IMPACT OF DIGITAL FINANCIAL LITERACY ON WOMEN'S ACCESS TO DIGITAL FINANCIAL SERVICES IN RURAL AREAS OF ANKLESHWAR TALUKA

Dr. Ashish C. Mehta[*]
Drashtiben N. Patel[**]

ABSTRACT

This research explores the influence of digital financial literacy (DFL) on rural women's ability to access and use digital financial services (DFS) in Ankleshwar Taluka, Gujarat. Knowing how to use digital platforms properly is crucial as they become the foundation of financial systems, particularly in disadvantaged rural areas. DFL includes awareness, operational expertise, cybersecurity, and self-assurance when utilizing digital tools like payment applications and mobile banking. A structured survey involving 184 women across 11 rural villages with age Gen Y and Gen Z found that although 82% of them were aware of digital tools, their practical usage skills (55%), security knowledge (49%), and confidence (29%) were significantly lower. Only a tiny percentage of respondents had high levels of competence, according to the study, which used a descriptive and exploratory quantitative methodology. The majority of respondents had moderate digital financial literacy, and only a small proportion exhibited high levels of competence. There was a statistically significant positive association between DFL and DFS access, suggesting that increased financial inclusion is a direct result of improved literacy. The main obstacles were found to be issues including transaction failures, technological mistakes, and a lack of cybersecurity expertise. Despite this, more than half of the respondents utilized DFS every day, indicating an increasing trend of adoption motivated by speed and convenience. However, autonomous usage is still constrained by cultural conventions, a lack of education, and fear of fraud. The results imply that targeted interventions to improve DFL, especially in increasing digital safety and confidence, can significantly improve women's engagement in the digital economy and close the digital gap between the genders. The report promotes regional training and education initiatives to empower rural women to securely and independently perform digital transactions.

***KEYWORDS**: Digital Financial Literacy, Digital Finance Services, Financial Inclusion, Rural Women.*

Introduction

Digital Financial Literacy

Digital Financial Literacy (DFL) refers to the ability to access, understand, and effectively use digital financial tools and services. It covers information of digital wallets, mobile payments, online banking, cybersecurity, and digital platforms for financial transactions. DFL is an essential skill as financial ecosystems grow more digitalized.it is a critical skill, especially for rural populations (Azeez &

* Professor, Postgraduate Department of Business Management, Sardar Patel University, Vallabh Vidyanagar, Gujarat, India.
** Research Scholar, Postgraduate Department of Business Management, Sardar Patel University, Vallabh Vidyanagar, Gujarat, India.

Akhtar, 2021). Digitally literate people are more likely to prevent fraud, use formal financial services, and manage their finances well (Mhlanga, 2020). Digital financial literacy measures in India are still in beginning stages and frequently fall short in reaching underserved populations, especially in rural area. Digital financial literacy is a multi-dimensional concept integrating knowledge of digital tools, financial principles, consumer rights, and digital safety. Lyons & Kass-Hanna (2021) conceptualize DFL as essential for navigating today's financial systems. Omego (2024) found that women in Homa Bay County, Kenya, who had higher DFL levels used DFS more confidently, these studies suggest DFL is a foundational requirement for empowering women through DFS.

Determinants of Digital Financial Literacy (DFL)

- **Digital Financial Services**

Digital Financial Services (DFS) include all financial services that may be accessed via digital platforms, including mobile apps, ATMs, cell phones, and online banking. These services are becoming more widely recognized as a way to increase service outreach, lower transaction costs, and encourage financial inclusion—particularly in underserved and rural areas (Ghosh, 2016). However, consumers' capacity to comfortably and safely use digital platforms is a prerequisite for DFS's usefulness. Despite the fact that mobile money has become widely used worldwide, gaps in utilization still exist because of digital illiteracy and low levels of trust in technology (Demirgüç-Kunt et al. 2018).

- **Women's Access in Rural Areas**

Accessing DFS is more difficult for women in rural India. According to Singh and Kaur (2020), cultural norms, low educational attainment, limited mobility, and lack of smartphone access impede their ability to participate in digital finance. Only a small portion of Indian rural women use e-wallets or mobile banking, primarily because they lack the necessary information and are afraid of fraud (Roy and Dutta, 2021). Programs such as Google and Tata Trusts' Internet Saathi initiative sought to close these gaps by teaching digital literacy to rural women, which has been shown to boost their confidence and usage of technology (Bhatnagar, 2020).

- **Ankleshwar Taluka**

Ankleshwar, located in the Bharuch district of Gujarat state, is a well-known industrial hub with rural areas that reflect both infrastructural development and digital disparity. According to 2011 census information total area of Ankleshwar taluka is 455 km, including 397.75 km rural area with 1,23,204 population, 26,060 houses and 61 villages. When it comes to literacy, 79.51% of males and 70.69% of females are literate. Despite the availability of digital services, the adoption of DFS among rural women in the region remains low.

Literature review

- **Digital Financial Literacy and Inclusion**

Azeez & Akhtar (2021) conducted an empirical study in rural India to assess digital financial literacy levels and identified that women in rural regions lag significantly in understanding basic financial concepts and using digital platforms. Their research emphasized the role of education and mobile ownership in enabling financial access. Mhlanga (2020) explored the digital financial inclusion of African women and found parallels to South Asia, identifying that low digital financial literacy and lack of digital identity documents limited women's access to digital banking. The author recommended targeted training programs to bridge the gap. Rupeek (2020) observed that even when rural households own smartphones, women often depend on male family members for digital transactions. This dependency stems from a lack of digital literacy and social norms restricting independent financial activity.

- **Gender and Digital Divide in DFS Access**

Singh & Kaur (2020) explored the gender digital divide in rural India and found that despite increasing mobile penetration, gendered barriers persisted in women's access to DFS. They emphasized that women lacked confidence in handling financial apps due to limited exposure and education. Roy & Dutta (2021) analyzed how cultural perceptions and fears of cyber fraud contribute to rural women's reluctance to adopt DFS. Their study showed that even when infrastructure is available, lack of digital financial knowledge and trust inhibits women's participation. Demirgüç-Kunt et al. (2018) provided global financial inclusion data, revealing that in India, only 37% of women made or received digital payments, compared to 46% of men. The gap is wider in rural regions, highlighting the need for inclusive literacy programs.

- **Theoretical and Conceptual Frameworks**

Hilbert (2011) proposed a framework of "digital capability deprivation", arguing that digital inclusion must be seen as a form of human development. He emphasized gender-sensitive training to promote equitable access to digital resources. Lusardi & Mitchell (2014) theorized that financial literacy influences economic behavior, especially in savings, investments, and budgeting. They argued that women, in particular, benefit from tailored financial education programs that account for their specific socio-cultural contexts. McKinsey Global Institute (2019) reported that closing gender gaps in digital financial inclusion could boost India's GDP by $700 billion by 2025. Their research supports the notion that empowering rural women with digital finance tools yields macroeconomic benefits.

Research Methodology

Research Design

This study adopts a quantitative research design using a descriptive and exploratory approach, intending to investigate the connection between women's access to digital financial services (DFS) in rural Ankleshwar and digital financial literacy (DFL). This method makes it possible to gather quantifiable data methodically and makes statistical analysis easier.

Objective

- To evaluate the level of digital financial literacy among rural women.
- To analyse the relationship between DFL and access to digital financial services.
- To identify the key barriers faced by rural women in using digital financial services.

Hypotheses

Null Hypothesis (H$_0$): There is no significant relationship between digital financial literacy and women's access to digital financial services.

Alternative Hypothesis (H$_1$): There is a significant relationship between digital financial literacy and women's access to digital financial services.

Population and sampling

- **Target Population:** This study focuses on rural women belonging to Generation Y and Generation Z across 11 villages within Ankleshwar taluka. These villages include Amboli, AndadaBhadkodra, Boidra, Borbhatha, Diva, Gadkhol, Kapodra, Pungam, Sanjali, and Surwadi, located within 0 to 5 kilometers from Ankleshwar city, selected from a total of 61 villages.

- **Sample Frame:** The sample frame comprises 11 specific villages strategically chosen to ensure a representative sample from various Gram Panchayat areas in and around Ankleshwar taluka.

- **Sampling Method:** Stratified random sampling was employed to ensure proportional representation of respondents across different villages and age groups within the study area.

- **Sample Size:** A total of 184 respondents participated in this study, contributing to the comprehensive analysis of digital financial literacy (DFL) and digital financial services (DFS) among rural women in Ankleshwar taluka.

- **Data Collection Method:** Primary data were gathered using a structured questionnaire administered in person to the respondents. Secondary data were sourced from scholarly articles, government reports (such as RBI and NFIS publications), and relevant past research studies pertaining to DFL and DFS.

- **Research Instrument:** The research utilized a structured, closed-ended questionnaire developed based on validated scales from previous academic inquiries (e.g., Azeez & Akhtar, 2021; Singh & Kaur, 2020), ensuring the reliability and validity of the data collected.

Data Analysis and Interpretation

Table 1: Age Group Distribution among Female Respondents

Age Group	Frequency	Percentage
18 – 27 years (Gen Z)	147	79.90%
28 – 43 years (Gen Y)	37	20.10%

Interpretation: A significant percentage of respondents (79.9%) are members of Generation Z, suggesting that younger women in rural Ankleshwar are more interested in and able to use digital financial services and literacy. Only 20.1% of the sample is Gen Y. This demographic dominance of Gen Z might reflect their higher exposure to smartphones, social media, and digital trends.

Table 2: Components of Digital Financial Literacy

Component	Description	%
Awareness	Knows UPI, Paytm, Google Pay, mobiclosed-endedle banking.	82
Knowledge	Understands how PINs, OTPs, and KYC work	64
Usage Ability	Can perform transactions, pay bills, use wallets	55
Security Practices	Knows fraud risk, uses passwords safely	49
Confidence	Feels independent and confident in digital finance use	29

Interpretation: Given that 82% of respondents were aware of digital financial tools, awareness was the component with the highest rating, according to the statistics. The decline, however, becomes evident as we get toward trust and real-world application. Just 29% report feeling independent and competent when using DFS, suggesting a large disconnect between tool knowledge and actual tool use. Additionally, 49% of women in rural areas lack security awareness, underscoring the need for focused initiatives to increase cyber safety.

Table 3: DFL Score Range of Total Respondents

DFL Score Range	Frequency	Interpretation
0–10	25	Very Low DFL
11–15	55	Low DFL
16–20	70	Moderate DFL
21–25	34	High DFL

Interpretation: The majority of women (38%) had intermediate DFL scores (16–20), which are indicative of a respectable basic comprehension but a lack of complete autonomy in DFS utilization. Notably, there are dangers of digital exclusion because 25 respondents (13.6%) had very low DFL. The fact that just 18.5% are highly literate highlights the necessity of targeted digital education initiatives to move more users from low to high literacy groups.

Table 4: Frequency of Digital Financial Services Usage

Usage	Frequency	Percentage
Daily	104	56.50%
Weekly	57	31.00%
Monthly	17	9.20%
Rarely	6	3.30%

Interpretation: The data shows that 87.5% of women use digital financial services daily or weekly, indicating strong adoption and regular usage. This reflects growing digital financial literacy and comfort with digital platforms. However, the small share of monthly (9.2%) and rare users (3.3%) suggests some women still face barriers like limited access or low digital confidence.

Table 5: Prospect of using DFS

Reason	Frequency
Convenience	81
Faster Transactions	53
Security & Safety	28
Peer Influence	12
Other	10

Interpretation: 81 women indicated convenience as their primary motive, with transaction speed coming in second. Due to a perception gap, only 28 give security as a justification; security isn't yet regarded as the main advantage. It appears that most women choose DFS for practical reasons rather than social pressure, as seen by the low level of peer influence.

Table 6: Challenges Faced While Using DFS

Issue Faced	Frequency
Transaction Failure	64
App Errors	41
Slow Processing	28
Fraud/Risk	21
No Issues	30

Interpretation: Transaction failure is the most frequently reported issue, followed by technical/app failures, which may erode confidence in digital systems. Only 21 people reported fraud or risk issues, however, this could be underreported because people aren't aware of them. Crucially, 30 respondents reported no problems, demonstrating that the system functions effectively for a small percentage of users. These findings highlight the necessity of improved infrastructure, technical assistance, and fraud prevention training.

Hypothesis Testing

H_0:   There is no significant relationship between DFL and women's access to DFS.

H_1:   There is a significant relationship between DFL and women's access to DFS.

Table 7: Pearson Correlation Analysis Output between DFL and Access to DFS

Variables	Mean	Std. Deviation	Pearson Correlation (r)	Sig. (2-tailed)
Total DFL Score	16.16	4.38		0.00001
Access to DFS Score	16.62	5.25	0.645	

Interpretation: There is a moderate to strong positive correlation (r = 0.645) between DFL and Access to DFS. The p-value (0.000) indicates a statistically significant positive relationship, allowing us to reject the null hypothesis. This suggests that higher levels of digital financial literacy are associated with better access to and usage of digital financial services among women in rural areas of Ankleshwar Taluka.

Conclusion

This study concludes that in a rural area of Ankleshwar, women's access to digital financial services (DFS) is significantly improved by increasing digital financial literacy (DFL). Despite the widespread awareness of digital tools, many women lack the confidence and understanding necessary to use them securely. It is confirmed by the positive and statistically significant association that access to DFS increases as DFL does. Rural women can be empowered, and the digital finance gap can be closed by strengthening DFL, particularly in areas like utilization ability and security.

References

1.   *Agarwal, S., & Zhang, L. (2020). Digital financial literacy and FinTech adoption in emerging markets. Journal of Financial Innovation, 5(2), 112–127.*

2.   *Azeez, A. A., & Akhtar, M. J. (2021). Digital financial literacy and its determinants: Empirical evidence from rural India. Retrieved from https://www.researchgate.net/publication/352372571*

3.   *Bhatnagar, R. (2020). Empowering women through digital inclusion: The case of Internet Saathi. Journal of Rural Development, 39(4), 25–38.*

4.   *Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: Measuring financial inclusion and the FinTech revolution. World Bank Group.*

5.   *Deloitte India. (2020). Digital financial services in India: Challenges and the road ahead. Retrieved from https://www2.deloitte.com/in/en.html*

6.   *Ghosh, S. (2016). Digital financial inclusion in India. Economic & Political Weekly, 51(5), 45–52.*

7.   *Goyal, R., & Kumar, A. (2022). Bridging the gender gap in FinTech usage: The role of digital literacy. International Journal of Rural Management, 18(1), 56–74.*

8.   *Hilbert, M. (2011). Digital gender divide or technologically empowered women in developing countries? Women's Studies International Forum, 34(6), 479–489.*

9.   *Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. Journal of Economic Literature, 52(1), 5–44.*

10.   *McKinsey Global Institute. (2019). The power of parity: Advancing women's equality in Asia Pacific.*

11.   *Mhlanga, D. (2020). Digital financial inclusion and the challenges of women in Africa. Journal of Gender Studies, 29(2), 135–148.*

12.   *Reserve Bank of India. (2019). Report on trends and progress of banking in India 2018–19.*

13.   *Reserve Bank of India. (2023). Report on financial inclusion and digital literacy in India. Retrieved from https://www.rbi.org.in*

14.   *Roy, S., & Dutta, R. (2021). Barriers to women's use of digital financial services in India. South Asia Economic Journal, 22(1), 89–105.*

15.   *Rupeek. (2020). Digital divide: Women still lag behind men in digital finance usage. Retrieved from https://rupeek.com*

16.   *Singh, R., & Kaur, J. (2020). Digital divide and women's access to digital financial services in rural India. International Journal of Social Economics, 47(12), 1457–1474.*

17.   *World Bank. (2021). The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19. Washington, DC: World Bank Publications.*

.

❑❑❑