

Bridging the Gap Between Adoption of Social Media Among Tribal Women in Jalpaiguri District

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Abstract

The adoption of social media among tribal women in the Jalpaiguri District represents a significant shift in the digital landscape, highlighting both opportunities and challenges in bridging the digital divide. This research paper examines the factors influencing the adoption and usage of social media by tribal women, focusing on the socio-economic, cultural, and technological barriers that persist in this marginalized community. The study analyzes the extent to which tribal women in Jalpaiguri District engage with social media platforms, their motivations for use, and the impact on their social and economic empowerment. Findings suggest that while social media serves as a vital tool for communication, information sharing, and community building, several impediments, such as limited digital literacy, inadequate infrastructure, and socio-cultural restrictions, hinder full participation. Moreover, the research highlights the positive outcomes of social media usage, including increased awareness of rights and resources, enhanced self-expression, and greater opportunities for economic activities. However, it also points to potential risks, such as exposure to misinformation and privacy concerns. The paper concludes with recommendations for policymakers, community leaders, and stakeholders to implement culturally sensitive digital literacy programs, improve digital infrastructure, and create supportive environments that foster safe and meaningful engagement with social media. By addressing these gaps, the study aims to contribute to the ongoing discourse on digital inclusion and gender equality among tribal communities in India.

Key Words: Social media adoption, Tribal women, Digital literacy, Digital divide Socio-economic empowerment.

Introduction

A revolutionary digital environment has been created due to India's explosive social media growth, fuelled by more internet access and reasonably priced smartphones. This increase, however, draws attention to the digital gap, particularly for marginalized communities like Indigenous populations. To address this gap, digital inclusion is crucial, and supportive policies, better infrastructure, and digital literacy are required. Addressing these obstacles will encourage economic involvement and provide communities with advocacy, education, and self-expression resources, especially for tribal women. (Mishra, 2017) the study 'Social Media Revolution - The New Digital Frontiers of Journalism' emphasizes how social media has revolutionized journalism by making it possible for news to be disseminated quickly and interactively. Although technology increases access to news

and democratic participation, it also brings about problems like disinformation, highlighting the necessity of plans to maintain trustworthy journalism in the digital era.

Understanding the way tribal women in Jalpaiguri, West Bengal, use social media could have a big impact on socioeconomic development by giving them easy access to information about healthcare, education, and entrepreneurship. By bridging knowledge gaps, social media can help Indigenous women access government programs, funding, and local product markets, promoting self-sufficiency and economic stability. It facilitates cultural expression and individual empowerment, motivating these women to interact with wider networks and maintain their cultural heritage while utilizing digital platforms. Adoption of social media can ultimately promote community development and individual empowerment, resulting in more inclusive development in tribal communities.

Tribal communities, often identified as indigenous or Adivasi populations in India, represent some of the oldest and most culturally distinct groups within the nation's diverse social fabric. These communities, officially recognized as Scheduled Tribes (ST) under the Indian Constitution, have been acknowledged for their unique socio-cultural characteristics and historical marginalization. According to the 2011 census of India, Scheduled Tribes constitute approximately 8.6% of the country's total population, underscoring their significant yet often overlooked presence in the broader demographic landscape (Deb & Mukherjee, 2024). Geographically, tribal populations are predominantly concentrated in specific regions, notably in Indian states such as Madhya Pradesh, Odisha, Jharkhand, Chhattisgarh, and parts of the northeastern states. These regions are often characterized by dense forests, hilly terrains, and areas rich in natural resources, aligning with the deep-seated connection that tribal communities have with their ancestral lands (Bora & Mahanta, 2024). This connection is not merely a matter of residence but forms the foundation of their identity, culture, and socio-economic practices. Tribal communities are distinguished by their traditional lifestyles, which are closely tied to the environment and natural cycles. Their subsistence often relies on agriculture, hunting, gathering, and the sustainable use of forest resources. The intimate relationship with their natural surroundings has fostered a rich cultural heritage, encompassing a diverse range of languages, dialects, customs, rituals, and religious practices (Leuthold, 1998). For instance, many tribes have their own oral traditions, folklore, and art forms, which have been passed down through generations and are integral to their cultural identity. Furthermore, the religious practices of tribal communities are often animistic, with a profound reverence for nature and the worship of various deities associated with natural elements like rivers, mountains, and forests. These practices reflect a worldview that emphasizes harmony with nature, community solidarity, and respect for ancestral traditions. However, despite their rich cultural heritage, tribal communities in India have historically faced socio-economic marginalization and exclusion from mainstream development processes (Shah, 2007). This has led to significant challenges in areas such as education, healthcare, and economic opportunities. The preservation of their cultural heritage, alongside efforts to integrate them into the broader socio-economic framework, remains a critical area of focus for policymakers and scholars alike. In a nutshell, tribal communities in India are not only a repository of ancient cultural practices but also represent a vital aspect of the nation's diversity. Their unique ways of life, profound connection to the land, and distinct cultural practices offer valuable insights into sustainable living and cultural resilience. As India continues to develop, it is crucial to ensure that the rights and cultural heritage of these communities are respected and preserved.

Tribal women in India, who form a significant portion of the country's indigenous population, play a crucial role in their communities' socio-economic and cultural fabric. These women are not only the custodians of their communities' traditional knowledge and practices but also the backbone of their economies, particularly in agriculture, forest-based activities, and artisanal crafts (Singh et al., 2010). Tribal women are often more economically active than their counterparts in non-tribal communities. The Ministry of Tribal Affairs reports that nearly 40% of tribal women are engaged in agriculture, either as cultivators or labourers, compared to about 30% of non-tribal women. Additionally, they contribute significantly to the collection of non-timber forest

products (NTFPs), which is a primary source of income for many tribal households (Shah et al., 2022). A study by the National Institute of Rural Development and Panchayati Raj (NIRDPR) found that tribal women in states like Odisha and Madhya Pradesh are responsible for up to 60% of the household income derived from NTFPs (George & Sharma, 2023). Despite their vital role, tribal women lag significantly behind in educational attainment. The literacy rate among tribal women stands at 49.4%, compared to the national average of 64.6% for women (Ramachandran & Reddy, 2022). This gap is even more pronounced in remote areas, where access to education is limited. For instance, in states like Rajasthan and Jharkhand, the literacy rate among tribal women is below 40% (Singh, 2020). The National Family Health Survey (NFHS-5) further highlights that only 10.7% of tribal women aged 15-49 have completed 10 or more years of schooling, compared to 35.7% of non-tribal women in the same age group (Sinha, 2022). Despite their significant contributions, tribal women often face substantial challenges, including lower literacy rates, limited access to healthcare, and socio-economic marginalization. Yet, their resilience and strength remain central to the survival and continuity of tribal cultures and communities. Tribal women also face unique social challenges, including gender-based violence, which is often underreported due to social stigma and isolation. The National Crime Records Bureau (NCRB) indicates that cases of violence against tribal women have been increasing, with a 10% rise in reported cases between 2015 and 2020 (Bhargavi et al., 2023). However, the actual figures are likely higher, given the difficulties in accessing justice in remote tribal areas.

1.1 Tribal Socio-Economy and Culture Interventions:

Recognizing the need for targeted interventions, the Indian government has implemented various schemes aimed at improving the socio-economic status of tribal women. Programs like the Jan Dhan Yojana, which promotes value addition to forest products, have empowered tribal women by enhancing their incomes and ensuring better market access (Srivastava, 2022). Additionally, initiatives like the Eklavya Model Residential Schools (EMRS) aim to improve educational outcomes among tribal girls.

Tribal women in India embody resilience and strength, yet they continue to face systemic challenges that hinder their full participation in society. Addressing these issues requires a multifaceted approach, encompassing education, healthcare, economic opportunities, and legal protections. With sustained efforts, there is potential for tribal communities.

In terms of Digital literacy, it is increasingly recognized as a critical tool for the empowerment of marginalized communities, particularly tribal women, who often face systemic barriers to social, economic, and political participation. In a rapidly digitizing world, the ability to access and effectively use digital technologies can transform the lives of tribal women by opening up new opportunities for education, employment, and civic engagement. By bridging the digital divide, tribal women can gain greater autonomy, connect with broader networks, and advocate for their rights more effectively.

The broader implications of enhancing digital literacy among tribal women extend beyond individual empowerment to promote social equity and justice. As tribal women become digitally literate, they can challenge entrenched gender norms, participate in decision-making processes, and contribute to the economic development of their communities. Moreover, digital literacy can catalyze social change, enabling tribal women to preserve their cultural heritage while navigating the complexities of the modern world. Thus, fostering digital literacy among tribal women is not only a matter of technological access but also a crucial step toward achieving a more inclusive and just society. The study strongly emphasizes the need for digital literacy among the tribal woman population and highlights the fact that despite the huge boom in the technology industry, the outlook of the marginalized section is still backward. Henceforth the paper finds out the awareness and usage of technology in the Jalpaiguri District. Especially emphasizing the women population as how they have broken the shackles of traditional tribes accepted technological advancement and secured it as a part of their livelihood.

1.2 Technological Barriers to Social Media Integration among Tribal Women

The integration of digital technologies, including social media, into rural and tribal communities in developing nations faces numerous challenges, many of which are rooted in deeply entrenched socio-cultural structures. As highlighted by Joseph (2013) patriarchal norms dominate these societies, particularly in remote areas, where women are marginalized and have limited access to information and communication technologies (ICT). (Maji & Laha, 2022) further underscore the gender digital divide in these regions, attributing it to extreme poverty and the cultural preference for boys, which systematically diminishes the status of women and girls. This divide is not solely an infrastructural issue but also psychological, as women frequently doubt their abilities to master ICT skills, perceiving technology as male-dominated or reserved for elites. Efforts to address these disparities have had varying degrees of success. (Ragasa, 2014) noted that gender-responsive communication strategies, such as employing female extension agents, have improved information dissemination among women in rural areas. Yet, while this strategy has shown promise, it requires complementary services to holistically address the issue. In the context of digital access for tribal women, particularly in regions like the Jalpaiguri District, it is clear that infrastructure is just one of many hurdles. These women also contend with low levels of digital literacy, socio-cultural restrictions, and economic barriers, making it essential to explore how they interact with technology and what specific challenges they face.

Social media platforms like Facebook, WhatsApp, and Instagram offer promising avenues for communication, information sharing, and community engagement. For tribal women, social media could provide unprecedented access to information, enhance social visibility, and enable greater participation in public discourse. However, this potential is hampered by a pervasive digital divide that disproportionately affects marginalized communities. Understanding the socio-cultural and economic contexts of these women is essential to harnessing the empowering potential of social media. Without addressing the underlying digital literacy gap and socio-cultural constraints, the transformative potential of social media for tribal women remains out of reach.

The dual nature of social media presents both opportunities and risks. On the one hand, it offers platforms for women to express their opinions, engage in decision-making, and access vital information. On the other hand, it exposes them to challenges such as cyberbullying, privacy violations, and online harassment. This demonstrates the need for targeted interventions to enhance digital literacy, promote responsible social media use, and mitigate these negative effects. The cultural strategies necessary to foster positive engagement with social media must be integrated into efforts to bridge the gender gap, focusing on educational and entrepreneurial opportunities, particularly in tribal regions.

Technological barriers further complicate the integration of social media into the lives of tribal women. In many remote areas, poor infrastructure and limited internet connectivity remain critical challenges. Without reliable and affordable access to the Internet, women are cut off from the broader world of digital platforms, restricting their opportunities for social, economic, and educational advancement. Even when connectivity exists, the cost of digital devices remains prohibitively high for many families, limiting individual access and control over technology. Sharing devices within households further restricts women's ability to engage with social media and other digital tools for personal growth and community building.

The digital divide is not simply a matter of access; it also encompasses a significant digital literacy gap. Tribal women often lack the basic skills required to navigate online spaces effectively, which extends beyond turning on a device or accessing the internet. As a result, they are unable to fully exploit the benefits of social media or use these tools to enhance their livelihoods. Language barriers further complicate the situation, as much of the content on social media platforms is not available in indigenous languages. This diminishes the relevance and appeal of these platforms, reducing the incentive for tribal women to engage with them.

Patriarchal social norms also play a pivotal role in limiting women's access to technology. Even within households where digital devices are available, decision-making about their use often rests with men, further restricting women's autonomy in engaging with these tools. This dynamic exacerbates the digital divide, as

women are excluded from digital literacy programs and other initiatives designed to enhance their technological skills. Without addressing these deep-rooted gender disparities, efforts to promote digital inclusion will remain incomplete.

The lack of culturally relevant content on social media platforms is another barrier to meaningful integration for tribal women. Most digital content fails to reflect the unique cultural, social, and economic contexts of these communities, making it less useful and appealing. Coupled with concerns about digital safety and privacy, these women often feel vulnerable in online spaces, discouraged from fully participating due to fears of harassment or privacy violations. Addressing these concerns requires a comprehensive approach that includes improving awareness of online security, managing privacy settings, and fostering supportive online environments.

Ultimately, overcoming these barriers will require significant investments in infrastructure, tailored digital literacy programs, and efforts to create culturally relevant content in Indigenous languages. By tackling the multifaceted nature of the digital divide, we can empower tribal women to engage fully with digital platforms, enhancing their social, economic, and cultural well-being. Furthermore, culturally informed interventions are crucial to promoting positive social media use and mitigating its potential adverse effects on mental health. Only by addressing these interconnected issues can we unlock the full potential of social media as a tool for women's empowerment in tribal regions.

2. Review of Literature

Initiatives like the Digital India program, which aims to improve connection and digital literacy across underserved regions, have contributed to a steady increase in internet penetration in rural India. Although there are still issues in remote tribal communities, there has been a noticeable increase in rural internet usage, with 390 million users in 2023, according to current reports. While initiatives aimed at tribal groups prioritize digital literacy and online service accessibility, initiatives like the Bharat Net project concentrate on bringing broadband to villages. The need for more specialized, community-driven digital projects is highlighted by the fact that tribal groups' use of digital technology is still limited and frequently hampered by socioeconomic limitations, infrastructure deficiencies, and low awareness levels.

Kumar & Best (2007) study on tele-centers in rural South India looks at how little ICT centers are used, especially by underserved groups. Even while these tele-centers provided vital resources including health information, e-government services, and computer education, their use was limited to a narrower group of people, primarily younger men from better-off, more educated homes. This selective adoption raises the possibility that the community's current socioeconomic disparities are being reinforced. To increase involvement among historically impoverished groups, the study ends by suggesting tactics for more inclusive tele-center access, such as customized material, strategic placement close to underprivileged regions, and the assistance of community leaders.

Mehra et al. (2004) emphasize how it can be incorporated into the lives of low-income families, sexual minorities, and African American women, this study explores how internet access among marginalized communities might promote social fairness and empowerment. The article examines the distinct ways in which each group uses digital technology through three studies on the digital divide, going beyond common metrics to consider how access affects everyday life and individual empowerment. According to the study, researchers and policymakers should give priority to coordinating digital access initiatives with the cultural and social settings of these communities, as meaningful internet involvement necessitates an awareness of each group's unique requirements and habits. A more sophisticated, realistic strategy for closing the digital divide for people on the periphery of society may be made possible by this alignment.

Gupta (2020) Evaluates how caste-based social networks affect the adoption of novel rice varieties by Indian farmers in rural areas. According to the authors, social networks, particularly those within caste groups—have a big impact on how people accept technology and marginalized caste groups frequently play a major role in the diffusion of technology. These unofficial networks are crucial for reaching underserved communities, but

they are frequently ignored by traditional agricultural extension agencies. The report recommends focusing on powerful members of caste-based networks in order to promote fair adoption of technology. They contend that this strategy might be more successful than traditional ones, encouraging agricultural innovation initiatives to be more inclusive and efficient.

Mal & Saikia (2024) point out that tribal communities continue to experience significant disparities in key socio-economic indicators, such as health, education, and employment when compared to the mainstream population. This gap is attributed to a complex interplay of historical, socio-cultural, and structural factors that have historically marginalized these communities. The heterogeneity of tribal groups in India further complicates the developmental landscape.

Raut (2014) explains that tribal populations are extremely diverse, with differing degrees of development, cultural customs, and resource accessibility; they are not a homogenous bunch. Their physical distribution, which frequently consists of isolated and scattered villages, as well as their linguistic and cultural distinctions, all demonstrate this diversity. These elements have made it extremely difficult to plan and carry out development interventions because regulations that work for one group might not work or be successful for another. Tribal populations have also been further marginalized and excluded as a result of the development processes that were started in the post-independence era, which have mostly avoided them. Tribal communities' particular demands and circumstances have frequently been overlooked in favor of more developed and accessible areas due to the emphasis on economic development.

Thamminaina (2020) The study focuses on the educational challenges and opportunities faced by girls from Particularly Vulnerable Tribal Groups (PVTGs) in India. It employs a systematic review using tools like SPIDER, JabRef, and Rayyan QCRI to filter and analyze relevant literature from 2011 to 2019. Of the articles reviewed, only 45 were deemed suitable for exploring the educational journey of PVTG girls. The findings underscore a significant gap in educational progress among PVTG girls, despite Sustainable Development Goal (SDG-4) advocating for inclusive and quality education for all. The literature primarily focuses on broader tribal education or health and ethnomedicinal practices of PVTGs, with limited attention to the specific educational challenges of PVTG girls. This study contributes to academic discourse and policy development by synthesizing diverse research, highlighting the need for targeted interventions to improve educational outcomes for PVTG girls. It bridges a critical gap in the literature by integrating findings on the importance of education for these marginalized communities.

Sharma (2022) The study highlights the profound impact of digitalization on the society and culture of tribal people, particularly in Jammu and Kashmir. Digitalization initiatives like 'Digital India' have shown potential to address socio-economic challenges in remote regions. The Tribal Research Institute report (2022) emphasizes that digital inclusion is critical for uplifting marginalized tribal communities. Despite the government's efforts, such as BharatNet and Khidmat Centers, there remains a significant digital divide, primarily due to infrastructure deficits, linguistic barriers, low digital literacy, and socio-cultural inertia. Studies indicate that while younger generations are more inclined to adopt digital tools, older tribal populations face challenges in adapting due to limited awareness and fear of technology. The digitalization of services like banking and public welfare has the potential to significantly benefit these communities by providing access to information, education, and financial services. However, the effectiveness of these interventions is hampered by socio-cultural constraints and a lack of targeted digital literacy programs. Addressing these gaps through culturally relevant content, community engagement, and policy reforms tailored to the needs of tribal women and marginalized groups is essential to achieving meaningful digital inclusion.

Rao (2005) in his study, *Bridging the Digital Divide: Efforts in India*, examines the challenges and efforts to address the digital divide in India, particularly the disparity between rural and urban access to information and

communication technologies (ICTs). The paper emphasizes the importance of developing infrastructure, reducing costs, and increasing digital literacy through community engagement and tailored programs. Successful projects like Akshaya e-centers are highlighted, underscoring the need for a coordinated national strategy focused on connectivity, content creation, and community participation to bridge the divide effectively.

Omweri (2024) The study explores the multifaceted implementation of e-government in developing countries, focusing on the disparities between urban and rural areas, the capacity of institutions, and socio-cultural influences. It reveals that while urban centers benefit from advanced infrastructure and higher digital literacy, rural regions face significant obstacles like poor connectivity, limited digital education, and resource shortages. The study emphasizes that to realize the full potential of e-government, countries must invest in digital infrastructure, localized literacy programs, and policies tailored to diverse socio-economic contexts. Such measures could foster transparency, accountability, and effective service delivery, ensuring equitable access to governance for all citizens.

Miller & Shrum (2011) examine the potential of digital literacy to bridge the gender gap in workforce participation in India, particularly focusing on women from rural areas. Research highlights the significant impact of the COVID-19 pandemic on women's employment and the importance of digital skills in accessing remote work and online markets. Through case studies from Haryana and Telangana, the study showcases how digital literacy programs have empowered women entrepreneurs and artisans. The research emphasizes the necessity of the digital divide to ensure inclusive economic recovery and sustained development. The importance of digital literacy for women highlights how it enables them to access online education, enhance financial independence, and bridge the gender divide. Digital literacy empowers women by improving their social awareness, employability, and safety online. It fosters economic participation and helps women overcome traditional limitations. Furthermore, researchers discussed how digital literacy enables women to make informed decisions and become responsible digital citizens.

Lal & Panigrahs (2022) study on digital literacy among Scheduled Tribes in Himachal Pradesh looks at the challenges that tribal communities face, especially in isolated places like Kinnaur and Lahaul-Spiti, because of limited internet access, inadequate infrastructure, and socioeconomic limitations that were made worse by the COVID-19 pandemic. The results emphasize that despite government efforts to improve digital access, economic and geographic obstacles still exist. In their conclusion, the authors urge more regional solutions to close the digital divide and encourage social involvement in these regions.

Suresh et al. (2021) argue that this oversight has resulted in the persistence of poverty, illiteracy, and poor health outcomes among tribal groups. Education, in particular, remains a critical area of concern. Tribal communities in India are characterized by low literacy rates and high dropout rates, which are indicative of deeper systemic issues such as inadequate access to quality education, cultural barriers, and economic constraints

In summary, the literature reviewed here underscores the importance of a multi-pronged approach to digital inclusion among tribal women, combining policy interventions, community-based initiatives, and further research. The integration of social media and digital tools into the lives of tribal women has the potential to enhance their social, economic, and cultural well-being, provided that the unique barriers they face are comprehensively addressed.

3. Economic and Social Media Adoption Among Tribal Women

Socioeconomic hurdles, which stem from a complex interaction of financial, educational, infrastructure, and cultural variables, provide significant obstacles to tribal populations' use of social media. One of the main obstacles is a lack of funding since many tribal households make little money and cannot buy digital gadgets, internet connections, and continuous upkeep. This disparity in income makes the digital divide worse, making

it difficult for a sizable section of tribal communities to access and use social media.

Cultural attitudes and hesitancy toward social media use also play a significant role. Because maintaining their distinct cultural identities is sometimes a top priority for tribal people, embracing new technologies may be viewed with caution or skepticism. Social media may be seen by certain tribal members as an outside force that could upend customs, which would make them reluctant to participate. These socioeconomic restrictions are also influenced by gender, with tribal women experiencing particular limitations because of conventional gender roles, low literacy rates, and a lack of financial independence. For women in Indigenous areas, who may already have obstacles to accessing education and technology, this makes social media use especially difficult.

4. Theoretical Framework

The digital divide in tribal communities is a complex issue characterized by structural, economic, educational, and socio-cultural barriers. In Jalpaiguri District, where diverse tribal populations reside, this divide is particularly evident. Infrastructure limitations, high costs of digital devices and internet services, and a lack of digital literacy among tribal communities, particularly women, further exacerbate the issue. Traditional gender roles and societal norms often restrict women's access to technology, leading to resistance from families or the broader community. Despite some efforts, the digital divide remains wide.

To effectively bridge this gap, comprehensive digital inclusion strategies are needed that address socio-cultural barriers, promote digital literacy, and create affordable pathways to technology adoption. Empowering tribal women through digital inclusion holds transformative potential, enhancing their access to critical information, expanding their opportunities for education and economic participation, and fostering greater social inclusion. This requires a multifaceted approach that includes policy-level interventions, community-based programs, and ongoing research. Drawing from global best practices and tailoring them to the specific needs of India's tribal populations, particularly in regions like Jalpaiguri, could lead to more effective frameworks for digital empowerment. Culturally sensitive efforts must ensure that technology respects and integrates into tribal traditions and social structures while promoting greater equity in digital access.

4.1 Social Media Adoption

By creating avenues for communication, education, and self-expression, social media adoption in tribal groups, especially among women, has the potential to revolutionize socio-economic empowerment. Through platforms to interact with larger communities, share experiences, and access previously unobtainable knowledge and possibilities, social media helps Indigenous women overcome traditional seclusion. But since many indigenous women have limited access to technology and lack the skills needed to use digital platforms effectively, the digital divide and low digital literacy remain major obstacles. In rural and isolated tribal regions, these difficulties are exacerbated by sociocultural norms and infrastructure restrictions, which make technological integration challenging. When social media is used properly, it may empower tribal women by giving them access to health information, educational materials, and business opportunities. Social media, when used effectively, can empower Indigenous women by giving them access to advocacy tools, health information, educational materials, and business opportunities that can strengthen their voices and promote communal growth. Comprehensive approaches are needed to overcome these obstacles, such as programs that promote social media usage in a good way, enhanced network infrastructure, and digital literacy campaigns. Tribal women will be able to interact with larger networks, improve their socioeconomic status, and advance a more inclusive digital society if this digital divide is closed. This will lessen inequalities in tribal areas and support sustainable development.

4.2 Empowerment through Technology:

Technology-enabled tribal community empowerment entails using digital tools to close social and economic gaps and promote long-term development in the areas of healthcare, education, finance, culture, and civic involvement. Technology provides revolutionary educational and skill-building opportunities, giving tribe members access to resources and vocational training, and opening doors for employment and business even in isolated locations. Digital platforms in the healthcare industry, such as telemedicine and health applications, increase access to medical services, which is especially helpful in places without access to medical facilities. Another crucial area is financial inclusion, since technology gives tribal communities access to banking, microfinance, and e-commerce, enabling them to sell things, save money, and obtain loans, all of which improve income stability. Technology is also a potent tool for activism and cultural preservation, giving tribes a way to record and disseminate their legacy while bringing important topics like environmental preservation and land rights to the public's attention. Additionally, by educating people about their rights, laws, and advancements, internet platforms promote active civic involvement and advocacy, hence increasing political participation. Customized programs can assist tribal groups in achieving self-sufficiency, safeguarding their cultural identity, and more effectively integrating into the larger socioeconomic system, even in the face of obstacles like limited internet access and low digital literacy.

5. Discussion

The research has illuminated the complex dynamics that affect social media adoption among tribal women in the Jalpaiguri District, emphasizing both the potential benefits and the obstacles these women encounter. On one hand, social media presents significant opportunities for tribal women, offering a platform for communication, education, economic activities, and community engagement. It has the power to enhance their social capital, broaden their knowledge, and give them a voice in larger societal discourses. However, the study also highlights deep-rooted barriers that hinder their effective use of these digital tools.

One major challenge is limited digital literacy. Many tribal women lack the skills necessary to navigate and use social media platforms to their full potential. This knowledge gap makes it difficult for them to access relevant information or benefit from online opportunities. Socio-cultural restrictions also play a significant role, as traditional norms may limit women's participation in public and digital spaces. In many tribal communities, women's access to technology is often controlled by male family members, and there may be societal pressures that discourage women from freely engaging with digital platforms. Lastly, infrastructural gaps, such as poor internet connectivity and lack of affordable access to smartphones or other digital devices, continue to serve as significant barriers, particularly in remote areas.

The socio-economic and cultural dynamics of the tribals in the Jalpaiguri district, particularly in the Mal subdivision, are influenced by their historical background, economic activities, and social customs. The tribal communities, primarily from two ethnic groups Mongoloid and Dravidian play a significant role in the socio-economic fabric of the area. These communities, including the Oraon, Munda, Santal, Lohar, and Mahali tribes, exhibit a strong connection to tea gardens and agricultural activities, while also preserving distinctive cultural practices. Economically, many of the tribal populations depend on low-wage tea garden labor, with high levels of poverty and limited access to better housing, education, and health services. Despite their strong workforce participation, they are subject to exploitation, poor working conditions, and limited access to modern amenities and technology, which have only marginally impacted their traditional livelihoods. Culturally, the tribal people hold onto customs like animism, though many have adopted Christianity or Hinduism. Modernization, however, poses a threat to their traditional art forms, music, and agricultural practices. The integration of modern agricultural technology is limited, and there is minimal positive economic impact from such advancements.

Addressing these issues requires a multifaceted approach. One key solution is to enhance digital literacy through

targeted training programs tailored to the needs and cultural contexts of tribal women. These programs must be developed in a way that is sensitive to local traditions, languages, and social structures, ensuring they resonate with the women and their communities. Additionally, improving digital infrastructure is crucial. Rural and tribal areas often suffer from poor internet connectivity and inadequate technological resources. Efforts must be made to provide reliable internet access and affordable devices, ensuring that these women are equipped with the tools they need to engage in the digital world.

Furthermore, creating safe and supportive environments for social media use is vital. This can be achieved by promoting gender-sensitive policies and frameworks that encourage women's active participation in digital spaces while ensuring their safety online. Policy interventions should be informed by a deep understanding of the socio-economic and cultural contexts of tribal communities. Governments and organizations need to collaborate with tribal leaders and women themselves to design initiatives that reflect their specific needs, making sure that solutions are not imposed from the outside but arise from within the communities.

Empowering tribal women through digital inclusion goes beyond mere technological advancement, it is a step toward greater gender equality and social justice. By addressing the digital divide, these women can gain more autonomy over their lives, improve their livelihoods, and contribute to the economic and social development of their communities. The study stresses that digital inclusion should not be seen as an isolated objective but as part of a broader strategy to uplift marginalized groups, ensuring that they have the same opportunities to thrive in the digital age as other segments of society.

In conclusion, this research adds a valuable perspective to ongoing discussions about digital inclusion and highlights the importance of continued efforts to bridge the gap for marginalized communities like those in the Jalpaiguri District. With sustained and culturally sensitive initiatives, the transformative power of digital technologies can be harnessed to empower tribal women, fostering greater equity and inclusion in the rapidly evolving digital landscape.

Conclusion

In conclusion, the study presents a crucial chance to close the digital divide by demonstrating the revolutionary potential of social media adoption for the Indigenous women of Jalpaiguri District. Tribal women, who sometimes stay disadvantaged because of socioeconomic limitations and a lack of digital literacy, might benefit greatly from social media as a platform for networking, information sharing, and economic activity. A multifaceted strategy is needed to close this gap, including community-based support networks, investment in accessible infrastructure, and culturally specific digital literacy initiatives. Tribal women can participate in broader socio-political processes, improve their social networks, and access new economic opportunities by being given the skills and information necessary to navigate digital areas. Reducing the digital gap is a step that goes beyond a technical problem. Reducing the digital divide is a step toward equitable socioeconomic status and goes beyond a technical problem. For these women, digital inclusion could open doors to entrepreneurship, healthcare information, education, and professional training—all of which are critical for long-term community development. To carry out focused interventions that acknowledge and honor the distinct cultural and socioeconomic dynamics of tribal groups, policymakers, non-governmental organizations, and local community leaders should collaborate. Making it possible for these women to engage with the digital world can promote greater social and economic empowerment, lessen gender inequality, and make a substantial contribution to the general development of the area. In the end, encouraging digital inclusion is essential to empowering these women to take an active role in the modern, digitally-driven society and creating a more resilient and inclusive future.

Reference

- Mishra, K. D. (2017). Social media revolution - The new digital frontiers of Journalism. *JOURNAL of ADVANCES in HUMANITIES*, 5(1), 610–620. <https://doi.org/10.24297/jah.v5i1.6068>
- Deb, P., & Mukherjee, R. (2024). Pattern of regional disparities in the level of household deprivation among the scheduled tribes of Eastern India: A district-level analysis. *Journal of Asian and African Studies*, 59(1), 201–221. <https://doi.org/10.1177/00219096221106097>
- Bora, D., & Mahanta, A. (2024). Rural Livelihood Diversification Among Tribal Communities of North-Eastern Region of India: A Systematic Review. *Journal of Asian and African Studies*, 59(3), 842–857. <https://doi.org/10.1177/00219096221123747>
- Leuthold, S. (1998). *Indigenous aesthetics: Native art, media, and identity*. University of Texas Press. <https://doi.org/10.7560/747029-009>
- Shah, A. (2007). The dark side of indigeneity?: Indigenous people, rights and development in India. *History compass*, 5(6), 1806–1832. <https://doi.org/10.1111/j.1478-0542.2007.00471.x>
- Singh, R. K., Pretty, J., & Pilgrim, S. (2010). Traditional knowledge and biocultural diversity: learning from tribal communities for sustainable development in northeast India. *Journal of Environmental Planning and Management*, 53(4), 511–533. <https://doi.org/10.1080/09640561003722343>
- Shah, M., Vijayshankar, P. S., & Rural, B. (Eds.). (2022). *Tribal Development Report: Human Development and Governance*. Taylor & Francis.
- George, A., Sharma, P. Spatial assessment of vulnerability of social groups to climate change in Madhya Pradesh, India. *Asia-Pac J Reg Sci* 7, 1329–1370 (2023). <https://doi.org/10.1007/s41685-023-00311-9>
- Ramachandran, V., & Reddy, A. (2022). Educational situation of scheduled tribes in India. In *Routledge eBooks* (pp. 193–231). <https://doi.org/10.4324/9781003172864-7>
- Singh, A. (2020). The Status of Girls' Education in Jharkhand. *Available at SSRN 3686884*. <https://doi.org/10.2139/ssrn.3686884>
- Sinha, D. (2022). Hunger and Malnutrition amongst Adivasis. In *Tribal Development Report* (pp. 158–192). Routledge India. <https://doi.org/10.4324/9781003172864-6>
- Srivastava, D. (2022). “Promoting and backing Tribal entrepreneurship in North-east India by the virtue of Pradhan Mantri Van Dhan Vikas Yojna.” *International Journal of Social Sciences*, 11(3). <https://doi.org/10.46852/2249-6637.03.2022.3>
- Joseph, M. K. (2013). *A Framework for Rural Women Empowerment using Information and Communication Technologies*. University of Johannesburg (South Africa).
- Maji, S. K., & Laha, A. (2022). State of digital divide and its determinants: evidences from student level survey in West Bengal, India. *International Journal of Business Environment*, 13(4), 392–417.

- Ragasa, C. (2014). Improving gender responsiveness of agricultural extension. *Gender in agriculture: Closing the knowledge gap*, 411-430.
- Kumar, R., & Best, M. L. (2007). Social Impact and Diffusion of Telecenter Use: A Study from the Sustainable Access in Rural India Project. *The Journal of Community Informatics*, 2(3). <https://doi.org/10.15353/joci.v2i3.2071>
- Mehra, B., Merkel, C., & Bishop, A. P. (2004). The internet for empowerment of minority and marginalized users. *New Media & Society*, 6(6), 781–802. <https://doi.org/10.1177/146144804047513>
- Gupta, I., Veettil, P. C., & Speelman, S. (2020). Caste, Social Networks and Variety Adoption. *Journal of South Asian Development*, 15(2), 155–183. <https://doi.org/10.1177/0973174120954632>
- Mal, P., & Saikia, N. (2024). Disparity by caste and tribe: Understanding women's empowerment and health outcomes in India. *Social Science & Medicine*, 354, 117074. <https://doi.org/10.1016/j.socscimed.2024.117074>
- Sharma, A., Mir, A. Q., & TRIBAL RESEARCH INSTITUTE, Jammu and Kashmir. (2022). *Identifying the impact of digitalization on the society and culture of tribal people of J&K*.
- Thamminaina, A., Kanungo, P., & Mohanty, S. (2020). Barriers, opportunities, and enablers to educate girls from Particularly Vulnerable Tribal Groups (PVTGs): A systematic review of literature. *Children and Youth Services Review*, 118, 105350. <https://doi.org/10.1016/j.childyouth.2020.105350>
- Sharma, A., Mir, A. Q., & TRIBAL RESEARCH INSTITUTE, Jammu and Kashmir. (2022). *Identifying the impact of digitalization on the society and culture of tribal people of J&K*.
- Rao, S. S. (2005). Bridging digital divide: Efforts in India. *Telematics and Informatics*, 22(4), 361–375. <https://doi.org/10.1016/j.tele.2005.01.007>
- Omweri, F. S. (2024). A Systematic Literature Review of E-Government Implementation in Developing Countries: Examining Urban-Rural Disparities, Institutional Capacity, and Socio-Cultural Factors in the Context of Local Governance and Progress towards SDG 16.6. *International Journal of Research and Innovation in Social Science*, 8(8), 1173-1199. <https://dx.doi.org/10.47772/IJRIS.2024.808088>
- Miller, B. P., & Shrum, W. (2011). The gender digital divide in the research sectors of Ghana, Kenya, and Kerala: Are women more connected over time?. *Gender, Technology and Development*, 15(1), 25-52 <https://doi.org/10.1177/097185241101500102>
- Lal, M., & Panigrahi, D. (2022). Digital literacy and its challenges. *International Journal of Health Sciences*, 5365–5372. <https://doi.org/10.53730/ijhs.v6ns4.10086>
- Suresh, P. R., & Rajasenan, D. (2015). *Social structural determinants of education among tribes in Kerala* (Doctoral dissertation, Cochin University of Science and Technology).