps and Websites:** The proliferation of fake UPI apps and phishing websites designed to steal personal and financial information poses a significant threat. These fraudulent platforms can deceive unsuspecting users, leading to financial losses and eroding trust in digital financial services.

Addressing these challenges requires a concerted effort from the government, financial institutions, and other stakeholders to ensure widespread access to digital financial services and the knowledge to use them effectively and safely. Enhancing digital financial literacy in India is crucial for fostering economic inclusion and empowering individuals to participate fully in the digital economy.

VII. Need to Study Digital Financial Literacy

Studying digital financial literacy in India is crucial for several reasons:

- **Financial Inclusion:** Digital financial literacy can help bridge the gap between the unbanked population and formal financial services, promoting inclusive growth. This is particularly important in rural and semi-urban areas where access to traditional banking infrastructure is limited.
- **Economic Empowerment:** By understanding digital financial tools, individuals can make informed decisions about savings, investments, loans, and insurance. This empowerment can lead to better financial management and improved economic stability for households.
- **Reduction in Fraud and Scams:** With the rise of digital transactions, the risk of fraud and scams has increased. Educating people on safe digital practices can reduce their vulnerability to such threats.
- **Government Initiatives:** The Indian government has launched several initiatives like Digital India and financial inclusion programs (e.g., Jan Dhan Yojana) that rely on digital platforms. Understanding these tools and services can maximize their benefits for the population.
- **Economic Growth:** A digitally literate population can boost economic growth by increasing the efficiency of financial transactions, reducing transaction costs, and encouraging entrepreneurship and innovation.
- **Adapting to Change:** The financial landscape is rapidly evolving with advancements in fintech. Digital financial literacy ensures that individuals and businesses can keep pace with these changes and leverage new opportunities.
- **Crisis Management:** During crises like the COVID-19 pandemic, digital financial tools became essential for accessing financial services, conducting transactions, and receiving government aid. Literacy in this area can enhance resilience in future crises.

VIII. Conclusion

Digital financial literacy is essential for everyone. Despite India being the second-highest country in internet usage (Johnson, 2021), it still lags in the global digitalization race. When individuals become aware, confident, knowledgeable, and responsible in using digital financial tools, their ability to contribute and benefit increases. This not only aids personal development but also fosters growth for the country and the world at large.

This study found that digital financial literacy is crucial in India for promoting financial inclusion, especially for underserved and marginalized communities. It emphasized the importance of digital financial literacy in reducing the costs and inconveniences of traditional banking services and encouraging the adoption of digital financial services. However, the study also identified several challenges in promoting digital financial literacy in India. These challenges include the digital divide, with many people lacking access to digital infrastructure and services, and a general lack of awareness and understanding of digital financial services.

The study concludes that efforts to promote digital financial literacy in India should be focused on underserved and marginalized communities. These efforts should aim to improve access to digital infrastructure and provide education and training on digital financial services. Additionally, the study highlights the need for collaboration between the government, financial institutions, and technology providers to develop and implement effective strategies for enhancing digital financial literacy levels in India.

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