

DIGITAL INCLUSION OF TRIBAL AND NON-TRIBAL WOMEN IN CHHATTISGARH: KEY TOWARDS RURAL TRANSFORMATION IN INDIA

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Abstract : India is predominantly a nation of villages, and its emergence as a developed economy is inseparable from the upliftment of rural society. In the contemporary era, the electronic revolution and the extensive use of Information and Communication Technology (ICT) have become key drivers of rural transformation. Over time, the approach of successive governments in India has shifted from welfare to development and further towards empowerment, particularly the empowerment of women to ensure gender equality in society. Digital literacy has become essential for women to ensure equitable access to education, employment opportunities, and productive resources. In this context, the present study attempts to explore the various government initiatives aimed at the empowerment of rural women. It also examines the issues and challenges faced by rural women and offers suggestions for enhancing their digital skills. The study adopts a descriptive survey research design. One village was selected using the simple random sampling technique, and almost all rural women from the selected village constituted the sample. The findings reveal that digital education has been instrumental in enhancing employment opportunities for women. However, the survey also indicates that many women lack awareness of their rights and of the various government initiatives designed for their benefit. The study concludes that digital inclusion is a significant milestone in women's empowerment, as it enables women to respond effectively to challenges and to confront and manage their lives with greater confidence and autonomy.

IndexTerms - Digital Inclusion, Digital Literacy, ICT, Rural Transformation, Women Empowerment.

1. INTRODUCTION

Literacy which involves the skills of teaching, writing, and computing, is the bedrock of any meaningful development of any country. No nation can develop beyond its literacy level. The human capital resources of a country can function only within the limit of their literacy level. Now, this is the era of the industrial revolution 4.0. The characteristics of industrial revolution 4.0 are the "internet of things" (Everything is controlled by the internet. We can do various things via the internet and big data. Information Communication and Technologies (ICT) is about computers, telecommunication technologies such as mobile, radio and television broadcasting and internet. Digital literacy is the ability to understand, analyze, and use information in various forms from varied sources that we can access through computer devices. Digital literacy is more associated with technical access, compiling, understanding, and disseminating information skills. ICT enables access to education, employment, economic independence, social networking and so on. The digital divides denote the gap between internet haves and have-nots. In today's global information society, digital gender gaps reflect gender inequalities. United Nations recognize ending the gender digital divide reinforcing efforts and achievement of one of the SDG goal (Sustainable Development Goals). Digital inclusiveness of women at global and national level, that women are still facing significant challenges in personal and professional life due to stereotype and traditional preconceptions in the society. ICT is considering male dominated sector.

The digital transformation of the society rising demand for digital skilled persons and being a digital is having lesser option for women. Without digital skills, women may miss out new business, accessing or selling products to new markets, participation in decision making process that affects their lives, finding, changing jobs or finding new contacts and accessing information from different sources. ICTs can empower women in different fields such as education, health, politics and economy and so on and so forth. If the Women or girls are choosing not to go online or to be prevented from going online; they may miss out, acquiring digital skills which are helpful in everyday life and increasingly essential in the modern digital economy. Digital inclusion can be fruitful

in two ways: firstly, ensuring that all communities have the opportunity to enjoy direct benefits of the digital technology through access and technology skills, motivation and the confidence to enhance the quality of life; and secondly, ensuring that the indirect benefits offered are to improve all aspects of planning and deployment services in order to be fully utilized by the society. After the onset of globalization in 1990, technology was initially a male-dominated field but with the increasing involvement of urban women over the years the usage of technology has increased among them. Despite the promises of the digital revolution, rural women still do not have the same access to information and technology, as urban women in India. Digital media digitized content that can be transmitted over the internet. It translates analogue data into digital data. Digital media mainly includes blogs, social media, websites, audio, and video, digital publishing advertising, broadcasting and interactive media. Digital media provides instance communication across the world. Use of internet via mobile has made a great impact. Internet Saathi provides a digital platform for rural women to get access digital tools and help them to connect the world.

1.1 Review Literature

Dhanamalar M, Preethi S, Yuvasree S; (2020) examined that, urban women have reached a specific level of self-reliance wherein their dependence on others has reduced over the years when compared to the state of rural women. This dependency level of the rural women in India has led to various issues such as their being misled and defrauded. Xiao Han (2018) reported that the Internet has experienced dramatic technological development since the late 1980s, fierce debates about the empowering potential of the Internet for women's liberation have also raged.

Malhotra Ruchi (2015) indicates that Information technology has revolutionized the world as never before. The benefits accrued from the synergy of knowledge and IT need not be restricted to the upper strata of the society but have to freely flow to all segments of the female population.

Gurumurthy, (2013) stated that digital ICTs and media also represent a commercial space, influenced by private sector interests. This means existing patriarchal attitudes towards gender can be reproduced as well as challenged in the online environment in ways that can limit the potential of ICTs to be tools for women's empowerment. Asiedu (2012) criticises ICT and development discourse for using the 'language of empowerment' while at the same time presenting women as 'passive recipients' of ICTs rather than examining whether they are able to be 'active users'. Even when women are passive users of ICTs, this can increase their access to services and information in ways that empower them and provide an important base for voice and influence. However, for women to use ICTs to voice their views and influence others, they need also to be active users of digital ICTs.

1.2 Objectives of the study

- a) To explore the various digital literacy initiatives, provisions and schemes for rural women's empowerment in India.
- b) To study the Socio-Personal characteristics of Rural Women in Digital India Environment.
- c) To Evaluate the Issues and Challenges of Rural women and Provides Suggestions for Improving their Digital Skills.

1.3 Delimitations of the study

Only one village of Chhattisgarh was included in this study.

2. MATERIAL AND METHOD

2.1: Research Design: For this study, both quantitative and qualitative methods are used.

2.2: Sampling Technique: Simple Random Technique has been selected to carry out the study.

2.3: Sample: To collect the data for the study, investigators visited the villages of Chhattisgarh namely ShivTarai, Bilaspur District.

2.4: Sample Size: There were total **30 respondents** out of which-

- ▶ 15 women from Tribal Community
- ▶ 15 women from Non- Tribal Community

3. RESULTS/FINDINGS

Objective 1: To explore the various digital literacy initiatives, provisions and schemes for rural women’s empowerment in India.

Findings of Objectives 1:

The Constitution of India not only grants equality to women but also empowers the State to adopt measures of positive discrimination in favour of women for neutralizing the cumulative socio-economic, education and political disadvantages faced by them. The government of India has launched various digital literacy initiatives for women. These are:

Table no. 1: Various Digital Literacy Initiatives for women launched by government of India

S. No.	Digital Initiatives	Area of Benefits
[1]	Pradhan Mantri Gramin Digital Saksharta (PMGDS)	Empowering rural women with digital skills and bridging the digital divide.
[2]	National Digital Literacy Mission	Providing essential digital skills, enhancing access to education and employment opportunities, and promoting gender equality in digital access.
[3]	Mahila E-Haat	Offering a platform for women to showcase products, fostering economic independence, and empowering women entrepreneurs.
[4]	DIGI LAMP	Enhancing digital literacy among students, promoting online safety, and equipping them with essential computer skills.
[5]	Digital Didi	Combating misinformation around menstruation, providing digital literacy, and empowering women with digital training.
[6]	Digital Financial Literacy	Session for SHG Women Empowering women with digital and financial literacy, enabling informed decision making, and fostering leadership.
[7]	GOAL(Going Online As Leaders)	Empowering rural girls through digital education, connecting them with mentors, and providing exposure to digital tools.
[8]	Citizen Media Network	Empowering women in digital journalism, providing platforms for story development, and offering training for rural reporters.
[9]	Internet Saathi	Increasing internet usage among rural women, providing digital literacy programs, and bridging the digital gender gap.
[10]	Helping Women Go Online	Empowering women with internet skills through guided training, promoting digital literacy, and enhancing economic opportunities.
[11]	English and Digital for Girls’ Education	Improving life prospects for adolescent girls through English proficiency, digital skills, and informed decision-making.
[12]	START	Promoting digital inclusion and fighting information poverty among rural and tribal communities.
[13]	SHE host	Promoting livelihood opportunities for rural women through local art, craft, and cultural promotion.
[14]	Soochna Preneur	Equipping information entrepreneurs with welfare scheme information dissemination through a mobile application.
[15]	Internet Roshni	Focusing on digital inclusion for the Adivasi Community.

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| [16] | Digital Sarthak | | Enabling women entrepreneurs to connect online, expand clientele, and outreach effectively through online platforms. |
| [17] | Project WAAT | | Building a community to combat online abuse and cyberbullying and provide support resources. |
| [18] | Mobile for Social & Behavioral Change | | Exploring mobile technology projects benefiting women, youth, and communities. |
| [19] | Community Information Resource Centers | | Establishing community-oriented hubs for digital literacy and development services nationwide. |
| [20] | Helping Women Get Online | | Empowering women with internet skills through guided training and promoting digital literacy. |
| [21] | Beti bachao beti padhao | | Raising awareness and improving welfare services for girls through personal campaigns. |
| [22] | We Think Digital for Women | | It offers tools and digital learning modules that are easily accessible to develop skills for a digital environment. |
| [23] | Learn English | | Promoting gender equality in education through digital platforms and resources. |
| [24] | She The People | | Leveraging technology to provide women opportunities for upskilling, mentorship, and employment. |
| [25] | Maternal Health Programme | | Using technology to improve maternal health outcomes and access to healthcare for women. |
| [26] | Digital ALL | | Promoting gender equality through technology and digital innovation initiatives. |
| [27] | Smart Electric Sari | | Enhancing safety and comfort for women in extreme work environments through intelligent textile technology. |
| [28] | Digital Abhiyan | Saksharta | Providing digital literacy training to rural women, enabling participation in the digital economy. |
| [29] | Vodafone's Sakhi | initiative' | Enhancing safety and confidence for women travellers through mobile service and safety features. |
| [30] | SEWA | | Supporting rural women through self-employment initiatives and promoting economic empowerment |
| [31] | Ujjas | | Innovation Raising awareness about women's issues through newsletters, radio, and technology. |
| [32] | Smile | | Organizing IT seminars and workshops for women's empowerment and skill development. |
| [33] | The Dhan Foundation and Swayam Krishi Sangam | | Educating poor women about ICT promotes respect, honour, and independence. |
| [34] | Dairy Information & Services Kiosk (DISK) | | Providing dairy information and services to women producers to enhance productivity and livelihoods. |
| [35] | Embalam | | Connecting villages through hybrid wired and wireless networks, empowering women with information. |
| [36] | NABANNA | | Exploring innovative uses of databases and intranet portals to benefit poor women in rural areas. |

[37]	e-Mahila	Teaching rural women to access and use the internet for various purposes and empowerment.
[38]	Gyandoot	Providing e-government services and promoting digital inclusion in rural areas.
[39]	Digital Board Operation	Enhancing education quality through digital classrooms, resources, and intelligent tutoring.
[40]	Bharat Padhe Online	Crowdsourcing ideas for improving e-learning and online education during the pandemic, especially for girls.
[41]	Digital learning programmes like ePathshala, DIKSHA, NROER, NPTEL, e-pg pathshala, SWAYAM and Swayam-Prabha PM eVidya-One Nation One Digital Platform	Facilitating blended learning through digital platforms and schemes during the COVID-19 crisis.
[42]	Chaa Jaa	Connecting, informing, and equipping adolescent girls with digital media and resources.
[43]	Unnati 21	Training children and adolescents in digital literacy through integrated programs and courses.
[44]	Ok To Talk	Online support for mental health and wellbeing, especially for girls and young women.
[45]	Centre for Catalyzing Change (C3)	Equipping adolescent girls with digital literacy skills in rural, tribal, and vulnerable regions to access technology and opportunities.
[46]	One-stop centre scheme	Providing support and assistance to women affected by violence through dedicated schemes and services.
[47]	Women helpline scheme	Offering toll-free telecom services and support to women affected by violence and emergencies.
[48]	Working Women Hostel	Promoting safe and convenient living arrangements for working women through dedicated hostels.
[49]	Wadhar greh	Providing essential support and care for women in distress through shelter, food, and medical assistance.
[50]	Safetypin	Enhancing women's safety through location-based apps and community-driven initiatives.
[51]	Safe Sawaari	Tracking private vehicles and ensuring safety features for women travelers through mobile apps
[52]	HIMMAT	Providing safety and emergency assistance for single working women travelers through dedicated apps.
[53]	SHeroes	Offering social networking and support platforms for women to connect, share, and seek assistance.
[54]	bSafe	Ensuring women's safety through voice activation, live streaming, and emergency alert features.
[55]	Maya Period	Tracker Tracking menstrual cycles, forecasting fertility, and managing general health for women
[56]	BabyGoGo	Mom App Offering parenting advice, baby-related queries, and evidence-based information for mothers.

[57]	Kavalan	Assisting in emergencies such as eve-teasing and kidnapping through dedicated police apps.
[58]	Abhayam app	Ensuring the safety of women travellers by providing support and assistance through mobile apps.
[59]	Indian Police at Your Call	App of National Informatics Centre Facilitating easy access to police stations and emergency services for women through dedicated apps.
[60]	112 India	Allowing women in trouble to call an emergency number and send SOS alerts with a single tap for assistance.
[61]	Women Engineer	Wireless women to become wireless engineers and set up wireless networks in their remote villages.
[62]	MeraApp	Provides information and facilitates the delivery of welfare schemes to empower communities through access to rights and benefits like healthcare, education, social security, finance, disability, and livelihood.

Objective 2: To study the Socio-Personal characteristics of Rural Women in Digital India Environment.

Finding of Objective 2:

Table 2: Educational Status of the Respondents

Education	Frequency	Percentage (%)
Illiterate	21	70
Upto Class X	4	13.33
Class X to XII	2	6.66
Graduation	3	10
Post Graduation	NA	NA
Any other	NA	NA
Total	30	100

Out of 30 respondents, 21 were illiterate, 4 were 10th passed, 2 were 10+2 passed, 3 were found completed graduation, none were found post graduate or with any other qualifications. While doing survey at the villages researcher found that out of 100%, 70 % women were illiterate and only 30 % women were literate.

Table 3: Age wise distribution of Respondents

Age	Frequency	Percentage
Less than 25 Years	2	6.66
25-35 Years	4	13.33

35-45	11	36.66
Above 45 Years	13	43.33
Total	30	100

Above table no. 3 indicates the only 6.66 % of the respondent were less than 25 years, those belonging to 25-35 years were having 13.33%. It was found that 36.66 % and 43.33 % of the respondent belong to 35-45 years and above 45 years respectively.

Table 4: Working pattern of the Respondents

Employment	Frequency	Percentage
Self employed	4	13.33
Private Sector	1	3.33
Agriculture & daily wage labourer	15	50
Govt Employee	3	10
Non- Working	7	23.33
Total	30	100

Above table no. 4 shows the working pattern of the women, only 4 women were working of its own, only one women was in Private sector, fifteen were in Agriculture and 3 were serving as Govt. Employee. It was also found that 7 women were not involved in any income generating jobs, as it was found that they were only involved in their own house hold chores or dependent on government for their livelihood.

Table 5: Income Level of the Respondents

Family Annual Income in Rupees	Frequency	Percentage
Less than 50000	NA	NA
50000 to 1 lakh	9	30
1 lakh to 2 lakh	7	23.33
More than 2 lakh	14	46.66
Total	30	100

It is found from the table no. 5 that none of the sampled women has low income i.e. up to Rs. 50 thousand, followed by (30 Percent, N=9) who have income level with 50 thousand to one lakh, (23.33 Percent, N=7) have one lakh to 2 lakh and majority (46.66 Percent, N=14) of the women have more than 2 lakh family income.

Objective 3: To Evaluate the Issues and Challenges of Rural women and Provides Suggestions for Improving their Digital Skills.

Findings Objective 3:

I. Issues/ Barriers in Improving their Digital Skills

All the rural women of selected village were interviewed to know the issues and problems faced while using mobile phones or/ gaining digital literacy or in the broader sense Digital Inclusion. Majority of respondents said that rural women in Chhattisgarh face multiple issues for gaining digital inclusion, such as lack of education, lack of communication, lack of awareness, accessibility and often restrictions because of their gender. Most of the respondents opined and agreed on the following points:

❖ **Lack of Self Initiative:** Most of the Women face barriers to learning on their own, most women rely on their social circle or mobile phone agents for initial set-up, but a significant proportion of participants, especially younger women, said that where possible, they would like to learn to use the internet by experimenting on their own. However, when they tried to learn in this way, they confronted a variety of challenges as well.

❖ **Lack of Digital Literacy & Training:** Most of the women we interviewed had not received any formal training in how to use the internet, but even those who had still had limited skills as accepted by participants. Few of the users we interviewed were aware of or used websites or applications beyond one or two popular applications like Facebook or Google, responses were not that satisfactory rural context may be the dominant factor. Another important issue responded by majority of them were concern for online safety

❖ **Lack of Infrastructural Support:** Majority of users struggled due to digital illiteracy and no infrastructural support, a significant proportion of the rural women population continues to fall short of the required internet bandwidth and knowledge to recognize devices and digital terminologies. Another major issue they mentioned was the absence of supporting infrastructural facilities such as a stable flow of electricity and unavailability of high-speed internet.

❖ **Lack of Time:** The group of non-users we sampled consisted of busy working mothers with tight budgets, who did not see the value of investing time and effort to learn how to use mobile internet. Many of the participants were semi-literate, and there was a strong perception that the going digital was meant to be used by males and school children only.

❖ **Lack of Focus on Practical Applications:** The women we interviewed saw the internet as a tool for looking up information related to their children's education, but they were often not aware of other uses that could motivate them to be independent users.

❖ **Lack of Awareness:** In rural India, non-users had the lowest awareness of the digital use among all groups we interviewed. Many admitted they were not completely sure what the internet was, or what it could be used for. When asked how they would learn, they exhorted, "First someone needs to tell us what the digital literacy is" then only they could try a bit.

❖ **Lack of ownership and economic independence:** In some cases, particularly in rural India, the young users we met often shared their phones with other members of the household. When asked why they thought the men around them had better mobile skills than women, these users replied it was because men had access to the device all day, while they barely had any time with the device.

❖ **Lack of Motivation:** Quite a few women in rural Chhattisgarh mentioned that when they enquired about the digital use, they were told there was no point in them learning it because "a woman's place was in the household".

Therefore, we may interpret that that major issues are: Lack of Focus on Mobile Internet, Specific Skills in Digital, Lack of Focus on Practical Applications, and the Benefit of the Internet, Social and Cultural Barriers, Lack of Awareness of various Digital schemes, Availability and Cost of training.

Recommendations for Stakeholders to address these Issues/ Barriers in Improving their Digital Skills

1. Suggestions for Improving Digital Skills

Here are a few ways in which stakeholders can contribute to overcoming the barriers of digital education in rural India:

- **Multi-Lingual Platform:** Ed-Tech companies should provide cheap multi-lingual platforms that could work on low bandwidth and provide access to quality content. To promote this, the Government can offer tax benefits to these companies.

- **Blended Learning:** The present situation will precede an analysis on topics such as penetration of digital learning in rural areas, economical learning platforms, redefining learning science from a blended mode of approach thus being more favourable for learners at large.
- **Online Content Delivery:** Chhattisgarh State Governments can arrange online content delivery training for teachers.
- **Innovation in Education:** Innovative solutions can be initiated to create the process of online education more interactive and vigorous.
- **Infrastructural Support:** The rural areas of the Chhattisgarh can be better equipped with the essential infrastructure provided by the public-private initiatives.
- **Promotion of Digital Education:** Digital education in schools of rural areas need to be further promoted. Schools in rural areas should be provided with digital learning kits, and substitute sources of energy such as solar power should be installed in these schools.
- **Training for Rural Women:** Digital skills training should be designed around the specific needs of a wide range of women rural stakeholders; from rural enterprises to farmers, to those inhabitants that are at the extreme end of the digital divide.

4. DISCUSSION & CONCLUSION

Education is a milestone of women empowerment because it enables them to respond to the challenges, to confront their life. A great disparity is observed between rural and urban women in every field of life because of the disparity in education. Women living in urban have comparatively come up in every field whereas women living in rural areas are still backward. Education has no place for them. It is the fact that education for them is a mere teaching and learning of alphabets and numbers and to their fortune mid-day meals, free books and free facilities thus matters a lot. Therefore, education for them is just literacy without any vision of higher education especially female and so undergoing the same traditional attitude of ignorance, low economy and poverty till today.

India's changing advanced scene is offering tremendous scope for women empowerment. Women empowerment program upholds the social and economic strengthening of women through community based reserve funds bunches that help individuals save money, access credit, develop financial literacy and invest in income generating activities. These women empowerment programs additionally advance abilities building, confidence, admittance to data and assets, and community action that position women as confident decision makers and leaders in their homes and communities. It is found from the study that digital India is improving the quality of women's life. It shows that digital India is forming digital infrastructure as a utility for every citizen. It is providing all government services accessible to common people and ensures efficiency, transparency and reliability of such services at affordable costs. Digital India is empowering women digitally and it also emphasis on universal digital literacy and availability of digital resources or services in Indian languages.

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