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DIGITAL FINANCIAL INCLUSION AND EDUCATION EQUITY IN INDIA (2015-2025): CHALLENGES AND OPPORTUNITIES

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ABSTRACT

India has undertaken a transformative digital journey, leveraging its layered digital public infrastructure, known as the India Stack, to achieve major progress in Digital Financial Inclusion (DFI). This infrastructure, which includes foundational elements like identity and instant retail payments (UPI), has lowered the costs of identification and transactions at a massive scale. National policies, such as the Pradhan Mantri Jan-Dhan Yojana (PMJDY), have catalyzed widespread financial access.

Concurrently, the National Education Policy (NEP) 2020 has institutionalized technology use and inclusive financing mechanisms to advance the goal of education equity. The study analyzes the crucial intersection where digital finance mediates the entire education financing lifecycle, encompassing application, verification, disbursement, and payment. Digital tools facilitate the seamless disbursement of scholarships via Direct Benefit Transfer (DBT) and reduce friction in fee payments through integrated platforms like Bharat BillPay. Furthermore, efforts like the VidyaLakshmi portal and credit guarantee schemes (CGFSEL) aim to expand access to education credit and bridge financing gaps for higher education.

However, the research identifies that persistent inequalities across gender, geography, and income threaten to undermine these gains. Significant challenges remain in translating basic account ownership into meaningful usage, particularly among women, resulting in account inactivity. Furthermore, uneven device ownership and connectivity, as documented in national surveys, sustain a digital divide that affects remote and low-income households.

The paper concludes that achieving genuine education equity requires policy interventions that move beyond mere access. Key recommendations emphasize coordinating digital infrastructure with financial protection, including scaling integrated digital and financial literacy programs, utilizing purpose-bound digital transfers such as e-RUPI vouchers for leak-proof scholarship delivery, and implementing infrastructure models (like KFON) to close the critical last-mile connectivity and device gap for vulnerable segments.

Keywords:

Digital Financial Inclusion (DFI), Education Equity, India Stack, Direct Benefit Transfer (DBT), Unified Payments Interface (UPI), Gender and Rural Divide

1. INTRODUCTION

1.1 Background and Rationale

Over the last decade, India has undertaken a remarkable digital transformation that is redefining how citizens access, use, and benefit from public and private services. The evolution from foundational identity (Aadhaar) to instant retail payments (UPI), to consented data sharing (Account Aggregator) is frequently described as India Stack, a layered digital public infrastructure that has materially lowered the costs of identification, payments, and data exchange at population scale (International Monetary Fund [IMF], 2023). India Stack's

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widespread adoption enabled significant progress in financial access and usage, compressing the time and cost to onboard users and transact at the last mile (IMF, 2023; IMF, 2021).

Within this transformation, financial inclusion traditionally understood as universal access to useful and affordable financial products has expanded rapidly via digital rails. National initiatives such as the Pradhan Mantri Jan-Dhan Yojana (PMJDY) for no-frills bank accounts, paired with Aadhaar e-KYC and ubiquitous mobile connectivity the so-called JAM Trinity have unlocked direct, low-friction transfers and digital payments at scale (Prime Minister's Office, 2015; Press Information Bureau [PIB], 2024). As of August 13, 2025, PMJDY accounts crossed 56.16 crore, with 55.7% held by women and 66.7% in rural and semi-urban areas (Department of Financial Services, Ministry of Finance, 2025). The Reserve Bank of India's (RBI) Financial Inclusion Index rose from 64.2 in March 2024 to 67.0 in March 2025, pointing to simultaneous improvements in access, usage, and quality (India Brand Equity Foundation [IBEF], 2025; Economic Times, 2025).

Concurrently, education equity equal opportunity to access, participate in, and benefit from quality learning remains central to India's development strategy. The National Education Policy (NEP) 2020 emphasizes technology-enabled learning, digital platforms, and inclusive financing to widen access and improve outcomes, while calling attention to the need to address the digital divide (Ministry of Education, 2020). Complementary programmes such as PM e-VIDYA, DIKSHA, and the National Digital Education Architecture (NDEAR) aim to scale learning content, teacher development, and digital infrastructure for schooling (Ministry of Education, 2020; NDEAR, n.d.; PM e-VIDYA, n.d.).

The relevance of connecting digital finance to education is twofold. First, digital payments reduce frictions in paying school fees, remitting funds across distances, and disbursing scholarships; second, digital accounts (especially for women) are linked in research to improvements in agency, safety, and timely receipt of benefits (World Bank G2Px, 2024, 2025). India's own trajectory with UPI crossing 20 billion transactions monthly in 2025 and continuing to add use-cases creates a natural platform on which to integrate school fee payments, ed-tech subscriptions, and scholarship disbursements (NPCI, 2025; Reuters, 2025).

1.2 Linkage Between Digital Finance and Education

Digital tools now mediate the entire education financing lifecycle: application, verification, disbursement, and payment. On the public side, the National Scholarship Portal (NSP) streamlines applications and direct benefit transfer (DBT) to students' bank accounts, with real-time dashboards on verified applications and disbursements (NSP, 2025). State and central departments increasingly use e-RUPI vouchers for leak-proof fee payments (e.g., Karnataka's e-RUPI for education scholarship fee payment), ensuring funds are used for the intended purpose and redeemable even on feature phones (NPCI, 2021). On the private side, Bharat BillPay (Bharat Connect) and payment gateways have expanded to education fee categories, enabling interoperability across channels and standardized customer protection (NPCI, 2025; CBSE circular; Economic Times, 2025).

Beyond payments, digital identity and consented data flows (Account Aggregator / DEPA) promise to lower information asymmetries for education loans and fee financing, potentially reducing collateral requirements and underwriting costs for students, especially first-generation learners (Financial Services, 2024; NITI Aayog, 2020; PIB, 2025). Portals like PM-Vidyalaxmi / VidyaLakshmi aggregate loan schemes across banks, while CGFSEL offers credit guarantees on education loans up to ₹7.5 lakh together bridging financing gaps that otherwise constrain access to higher education (MoE, 2025; NCGTC, n.d.).

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1.3 Research Problem and Justification

Despite these advances, inequalities persist across income, gender, and geography. The Global Findex 2021 reports that 35% of Indian account owners had inactive accounts, with higher inactivity among women (32% vs. 23% for men), suggesting barriers between access and meaningful use (World Bank, 2022; Business Standard, 2025). On the education side, surveys during and after COVID-19 (ASER 2021) documented uneven device and internet access, with poorer households and girls often at a disadvantage (Pratham ASER, 2021; UNESCO, 2021/2023). While UDISE+ data point to rising digital infrastructure in schools (computers, internet), rural-urban gaps remain material (PIB, 2025; TRAI, 2025). These tensions motivate a closer, empirical and policy-oriented assessment of how Digital Financial Inclusion (DFI) interfaces with education equity in India.

1.4 Objectives of the Study

1. To map the trends and status of digital financial inclusion in India (2015-2025) using national indicators (FI-Index, RBI-DPI) and program metrics (PMJDY, UPI).
2. To assess education equity in access, quality, and outcomes during the same period, using UDISE+, AISHE, and ASER indicators.
3. To analyze interlinkages between DFI and education, focusing on scholarships/DBT, fee payments, and credit models (e.g., VidyaLakshmi, CGFSEL).
4. To evaluate demographic disparities (rural-urban, gender) in DFI and education access, and identify key constraints.
5. To conduct a policy and institutional analysis of major schemes (JAM Trinity, Digital India, PMGDISHA, NEP 2020, NDEAR), culminating in a SWOT and concrete recommendations for Edu Vision 2035.

1.5 Research Questions

- How has DFI evolved in India from 2015 to 2025, and what are its key determinants and bottlenecks?
- In what ways do digital public infrastructure and payment rails affect education access, affordability, and continuity (e.g., fee payment, stipends, loans)?
- What correlations exist between DFI measures and education equity indicators across states or demographic segments?
- How do gender and rural-urban divides shape the interaction between DFI usage and participation in schooling/higher education?
- What policy gaps persist, and which global practices offer actionable lessons for India?

1.6 Scope and Limitations

The study focuses on the 2015-2025 period coinciding with the Digital India era covering India with sensitivity to rural-urban and gender perspectives. It synthesizes secondary data from official sources (RBI, NPCI, MoE, MeitY, NITI Aayog), international organizations (World Bank, IMF, UNESCO), and credible national surveys (ASER, UDISE+, AISHE, TRAI). Limitations include: absence of state-level FI-Index data; reliance on program dashboards with evolving methodologies; and the challenge of establishing causality in observational correlations between finance and education.

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2. REVIEW OF LITERATURE

2.1 Conceptual Framework of Digital Financial Inclusion (DFI)

DFI extends traditional inclusion by integrating **digital rails** that improve **access**, **usage**, **quality**, and affordability of financial services. Foundational digital public infrastructure identity (Aadhaar), payments (UPI), and data exchange (Account Aggregator/DEPA) underpins rapid scaling of low-cost accounts, seamless payments, and consent-based data portability (IMF, 2023; NITI Aayog, 2020). The RBI's FI-Index operationalizes inclusion across three sub-indices (Access, Usage, Quality), while the Digital Payments Index (DPI) measures the extent of payment digitization (RBI via PIB, 2025; Business Standard, 2025).

2.2 Theoretical Perspectives: Access, Affordability, and Empowerment

The literature links digital payments and inclusive finance to reduced transaction costs, improved targeting and timeliness of transfers, and enhanced agency especially for women when benefits are deposited into private, functional accounts (World Bank G2Px, 2024/2025). The behavioral and infrastructure dimensions also matter: UPI's interoperability and low cost have driven adoption, but meaningful usage still depends on device access, literacy, and trust (World Bank, 2023; GSMA, 2023/2025).

2.3 Global and National Studies on DFI and Educational Access

Internationally, mobile money has been leveraged for school fee payments and stipends e.g., Côte d'Ivoire (GSMA case study), Bangladesh (Primary Education Stipend via mobile money), Ghana (LEAP cash transfers), and Pakistan (Ehsaas education stipends) with mixed but generally positive effects on enrolment, timeliness, and household welfare (GSMA, 2015/2020; CGD, 2019; UNICEF, 2024). Indian evidence emphasizes the role of digital G2P in improving convenience and safety, with potential empowerment effects for women beneficiaries (World Bank G2Px, 2024/2025).

2.4 Policy Milestones in India: JAM Trinity, Digital India, NEP 2020

The JAM Trinity (Jan Dhan-Aadhaar-Mobile) catalyzed account opening and DBT at scale, with PMJDY balances and usage sustained by payments innovations (PMO, 2015; PIB, 2024). Digital India built the nine-pillar digital governance architecture, while NEP 2020 institutionalized technology integration in education and emphasized addressing the digital divide. The NDEAR and DIKSHA platforms carry NEP's digital vision into implementation, supported by PM e-VIDYA channels for at-scale content delivery (Ministry of Education, 2020; NDEAR, n.d.; PM e-VIDYA, n.d.).

2.5 Research Gap and Need for the Present Study

While many reports document DFI progress (FI-Index, DPI, UPI growth), fewer studies synthesize how these advances concretely reduce frictions in education financing (fees, scholarships, loans) and how benefits vary by gender and rurality. Moreover, risks such as account inactivity, privacy concerns (e.g., DIKSHA data exposure), and cyber-fraud may blunt equity gains if unaddressed. A consolidated analysis spanning 2015-2025 is therefore timely (Wired, 2023; World Bank, 2022).

3. RESEARCH METHODOLOGY

3.1 Nature of Study: Descriptive and Analytical

This study is descriptive in mapping trends and analytical in drawing linkages, using triangulation across official datasets and high-quality institutional literature.

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3.2 Data Type and Sources

Secondary data from: RBI (FI-Index, DPI), NPCI (UPI, 123PAY, UPI Lite), PIB press releases (PMGDISHA, DBT), World Bank/IMF (Findex, G2Px, IMF WP), UNESCO/ASER (education access), UDISE+/AISHE (school and higher-ed indicators), TRAI (internet subscribers), and NSP (scholarship dashboards).

3.3 Time Frame: Digital India Era (2015-2025)

The analysis aligns with national digitization phases: account opening (2014-2017), early UPI scale-up (2016-2019), pandemic-era digitization (2020-2022), and consolidation/innovation (2023-2025).

3.4 Variables and Indicators

- **DFI indicators**: FI-Index (overall, sub-indices), DPI; PMJDY account counts; UPI volumes/values; PMGDISHA training/certification numbers; 123PAY/Lite features (proxy for inclusion in low-connectivity contexts).
- **Education indicators**: UDISE+ infrastructure (computers, internet); ASER device access; AISHE GER; NSP disbursements.
- **Socio-economic controls**: TRAI rural/urban subscribers per 100; NFHS-5 gendered device/internet usage.

3.5 Data Analysis Tools and Techniques

- Trend analysis of FI-Index, DPI, UPI, PMJDY, PMGDISHA, UDISE+/AISHE.
- Correlation and comparative assessment (e.g., proxy contrasts between states with stronger digital infrastructure Kerala KFON vs. states with lower indicators Bihar).
- SWOT and policy gap analysis synthesizing institutional documents.

3.6 Ethical Considerations and Reliability

Given reliance on secondary sources, the study prioritizes official datasets and recognized organizations. Privacy and security implications of ed-tech platforms are explicitly considered (e.g., DIKSHA breach), emphasizing the need for DEPA and robust data governance (NITI Aayog, 2020; Wired, 2023).

4. TRENDS AND STATUS OF DIGITAL FINANCIAL INCLUSION IN INDIA

4.1 Evolution of DFI: From PMJDY to the UPI Ecosystem

Launched in 2014, PMJDY delivered universal basic accounts, progressively complemented by DBT. By August 2025, PMJDY reached 56.16 crore accounts with a strong rural and women footprint. UPI live since 2016 has become the default rail for instant, interoperable payments; RBI's DPI indicates robust digitization gains through March 2025. Innovations such as UPI 123PAY for feature phones and UPI Lite/Light X for low-value and offline transactions further push inclusion into low-connectivity segments (DFS, 2025; Business Standard, 2025; NPCI, n.d.).

4.2 Key Indicators of Financial Inclusion

- **FI-Index**: Rose to 67.0 (Mar 2025) from 64.2 (Mar 2024).
- **DPI**: Increased to 493.22 (Mar 2025) from 465.33 (Sep 2024).

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- **UPI**: Exceeds 20 billion transactions monthly in 2025; intensive ecosystem feature development continues (e.g., conversational payments pilots).
- **PMGDISHA**: 4.78 crore candidates certified (2017-2024), addressing digital literacy in rural India.

These metrics collectively suggest deepening access and usage, but they do not automatically resolve inclusion quality (e.g., account inactivity) without parallel literacy, grievance redress, and safety measures (IBEF, 2025; RBI/PIB, 2025; NPCI, 2025; PIB, 2024).

4.3 Regional and Demographic Patterns

TRAI data show a continued urban advantage in internet subscribers per 100 population (March 2025), though rural broadband subscriptions have grown rapidly (TRAI, 2025). NFHS-5 highlighted gender gaps in internet use and device access, corroborating ASER insights on uneven smartphone availability and learning supports during school closures (NFHS-5, 2019-21; ASER, 2021). These demographic gradients are critical in understanding why access does not always translate into equitable outcomes (TRAI, 2025; Indian Express, 2021; ASER, 2021).

4.4 Government and Institutional Interventions

RBI and NPCI have introduced consumer-centric safeguards and inclusion enablers e.g., DigiSaathi 24×7 helpline; 123PAY for feature phones; UPI Lite X for offline NFC payments; and operational API rules to improve reliability. NITI Aayog has proposed frameworks for digital banks and emphasized protecting UPI's open competition landscape (NITI Aayog, 2022; NPCI, 2022/2023; Economic Times/TOI, 2025).

5. EDUCATION EQUITY IN THE DIGITAL ERA

5.1 Understanding Education Equity: Access, Quality, and Outcomes

Education equity requires equal opportunity to attend and complete schooling, quality learning experiences, and fair outcomes irrespective of socio-economic status or gender. The COVID-19 shock intensified disparities, making digital access a prerequisite for continuity; UNESCO estimates over 1.6 billion learners globally were affected (UNESCO, 2023). In India, ASER 2021 highlighted uneven device access and parent-led learning supports, pointing to vulnerabilities in remote learning environments (Pratham, 2021).

5.2 Digital Education Policies under NEP 2020

NEP 2020's "Online and Digital Education: Ensuring Equitable Use of Technology" underscores bridging the digital divide and developing robust content platforms (DIKSHA), teacher training, and inclusive design. The NDEAR program operationalizes architecture for interoperable registries and learning services; PM e-VIDYA expands channels (TV, radio, SWAYAM) to reach offline learners (MoE, 2020; NDEAR; PM e-VIDYA).

5.3 Financing of Education and Role of Digital Transactions

Digitized **scholarship** and **fee** flows reduce leakage and transaction costs. The NSP provides a single window for applications and DBT; Bharat BillPay and private PSPs enable school/college fee payments across channels; e-RUPI and state-level innovations (e.g., Karnataka's voucherized fee disbursals) deliver purpose-bound transfers. For higher education, VidyaLakshmi and CGFSEL expand access to education credit, with credit guarantees on small loans (NSP dashboard; NPCI 2021; MoE 2025).

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5.4 Challenges in Equitable Digital Learning

Despite progress, persistent challenges include: connectivity gaps (rural bandwidth, device access), affordability of data and devices for low-income households, gendered access for girls, and data privacy concerns (e.g., DIKSHA data exposure) that may undermine trust (TRAI, 2025; Indian Express & Wired reports). Targeted initiatives (e.g., Kerala's KFON for free or subsidized broadband to poor households) illustrate how infrastructure policy can complement education and finance reforms (India Today, 2025; Indian Express, 2023).

6. INTERLINKAGES BETWEEN DFI AND EDUCATION EQUITY

6.1 Correlation Between Financial Inclusion and Education Outcomes

The hypothesized channels are: (a) reduced frictions in fee payments and scholarship DBT, improving timeliness and predictability; (b) women's account ownership and private control over benefits enhancing girls' schooling; (c) lower remittance costs via UPI supporting household education budgets; (d) credit access (VidyaLakshmi/CGFSEL) for higher education enrolment. Evidence briefs show digital G2P improves convenience and safety, with potential empowerment effects (World Bank G2Px, 2024/2025); global studies link mobile money expansion to increased schooling in low-income contexts (Rotondi, 2022). In India, as DPI and FI-Index rise, UDISE+ and AISHE suggest gains in infrastructure and higher-education GER, though causality requires careful identification beyond scope here (PIB, 2025; AISHE 2021-22).

6.2 Case Studies and State Comparisons

- **Kerala (High digital infra)**: The KFON project targets universal broadband with free connections for BPL households; public offices and institutions have been onboarded, and targeted roll-outs continue. This state's relatively high literacy and digital public infrastructure create favorable conditions for integrating digital fee payments and online learning supports (Kerala KFON sources).
- **Bihar (Expanding education finance)**: The Student Credit Card scheme (now interest-free) expands education credit access; integration with digital payments and DBT can narrow affordability gaps if complemented by device/connectivity initiatives (UP CM announcements; myScheme/TOI).

  These contrasts illustrate how state-level infrastructure and finance levers can jointly influence education equity trajectories.

6.3 Digital Financial Literacy and its Impact on Education Access

PMGDISHA's 4.78 crore certified candidates mark investment in basic digital literacy critical for both payments adoption and learning platforms. DigiSaathi complements with helplines for digital payments. These elements reduce the usability gap between access and meaningful use of accounts and apps (PIB, 2024; NPCI, 2022).

6.4 Role of FinTech and EdTech Collaborations

Payment gateways (Razorpay), fee management platforms (Teachmint/TeachPay), and Bharat BillPay integrations offer interoperable and reconcilable fee collection, recurring mandates, and financing options (eNACH). This reduces administrative burdens for schools and lowers friction for households (Razorpay case study; Teachmint T&Cs; Paytm education; Economic Times on Bharat BillPay).

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7. POLICY AND INSTITUTIONAL ANALYSIS

7.1 Assessment of Major Policies

- **JAM Trinity & PMJDY**: Large-scale account opening + Aadhaar-enabled DBT reduced leakages; reported DBT savings are substantial though estimates differ by methodology (PIB/Fortune, 2025).
- **Digital India**: Nine pillars broadband highways to digital services support citizen-centric delivery, with payments and identity as core enablers (MeitY, 2025).
- **NEP 2020 & NDEAR/DIKSHA/PM e-VIDYA**: Embed technology integration while explicitly addressing equity; DIKSHA scaled content and teacher development; PM e-VIDYA expanded multi-channel access (MoE, 2020; UNESCO DIKSHA).
- **PMGDISHA**: Scaled digital literacy in rural India (PIB, 2024).

7.2 SWOT Analysis of Digital Financial Inclusion Policies

- **Strengths**: Low-cost, interoperable UPI rails; scale of PMJDY; consent-based AA/DEPA; robust policy attention to DPI; active regulators.
- **Weaknesses**: Account inactivity; uneven device/connectivity; privacy incidents; variable grievance redress capacity at the last mile.
- **Opportunities**: Feature-phone UPI (123PAY); offline UPI (Lite X); expansion of Bharat BillPay to education fees; scholarship vouchers (e-RUPI); open credit enablement for student finance via AA.
- **Threats**: Fraud and social-engineering risks; over-concentration risks in payments; sustainability of zero-MDR economics; widening gaps if remote/poorer learners remain offline.

7.3 Policy Gaps and Implementation Challenges

Key gaps include: (i) translating account ownership into active usage (especially among women); (ii) ensuring privacy/security of education platforms; (iii) streamlining scholarship processing end-to-end (KYC, attendance verification, grievance redress); (iv) extending broadband/device access in rural/low-income areas. Addressing these requires coordinated investments in digital public goods (identity, payments, data) and last-mile infrastructure (broadband, devices), with gender-sensitive design and consumer protection.

7.4 Global Best Practices and Lessons for India

- **Côte d'Ivoire**: School fee payments via mobile money standardized and scaled through public-private collaboration (GSMA).
- **Bangladesh**: Digital stipend disbursements to mothers improved timeliness and reduced leakage (CGD; BIGD/BRAC, 2025).
- **Ghana**: LEAP transfers show welfare gains and school participation effects (UNICEF, 2024).

  These cases underscore the value of purpose-bound digital transfers, women-centric delivery, and integrated payment + verification rails.

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8. FINDINGS AND DISCUSSION

8.1 Key Trends Observed (2015-2025)

India achieved simultaneous gains in access (PMJDY), usage (UPI at massive scale), and quality (FI-Index sub-dimensions; DPI). Digital literacy inputs (PMGDISHA) and consumer guidance (DigiSaathi) complemented the infrastructure. However, progress is heterogeneous across geography and gender, with rural and women users lagging in device/internet access and account activity (RBI/PIB, 2025; World Bank, 2022; TRAI, 2025).

8.2 Relationship Between DFI Growth and Educational Progress

Theoretical and empirical literature suggests digital G2P and payments lower transaction costs and increase predictability factors strongly associated with education continuity and affordability. Indian program evidence (NSP DBT, e-RUPI fee vouchers, Bharat BillPay fee category) indicates improving efficiency and transparency. Higher-education enrolment (AISHE) shows gradual GER improvement, but causal attribution to DFI needs careful micro-data analysis and quasi-experimental designs (World Bank G2Px, 2025; AISHE, 2022).

8.3 Persistent Inequalities and Digital Divide

The rural-urban and gender divides continue to shape both DFI usage and digital learning participation. NFHS-5 and ASER 2021 reveal device and connectivity constraints; UDISE+ improvements in school digital infrastructure are promising but uneven. Without targeted support devices, subsidized connectivity, community digital centers digital finance benefits may not fully translate into equitable educational gain (ASER, 2021; UDISE+/PIB, 2025).

8.4 Role of Gender, Geography, and Socioeconomic Factors

Where women control accounts and receive transfers directly, evidence indicates gains in agency and household spending on children, including education; yet, India's account inactivity gender gap points to the need for human-centered design, localized assistance, and grievance redress. Geographical constraints (hilly/remote areas) elevate the role of offline payments (UPI Lite X) and broadcast channels (PM e-VIDYA) as equity strategies (World Bank G2Px, 2025; NPCI, 2023).

8.5 Summary of Empirical and Policy Insights

1. DFI has scaled rapidly (FI-Index, DPI, UPI), with deepening institutional capacity.
2. Education financing mechanisms scholarships, fee payments, loans are increasingly digitized, improving efficiency and traceability.
3. Gaps persist in usage, trust, connectivity, and gendered access; account ownership alone is insufficient.
4. Integrating payments + identity + data for purpose-bound education transfers (e-RUPI), consent-based loan underwriting (AA/DEPA), and offline modalities (UPI Lite X) offers a coherent path to equity.

9. CONCLUSION AND RECOMMENDATIONS

9.1 Summary of Findings

From 2015 to 2025, India's digital public infrastructure enabled measurable advances in financial inclusion and payment digitization. Education policy kept pace by embedding digital components (NEP 2020, DIKSHA, PM e-VIDYA, NDEAR). The linkages between DFI and education equity are evident in streamlined scholarships, fee payments, and

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expanding student credit ecosystems. Yet, persistent digital divide and account inactivity highlight the need for last-mile and gender-responsive interventions.

9.2 Policy Recommendations

(A) Promote Digital & Financial Literacy especially for girls and rural households)

- Scale PMGDISHA-plus modules that integrate payments safety, ed-tech usage, and scholarship navigation, with community-based mentors; link to DigiSaathi and school-based ICT labs.
- Embed **consumer protection** (fraud awareness, grievance channels) in school curricula and parent outreach.

(B) Strengthen FinTech-EdTech Partnerships

- Expand Bharat BillPay onboarding of schools/universities; ensure transparent fee ledgers, receipt standardization, and multilingual UX; enable recurring mandates with consent dashboards.
- Encourage Teachmint/fee-management platforms to integrate responsible education finance options (e.g., CGFSEL-aligned loans, AA-enabled underwriting) with strict data minimization.

(C) Inclusive Financial Education Policies

- For scholarships, adopt purpose-bound e-RUPI where appropriate; for areas with poor connectivity, support UPI Lite X and feature-phone 123PAY flows; maintain assisted models via CSPs/BCs.
- For student credit, expand VidyaLakshmi integrations with AA, standardize timelines (e.g., 15-day PSB processing directive), and bolster CGFSEL coverage; ensure grievance redress cells at district level.

(D) Close Connectivity & Device Gaps

- Replicate KFON-like broadband models (public fiber + last-mile LNOs) for targeted rural clusters; complement with device grants for girls/low-income students and community Wi-Fi.
- Track digital readiness in UDISE+/PGI dashboards at district level, linking capex to verifiable improvements in device/internet availability and usage.

(E) Privacy and Trust by Design

- Enforce privacy-by-design for ed-tech platforms (e.g., DIKSHA), including regular audits, consent dashboards, and breach notification norms; align with DEPA consent artefacts.
- Promote AA-enabled data sharing for student finance with strict purpose limitation and revocation features.

9.3 Roadmap for Edu Vision 2035

1. **Universal Digital Readiness**: 100% schools with reliable electricity, computers, and broadband by 2030; 100% secondary students with individual learning devices by 2035 (UDISE+/PGI tracked).

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2. **Seamless Edu-Payments Fabric**: All schools and HEIs on Bharat BillPay or equivalent, with standardized e-receipts, optional installment plans, and real-time reconciliation.
3. **Scholarship 2.0**: Move 80% of student benefits to purpose-bound vouchers (e-RUPI) by 2030; integrate attendance and learning verification through consented APIs.
4. **Student Credit on Consent**: AA-integrated underwriting for small-ticket education loans; expand CGFSEL corpus; ensure time-bound loan decisions.
5. **Gender Equity**: Targeted device/data support for girls; women-first account initiatives linked to NSP; community support for safe digital use.

9.4 Future Research Directions

- **Causal Impact**: Exploit policy rollouts (e.g., e-RUPI pilots, BBPS onboarding waves) to estimate causal effects on enrolment, attendance, and completion.
- **Granular Inequalities**: Micro-studies on tribal and hard-to-reach geographies, measuring offline UPI and broadcast learning impacts.
- **Data Governance**: Evaluate DEPA/AA-based student finance pilots for inclusion vs. privacy trade-offs and long-term credit outcomes.

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