



# THE NEW FACE OF GENDER INEQUALITY IN INDIA: DIGITAL DIVIDE

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Article DOI: <https://doi.org/10.36713/epra26007>

DOI No: 10.36713/epra26007

## ABSTRACT

The gender digital divide in India represents a critical barrier to achieving gender equality and inclusive socio-economic development. This research explores the multifaceted dimensions of this divide, examining the disparities in access to digital technologies, internet usage, and digital literacy between men and women across different socio-economic and geographic circumstances. Utilizing data from national surveys, such as the National Family Health Survey (NFHS), and data from various reports, the study identifies the specific barriers that prevent women from accessing digital devices and the internet. The research paper also examines the current state of digital access among women in India, with a focus on rural, urban of gender digital divide in India with figures taken from NFHS 2019-21. The study highlights the significant gap in digital access between men and women, particularly in rural areas. The research paper also examines the Rwanda's Digital policy – Digital Ambassador Program as a case study. The research concludes by recommending targeted interventions to bridge the gender digital divide, including the expansion of digital infrastructure in remote areas, the implementation of gender-sensitive digital literacy programs, and the development of women-centric digital platforms.

**KEY WORDS:** Digital divide, Gender, Internet Access, India

## DIGITAL DIVIDE

The term "digital divide" refers to the disparity between people, families, businesses, and geographical areas at various socioeconomic levels in terms of their access to information and communication technologies (ICTs) and their use of the Internet for a wide range of purposes. The digital divide is a reflection of numerous regional and national inequalities. (OECD). The term "digital divide" refers to all forms of inequality that exist within the digital world, such as access between rich and poor, women and men, and developed and developing countries. (Norris, 2001). The digital divide as a multifaceted issue and makes distinction between the global digital divide (access to Internet), the social divide (Information among nations) and the democratic divide (engagement in public life through digital resource) (Asrani, 2020)<sup>1</sup>

<sup>1</sup> Digital disparities occur across countries, between areas of a country, within organisations, between men and women, between the elderly and the young, among different religions, and between men and women, according to the World Information Society study (WIS, 2007).

<sup>2</sup> A global organization, the GSMA unites the mobile ecosystem to find, create, and distribute innovation essential to improving business conditions and bringing about positive social change. The objective is to optimise connectivity to the benefit of people, businesses, and society as a whole. <https://www.gsma.com/about-us/> Retrieved on 29.07.2024

## Digital Divide in India

According to India's 2020 National Family Health Survey, only 42 percent of Indian women surveyed had ever used the Internet compared with 62 percent of men. However, according to the 2020 GSMA<sup>2</sup> Gender Gap Report the mobile internet gender gap has narrowed from 68 percent to 50 percent since 2017 due to the affordability of smart feature phones.

### ➤ Urban-Rural Disparities

The urban-rural digital divide is a significant challenge in India. According to the **National Sample Survey (NSS) Report on Household Social Consumption: Education in India (2017-18)**, only 15% of rural households had access to the internet compared to 42% of urban households<sup>3</sup>. The gap is even more pronounced in terms of computer access, with only 4.4% of rural households owning a computer compared to 23.4% of urban households.

<sup>3</sup> Among people in rural areas who were five years of age and older, 9.9% could use a computer, 13.0% could access the internet. Among people aged five and older in urban areas, 32.4% could use a computer, 37.1% could access the internet. <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1593251> Retrieved on 05.08.2024



### ➤ Gender Digital Divide<sup>4</sup>

The difference between men and women in terms of access to, usage of, and benefits from information and communication technologies (ICTs) is known as the gender digital divide. This division, a particular aspect of the larger digital divide, is defined by gender disparities in the accessibility, affordability, and use of digital technology. It impacts many facets of life, such as relationships with others, economic prospects, and education. Women's roles in previous societies were confined to the home and hearth, but industrialization changed this. In modern countries, women may now compete with males on an even playing field because of technological advancements. However, even now gender biases continue to influence the access to and use of ICT by women even in developed countries such as Japan and Sweden. (Bala, 2017). Women and girls in all their diversity are limited in their ability to use mobile technology and the Internet for a variety of reasons, all of which are grounded in persistent global gender inequality. The main barriers to adoption fall into four broad areas: (htt9)

- ✓ Affordability<sup>5</sup>
- ✓ Availability<sup>6</sup>
- ✓ Ability<sup>7</sup>
- ✓ Appropriateness<sup>8</sup>

### OBJECTIVES

- To educate readers on the existence and extent of the "digital divide," emphasising the differences in access to digital technology among various demographic, geographic, and socio economic groups.
- To identify the specific barriers that prevent women from accessing digital devices and the internet.
- To examine the current state of digital access among women in India, with a focus on rural, urban, and marginalized groups.
- To explore the Rwanda's Digital Ambassador Program as a case study
- To make recommendations on how to increase women's access to economic and educational possibilities using digital platforms to become more empowered and financially independent.

<sup>4</sup> GDD can be defined as the unequal opportunity for ICT use between men and women in social, political, economic, and cultural domains. Some researchers use gender divide and gender inequality interchangeably (Rababah & Abu-Shanab, 2011; Younghoon, Mehri, Hyerin, & MyeongCheol, 2012)

<sup>5</sup> Social conventions and other factors often result in women having lower wage levels and being less financially independent than males. Women who are last-mile or live in low-resource communities face special challenges since they are unable to afford gadgets, high fees, taxes, or pricing plans. Instead, in order to provide for their families' basic requirements, these women must spend their money on necessities.

<sup>6</sup> Network coverage is typically worse in rural, low-income communities, which puts more of a burden on low-income women and girls in all of their diversity. In these communities, it is frequently more difficult for women to obtain devices, particularly smartphones,

### METHODOLOGY

In the recently released National Family & Health Survey -5, the Ministry of Health & Family Welfare collected data on internet usage by men and women in various parts of the nation for the first time. Additionally, the data included information on women's ownership of mobile phones and measures of women's empowerment. The objective of the article is to use secondary data research to quantify the gender digital divide in terms of ICT tool and device ownership, ability, and access. The purpose of the survey is to look into how digitally connected Indian women who live in rural and urban areas are compared to their male counterparts. The above mentioned survey was carried out in 707 districts of India, with a sample size of around 610,000 households.

### Barriers that prevent women from accessing digital devices and the internet

In the vast majority of countries and territories analysed, adolescent girls and young women face significant disparities with regard to internet use. Especially in low-income countries, 90 per cent of adolescent girls and young women aged 15-24 are offline, compared to 78 per cent of adolescent boys and young men of the same age who do not use the internet. Among regions, the largest gap is observed in South Asia, favouring adolescent boys and young men by 27 percentage points.<sup>9</sup> Adolescent girls and young women have a significantly lower prevalence of digital skills than their male counterparts. For every 100 male youth who have digital skills, only 65 female youth do, across 32 countries and territories analysed. (htt8)

The perspective highlights five hurdles that contribute to the gender digital divide: lack of gender-responsive policies, poor access to and affordability of digital infrastructure, inadequate teacher training and low level of digital skills among youth, online safety of girls, and the lack of mind set-shifting interventions for communities. (htt7)

which causes many of them to use older feature phones that limit mobile internet use.

<sup>7</sup> Globally, women frequently report having lower levels of technical and digital literacy, lack confidence while using technology, and have limited access to pertinent content-especially in local languages – for their requirements. Their usage of internet and mobile platforms is restricted by these considerations.

<sup>8</sup> Women's use of technology is further discouraged by concerns about safety, security, and harassment. These issues include fears about online data security and privacy threats and the fear of being harassed by strangers. Additionally, women frequently report feeling less valuable and having a poorer comprehension of the potential of the Internet.

<sup>9</sup> Bridging the Gender Digital Divide, Challenges and an Urgent Call for Action for Equitable Digital Skills Development, May 2023

**Figure 1: Barriers that prevent women from accessing digital devices and the internet**



➤ **High Costs of devices and Internet Access**

Women, especially in low-income households, may not have the financial resources to afford digital devices or internet services. economic inequalities contribute to the digital divide, particularly in developing countries where women are often economically disadvantaged. (Edited by Massimo Ragnedda, 2013)

➤ **Limited Education and Training Opportunities**

Women, particularly in rural areas, may have lower levels of education and fewer opportunities to learn digital skills. The digital literacy is unevenly distributed, with women and girls often having less access to educational resources that could help them gain digital skills. (Digital Divides: The New Challenges and Opportunities of e-Inclusion, 2015)

➤ **Socio-cultural Norms and gender roles**

In many cultures, women are expected to prioritize household and caregiving duties over education or career development, limiting their time and opportunity to engage with technology. traditional gender roles and societal expectations limit women's

access to and use of ICT (Women and ICT in Africa and the Middle East : changing selves, changing societies, 2017)

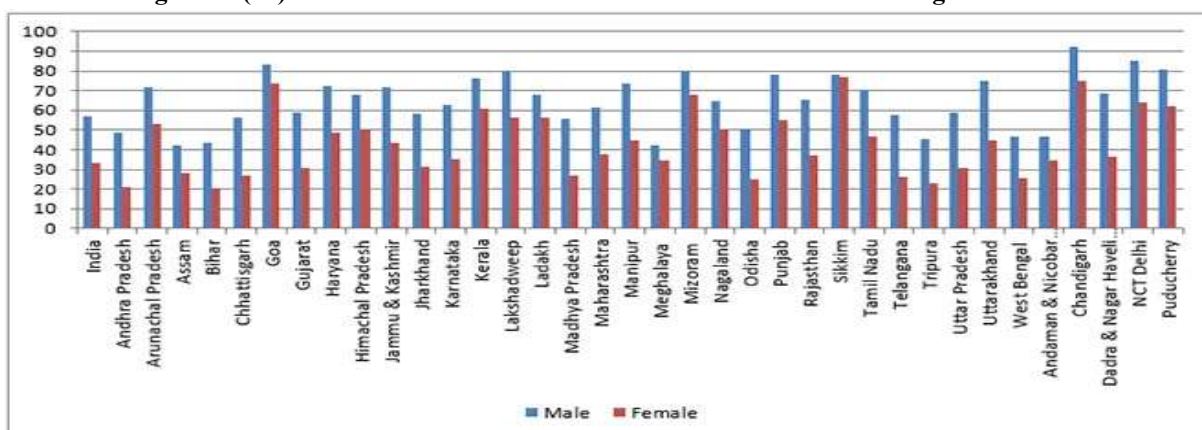
➤ **Fear of Cyber Harassment:**

Concerns about online harassment and privacy can discourage women from using the internet or engaging in online activities. cyber violence is a significant barrier to women's participation in the digital world, often leading to self-censorship or complete withdrawal from online spaces. Millions of women and girls around the world are subjected to deliberate violence because of their gender. Violence against women and girls (VAWG) knows no boundaries, cutting across borders, race, culture and income groups, profoundly harming victims, people around them, and society as a whole. (Cyber Violence against Women and Girls: A world-wide wake-up call)

➤ **Inadequate Infrastructure in Rural Area**

Women in rural areas often face limited or no access to the necessary infrastructure, such as electricity and reliable internet connections, needed to engage in the digital world. Infrastructural deficits in rural areas disproportionately affect women's access to digital technologies. (Heeks, 2018)

**Figure 2: (%) Individuals who have ever used the internet – state wise gender divide**

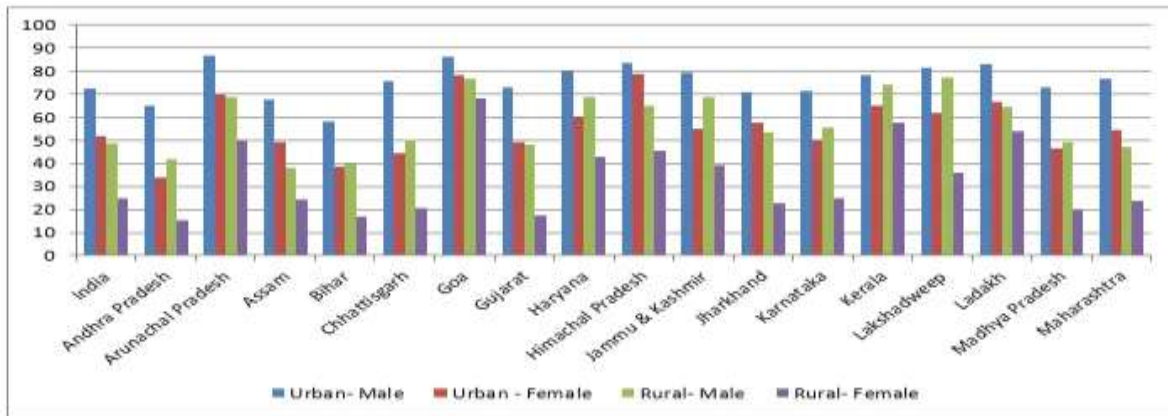


Source: Data from NFHS 2019-21

The National Family Health Survey (NFHS) for 2019-2021 reveals a considerably greater gender disparity in internet usage. Only 57.1 percent of men and 33.3 percent of women,

according to the NFHS Report, stated having ever used the internet. As Figure 1 illustrates, there was a gender imbalance in every state.

**Figure 3: (%) Individuals who have ever used the internet- State-wise gender and rural/urban divide.**

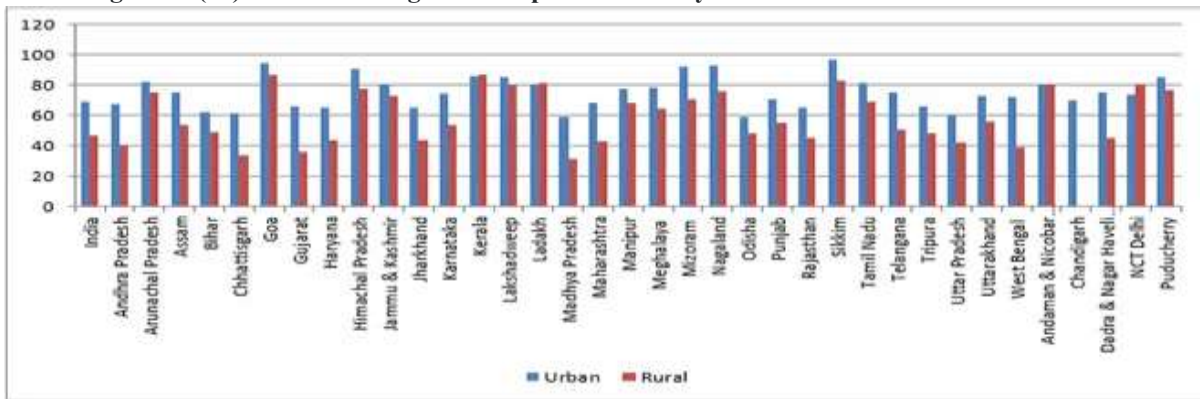


Source: Data from NFHS 2019-21

From the NFHS, 2019–21 Data segregation based on the rural-urban divide is another feature offered by the NFHS. Although 51.8 percent of urban women and 72.5 percent of male urban users have ever accessed the internet, only 24.6 percent of rural

women and 48.7 percent of male rural users meet this requirement. It's noteworthy to observe that, as Figures 2 and 3 show, rural ladies have the lowest percentage while urban males have the highest percentage in every state.

**Figure 3: (%) Women having a mobile phone that they use – State-wise Rural-Urban divide**



Source: Data from NFHS 2019-21

From the NFHS, 2019–21 Segregation of mobile phone ownership based on the rural/urban divide is another feature of the NFHS data. The data demonstrates that there is an enormous gap in mobile phone ownership, with urban women generally owning a higher percentage of mobile phones than do rural women. In many states and union territories, rural women have better access to mobile phones and the tendency is reversed, such as Kerala, Ladakh, Delhi, Andaman, and Nicobar. Figure 5 shows the state-by-state disparity in female mobile phone ownership between rural and urban areas.

**Results from the above Figures**

As has been noted, there is a severe digital divide in India, with differences in how the country's citizens use the internet and have access to digital infrastructure depending on factors like age, gender, caste, and whether they live in an urban or rural location. It is commonly noted that men own more mobile phones and have more access to the internet. When compared to urban women, rural men, and rural women, urban men are significantly better off than others in terms of having access to the internet and owning phones, although there may be slight differences.

**Recommendations**

• **Improving Digital Infrastructure in Rural Areas**

Increasing Connectivity of Government programs such as Bharat Net should give priority to increasing high-speed internet access in rural areas, especially for households led by women. Increase the number of free or inexpensive public Wi-Fi hotspots in communities, especially in community centres, schools, and women's organizations. Infrastructure's vital role in improving underprivileged people's access to the Internet, especially women. (Hussain Hadi, 2023)

• **Enhancing Digital Literacy Programs Targeted at Women**

Develop women-specific, locally-adapted digital literacy initiatives, emphasising functional literacy for online banking, e-commerce, and educational material access. To ensure that women from marginalised communities are included in digital literacy training, make use of already-existing community networks such as self-help groups (SHGs).

• **Promoting Women-Centric Digital Platforms**

The government should collaborate with tech companies to develop and promote platforms that offer content in regional



languages and address the unique needs of women. It should also encourage the development of digital platforms and apps tailored specifically for women, with an emphasis on education, vocational training, and e-commerce. Digital platforms can be customised to help women advance their economic and educational status.

- **Providing Financial Incentives and Support**

Provide subsidies for women living in low-income households to purchase digital gadgets like tablets and smartphones in order to lower the affordability barrier and increasing the reach of microfinance programs to assist female entrepreneurs in launching digital ventures and participating in online markets

- **Creating Safe and Inclusive Online Spaces**

Provide training on cyber security and digital safety with an emphasis on safeguarding women's online identities and data. In order to ensure that women feel safe utilising digital platforms, regulations and frameworks addressing online harassment and abuse should be reinforced.

- **Leveraging Online Education and Skill Development**

Increase the number of women-focused Massive Open Online Courses (MOOCs) and online vocational training programs available, particularly in high-demand industries like digital marketing, healthcare, and IT. Collaborate with educational establishments to provide financial aid and other inducements to female students to sign up for online courses.

India can make great progress towards empowering women, closing the gender digital divide, and promoting inclusive growth in the digital era by putting these initiatives into practice.

### Case study: Rwanda's Digital Ambassadors Program

Rwanda, a country that has made significant strides in post-genocide recovery, has embraced digital technology as a key driver for economic development. Despite these efforts, the country faced a significant digital divide, particularly among women and rural populations. In response, the Rwandan government launched the Digital Ambassadors Program (DAP) in 2017 as part of its broader Smart Rwanda Master Plan. The program aimed to enhance digital literacy across the country, with a particular focus on women, who were disproportionately affected by the digital divide. Partnering with the World Economic Forum's (WEF) Internet for All Northern Corridor initiative and Digital Opportunity Trust (DOT), Rwanda's Ministry of Youth and Information Communication Technology (MYICT) will be spearheading a push to provide Internet access, skills training and jobs across the country.<sup>10</sup> Objectives of the Digital Ambassadors Program (DAP)<sup>11</sup>

**Increase Digital Literacy:** To train citizens in basic digital skills, enabling them to use smartphones, access the internet, and utilize digital services.

**Promote Gender Equality:** By specifically targeting women and other marginalized groups, the program sought to reduce the gender-based digital divide and empower women economically.

**Support Socio-Economic Development:** The program aimed to leverage digital literacy to improve access to e-government services, financial inclusion, and job opportunities.

### Implementation

**Training Digital Ambassadors:** The program recruited and trained over 5,000 young Rwandans as Digital Ambassadors. These ambassadors were deployed to rural communities to provide digital literacy training. The training covered basic computer skills, internet use, and how to access and benefit from digital services.<sup>12</sup>

**Community Engagement:** The ambassadors were tasked with engaging directly with the community, providing hands-on training to citizens in their local areas. This peer-to-peer learning model was crucial in ensuring that the training was accessible and culturally relevant.

**Public-Private Partnerships:** The program was supported by various stakeholders, including the Rwandan government, international organizations such as the World Bank, and private sector partners. These partnerships provided the necessary resources, infrastructure, and technical support to sustain the initiative.

### Impact

**Improved Digital Literacy:** By 2020, the DAP had trained thousands of Rwandans, particularly women, in digital skills. Many of these women used their newfound skills to improve their businesses, access online banking, and engage in e-commerce.

**Increased Access to Digital Services:** The program significantly increased access to digital services among rural populations, including e-government services and online marketplaces. This has been particularly beneficial for women, who have historically had less access to such services.

**Economic Empowerment:** The digital skills acquired through the program enabled many women to start or expand their businesses, leading to improved economic outcomes. This has contributed to reducing poverty and promoting gender equality in Rwanda.

**Sustainability and Scalability:** The success of the DAP has demonstrated the potential for similar programs to be scaled up and replicated in other regions facing a digital divide. The use of Digital Ambassadors as a model for community-based digital literacy training has been particularly effective.

<sup>10</sup> <https://www.weforum.org/agenda/2017/02/rwandas-digital-ambassadors-are-boosting-computer-literacy/> retrieved on 12.08.2024

<sup>11</sup> <https://risa.prod.risa.rw/projects/digital-ambassadors-program> retrieved on 12.08.2024

<sup>12</sup> <https://www.risa.gov.rw/projects/digital-ambassadors-program> retrieved on 12.08.2024



### Main Achievements: <sup>13</sup>

DAP was launched in September 2017 in Rulindo Districts and started with 50 Digital Ambassadors; 41,025 citizens were trained through the Proof of Concept (from September 2017 to June 2019). The DAP new model is designed and implemented since November 2019. This new model is based on training cost optimization through the strong partnership between the Ministry of ICT and Innovation (MINICT), Ministry of Local Government (MINALOC), Ministry of Youth and Culture (MYCULTURE), development partners and private sector. The new model was run using 110 digital ambassadors deployed across 110 cells across 30 districts. Since November 2019 (5 months), 27,602 citizens have been trained and this make a total of 67,627 citizens trained under Digital Ambassadors Program (DAP).

Currently 262 Service Access Points (SAPs) are operational in Rwanda; among them 200 are at sector level, each equipped with four (4) laptops, one (1) all in one printer and one agent. The other 62 SAPs are operating at District level each having 15 desktop computers, one all in one printer and one agent. Implementing Rwanda's Digital Ambassadors Program (DAP) in India could be a powerful approach to addressing the country's significant digital divide, particularly in rural areas and among women. Here's how the program could be adapted and implemented in the Indian context:

#### 1. Localizing the Training Content

**Language and Cultural Sensitivity:** India is a multilingual and multicultural nation with a wide range of cultural customs. The training materials should be translated into regional languages, and cultural subtleties should be integrated to make the subject relevant and accessible. In Rwanda, this strategy has been effective when teaching is given in the native tongues.

**Content Focus:** The curriculum should include basic digital literacy, with a focus on using mobile devices, accessing government e-services, digital payments, and social media. In addition, specific modules could focus on empowering women by teaching skills related to digital entrepreneurship, which is critical in the Indian context where women's participation in the workforce is relatively low.

#### 2. Community-Based Training Model

**Digital Ambassadors Recruitment:** India can replicate Rwanda's model by recruiting local youth, especially from rural and semi-urban areas, to serve as Digital Ambassadors. These ambassadors should be selected based on their digital literacy and ability to communicate effectively with their communities.

**Peer-to-Peer Learning:** As in Rwanda, Digital Ambassadors in India would provide training to their peers, using a peer-to-peer learning approach. Particularly with women who might be reluctant to attend official training sessions, this strategy can foster trust and encourage increased involvement.

#### 3. Public-Private Partnerships

**Leveraging Existing Initiatives:** India has several ongoing digital literacy initiatives, such as the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA). The DAP could be integrated with these programs, leveraging existing infrastructure and resources.

**Corporate and NGO Involvement:** Private companies and NGOs in India could partner with the government to provide technical expertise, training materials, and funding. Companies in the tech sector, such as Infosys and Tata Consultancy Services, have extensive experience in digital education and could play a significant role.

#### 4. Targeted Outreach to Women and Marginalized Groups

**Women-Focused Training:** It is important to make additional attempts to identify female Digital Ambassadors and make certain that a sizable percentage of the trainees are female. Collaborations with rural self-help groups (SHGs) and women's organisations could help accomplish objectives.

**Addressing Social Barriers:** Women encounter societal obstacles to education and technology use in several regions of India. A community awareness campaign addressing these challenges and urging families and community leaders to promote women's participation in digital training could be a part of the program.

India may substantially reduce the digital divide, especially among women and rural communities, by adopting Rwanda's Digital Ambassadors Program for the Indian context. Localising the material, making use of already-existing infrastructure, and making sure the project is inclusive and sensitive to cultural differences are all necessary for the program's success.

### CONCLUSION

In India, the gender digital divide is a complicated problem with underlying socioeconomic, cultural, and infrastructural issues. Although digital technologies have spread quickly across the nation, there are still big differences in women's access to and usage of these resources. The divide persists due to a number of factors, including safety concerns, socio-cultural norms, lack of digital proficiency, and economic hurdles. Providing access to technology alone is unlikely to be sufficient to close this gap; a multipronged strategy that tackles the root causes of inequality is needed. Crucial actions towards closing the gap include giving women digital skills, protecting their safety online, questioning constrictive cultural norms, and enhancing infrastructure in underprivileged areas. India can make significant progress towards attaining gender equality while additionally making certain that women are engaged members of the digital economy and society by concentrating on these areas. If these initiatives are successful, women will gain from them, but the country's general growth and advancement will also benefit. Achieving universal access to digital platforms is crucial for a future that is both wealthy and truly comparable.

<sup>13</sup> <https://www.minict.gov.rw/projects/digital-ambassadors-programme> retrieved on 13.08.2024



The study's recommendations for specific initiatives to close the gender digital divide include creating women-focused digital platforms, implementing gender-sensitive digital literacy programs, and expanding digital infrastructure in remote areas. By addressing these challenges, India can harness the potential of digital technologies to empower women, promote gender equality, and foster inclusive growth. In conclusion, addressing the gender digital divide is not just about providing access to technology; it is about ensuring that women can fully participate in and benefit from the digital age. This aligns with Ambedkar emphasized the importance of education for women, stating,

***“I measure the progress of a community by the degree of progress which women have achieved”***

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