



DIGITAL LITERACY AMONG RURAL WOMEN IN RASULPUR BLOCK OF JAJPUR DISTRICT, ODISHA: A STUDY OF AWARENESS, USAGE AND CHALLENGES

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ABSTRACT

Digital literacy has become an important component of contemporary social, educational and economic life. Access to smartphones, internet services, digital payments, online education, government services and other digital platforms has created new opportunities for rural women. However, access to digital devices does not necessarily ensure effective digital literacy. The present study examines digital literacy among rural women of Rasulpur block in Jajpur District, Odisha, with particular emphasis on awareness, use of digital devices and services, and challenges experienced in acquiring and using digital skills. The study adopted a descriptive field-work approach. A sample of 100 rural women aged 18 years and above was considered, and data were collected through a structured questionnaire and face-to-face interaction. Frequency and percentage methods were used for analysis. The findings indicate that mobile-phone ownership is relatively high, with 80% of respondents reporting ownership of a mobile phone and 80% using smartphones. However, awareness of digital literacy, internet services, online banking, cyber safety and government digital-literacy programmes was comparatively limited. The use of advanced digital services such as online forms, government portals, email, online educational resources and independent digital transactions was also low. At the same time, 83% expressed positive attitudes toward the importance of digital literacy and 51% expressed willingness to participate in digital-literacy training. The study highlights the need for continuous, practical and accessible digital-literacy programmes for rural women.

KEYWORDS: Digital Literacy, Rural Women, Digital Inclusion, Smartphones, Digital Services, Jajpur, Odisha

1. INTRODUCTION

The rapid development of digital technology has transformed the ways in which people communicate, learn, access information, undertake financial transactions and obtain public services. Digital literacy refers not simply to possessing a digital device but also to having the knowledge and skills required to use digital technologies effectively, safely and independently.

For rural women, digital literacy can provide opportunities for communication, education, access to government schemes, banking, healthcare information, employment-related activities and social participation. The uploaded study identifies digital literacy as increasingly important for education, healthcare, banking and communication and notes that rural women may experience barriers related to access, training and educational background.

The present study focuses on Rasulpur block of Jajpur District, Odisha. It examines whether access to digital devices is accompanied by awareness and practical digital competencies. The study also considers the challenges faced by rural women and their willingness to participate in digital-literacy training.

2. REVIEW OF RELATED LITERATURE

Kumar, Kumar, and Devi (2024) examined the relationship between digital literacy and women's empowerment among rural women in Himachal Pradesh. The study involved 250 rural participants and used structured questionnaires to assess digital literacy and empowerment. The findings indicated a significant positive relationship between digital literacy and women's empowerment. The study also identified education as an important factor influencing women's digital skills and empowerment. The authors emphasized that digital literacy can contribute to greater participation in social and economic activities and can support gender equality in rural communities. This study is particularly relevant because it demonstrates that digital literacy is not merely a technological skill but can also function as an important mechanism for improving women's empowerment.

Meenu, Dua, and Yadav (2025) conducted a review of literature on digital literacy among rural women and its role in empowerment and socioeconomic inclusion. The review identified several barriers that restrict rural women's digital participation, including inadequate digital infrastructure, limited access to devices, economic constraints, gender-based inequalities, and socio-cultural barriers. The authors further highlighted that need-based training, local-language digital content, peer support, and culturally appropriate training approaches can improve women's digital participation. The review concluded that digital literacy can support rural women's economic independence, social participation, access to information, and community involvement. This review provides a useful conceptual foundation for studying the relationship between digital literacy and empowerment among rural women.

Gogoi, Manoranjini, and Gupta (2025) investigated the effectiveness of a digital literacy training programme among adolescent girls in rural Jharkhand through a quasi-experimental study. The study compared 314 girls in the intervention group with 272 girls in a comparison group. The findings showed improvements in digital literacy and access to ICT among participants who



received the training. The intervention was also associated with improvements in areas such as continuation of education, knowledge of government schemes, and perceived safety. The study demonstrates that structured and culturally appropriate digital literacy programmes can contribute to reducing the digital divide and expanding opportunities for rural girls and women.

3. BACKGROUND OF THE STUDY

The expansion of digital services has increased the importance of digital competencies in everyday life. Smartphones have become an important means of communication and access to online information. Digital payment applications, social-media platforms, online education, government portals and internet-based services are increasingly relevant to rural communities.

The research study indicates that the study area is Rasulpur block in Jajpur District, Odisha, and that the investigation was undertaken as part of the curriculum requirements under NEP 2020.

Digital empowerment of rural women is significant because women with adequate digital skills can independently access information and services rather than depending entirely on family members or other intermediaries. Thus, digital literacy can contribute to greater participation in educational, economic and social activities.

4. NEED AND SIGNIFICANCE OF THE STUDY

The study is significant for the following reasons:

1. Digital literacy is increasingly necessary for accessing education, healthcare, banking and communication.
2. Rural women may have access to digital devices without possessing adequate knowledge of their effective use.
3. Understanding the digital-literacy situation can help identify areas requiring training and support.
4. The findings may be useful for government agencies and voluntary organizations planning digital-literacy programmes.
5. Digital literacy can contribute to women's empowerment and digital inclusion.
6. The study provides a basis for further research on rural women's use of digital technology.

The research study similarly identifies women's empowerment, digital inclusion and future research as important implications of the study.

5. OBJECTIVES OF THE STUDY

The study was guided by the following objectives:

1. To study the level of awareness of digital literacy among rural women of Rasulpur block, Jajpur District, Odisha.
2. To assess the extent of use of digital devices and digital services among rural women of Rasulpur block.
3. To identify the major challenges faced by rural women in acquiring and using digital-literacy skills.

6. RESEARCH QUESTIONS

The study addressed the following research questions:

1. What is the level of awareness of digital literacy among rural women in Rasulpur block?
2. To what extent do rural women use digital devices and digital services in their daily lives?
3. What are the major challenges faced by rural women in acquiring and using digital-literacy skills?

7. METHODOLOGY

7.1 Research Design

The study followed a descriptive research approach to examine digital literacy among rural women in the selected village.

7.2 Population

The population comprised rural women aged 18 years and above residing in Rasulpur block of Jajpur District. The population included women from different age groups, educational backgrounds, occupations and socioeconomic backgrounds.

7.3 Sample

The study comprises a sample of 100 rural women aged 18 years and above from Kalan Gram Panchayat of Rasulpur Block, Odisha. The respondents were selected from the rural community to assess their level of digital literacy and its role in their social and economic empowerment.

7.4 Tool for Data Collection

A structured questionnaire was used for data collection. The questionnaire covered:

- ❖ Personal and socioeconomic information;
- ❖ Ownership and type of mobile phone;
- ❖ Awareness of digital literacy;
- ❖ Smartphone and internet use;
- ❖ Digital payment and online banking;
- ❖ Cyber safety;
- ❖ Online education;



- ❖ Government digital services;
- ❖ Use of social media and communication applications;
- ❖ Digital skills;
- ❖ Challenges related to digital access;
- ❖ Attitudes toward digital-literacy training.

The questionnaire including questions on digital knowledge, digital services, attitudes and challenges.

7.5 Data Collection Procedure

Data were collected through face-to-face interaction with respondents using the questionnaire. The purpose of the study was explained to participants and confidentiality of the collected information was maintained.

7.6 Data Analysis

The collected data were edited, coded, classified and tabulated. Frequency and percentage techniques were used, followed by interpretation of the findings.

8. ANALYSIS AND FINDINGS

8.1 Awareness of Digital Literacy

The study found that 80% of respondents owned a mobile phone and 80% reported using smartphones. However, ownership did not correspond to equally high awareness of digital concepts.

Only 30% had heard about digital literacy, while 70% had not. Similarly, 32% reported knowing how to operate a smartphone, while 68% did not report this knowledge. Awareness of internet services was reported by 29%, while 42% had heard about online education.

Awareness of digital financial services was comparatively low. Only 22% were aware of online banking services, while 40% knew about digital payment systems such as UPI, PhonePe and Google Pay. Cyber-safety awareness was reported by 35%, while only 24% had heard about government digital-literacy programmes.

Table 1: Selected Indicators of Digital-Literacy Awareness

Indicator	Yes (%)	No (%)
Own a mobile phone	80	20
Use a smartphone	80	20
Heard about digital literacy	30	70
Know how to operate a smartphone	32	68
Aware of internet services	29	71
Heard about online education	42	58
Aware of online banking	22	78
Aware of digital payment systems	40	60
Aware of cyber safety/online fraud	35	65
Heard about government digital-literacy programmes	24	76

8.2 Use of Digital Devices and Services

The findings show that basic digital activities were more common than advanced digital activities. Regular internet use was reported by 51% of respondents. WhatsApp and YouTube were each used by 48%, while 45% reported that they could send and receive messages on a smartphone.

However, only 18% had filled an online form, 15% used digital platforms for government services, 17% used email services, and 18% reported using online educational resources. Only 19% indicated that they could use digital tools without assistance.

Table 2: Selected Digital Activities

Digital Activity/Skill	Yes (%)	No (%)
Use mobile applications	28	72
Search information on Google	41	59
Use internet regularly	51	49
Use WhatsApp	48	52
Use YouTube for learning/information	48	52
Attend online class/training	21	79
Use digital payment apps	38	62
Use social-media platforms	37	63
Fill an online form	18	82
Use government digital platforms	15	85



Send/receive smartphone messages	45	55
Make video calls	48	52
Download apps from Play Store	43	57
Use online payment independently	32	68
Identify fake messages/online fraud	16	84
Use email services	17	83
Upload photos/documents online	37	63
Use online educational resources	18	82
Use digital tools without assistance	19	81

8.3 Attitude Toward Digital Literacy

The respondents generally expressed positive attitudes toward digital literacy. For each of the five attitude statements reported in the document, 16% strongly agreed and 67% agreed, while 3% were neutral and 14% disagreed.

Thus, 83% of respondents either strongly agreed or agreed that digital literacy is important for rural women, improves self-confidence, can improve employment opportunities, that rural women should receive digital-literacy training, and that digital literacy helps in accessing government schemes.

8.4 Challenges Faced by Rural Women

The findings indicate that connectivity and affordability were not reported as major problems by most respondents. 89% reported no internet-connectivity problems, and 85% did not consider the cost of smartphones and internet services a problem.

Similarly, 94% reported that lack of digital knowledge was not a barrier. Nevertheless, 51% expressed willingness to participate in digital-literacy training programmes, compared with 49% who did not express such willingness.

Table 3: Challenges and Training Interest

Item	Yes (%)	No (%)
Face internet-connectivity problems	11	89
Lack of digital knowledge is a barrier	6	94
Cost of internet/smartphone is a problem	15	85
Interested in digital-literacy training	51	49

9. DISCUSSION

The findings reveal an important distinction between access to digital devices and effective digital literacy. Although 80% of respondents reported owning mobile phones and using smartphones, awareness of digital literacy itself was considerably lower. Similarly, basic communication-related activities were more common than advanced digital activities such as online forms, government services, email, online educational resources and independent digital transactions.

The findings also indicate that internet connectivity and affordability were not major challenges for most respondents. However, the comparatively low levels of independent use of advanced digital services suggest that access alone may not be sufficient to achieve meaningful digital inclusion.

The positive attitude toward digital literacy is particularly significant. A large majority of respondents expressed agreement regarding the importance of digital literacy, its potential contribution to self-confidence and employment opportunities, and the need for training. Furthermore, 51% expressed willingness to attend digital-literacy training programmes. These findings suggest an opportunity for practical, locally accessible training focused on everyday digital tasks.

The document also identifies differences associated with education, age, occupation, income and social background as factors that may influence digital participation.

10. MAJOR FINDINGS

The major findings of the study are:

1. Mobile-phone ownership among respondents was relatively high at 80%.
2. Smartphone use was also reported by 80% of respondents.
3. Awareness of the concept of digital literacy was comparatively low, with only 30% reporting awareness.
4. Awareness of online banking was particularly limited at 22%.
5. Awareness of cyber safety and online fraud was reported by only 35%.
6. Awareness of government digital-literacy programmes was only 24%.
7. Regular internet use was reported by 51%.
8. Basic digital activities such as WhatsApp, YouTube, messaging and video calling were used by a substantial proportion of respondents.
9. Advanced digital competencies, including online forms, government portals, email and online educational resources, were comparatively limited.
10. Only 19% reported being able to use digital tools without assistance.
11. A large majority expressed positive attitudes toward the importance of digital literacy.
12. Internet connectivity and affordability were not major barriers for most respondents.



13. More than half of the respondents expressed willingness to attend digital-literacy training.
14. The findings indicate a continuing need for practical digital-skill development despite relatively high access to smartphones.

11. EDUCATIONAL IMPLICATIONS

The study has several implications for education and rural development:

1. **Practical digital training:** Training should focus on real-life activities such as online forms, digital payments, government portals, email, online learning and cyber safety.
2. **Women's empowerment:** Digital competencies can help rural women participate more independently in social and economic activities.
3. **Digital safety:** Training should include identification of fake messages, online fraud, privacy protection and safe digital transactions.
4. **Community-based learning:** Local training programmes can provide accessible opportunities for women who may not be able to attend formal technology courses.
5. **Educational access:** Digital literacy can support women's access to online educational resources and information.
6. **Government-service access:** Improving digital skills can facilitate independent access to online government services and schemes.
7. **Continuous learning:** Since 51% of respondents expressed interest in training, regular skill-development programmes may be useful.

12. SUGGESTIONS

Based on the findings, the following suggestions are proposed:

1. Regular digital-literacy training programmes should be organized for rural women.
2. Training should emphasize practical skills rather than only theoretical knowledge.
3. Special sessions should be conducted on online banking and digital payments.
4. Cyber-safety and online-fraud awareness should be included in digital-literacy programmes.
5. Women should be trained to independently use government digital-service platforms.
6. Digital-learning resources should be introduced in simple and locally understandable language.
7. Community institutions and educational institutions can collaborate to provide digital-literacy training.
8. Training programmes should give particular attention to women who have limited prior exposure to digital technology.
9. Awareness regarding government digital-literacy initiatives should be strengthened.
10. Further studies should compare rural and urban women and examine digital literacy across different age and socioeconomic groups.

The research study similarly recommends comparative studies, investigation of government initiatives, research on digital literacy and employment/financial inclusion, and evaluation of digital-literacy training programmes.

13. CONCLUSION

Digital literacy is increasingly important for rural women's participation in contemporary educational, social and economic life. The present study of rural women in Rasulpur block, Jajpur District, shows that access to smartphones is relatively widespread, but awareness and effective use of advanced digital services remain comparatively limited.

The findings demonstrate that basic digital activities are more common than independent use of online forms, government services, email, online educational resources and cyber-safety practices. At the same time, the generally positive attitude toward digital literacy and the willingness of 51% of respondents to participate in training indicate an opportunity for strengthening digital competencies.

Therefore, digital inclusion among rural women should move beyond device ownership toward meaningful, safe and independent use of digital technologies. Locally accessible and practical training can help rural women make more effective use of digital education, financial services, government services, communication and information resources. Such efforts can contribute to women's empowerment and broader inclusive development.

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