



Original Article

A study on Digital literacy for rural area of Chandrapur District

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Abstract

This paper focused on strengthening digital literacy in rural areas of Chandrapur district for serving as a vital bridge to modern agriculture, education, and government services. In this region, most of the rural communities belongs to agriculture and manual labor; digital skill supports farmers to access real-time market prices, weather updates, and agricultural expert advice via platforms like the SmartU WhatsApp Chatbot. Digital literacy plays a critical role in empowering rural communities by enabling access to information, services, and opportunities essential for rural development. Even though fast digitalization, rural populations repeatedly face major challenges such as limited connectivity, low awareness, inadequate digital skills, and socio-economic constraints, which expand the digital divide. Using a review of existing literature and secondary data, the paper highlights the importance of community-based training, local-language content, and institutional support in enhancing digital competencies.

Keywords: Digital literacy, Rural Communities, Challenges

Introduction

Digital literacy refers to the ability of rural people to access, understand, and successfully use digital technologies such as smartphones, computers, the internet, and online services for education, employment, healthcare, and governance. The digital literacy implication drives beyond the simple use of technology. It is the ability to use digital tools and platforms to find, evaluate, create, and communicate information. For rural people, digital literacy plays a vital role in bridging the gap between urban and rural populations by enabling unbiased access to information, services, and opportunities. Rural areas regularly face challenges regarding limited educational resources, inadequate infrastructure, and limited access to government and financial services. Digital literacy helps overcome these obstacles by empowering individuals to use smartphones, computers, and the internet for education, healthcare, agriculture, employment, and communication. Through digital platforms, rural people can access e-governance services, digital banking, online markets, and skill development programs. (Shashank Singh, 21 April 2025)

Digital literacy which helps to public for access of government schemes to common citizen. Now a day's government of India taking initiatives to digitalization of all government activities. Now a days everyone is using internet through mobile phone which provide all the global trends to our finger tips. But in rural area people are still unaware about the use of more technology benefits and Government scheme. Digital literacy changes current administration problem and brings social changes in the country. (Maruthi M V, |December - 2023).

In the situation of national development, encouraging digital literacy in rural communities is essential for complete growth. Government initiatives and community-based programs aimed at improving digital skills have the potential to transform rural livelihoods, enhance social participation, and reduce the digital divide. Therefore, digital literacy is not merely a technological requirement but a key driver of social and economic empowerment in rural communities.

(Marketing, 2022)

Digital Literacy Challenges in Rural Areas of Chandrapur District

Limited Access to Digital Infrastructure

Rural areas often face poor internet connectivity, low bandwidth, and lack of reliable electricity, which restricts the use of digital tools and platforms.

2. Low Awareness and Exposure

Many rural residents are unaware of digital technologies, online services, and their benefits, leading to low motivation to learn digital skills.

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3. Educational Barriers

Lower levels of formal education and high illiteracy rates make it difficult for individuals to understand and use digital devices effectively.

4. Economic Constraints

High costs of smartphones, computers, and internet services limit accessibility for economically weaker sections.

5. Language and Content Issues

Most digital content is in English or dominant languages, creating barriers for people who primarily speak regional languages like Marathi.

6. Lack of Training and Support

There is insufficient availability of structured training programs, skilled trainers, and local support systems for digital education.

7. Gender Divide

Women in rural areas often have less access to digital devices and training opportunities due to social and cultural restrictions.

8. Resistance to Change

Traditional mindsets and fear of technology create hesitation in adopting digital tools among rural populations.

9. Cyber security and Trust Issues

Fear of online fraud, lack of awareness about digital safety, and mistrust in online transactions discourage usage.

10. Policy Implementation Gaps

Although government initiatives exist (like Digital India), their reach and effectiveness in remote rural areas remain inconsistent.

Review of Literature

According to the American Library Association (ALA), a person who digitally literate has ability to use information and communication technologies to find, evaluate, create, and communicate information. Technical and cognitive skills are important to process information in various formats, utilizes different technologies effectively, and engages in digital universes to work together with each other's and contribute confidently to society. (Association, 2011)

According to Tiara Putri Prastiwi¹ Jihan Nailur Rohmah² Deyan Damar, Digital literacy has become a key enabler for rural empowerment, as it equips individuals with the knowledge and skills to effectively utilize ICT for personal, economic, and community development (Ng, 2021). (Damar³, 31 MARCH 2025)

According to the Meli Susanti¹, Sri Nurhayati² This study aims to address this gap by examining rural adolescents' perspectives on the use of digital literacy in self-directed learning and its potential to transform rural education. The research employed a qualitative approach and involved in-depth interviews with thirty rural adolescents. The findings indicate that rural adolescents perceive themselves to have good digital literacy skills and actively use digital media for learning (Meli Susanti¹, May 2024)

This research article aims to examine the effects of digital literacy programs on the enhancement of the status of rural communities in developing countries, especially in India. This research uses both quantitative and qualitative approaches to evaluate the impact of these programs on information, economics, and self-empowerment. The data

were obtained from the surveys and interviews in several rural areas and show the changes in the use of digital tools, which increased from 35% before the program to 75% after the program.

According to the Dr Pijush Kanti Tripathi^{1*}, Nibedita Basu², Dr George Abraham³, Dr Chandra Shekhar Singh⁴ This research article aims to examine the effects of digital literacy programs on the enhancement of the status of rural communities in developing countries, especially in India. This research uses both quantitative and qualitative approaches to evaluate the impact of these programs on information, economics, and self-empowerment. The data were obtained from the surveys and interviews in several rural areas and show the changes in the use of digital tools, which increased from 35% before the program to 75% after the program. (Dr Pijush Kanti Tripathi^{1*}, 2024:)

According to Vijayan (2019) discussed that the emergence of internet in rural livelihoods eliminated the difference between rural and urban livelihoods and also grown up their education system as well. In conclusion, the author stated that the Digital India Campaign has been effective thus far, demonstrating favorable outcomes in terms of GDP growth, employment prospects, educational elements, and technological advancement.

Objective

1. To assess the level of digital literacy among people in rural areas of Chandrapur District.
2. To evaluate awareness and usage of digital tools.
3. To investigate the challenges and barriers faced in adopting digital literacy.
4. To advise measures and strategies to improve digital literacy in rural areas of Chandrapur District.

Hypothesis

1. The level of digital literacy among rural people in Chandrapur District is low / not significantly adequate.
2. The rural people face lots challenge and barriers (such as lack of internet, skills, cost, and awareness) of digital literacy.

Research Methodology

Research Design

This research has implemented a both **descriptive and analytical research design**. **Descriptive** for assess the level of digital literacy among rural people and **Analytical** for analyze the challenges and barriers faced in adopting digital literacy.

Nature of Research

Quantitative: Measurement of digital literacy levels through structured questionnaires

Qualitative: Understanding challenges, attitudes, and barriers through interviews

Area of Study

The research will be conducted in rural villages of Chandrapur District (Maharashtra).

Population

The target populations for this study are rural residents (Students, Farmers, Women, Small business owners, Elderly population) of Chandrapur district

Sample Size: I have Collected 50 sample with help of the questionnaire.

Data Collection and Analysis

Primary Data: It has been collected with help of Standard Questionnaire and interview and Observation.

Secondary Data: It has been collected from Government reports (Digital India, NSSO), Research papers and journals, Census data, Internet sources

Data Analysis

For this study 50 respondents were identified and questionnaire distributed among them. Only 45 respondents were having filled questionnaire, hence analysis is done on the basis 40 respondent.

1. Awareness

- 67% are aware
- 33% are not aware

Interpretation: People of chandrapur district are moderate aware about digital literacy but improvement are necessary.

2. Digital Devices

- 71% use smartphones
- 21% use basic phones
- 8% have no device

Interpretation: High smartphone availability supports digital growth.

3. Internet Usage

- 65% regular users
- 27% occasional users
- 18% non-users

Interpretation: Usage gap occurs despite device availability.

4. Internet Use

- 47% social media
- 15% education
- 16% online payments
- 10% government services
- 12% others

Interpretation: people mostly used device for entertainment.

5. Digital Skills Level

- 53% basic skills
- 27% intermediate
- 18% advanced
- 12% no skills

Interpretation: advance skill levels are very low as compare to basic skill, its need to focus on advance skills.

6. Barriers

- 32% lack of knowledge
- 23% poor internet
- 23% cost issues
- 12% lack of training
- 10% language barriers

Interpretation: Knowledge and infrastructure are key challenges.

7. Interest in Learning

- 77% interested

- 23% not interested

Interpretation: Strong willingness to learn provides opportunity for development programs.

Findings

1. Digital literacy in rural Chandrapur district is still in the developing phase.
2. Majority of people have access to smartphones but lack of skills
3. Most of people have uses mobile phone, but few are not accessing internet.
4. People are only aware about basic skills, its need to learn advance skills for future.
5. Due to interior region people faces poor internet connectivity issue and financial problem about recharge.
6. In Chadrapur district people are strongly willingness to learn skills.

Suggestions

1. Organize digital literacy training programs in villages.
2. Improve internet connectivity
3. Provide affordable digital devices
4. Promote awareness campaigns
5. Encourage use of digital services for education and banking.

Conclusion

The study conveys that rural areas of Chandrapur District are steadily adopting digital technology, but true digital literacy is still developing. While access to devices is relatively high, effective usage remains limited due to lack of skills and awareness.

Though, the strong interest among rural people to learn digital skills presents a positive attitude. Using proper training, infrastructure, and policy support, digital literacy can significantly improve socio-economic conditions in the region.

The major challenges include lack of education, infrastructure issues, language barriers, and security concerns, which collectively slow down the adoption of digital practices.

To improve digital literacy, there is a need for targeted interventions, including:

- Skill-based training programs
 - Improved internet infrastructure
 - Awareness campaigns in local languages
 - Support from government and educational institutions
- Overall, enhancing digital literacy will not only empower rural populations but also contribute to the economic and social development of Chandrapur District.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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