Internet Usage among Senior Secondary School Students: A Study of Locality and Institutional Differences

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ABSTRACT

Inequalities in digital access and engagement continue to shape educational opportunities within secondary schooling contexts. This study examines variations in internet usage among senior secondary school students by analysing differences across locality (rural-urban) and institutional type (government-private). Grounded in the digital divide framework, the research explores how structural and contextual factors influence patterns of online engagement among adolescents. A descriptive survey method was adopted, and data were collected from 304 senior secondary school students using the Internet Usage Scale developed by Saini and Kaur (2017). The instrument demonstrated acceptable internal consistency as indicated by Cronbach's alpha. Data were analysed using descriptive statistics to determine overall usage trends and independent samples t-tests to assess group-based differences. The results indicate that internet usage is not uniformly distributed across educational contexts. Urban students reported significantly higher engagement levels compared to rural students, reflecting infrastructural and resource-based disparities. Similarly, students enrolled in private institutions exhibited greater usage intensity than those in government schools, suggesting institutional differences in digital exposure and support systems. These findings suggest that digital inequality in school education is multidimensional, shaped by geographic and institutional conditions rather than individual factors alone. The study contributes to ongoing debates on educational equity by emphasizing the need for context-sensitive digital policies that address structural gaps in access, quality of connectivity, and digital learning environments.

Keywords: Digital Divide; Internet Inequality; Locality; Institutional Type; Adolescents; Educational Technology

INTRODUCTION

Digital technologies have become deeply embedded in the everyday experiences of adolescents, reshaping not only communication practices but also educational participation. In secondary schooling, internet usage now functions as an enabling resource for academic research, collaborative learning, and access to global knowledge networks. Despite the increasing normalization of digital connectivity, patterns of engagement remain uneven across student populations. Contemporary scholarship argues that digital inequality is no longer confined to access alone but is reflected in differentiated opportunities for meaningful use (Helsper & Eynon, 2010; Van Dijk, 2020).

Geographical context constitutes a critical dimension of this inequality. Rural–urban disparities in infrastructure, bandwidth availability, and technological ecosystems continue to influence students' exposure to digital tools. Empirical studies have demonstrated that urban environments tend to provide stronger digital ecosystems, including institutional support, peer learning networks, and technology-rich classrooms, which enhance online participation (OECD, 2019). In contrast, rural settings often experience infrastructural constraints that limit both frequency and diversity of internet engagement. Such locality-based differences can shape not only the quantity of usage but also its academic orientation.

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Institutional type further mediates digital participation within school education. Research suggests that private schools frequently demonstrate greater integration of information and communication technologies (ICT) into pedagogical processes compared to government institutions, owing to differences in funding models, administrative autonomy, and resource allocation (Warschauer, 2004; Wei et al., 2011). These institutional variations influence students' digital exposure, support mechanisms, and opportunities to develop online competencies. Consequently, examining internet usage through institutional and locality lenses provides insight into structural determinants of digital participation.

While prior studies have explored demographic influences on adolescent internet engagement, fewer investigations simultaneously analyse locality and institutional factors within the context of senior secondary education. Addressing this gap, the present study examines variations in internet usage among senior secondary school students with specific reference to locality and type of institution. By foregrounding contextual determinants, the study contributes to a structural understanding of digital divide in school education and offers evidence to inform equitable digital policy interventions.

Background of the study

Research on adolescent internet usage consistently highlights the influence of structural and contextual factors such as locality and institutional environment. Warschauer (2004) emphasized that the digital divide extends beyond physical access to technology and includes inequalities in meaningful participation shaped by social and educational contexts. Similarly, Livingstone and Helsper (2007) found that variations in young people's online engagement are closely linked to socio-demographic and institutional support systems. Expanding this perspective, Helsper and Eynon (2010) argued that digital competence and intensity of use are influenced by educational background and contextual exposure rather than age alone. From a structural standpoint, Wei et al. (2011) demonstrated that environmental and institutional determinants significantly affect digital participation patterns. International evidence from OECD (2019) further reported persistent rural-urban disparities in digital access and usage among school students. Theoretical contributions by Van Dijk (2020) conceptualized digital inequality as multi-layered, involving access, skills and usage outcomes shaped by locality and institutional resources. Additionally, Selwyn (2016) observed that differences in school type, funding, and ICT integration policies produce variations in students' digital learning opportunities. Collectively, these studies provide a strong foundation for examining internet usage among senior secondary school students in relation to locality and type of institution.

Significance of the study

The present study holds significance in advancing the understanding of digital inequality within school education by examining internet usage among senior secondary school students in relation to locality and type of institution. While access to digital technologies has expanded considerably, disparities in usage patterns persist across rural-urban contexts and between government and private institutions. By empirically investigating these structural determinants, the study contributes to the growing discourse on the digital divide in secondary education. The findings provide evidence-based insights for policymakers, school administrators, and educators to design targeted interventions that promote equitable digital access and meaningful engagement. Furthermore, the study supports the development of inclusive ICT policies aimed at reducing contextual and institutional gaps in digital participation among adolescents.

Objectives of the study

i. To examine differences in internet usage among senior secondary school students based on their locality (rural and urban).
ii. To analyse differences in internet usage among senior secondary school students with respect to type of institution (government and private schools).

Hypotheses of the study

i. H_{01}: There is no significant difference in internet usage among senior secondary school students based on their locality (rural and urban).

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ii. H_{02}: There is no significant difference in internet usage among senior secondary school students with respect to type of institution (government and private schools).

Methodology Used

The present study adopted a descriptive survey design to examine differences in internet usage among senior secondary school students with respect to locality (rural-urban) and type of institution (government-private). The sample comprised 304 senior secondary school students selected through stratified random sampling to ensure proportional representation across locality and institutional categories. Data were collected using the Internet Usage Scale developed by Saini and Kaur (2017), which measures the extent and patterns of students' online engagement. The tool demonstrated acceptable reliability, as indicated by Cronbach's alpha. The collected data were analysed using descriptive statistics (Mean and Standard Deviation) to assess overall usage levels and independent samples t-tests were employed to determine significant differences based on locality and type of institution.

Data Analysis and Interpretation

Comparison of Internet Usage Among Senior Secondary School Students in relation to their Locality.

In order to compare Internet Usage among rural and urban senior secondary school student, t- value was computed and shown in table 1.

Table- 1 Mean, Standard Deviation and 't' Value for Rural and Urban Senior Secondary School Students on Internet Usage

Sr. No.	Locale	Number	Mean	Standard Deviation	Degree of Freedom (df)	't'Value
1	Urban	152	46.44	10.712	302	2.164*
2	Rural	152	43.86	10.056		

Note: * indicates that the calculated t-value is significant at acceptable level of significance.

Table value of 't' for df 302 at 0.05 level of significance is 1.97.

Table 1 showed that the calculated 't' value of 2.164 come to be highly significant at 0.005 level of significance for the two groups of urban and rural senior secondary school students. Urban exhibit a higher mean internet usage score compared to their counterparts. Hence, it is interpreted that urban and rural senior secondary school students differ significantly to their internet usage. Since, the calculated 't' value of groups reached up to acceptable level of significance on their internet usage.

Since the calculated 't' value representing the significance of the difference is turned out to be 2.164, which is significant at 0.05 level of significance. Hence hypothesis stated "There is no significant difference in internet usage among senior secondary school students based on their locality (rural and urban)" is rejected.

Comparison of Internet Usage Among Senior Secondary School Students in relation to their Types of School.

In order to compare Internet Usage among Government and Private senior secondary school student's 't' value is computed which is given in table 2.

Table-2 Mean, Standard Deviation and 't' Value for Government and Private Senior Secondary School Students on Internet Usage:

Sr. No.	Types of School	Number	Mean	Standard Deviation	Degree of Freedom (df)	't'Value
1	Government	152	43.38	11.534	302	3.002*
2	Private	152	46.93	8.935		

Note: * indicates that the calculated t-value is significant at acceptable level of significance.

Table value of 't' for df 302 at 0.05 level of significance is 1.97.

Table 2 showed that the calculated 't' value of 3.002 come to be highly significant at 0.005 level of significance for the two groups of government and private senior secondary school students. Private exhibit a higher mean internet usage score compared to their counterparts. Hence, it is interpreted that government and private senior secondary school students differ significantly to their internet usage. Since, the calculated 't' value of groups reached up to acceptable level of significance on their internet usage.

Since the calculated 't' value representing the significance of the difference is turned out to be 3.002, which is significant at 0.05 level of significance. Hence hypothesis stated "There is no significant difference in internet usage among senior secondary school students with respect to type of institution (government and private schools)" is rejected.

DISCUSSION

The present study examined differences in internet usage among senior secondary school students with respect to locality (rural-urban) and type of institution (government-private). The findings revealed that urban students reported significantly higher mean scores than rural students, and the difference was statistically significant. This suggests that locality continues to be a strong determinant of internet usage at the senior secondary level. The presence of significant rural-urban disparity may reflect unequal access to infrastructure, limited digital resources, and differences in connectivity, which continue to sustain the traditional access-based digital divide.

Similarly, the comparison based on type of institution indicated a significant difference between government and private school students in terms of internet usage. The higher mean scores of private school students suggest that institutional type substantially influences overall levels of digital engagement among adolescents in the present context. This finding may indicate variations in institutional support, availability of digital facilities, and exposure to technology-integrated learning environments.

Overall, the results imply that structural factors such as locality and institutional type continue to shape digital inequality, and their impact on basic internet usage levels remains significant. However, it is important to note that the study measured overall usage rather than qualitative dimensions such as digital skills, academic orientation, or quality of engagement.

CONCLUSION

The study concludes that there are significant differences in internet usage among senior secondary school students based on locality and type of institution. Urban students, as well as private school students, demonstrate higher levels of internet engagement compared to their counterparts. These findings suggest the continued presence of structural disparities in access and engagement at the level of basic internet usage.

Nevertheless, further research is needed to explore qualitative aspects of digital engagement to better understand deeper dimensions of digital equity in school education.

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