



Digitalization and its Impact on Human Life: A Study on Arunodoi-Received Women in Goalpara District of Assam

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Abstract- This study examines the influence of digitalization on different aspects of human life among women beneficiaries of the Arunodoi welfare scheme in Goalpara district, Assam. Using primary data collected through structured questionnaires from 150 Arunodoi-received women, the research highlights how digitalization affects education, employment, financial inclusion, social participation, and quality of life. Descriptive statistics are applied to interpret the data. The results show that increased digital access leads to significant improvements in women's economic empowerment, access to public services, and social connectivity.

Keywords:- Digitalization, Arunodoi Scheme, Women Empowerment, Descriptive Statistics, Goalpara, Assam

I. Introduction

Digitalization refers to the integration of digital technologies into everyday life, transforming the way individuals access information, communicate, and engage in economic activities. With the rapid expansion of the internet, smartphones, digital banking, and online governance platforms, digitalization has significantly reshaped social, economic, and administrative structures across India. Government initiatives such as Digital India have aimed to bridge the digital divide and promote inclusive growth by ensuring access to digital services for rural and marginalized communities. In rural and semi-urban regions of India, digitalization has profound implications for women's empowerment by providing access to information, financial services, and educational resources.

The impact of digitalization on human life is multidimensional. It has improved communication, enhanced access to education and healthcare, increased financial inclusion through digital payments, and created new livelihood opportunities. At the same time, it has also introduced challenges such as digital illiteracy, cybersecurity risks, and unequal access to technology, particularly in rural areas.

The Arunodoi scheme, launched by the Government of Assam, provides a monthly financial benefit to women from economically weaker sections. While economic upliftment is the main objective, such financial inclusion also potentially affects the uptake and utility of digital technologies. Digitalization refers to the integration of digital technologies into everyday life, transforming traditional systems into technology-driven processes.

In Assam, welfare schemes like Orunodoi Scheme (popularly known as Arunodoi) have utilized digital platforms for direct benefit transfers to economically vulnerable women. In districts like Goalpara district, digitalization plays a crucial role in ensuring



transparency, timely fund disbursement, and financial empowerment of women beneficiaries. By linking bank accounts, mobile numbers, and digital identity systems, the scheme demonstrates how digital governance can strengthen social welfare delivery. In Assam and other northeastern states, research notes that while digital initiatives expand access to services, many rural residents still lack the skills or resources to navigate digital interfaces, particularly older women or those with lower educational attainment.

This study examines the impact of digitalization on the lives of Arunodoi-receiving women in Goalpara District, Assam, focusing on financial independence, access to information, social participation, and overall quality of life. It seeks to understand whether digital transformation has genuinely empowered beneficiaries or whether structural and technological barriers still limit its full potential.

II. Literature Review

The concept of digitalization has been widely studied in social science as a transformative process that affects economic activities, access to services, and social inclusion in both developed and developing contexts. Digitalization bridges information gaps, enhances connectivity, and reshapes the way public services are delivered, particularly in rural communities where access to traditional infrastructure is limited. (Ahir & Jain, 2024)

Das & Saikia (2022) suggest that digital literacy positively influences women's socio-economic outcomes in rural India. Digital access encourages financial inclusion through mobile banking, enhances educational participation, and facilitates access to government services (e-governance). However, barriers such as lack of digital skills and infrastructure still persist.

Rajkumari Ahir and Jeevika Jain (2024) investigated the impact of digitalization on rural India, highlighting how digital technologies such as mobile internet, e-services, and digital platforms increase efficiency in governance, improve access to services, and can create new economic opportunities for rural households. Their study underlines that while digitalization brings efficiency and connectivity, it also introduces challenges like cybersecurity risks, data privacy concerns, and digital divides between urban and rural populations.

Internet Saathi programme(2025)in India has worked to improve digital literacy among rural women, demonstrating the necessity of tailored digital education initiatives to increase women's participation in the digital ecosystem (Internet Saathi programme description, 2025). Digital technologies can empower rural women by enhancing access to information, financial services, and livelihood opportunities.

Sowmya & Pai (2025) studies on digital inclusion indicate that digital financial services and mobile banking significantly contribute to women's economic empowerment, offering pathways for formal financial inclusion and entrepreneurial engagement.



Riti & Kumar (2025) conducted a study on the Challenges in Digital Literacy and Accessibility in Rural Communities: A Case Study of Salempur Village. Despite the potential benefits, rural communities face persistent barriers to taking full advantage of digitalization. Limited digital literacy, inadequate network infrastructure, language barriers, and vulnerability to digital scams continue to impede rural users' ability to leverage digital platforms effectively.

Borah (2025) case study on beneficiaries in Dhemaji District found that while the Arunodoi scheme improved household consumption and women's involvement in financial decisions, its effectiveness was limited by delayed disbursements and low financial literacy among beneficiaries.

Additionally, research on women's empowerment in Goalpara District has shown that socio-economic and psychological characteristics significantly correlate with empowerment levels, indicating broader structural factors that influence women's capability to participate fully in community development processes.

III. Objectives of the Study

- To assess the level of digital access among Arunodoi-received women.
- To examine the impact of digitalization on education, employment, and financial inclusion.
- To explore the social and personal benefits of digitalization.

IV. Delimitation of the study

- The study is delimited to the Goalpara District of Assam only.
- The study is delimited only to the Arunodoi received women of Goalpara district.

V. Methodology

Study Area

Goalpara District, Assam — a culturally diverse region with substantial rural population and increasing digital penetration through mobile networks and public internet centers.

Sample and Data Collection

- Population: Women beneficiaries of the Arunodoi scheme.
- Sample Size: 150 respondents.
- Sampling Technique: Stratified random sampling to ensure representation from rural and semi-urban blocks.
- Data Collection Tool: Structured questionnaires with both closed-ended and open-ended questions.
- Data Period: November 2025 to January 2026.



Variables:

The present study is based on the data collected from both the secondary and primary sources. The variables that have been used to analyze and measure were based on the following factors.

Variable	Measurement
Age	Years
Education Level	Literate, Primary, Secondary, Higher Secondary, Graduate
Digital Access	Owns mobile phone, Internet use frequency
Digital Literacy	Ability to use apps, digital payments, e-services
Impact Indicators	Employment status, income changes, financial inclusion, service access

VI. Results and Discussion

- **Demographic Profile**

Table 1
 Demographic Profile of the respondents

Demographic Variable	Frequency	Percentage
Age Group		
18–25	30	20%
26–35	45	30%
36–45	40	26.7%
46+	35	23.3%
Education		
Illiterate	40	26.7%
Primary	50	33.3%
Secondary	35	23.3%
Graduate & Above	25	16.7%

Source: Field Survey

Age Distribution:

Analysis

- The largest proportion (30%) of respondents falls within the 26–35 years age group.
- Women aged 36–45 years (26.7%) also constitute a significant share.
- Only 20% are in the 18–25 category, while 23.3% are above 46 years.



Interpretation

This distribution indicates that the majority of beneficiaries are in their economically active and socially productive years (26–45 years). This age composition is significant because:

- Women in this group are more likely to adopt and utilize digital tools for income generation, financial management, and children’s education.
- They are generally more adaptable to technological change compared to older age groups.
- The presence of 23.3% women above 46 suggests the need for targeted digital literacy interventions for older beneficiaries who may face technological barriers.

Educational Status:

Analysis

- A majority (60%) have education up to primary or below.
- Only 16.7% are graduates or above.
- Over one-fourth (26.7%) are illiterate.

Interpretation

The educational profile shows that most respondents possess basic or low formal education. This has important implications:

- Digital adoption among women with limited education reflects the user-friendly nature of mobile technologies.
- However, low educational attainment may restrict their ability to access advanced digital services (e.g., online government portals).
- It explains why basic digital skills are more common than higher-order skills (as seen in Section 5.3).

Thus, digitalization is occurring even among women with minimal education, but depth of engagement may remain limited.

- **Digital Access and Usage:**

Table 2
Digital Access and Uses of Mobile Phone

Variable	Frequency	Percentage
Owns Mobile Phone		
Yes	130	86.7%
No	20	13.3%



Internet Use		
Daily	70	46.7%
Weekly	35	23.3%
Rarely	25	16.7%
Never	20	13.3%

Source: Field Survey

Mobile Ownership:

Analysis

- An overwhelming 86.7% own mobile phones.
- Only 13.3% lack personal access.

Interpretation

High mobile ownership indicates:

- Strong digital penetration even in semi-rural/low-income contexts.
- The success of mobile-based financial inclusion policies.
- Mobile phones serve as the primary gateway to digital inclusion.

However, ownership does not necessarily guarantee digital competence.

Internet Usage Pattern:

Analysis

- Nearly 70% use the internet daily or weekly.
- 46.7% are daily users.
- 13.3% never use the internet.

Interpretation

The findings suggest increasing digital engagement among beneficiaries:

- Daily users likely rely on digital platforms for communication, entertainment, banking, or information.
- The 13.3% non-users represent the digitally excluded segment, likely overlapping with illiterate or older respondents.
- A shift from mere access to regular usage is visible.

Thus, digital inclusion is progressing from access stage to engagement stage.



- **Digital Literacy**

Table 3
Digital Literacy of the Respondents

Skill	Ability	Percentage
Mobile Apps (e.g., WhatsApp)	Yes	110 (73%)
Digital Payments (UPI/Apps)	Yes	85 (56.7%)
Accessing Government e-Services	Yes	60 (40%)

Source: Field Survey

Analysis

- 73% can use mobile apps such as messaging platforms.
- 56.7% use digital payments (UPI/apps).
- Only 40% can access government e-services.

Interpretation

This reveals a three-tier pattern of digital literacy:

- Basic Digital Skills – High
- Communication apps are widely used, indicating familiarity with smartphones.
- Financial Digital Skills – Moderate

More than half use digital payments, reflecting:

- Trust in digital transactions
- Integration into formal financial systems
- Administrative Digital Skills – Low

Only 40% access government e-services, suggesting:

- Difficulty navigating official portals
- Language barriers
- Limited awareness or procedural complexity

Hence, digital literacy remains functional but not fully transformative.

Impact on Socio-Economic Indicators

Employment & Income

- Reported increased income after adoption of digital tools:70 respondents (46.7%)



- Started digital income activities(e-commerce, freelancing):35 respondents (23.3%)

Analysis

Nearly half experienced income improvement, suggesting:

- Digital tools enable market access.
- Online platforms create supplementary earning opportunities.
- Women are gradually integrating into the digital economy.

However, only 23.3% actively initiated digital enterprises, indicating:

- Risk aversion
- Limited skills or capital
- Lack of advanced training

Financial Inclusion

- Use of digital banking/UPI: 80 respondents (53.3%)
- Savings increased due to digital access: 55 respondents (36.7%)

Analysis

a. Digital banking adoption supports:

- Reduced dependency on cash
- Transparency in transactions
- Direct Benefit Transfers (DBT)

b. Increased savings (36.7%) indicate improved financial discipline facilitated by:

- Easier tracking of expenses
- Secure digital storage of money
- Reduced leakages

Thus, digitalization strengthens financial empowerment.

Education & Information Access

- Use of online learning(for self or children): 65 respondents (43.3%)
- Improved awareness of public schemes via digital media: 90 respondents (60%)

Analysis

a. Digital media enhances:

- Educational opportunities for children.
- Awareness about welfare schemes.
- Information dissemination speed.



- b. The 60% awareness rate suggests digital platforms are becoming a key channel for policy communication.
- c. This strengthens participatory governance and informed decision-making.

VII. Summary of Observations

The data reveals that digitalization plays a significant role in enhancing the quality of life among Arunodoi-received women. Strong mobile penetration and internet usage create opportunities for income generation, financial inclusion, and access to information. However, barriers like limited digital literacy for advanced applications and unequal distribution of internet infrastructure still moderate the extent of impact. The descriptive statistics suggest that while beneficiary women are increasingly using digital tools, skill enhancement and infrastructure support remain areas for policy intervention.

The study presents a moderately positive impact of digitalization among Arunodoi beneficiaries in Goalpara district.

Key Observations:

SI No.	Main Factors	Key Observations
a	High Digital Access	<ul style="list-style-type: none">○ Mobile ownership (86.7%) is strong.○ Internet usage is frequent.
b	Moderate Digital Literacy	<ul style="list-style-type: none">○ Basic skills are common.○ Advanced e-governance skills remain limited.
c	Economic Improvement	<ul style="list-style-type: none">○ Nearly half report income growth.○ Over half use digital financial systems.
d	Social Empowerment	<ul style="list-style-type: none">○ Improved awareness of schemes.○ Better educational access.○ Increased financial inclusion.

Digitalization among Arunodoi-received women shows:

- Transition from digital exclusion to partial digital empowerment.
- Strong foundation in access and communication.



- Growing financial integration.
- Need for structured digital literacy training to:
 - o Enhance e-governance access.
 - o Promote digital entrepreneurship.
 - o Reduce age- and education-based digital divides.

Overall, digitalization is acting as a catalyst for socio-economic transformation, but its full potential will depend on skill enhancement, infrastructure support, and policy interventions tailored to low-education rural women.

VIII. Recommendations

- a) Digital Literacy Workshops: Tailored training for women on UPI, e-services, and online education tools.
- b) Affordable Internet Access: Public Wi-Fi zones in rural areas.
- c) Women-Focused Digital Programs: Encouraging entrepreneurship through e-commerce platforms.
- d) Monitoring & Evaluation: Longitudinal studies to track digital adoption and outcomes.

IX. Conclusion

The study confirms that digitalization contributes positively to the socio-economic conditions of Arunodoi-received women in Goalpara district. It enhances financial inclusion, supports employment opportunities, and increases access to education and public services. To amplify these benefits, targeted digital literacy programs and improved internet infrastructure should be prioritized by government and NGOs. Although these studies address digitalization, welfare delivery, and women's empowerment separately, there remains a literature gap specifically linking digitalization with the lived experiences of Arunodoi-receiving women in Goalpara District. This study therefore contributes to existing research by focusing on how digital access and skills affect the socio-economic life, empowerment, and well-being of women beneficiaries of the Arunodoi scheme in a rural district of Assam.

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