DIGITALISATION IN INDIA AND WOMEN: A SOCIOLOGICAL STUDY OF HAZARIBAG DISTRICT

Abstract

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PROF. BIRENDRA NARAIN DUBEY

SUBMITTED BY

ABHISHEK KUMAR

ENROLMENT NO. 672/18

DEPARTMENT OF SOCIOLOGY

SCHOOL OF AMBEDKAR STUDIES FOR SOCIAL SCIENCES

BABASAHEB BHIMRAO AMBEDKAR UNIVERSITY

(A CENTRAL UNIVERSITY)

VIDYA VIHAR, RAIBARELI ROAD, LUCKNOW-226025

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Abstract

In recent years, digitalisation and its reach have expanded significantly. Recent progress may be observed in nearly all fields, including the social, political, cultural, and economic sectors. Education, health, the economy, information and communication, and allied fields are seeing the most tremendous shifts. In the past few years, digitalisation has been one of the most significant trends in developing nations like India. The COVID-19 pandemic has once again demonstrated to the globe the significance of digitalisation and digital infrastructure, which have made computers, smart phones, tablets, and the internet our everyday companions, and it is now more evident than ever before that research in the field of impacts of digitalisation has come to gain prominence.

India's digital customer base seems to be the second-largest in the world and is expanding at the second-fastest pace among major countries. Many digital sociologists also have marked a great potential for digital interventions in the field of education and its socio-cultural and economic convertibility. However, they have also identified the existence of a great "digital divide" on gender, class, caste, age, geographical location, and other lines. Again, they mark the "digital divide" as a new form of social stratification specific to the internet age of the 21st century. The advent of the digital era has moved real-world societal issues into the virtual sphere. Significant portions of the population continue to struggle to locate a space on digital platforms or to comprehend and participate in the digital environment to their own advantage. Consequently, it creates a digital gap between individuals and social groups called the "digital divide". According to the International Telecommunications Union (ITU), 94% of individuals between the ages of 15 and 24 in developed countries utilise the internet, compared to 65% in developing ones. Nonetheless, access is biassed towards young men. The World Bank has also identified the internet spaces as "male preserves." COVID-19 has further shed light on the foetid swamp of females' digital exclusion. India accounts for fifty percent of the global digital gender disparity, and women make up only one-third of the country's internet users.

Digital technologies provide new opportunities for development; however, technological remedies alone are not able to solve the structural issues that underlie the digital disparity in

usage among people. Education is one of the most effective means of bridging the digital divide between those with access to digital connectivity and those without. However, for inclusive development, inclusive education is regarded as indispensable, in which individuals from all demographic groups not only participate but also reap the advantages of their participation. The fast-developing nature of technology is causing significant shifts in the transmission and reception of educational resources in the modern world. The National Education Policy [NEP] 2020 has also come up with a promise of inclusiveness, demonstrated a commitment to transforming the present educational framework into a digital infrastructure and has also placed an importance on the issue of the digital divide at its origin. Several socio-cultural and politico-economic issues influence some individuals or groups to engage less or not at all with digital gadgets and platforms . These aspects are described in a number of study findings and subsequently categorised into various levels of the digital divide, such as the "accessibility divide," "usage divide," and "outcome divide". Given that the notion of the digital divide is closely tied to the classic sociological concept of social inequality, a sociological approach is important and of the highest relevance when examining digitalisation and its repercussions in the contemporary context.

As a result, the present study aims to investigate and describe the position of people with regard to digitalisation and its many levels, ranging from simple participation to benefiting from it, primarily from a sociological perspective with gender as the focus. This study further attempts to elaborate on the different elements that either facilitate or hinder digital involvement. In the study, efforts are made to analyse the position of women and other social groups within the expanding digital space in India with special influence on women's reach to digital literacy, the various levels of the (gender) digital divide, the challenges and threats they are facing in getting digital education, the analysis of interventions for digital literacy in government institutions, and the opportunities and challenges for better life chances for women in a digital-driven market economy. This research work is also concerned with the digital divide in all of its manifestations and levels. The various specific objectives of the study are illustrated in the below section.

Objectives of the Study

1) To review and evaluate the past, present, and future status of digitalisation in India.

2) To examine the general profile of respondents and observe digitalisation programmes and their outreach.

3) To analyse the representational status of respondents, particularly women, in the context of digitalisation.

4) To examine the processes and levels of the digital divide.

5) To assess the gender gap in digitalisation related opinions.

6) To explore women's representation and the gender divide on online media platforms.

To achieve the stated objective, the following hypotheses were devised and tested for their validity and reliability in order to confirm or reject them and draw a conclusion.

Research Hypotheses

1) There is no difference between the past, present, and future status of digitalisation in India and among the users of internet and social media.

2) There is no significant difference between male and female respondents in terms of digitalisation programme awareness, usage, and satisfaction.

3) There is no significant difference between male and female respondents regarding the extent of digital infrastructure representation in terms of ownership and access to digital gadgets.

4) There is no significant difference between male and female respondents in terms of process-oriented representation in digitalisation.

5) There is no significant difference between male and female respondents in terms of outcome-oriented representation in digitalization.

6) There is no significant difference between male and female respondents in terms of opinion regarding mode of education preference.

7) There is no significant difference between male and female respondents in terms of opinion on digitalisation and its impact in schools.

8) There is no significant difference between male and female respondents in terms of opinion regarding online abuse/crime and its impact.

9) There is no significant difference between male and female respondents' opinions regarding outcome-oriented representation in digitalisation in terms of opportunities and its convertibility into advantages.

10) There is no significant difference between male and female respondents' opinions regarding outcome-oriented representation in digitalisation in terms of inclusiveness and exclusion from the education process.

11) There is no significant difference between male and female respondents in terms of identifying reasons for lacking digital gadget possession.

12) There is no difference between male and female respondents in terms of representation on social media platforms.

Methodology

The study's goal is primarily descriptive and explanatory, and it employs a mixed-method approach with a deductive mode of inquiry to achieve its objectives. The research was carried out in the Hazaribag district of the state of Jharkhand using multistage cluster sampling to select respondents at random. Snowball sampling and purposive sampling have also been used as there are multiple units of sampling. There are 362 entities in total from whom data has been gathered. The total entities include 288 students for the survey, 20 teachers for the survey, 4 groups for FGD and 50 posts from the selected social media platforms for observation purposes. Questionnaires, focus group discussions, observations, and thematic content analyses have been used to collect and analyse data from both primary and secondary sources. In this study, version 22 of the software "Statistical Packages for the Social Sciences" (SPSS) was used for data analysis and report presentation.

Results and Discussions

The thesis contains eight chapters. Chapter I, "Introduction," introduces the thesis and discusses the research's context, an overview of the literature review and literature gap, objectives, hypotheses, and methodology for conducting research to assess those hypotheses. In addition to discussing the main applications and significance of the study, this chapter briefly discusses its limitations as well.

Chapter II, "Review of the Literature," attempts to contextualise and organise the literature on the proposed topic of this research in a thematic manner. It attempts to elucidate a variety

of education and digital sociology theories and perspectives that are crucial to the advancement of this research. In addition, the chapter discusses conceptual and theoretical frameworks in depth. It also identifies gaps in the literature and outlines the need for a sociological perspective in digitalisation studies.

Chapter III, "Understanding Digitalisation: Past, Present, and Future," discusses briefly the emergence and future possibilities of digitalisation, as well as a number of government and non-government programmes and initiatives within the digitalisation effort. The chapter concludes that the status and roles of internet users have changed significantly due to the sustained efforts of government and non-government entities in the field of digitalisation in the country, as is evident by the various analyses of the reports and literature cited in Chapter III. Again, the various reports that predict the future status of digital infrastructure and service delivery demonstrate that the status of digitalisation will change drastically and that the future will be highly dependent on digital technologies. Therefore, the null hypothesis that "there is no difference between the past, present, and future status of digitalisation in India and among users of the internet and social media" is rejected, and a difference has been observed between the past, present, and future status of digitalisation in India.

Chapter IV, "Socio-Economic and Socio-Demographic Profile of Respondents and their Outreach to Various Digitalisation Programmes," discusses the socioeconomic and sociodemographic profiles of the respondents in this study, as well as their outreach to various digitalisation programmes. Men and women report significantly differing levels of satisfaction with the "Government programmes on Digitalisation" and "Social Media Platforms for Digitalisation" components of digitalisation programmes. The results indicate that males are more satisfied in both cases. Moreover, for the programmes on digitalisation for women, substantially different levels of satisfaction have been observed in terms of awareness and use of the "Digitalisation Programmes for Women" component. The findings indicate that females are more satisfied in terms of awareness and utilisation of digitalisation programmes for women. Therefore, males and females differ significantly, as determined by the Mann-Whitney and Kruskal-Wallis tests. The null hypothesis is therefore rejected, and the alternative hypothesis that "there are significant differences between male and female respondents in terms of digitalisation programme awareness, usage, and satisfaction" is accepted.

Chapter V, "Digitalisation in India and Women's Representation: Processes and Levels of the Digital Divide," discusses the processes and levels of the digital disparity, with a particular emphasis on the gender digital divide. Research findings indicate that there is not a statistically significant association between gender and ownership of digital devices. However, a significant correlation has been observed between gender and access to desktop or laptop computers among the participants, gender and smartphone or tablet access do not significantly correlate. Therefore, the null hypothesis that "there is no statistically significant difference between male and female respondents regarding the extent of digital infrastructure representation in terms of ownership and access to digital gadgets" is partially true, as the different components taken under this exhibit different natures of association with gender.

The findings of Chapter V again indicate a notable correlation between gender and familiarity with email, Microsoft Office, or the Instagram platform. Nevertheless, there is a lack of substantial correlation between gender and familiarity with educational apps, YouTube, WhatsApp, or Facebook platforms. There is also no statistically significant difference between genders in terms of their level of comfort in utilising computers and engaging in electronic communication. However, a notable difference has been discovered between genders in terms of their level of comfort with the language used in digital content. Moreover, a noteworthy correlation has been discovered between the ability to create links on educational platforms, write blogs or e-articles, create email or professional accounts, and create documents using MS-Office (MS-Word, MS-Excel, and MS-PPT) and the gender of the participants. The research reveals a noteworthy correlation between gender and the frequency of utilising digital gadgets and platforms, specifically in relation to email usage (both sending and receiving), online buying or selling of products, and the utilisation of online banking and payment services. Nevertheless, no substantial correlation exists between the frequency of computer usage in schools or at home, the utilisation and accessibility of classroom resources, or engagement in online leisure activities, and gender. Therefore, the null hypothesis that "there is no significant difference between male and female respondents in terms of process-oriented representation in digitalisation" is partially true, as the different components taken under this show different natures of association with gender.

The results of Chapter V pertaining to the outcome-oriented convertibility of digitalisation indicate that a notable percentage of both male and female respondents perceive their school's preparation efforts regarding economic convertibility of digitalisation to be

insufficient. However, gender is not significantly associated with it. In terms of political convertibility, gender affects the likelihood of participating in political discussions. Furthermore, gender exerts a substantial influence on the extent and comfort level of student engagement and interaction with other students, teachers, and individuals within the community at large. Moreover, it is noteworthy that females in this context exhibit a notably lower level of engagement and interaction, and comfort with their counterparts. Therefore, the null hypothesis that "there is no significant difference between male and female respondents in terms of outcome-oriented representation in digitalisation" is partially true as the different components taken under this show different natures of association with gender.

Chapter VI, "Digitalisation and Inclusivity: Gender, Digital Divide Factors, and Opinion Status," focuses on the gender disparity in opinions regarding digitalisation aspects and the use of offline and online modalities. The findings of Chapter VI indicate that the majority of respondents prefer offline mode to partake in the education process because they believe it is easier and more enjoyable to learn offline, there will be fewer distractions, and discipline can be maintained more effectively. Males and females almost perceive the same educational preference scenario. Therefore, the null hypothesis that "there is no significant difference between male and female respondents in terms of opinion regarding mode of education preference" is fully accepted.

Further, the findings of Chapter VI indicate that internet connectivity is a significant concern for a substantial portion of the students, with the majority classifying it as a "Moderate problem." Moreover, the majority of students view online distraction as at least a "Moderate problem" at the school, indicating that it is an important issue. The null hypothesis that "there is no significant difference between male and female respondents in terms of opinion on digitalisation and its impact in schools" is partially true as the different components taken under this show different natures of association with gender.

Regarding online abuse/crime and gender-based perceptions, the results of Chapter VI indicate that a substantial proportion of both males and females believe that online abuse/crime are more prevalent than offline abuse/crime. Female respondents demonstrate a higher level of concern for online abuse, possibly influenced by their personal experiences or societal awareness. Moreover, the findings indicate that online abuse has an effect on the studies of a substantial proportion of the students surveyed. However, the majority of respondents, regardless of gender, do not believe that online abuse has a significant impact on

their physical health. The findings suggest that a substantial proportion of both male and female respondents believe that online abuse has some level of impact on their psycho-emotional health; female respondents continually reported higher percentages of impact than male respondents. The results also indicate that a sizeable proportion of both male and female respondents believe that online abuse sometimes or often compels individuals to leave online platforms. However, very few respondents have experienced online abuse to the extent that they felt compelled to leave online platforms temporarily or permanently. The null hypothesis that "there is no significant difference between male and female respondents in terms of opinion regarding online abuse/crime and its impact" is partially true as the different components taken under this show different natures of association with gender.

The findings of Chapter VI for gender-wise opinion in outcome-oriented representation in digitalisation suggest that the majority of both male and female respondents do not perceive a statistical correlation between using online resources and being given opportunities. Also, there is a lack of statistical correlation between the gender of the respondent and the digital opportunities being successfully converted into personal advantages. While there are some differences in responses between genders, both groups report relatively low percentages of experiencing opportunities and its convertibility resulting from online resource use. Therefore, the null hypothesis that "there is no significant difference between male and female respondents' opinions regarding outcome-oriented representation in digitalisation in terms of opportunities and its convertibility into advantages" is totally true and accepted.

The further findings of Chapter VI suggest a significant proportion of both males and females believe that online education affects their understanding. It is interesting to note that a higher percentage of females do not perceive online education negatively compared to males. However, gender does not seem to influence how individuals perceive the impact of online education on their exclusion from the formal schooling system. Therefore, the null hypothesis that "there is no significant difference between male and female respondents' opinions regarding outcome-oriented representation in digitalisation in terms of inclusiveness and exclusion from the education process" is partially true as the different components taken under this show different natures of association with gender.

Also, the findings of Chapter VI again identifies economic hardship as the most common reason overall and again for both males and females, but it is mentioned more frequently by males. The majority of the female respondents identified both "economic hardship and family

not allowing them" as significant reasons for their non-possession of the digital gadgets. Further, the majority of them do not find their gender to be the sole reason for their lack of digital gadgets. Females found it more relatable to their gender than males. The null hypothesis is totally rejected and the alternate hypothesis that says "there is a significant difference between male and female respondents in terms of identifying reasons for lacking digital gadget possession" holds true.

Chapter VII, "Women on Digital Media Platforms: Status of Participation and the Gender Divide," examines the representational status of social media platforms according to gender. The findings suggest that on social media platforms, there is a gender disparity between men and women who are members of these platforms. Men are also more likely than women to have a display picture on their profile and make themselves visible online. Men represent the majority of social media users, as they engage more actively in social media activities. Also, a significant proportion of social media users identified as "others" with "no display picture" (NDP) indicates that many users are unwilling to reveal their gender identity. Therefore, the analyses and findings of social media platforms lead to the rejection of the null hypothesis, and the acceptance of the alternative hypothesis that "there is a difference between male and female respondents in terms of representation on social media platforms".

The Chapter VIII, "Conclusion and Suggestions," concludes the thesis and attempts to relate the results of verifying the hypotheses to the objectives of the research. This chapter describes some of the most important findings and discusses the novel contribution of this research to the academic and literary communities. In addition, the chapter offers some suggestions and policy recommendations.

Major Findings

1) The student digital penetration rate in government secondary and higher secondary education institutions is extremely low. The population's active participation in digitalisation, as opposed to its passive consumption of digital content, is a significant concern. Also, the majority of respondents believe that offline mode of education is the better option for education and discipline management.

2) Even in less digitalised societies, gender has been designated as one of the most significant contributors to the digital divide. There exists a significant gender gap in a variety of aspects of digitalisation, including ownership and access to digital devices,

digital literacy, familiarity, proficiency, and comfort with digital devices, as well as the frequency with which these devices and digital platforms are utilised.

3) Women stated both economic hardship and family constraints more frequently than men, who cited economic hardship as the primary reason for not possessing any digital gadgets. This demonstrates the prevalent bias against women in society.

4) Despite their underrepresentation in digital spaces, women do not attribute their lack of understanding to online platforms. It is primarily due to their simple access to educational resources online, as societal biases and domestic responsibilities frequently prohibit them from attending school.

5) Both men and women responded that there is very little emphasis on the economic benefits of digitalisation in the school. However, there is a significant difference between men and women respondents in both the political participation on social media platforms and their cultural participation in terms of community engagement and comfort with it.

6) Women are underrepresented on social media platforms, both passively (i.e., as group members) and actively (i.e., as post uploaders and activity performers, etc.), and their identities (as in the case of display pictures or sometimes original names here) are often concealed.

7) In recent years, the phenomenon of digital divide has been extensively studied, especially in terms of "ownership/accessibility" and "usage" divides. Recent studies have begun to investigate the disparity in "benefits" that results from unequal access to and utilisation of digitalised devices, skills, and digital opportunities. However, this study also attempted to include the fourth level of divide that exists in terms of the "motivational lag" for digital participation and it has been found that it is dependent upon "social and cultural capital" in addition to "economic capital". "Motivational latency" is also characterised by "the divide in the purpose of use" of digital tools and platforms. In India, for instance, entertainment activities and non-educational use of digital media are more prevalent than educational use at formative stages, as this research has also revealed.

Conclusion and Suggestions

The purpose of this research is to investigate the socioeconomic impacts resulting from the digital divide in India and to assess how inadequate access to digital tools and online platforms influences learning, work, entrepreneurial endeavours, and social mobility, especially among women.

This study also involves addressing challenges related to accessibility, affordability, and proficiency with technology among disadvantaged groups such as women and investigates the underlying reasons and dynamics of the digital divide between genders. The research also attempts to recognise the particular impediments that prevent women from accessing and utilising digital tools, such as cost, social norms, cultural prejudices, and online violence based on gender. By gaining a thorough knowledge of these barriers, it is possible to devise strategies to mitigate them and cultivate a more equitable digital space.

In the wake of the rapid acceleration in digitalisation, a number of fundamental insights have developed that will assist us in navigating our digital transformation journey. First, it is evident that closing the digital divide is an important concern and we must adopt a broader understanding of "meaningful usage" than just counting connectivity. This entails ensuring that digital gadgets and services are available, affordable, accessible, and relevant for everyone, and that individuals have the skills necessary to utilise them. The second, related remark is that we need to ensure that digital use is consciously inclusive. Rapid adoption of internet services has the potential to worsen existing inequities if they are not designed with the user community, especially underprivileged populations, in consideration. Our increasing reliance on digital technology places upon us the obligation to include everyone within its scope and to safeguard our information, data, and records, as well as their overall best interests, in an equitable manner. We must keep striving for our own technological advancement while simultaneously assisting our partners in constructing inclusive and ethical digital societies.

Keywords

Digitalisation, Women, Social Capital, Gender Digital Divide, Online Media Platform