

Digital Divide: A Comparison of Undergraduate Female Student's Use of Social Media Platforms in Urban and Rural Areas

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Abstract

The Covid-19 pandemic has contributed to the increase in online education and subsequent social media use among the student communities globally. The use has drastically changed the everyday life patterns concerned with their education, communication, and entertainment needs. Research shows that social media platforms provide formal and informal learning opportunities influencing higher education. They offer a space for collaborative learning, sharing, and communicating with not only friends but also teachers. However, access and use vary among student communities based on gender, class, nationality, and language. Understanding students' experiences using social media platforms is vital beyond the barriers mentioned above. In the given context, the study contributes to understanding female students' engagement and participation with social media platforms. It tries to determine if there are differences in access use and purpose of use of social media platforms among urban and rural women students. This study identifies the digital divide in terms of urban-rural and locates the need to empower rural female students by requiring knowledge and skills as part of their educational curriculum in higher education institutions.

Keywords: Social Media Platforms, Digital Divide, Women Students, Rural-Urban Divide, Digital Literacy

Introduction

Internet use, particularly social media platforms, is growing more widespread among student groups worldwide in the post COVID-19 context. Social media platforms include wikis, video-sharing sites, photo-sharing sites, bookmarking sites, and social networking websites (Chugh and Ruhi 2019, Chugh, Grose, & Macht, 2021). Students' engagement with social media platforms is found to contribute positively and negatively to their academic performances. Initially, social media engagement of student communities was not welcomed and

was seen as a hindrance to their academic performances. However, the scope of these platforms is increasing in terms of catering to not only the social networking of its users but also their education, information, and entertainment needs. Today, it isn't easy to find a youngster who does not have a Gmail, Facebook, or Twitter account, which they use to communicate with friends, express or share their thoughts, and utilize for other purposes. Social networking platforms primarily enable students to engage in both formal (like studying course material) and informal (like searching everywhere for valuable

information) learning environments (Zachos, Paraskevopoulou-Kollia, & Anagnostopoulos, 2018). The impact of social media on universities is currently the subject of an increasing number of studies (Hamadi, El-Den, Azam, & Sriratanaviriyakul, 2022). In the post-Covid-19, the usage is increased adoption of online technologies in teaching and learning processes. They are used extensively among academicians to interact, collaborate and connect further. The research findings by Khan, Ashraf, Seinen, Khan, and Laar (2021) indicate that social media played an essential role during the pandemic because it provided opportunities for students to enhance collaborative learning. In an era when social media is an inherent part of academic communities, it is crucial to understand the nature of engagement of students, their usage patterns, purpose, and existing barriers against access and use. The present study aims to identify if any differences exist in terms of access, use, and purpose of use of social media platforms by women students from rural and urban regions.

Literature Review

The increasing demands of communication and information needs have enhanced the use of online platforms. According to the Digital 2022 Global Overview Report, out of the 1.40 billion population of India as of January 2022, it is estimated that 658.0 million internet users, which is 47 per cent (Datareportal, 2022). In India, the top 5 social media platforms (including messaging applications) are WhatsApp, with 534.30 million active users; Instagram, with 503.37 million active users; Facebook, with 491.53 million active users; Telegram, with 374.40 million active users, and Facebook Messenger, with 324.39 million users (The Global Statistics, 2022). In this context, the COVID-19 pandemic has contributed to the increase in online

education and subsequent social media use among the student community globally. Social media platforms are used more in educational settings (Busque & Mingoia, 2021). Social media offers a platform for learning that makes it simple for students to communicate with their peers and topic experts and benefits their collaborative learning (Khan, Ashraf, Seinen, Khan, & Laar, 2021).

Much of social learning takes place in social media networks, contributing to the informal learning of student communities. According to research by Hamat and Hassan (2019) of 6085 students at a Malaysian university, writing, communication, vocabulary growth, and reading were the areas of proficiency the students benefited the most from social networking. A study by Madhusudan (2012) on exploring the use of social networking sites by research scholars of the University of Delhi states that they are used in their communication for research work, and most respondents preferred the social media platforms Facebook and ResearchGate for academic purposes. In a review of social media usage in higher education from the 77 articles published from 2010 onwards, Zachos, Paraskevopoulou-Kollia, & Anagnostopoulos (2018) find that Facebook and Twitter were identified to be the essential online social media platforms for educational purposes.

According to the literature, students naturally and frequently utilize social media platforms as an informal academic tool to collaborate with classmates, plan class projects, and exchange course-related information (Bosch, 2009; Madge, Meek, Wellens & Hooley 2009; Selwyn 2009, Hamadi, El-Den, Azam, & Sriratanaviriyakul, 2022). The incorporation of social media in higher education classrooms is motivated by a desire to improve student learning outcomes, particularly

by encouraging pedagogical approaches like collaborative learning (Hamadi, El-Den, Azam, & Sriratanaviriyakul, 2022). This has created a paradigm shift in higher education, altering teaching, learning, and research. As a result of these technological advancements, many higher education institutions (and educators) are now under pressure to keep up with the world of social media users and applications (Selwyn, 2012). However, not all students have similar social media experiences regarding access and use based on gender, race, nativity, and other related socio-economic and cultural factors.

Significance of the Study

The gap between people who have access to and ability to use technology and those who do not is known as the "digital divide." Students who used computers and associated technologies growing up have an edge since they have the necessary technical abilities to take advantage of technology for learning. As per Neilsen's Bharat 2.0 internet study, almost 60 per cent of the rural population still does not actively use the Internet. Urban India continues to lead the world in the percentage of people who use the Internet actively, with a share of 59 per cent, leaving behind rural India with 41 per cent (Dey, 2022). Due to the digital divide, the adoption of technologies has not achieved the desired results (Faloye & Ajayi, 2021). Basharat, Ahmad, & Ahmad (2019) observed the existence of the digital divide among college students in the Kashmir district of Jammu and Kashmir in a study. According to the survey, students from metropolitan backgrounds use digital content more frequently than students from rural areas.

However, globally access to technology by students was not equal since the lack of infrastructures, such as broadband and wireless Internet, as well as lack of knowledge and the absence of training

institutes in rural areas as compared to metropolitan areas, create a disparity in access to the Internet. A study in Afghanistan found that inadequate internet/Wi-Fi, electricity, technological gadgets, infrastructure, time, and confidence towards use primarily hinder the use of ICTs in a university (Hashemi, Na, Noori, & Orfan, 2022). Jones, Johnson-Yale, Millermaier, & P'erez (2022) found differences in Internet usage among American college students based on race and gender in the study. College students use social networking websites for discussion, learning activities, and fun (Dhanyasree & Sharma, 2019).

Compared to men and boys, there is a significant difference in the adoption and usage of digital technology among women and girls (OECD, 2018). Considering rural female students, access to digital gadgets has improved during the Covid-19 period. This is an increase compared to previous years; however, the reason and purpose of the access are to be explored. The access to online platforms for education by female students, more specifically from rural regions, is low compared to urban male and female students. Gender discriminatory practices impact access to technology. This gender digital divide can have broader consequences in ensuring equal learning opportunities for women students. However, it is essential to understand the online social media usage patterns and purpose of use by rural women students compared to urban women students. This can pave the way to impart structured digital literacy programs to rural female students based on the observed trends.

Objectives of the Study

1. To determine if there are any differences between urban and rural women students' access to social media platforms.

2. To compare the usage patterns of social media platforms by urban and rural women students.
3. To determine if there are any differences between urban and rural women students' purpose of using social media platforms.

Hypotheses

H01 - There is no significant difference in the mean score of social media usage for education and information purposes by women students in relation to their urban-rural nativity.

H02 - There is no significant difference in the mean score of social media usage for entertainment purposes by women students in relation to their urban-rural nativity.

Methodology

The study uses a quantitative survey method to collect data from the samples taken for the research. The study's primary objective is to compare female students' access and use of social networking sites in rural and urban regions. Using purposive sampling, rural college students (60) studying in Tirunelveli, Tamil Nadu and urban college students (60) studying in Chennai, Tamil Nadu, a total of 120

students were involved in the study. A self-made closed-ended questionnaire was used to collect data from the samples. It consisted of two scales to measure the usage frequency of social media platforms and the related purpose of use. The scale measuring social media usage for education and information purposes contains 13 items with Cronbach's alpha = 0.791, and the scale measuring social media use for entertainment needs consists of 8 items with Cronbach's alpha = 0.836 each with 5 alternative responses measuring the frequency of use.

Using the Statistical Package for the Social Sciences (SPSS) the collected data are analysed through frequency and percentages along with a t-test for measuring mean differences between the urban and rural women students using independent samples 't' test.

Findings and Discussion

Analysis of Objective 1

According to the data presented in Table 1 (n=120), access to the Internet by means of smartphones is high (91.7 per cent) among rural female students. However, the use of the Internet through laptops/desktops is high (18.3 per cent) among urban women students compared to rural.

Table-1 : Frequency of access to Internet by the respondents

Access to Internet			
Gadgets used in Internet access	Nativity		Total
	Rural	Urban	
Smart Phone	55	49	104
	91.7%	81.7%	86.7%
Laptop/Desktop	5	11	16
	8.3%	18.3%	13.3%
Total			120
			100.0%

The data presented in Table 2 (n=120) shows the internet usage per day by the respondents. It is observed that internet usage for more than two hours

per day is high among urban women students (71.7 per cent) compared to rural women students (43.3 per cent).

Table-2 : Frequency of Internet access hours per day

Nativity	Internet access hours per day			Total
	Less than 1 hour	1-2 hours	More than 2 hours	
Rural	12	22	26	60
	20.0%	36.7%	43.3%	100.0%
Urban	2	15	43	60
	3.3%	25.0%	71.7%	100.0%

According to the data presented in Table 3, affording high monthly data charges is limited among rural women students, in terms of 71.7 per cent recharging

within Rs. 300 per month. Most urban women students, 40 per cent, state they recharge above Rs.300 per month.

Table-3 : Frequency of average amount used for data recharge per month

Recharge Amount	Nativity		Total
	Rural	Urban	
Below 100	2	3	5
	3.3%	5.0%	4.2%
101-200	14	16	30
	23.3%	26.7%	25.0%
201-300	43	17	60
	71.7%	28.3%	50.0%
301 & Above	1	24	25
	1.7%	40.0%	20.8%
Total			120 (100%)

In a post-Covid-19 pandemic scenario, the increase in smartphones and online classes have enhanced the access of smartphones in rural regions. However, personal desktops or laptops are beyond affordability for rural women students. Access is by means of shared smartphones, where a single phone is used by the entire family.

This impacts the usage time and time of use of the gadgets. The duration of use depends on the type of gadgets used, the strength of the network, data quality, and recharge capacity. Female students in rural regions state that problems of the poor network in their villages reduce their usage hours. Many times, they had to wait for their parents'

phones in the evenings. Data recharge is not a priority for women students in rural regions.

Analysis of Objective 2

The data presented in (Table 4) shows several differences in social media usage patterns of rural and urban women students. The rural women students

who do not use Facebook are (72.80 per cent). Twitter is (78.20 per cent), Moj is (78.2 per cent), and Josh is (80 per cent). On the contrary, the number of urban women students who use social media platforms is high: Sharechat (72.30 per cent), Facebook (69.40 per cent), and Twitter (67.7 per cent) for more than two hours per day.

Table-4 : Usage of social media platforms

Media Type	Percentage not using	Percentage of respondents using social media platforms						
		Less than 1 hr		1-2 hours		Above 2 hours		
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
WhatsApp	0.00%	0.00%	47.20%	20.00%	27.30%	27.70%	25.50%	52.30%
Instagram	41.80%	7.70%	34.50%	23.10%	16.40%	32.30%	7.30%	36.90%
YouTube	9.10%	1.50%	56.30%	43.10%	20.00%	21.50%	14.60%	33.90%
Facebook	72.80%	15.30%	10.90%	13.80%	1.80%	1.50%	14.50%	69.40%
Twitter	78.20%	21.50%	12.70%	10.80%	0.00%	0.00%	9.10%	67.70%
Telegram	70.90%	13.80%	16.40%	23.10%	1.80%	1.50%	10.90%	61.60%
Sharechat	52.70%	10.80%	25.50%	13.80%	7.30%	3.10%	14.50%	72.30%
Moj	78.2%	23.1%	7.3%	1.5%	1.8%	0.0%	0.0%	46%
MX TakaTak	80.0%	23.1%	3.6%	3.1%	0.0%	1.5%	16.4%	72.3%
Josh	80.0%	23.1%	3.6%	1.5%	0.0%	1.5%	16.4%	73.8%

Youtube, Whatsapp, and Instagram use are high compared to popular social media platforms like Facebook and Twitter. The use of social media platforms is high among urban women students and this indicates more communication, opportunities, collaborative learning and development. In a study among a sample of 3000 students in the USA, Dahlstrom, Boor, and Grunwald (2011) report that 90 per cent of them use Facebook, whereas 37 per cent use Twitter as a communication tool. The majority of rural women students 72.8 per cent do

not use Facebook for several reasons like fear of security, lack of adequate knowledge and skills, language barriers and social stigma based on gender. Also access of YouTube is high compared to other social media platforms among rural women students. YouTube usage towards accessing entertainment content can have its own consequences good or bad. Navigating entertainment content with adequate knowledge and skills is a dire requirement owing to the trends in addiction and diversion of young people.

Analysis of Objective 3

Table-5 : Social media use for education and information purpose

Constructs	Never	Rarely	Sometimes	Often	Very Often	Mean	SD
I see online course contents	12.5%	17.5%	25.8%	23.3%	20.8%	3.23	1.306
I watch education contents	8.3%	15.0%	34.2%	23.3%	19.2%	3.30	1.185
I send educational content to my friends	5.8%	13.3%	32.5%	29.2%	19.2%	3.43	1.120
I watch online news	7.5%	10.8%	49.2%	20.0%	12.5%	3.19	1.040
I search for Employment details	10.0%	21.7%	37.5%	22.5%	8.3%	2.98	1.088
I see competitive exam details	13.3%	17.5%	36.7%	22.5%	10.0%	2.98	1.159
I see personality development details	12.5%	12.5%	25.8%	38.3%	10.8%	3.23	1.184
I see nutrition and health tips	7.5%	10.8%	33.3%	37.5%	10.8%	3.33	1.056
I see beauty tips	10.8%	20.0%	26.7%	30.8%	11.7%	3.13	1.185
I see cooking contents	7.5%	13.3%	28.3%	30.0%	20.8%	3.43	1.179
I chat with my friends	7.5%	5.8%	25.8%	27.5%	33.3%	3.73	1.200
I find new friends	32.5%	25.8%	24.2%	8.3%	9.2%	2.36	1.269
I keep in touch with family abroad	26.7%	9.2%	19.2%	19.2%	25.8%	3.08	1.548

According to the data presented in Table 5, the use of social media for educational and informational needs is high among students, with a mean score greater than three. Usage of online platforms for educational needs like accessing online course content (mean =3.23), watching education content (mean =3.30), and sending education content to friends (mean =3.43). The use of online platforms in accessing

online news (mean=3.19), accessing nutrition and health tips (mean =3.33), accessing beauty tips (mean =3.13), and accessing cooking content (mean =3.43) is high above three. The use of online platforms for communication purposes among women students includes chatting with friends, with a mean value of 3.73 and keeping in touch with the family, with a mean value of 3.08.

Table-6 : Social media use in education and information

Nativity	N	Mean	SD	t-value	Sig (2-tailed)
Urban	60	44.12	8.614	-3.449	0.001
Rural	60	38.67	8.746		

H₀₁ Testing - Table 6 shows that urban women student's mean score of social media use in education and information is 44.12 and the mean score of rural women students is 38.67. It is also seen that the calculated value of t (120) =-3.449 and the associated significant value is 0.001 (p,0.05). Thus,

t is significant at 0.05 level and the null hypothesis H₀₁ is rejected. It is concluded that there is a statistically significant difference between the mean values of urban and rural students' use of social media platforms for education and information purposes.

Table-7: Social media use for entertainment purpose

Constructs	Never	Rarely	Sometimes	Often	Very Often	Mean	SD
I use film-related content	20.0%	13.3%	25.0%	15.8%	25.8%	3.14	1.457
I watch web series	12.5%	16.7%	30.0%	22.5%	18.3%	3.18	1.268
I play online games	53.3%	11.7%	22.5%	1.7%	10.8%	2.05	1.346
I hear songs/music	5.8%	5.8%	25.8%	25.0%	37.5%	3.83	1.172
I upload short videos	10.8%	14.2%	35.0%	13.3%	26.7%	3.31	1.302
I upload posts/status	9.2%	15.8%	25.8%	24.2%	25.0%	3.40	1.273
I watch celebrity's details	23.3%	18.3%	27.5%	12.5%	18.3%	2.84	1.402
I watch sports	20.8%	22.5%	25.8%	11.7%	19.2%	2.86	1.392

As per Table 7, the use of online platforms for accessing film-related content (3.14), watching web series (3.18), and watching/listening to film

songs/music (3.83) are found to be higher, with a mean score greater than three in each case.

Table-8 : Social media use in entertainment

Nativity	N	Mean	SD	t-value	Sig (2-tailed)
Urban	60	27.53	7.043	-5.242	0.000
Rural	60	21.67	5.055		

H₀2 Testing – Table 8 shows that urban women student's mean score of social media use in entertainment is 27.53 and the mean score of rural women students is 21.67. It is also seen that the calculated value of $t(120) = -5.242$ and associated significant value is 0.001 ($p, 0.05$). Thus, t is significant at 0.05 level and the null hypothesis H₀2 is rejected. It is concluded that there is a statistically significant difference between the mean values of urban and rural students' use of social media platforms for entertainment purposes.

Educational Implications and Conclusion

The study contributes toward understanding the nature of engagement and participation of urban and rural women students on social media platforms. The education sector is witnessing increased use of information communication technologies in teaching, learning, and administration processes. Knowledge and skills in using these technologies by student

communities can enable them to explore more learning and development opportunities. The study shows that access and use of social media platforms for education and development are not equal for all, especially rural women students. The barriers in the poor network, lack of individual gadgets, and higher data costs impact access and use. Though similar levels of undergraduate education, urban-rural demography determines the nature of access and related opportunities. This creates the need for digital literacy, ensuring safe and informed navigation on online platforms. Another significant finding of the study is that social media platforms are highly used for entertainment and communication compared to educational purposes. This necessitates appropriate digital literacy programs for students to use digital skills for education and development. Structured digital literacy programs based on the needs of both urban and rural women students will serve the purpose.

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