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Internet Use by Rural and Urban College Students: A Comparative Study

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ABSTRACT

Internet has become the backbone of the modern education system. The academic community uses internet to satisfy its diverse needs; be it information, education, communication, or research. The students, who were born during full bloom of internet revolution, extensively use internet to satisfy their various needs. Therefore, the present study was conducted to compare the use of internet by the rural and urban college students and identify the problems faced while searching the internet. The stratified random sampling technique was employed to select students and data collected through a questionnaire. The results reveal that majority of the students are frequent users of the internet using internet from daily to weekly basis in which use by urban students is more than their rural counterparts. The findings further reveal that rural students mainly use internet at home whereas urban students highly use internet at commercial cyber cafes. Majority of the urban students use internet primarily for a specific information whereas rural students mostly use internet for education. Majority of students, irrespective of regional differences, don't use internet sources like e-magazines, e-journals, e-books, wikis and blogs up to their expected usage. The findings also indicate that both the rural and urban students face the same problems with slight variations like information overload (too many hits) followed by internet illiteracy (lack of internet operating/searching skills), financial barrier (paid information), and information pollution (too many irrelevant hits).

Keywords: Internet, usage pattern, web use, internet surfing, urban college students, rural college students

1. INTRODUCTION

Internet, the ever expanding technology, serves as one-stop point for all the needs of academic community, be it information, education, communication, or research. It provides access to galaxies of internet services round the clock (24X7) and sources at a click. These galaxies of internet services and sources have attracted a large number of people from all over the world towards the internet. According to Internet World Statistics[1], the population of internet users worldwide is 1,733,993,741, almost covering 25.6 per cent of the total world population. The highest percentage of internet users belongs to younger generation who opened their eyes in full light of internet age. The college students are the main dominators of these services and sources as they are well versed with the new technologies and their applications in the present networked society. Williamson[2] reports that out of 18.0 million college students, 17.1 million (95.0 %) go online at least once a month in 2007 and out of 18.2 million, 17.4 million (95.7 %) use internet once a month in 2008 in USA.

1.1 Internet Services in Kashmir Valley

Internet services were introduced in the Kashmir Valley during 1994-95. At that time, there were four ISPs in the Kashmir valley: National Telecom Company BSNL owned by Government of India and privately owned ISPs—IPEAKS; SLICNET; and INFONET[3]. Presently, six ISPs are operational in the valley, BSNL, Airtel, Aircel, Tata Indicom, Reliance, and Vodafone. There are more than 100 cyber cafés in Srinagar alone. Some of the leading cyber cafés operating in summer capital of the Valley is ethernet, hotline, CNET, Net Surfer, and BBC online. The government also established 57 community information centres in the Kashmir valley to provide internet services to the public[4].

1.2 Internet Facility in Colleges

The internet service isn't available to the whole academic community in Kashmir valley. Most of the higher institutions like University of Kashmir, Srinagar and National Institute of Technology (NIT), Srinagar have

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started to provide these facilities to the academic community from last few years. The University of Kashmir has played a leading role in initiating the process. It established the internet access centres in the library premises separately for students, scholars, and teachers in 2002 and on December 4, 2008 opened two more browsing centres and named these as 'E-resource Centre' and '24X7'. Now almost more than 200 computers are available in the library for browsing the online information. Besides the services in central library of the University, internet access centres are available in almost all departments besides the Wi-Fi system available in the whole campus. Besides, some other higher academic institutions like Sher-i-Kashmir University of Agricultural Sciences and Technology-Kashmir (SKUAST-K), Sher-i-Kashmir Institute of Medical Sciences (SKIMS), and NIT, Srinagar, provide internet services to the academic community since the last decade. Initiated by these universities, most of the degree colleges have also established browsing centres for their academic communities to enhance their academic performance. The students also exploit these services for various purposes. Therefore, the present study is an attempt to compare the internet use by rural and urban college students.

2. LITERATURE REVIEW

The available literature on the internet usage reveals that the internet is widely used by the students' community all over the world for different purposes. Jones[5], *et al*. revealed that 79 per cent of college students agree that internet use has a positive impact on their college academic experience. Mishra[6], *et al*. indicated that a majority of the students (85.7 %) use internet in which the male students are more than female students. Blaiso[7] revealed that urban respondents use internet more than their rural counterparts. Laite[8] reported that 57.6 per cent of the undergraduate students used internet 1-2 times in a week, another 37.1 per cent used it 1-2 times in a day, whereas 54.7 per cent of the graduate students used internet 1-2 times in a week and 37.7 per cent used it 1-2 times in a day. Kumar and Kaur[9] disclosed that majority of the respondents (69.4 %) used the internet for educational purpose, (51.9 %) for research purpose, (47.4 %) for communication purpose, and (34.7 %) for entertainment purpose. Pivec[10] identified that 45 per cent of the students used internet for entertainment, 33 per cent for news and information, and 22 per cent for education, respectively. Bao[11] reported that students search internet for information related to both their academic (83.2 %) and non-academic purposes (73.8 %). Zhang[12] depicted that 94.2 per cent of the scholars used e-mail, 92.3 per cent web, 90.4 per cent mailing lists, 83.3 per cent Telnet, and 80.1 per cent FTP, respectively.

Study by Tadasad[13], *et al*. revealed that 87.4 per cent of the respondents used the internet for e-mail, 54.5 per cent for surfing websites, 52.4 per cent for reading newspapers, and 45.5 per cent for enjoyment, fun, and playing games. Ureigho[14], *et al*., identified that 21.70 per cent of the respondents used internet for chatting, 20.92 per cent for e-mail service, 19.87 per cent for research materials, 18.75 per cent for online dating, 15.53 per cent for entertainment, and 3.22 per cent for religious information.

The available literature reveals that a good number of studies have been conducted about the internet use by academic community. However, the gaps are obviously there; as the use of internet sources and problems faced in searching the internet by the new generation students haven't been taken care of. Moreover, the present study is conducted to compare the internet use by rural and urban students, which is a step forward in the research.

3. OBJECTIVES

The present study was conducted to compare the use of internet by the rural and urban college students and to identify the problems faced by them while searching the internet.

4. METHODOLOGY

The survey method of research was used to conduct the study and questionnaire was used as a data collection tool. After the survey, a questionnaire was drafted, it was pre-tested with 30 students. The questionnaire was then modified (simplified) base on the result of the pre-test. Later, the data was collected from 302 college students (Net generation) during academic sessions. The stratified random sampling technique was employed for on the spot selection of students. The data was collected with respect to three demographics, i.e., gender, region, and faculty. The questionnaire was administered personally to ensure the excellent response rate as well as to avoid any misunderstanding while providing responses. The data were analysed using different quantitative techniques and presented in the appropriate formats.

5. SCOPE

The scope of the present study was limited to the academic college students of Kashmir valley covering the faculties of general science, social sciences, humanities, business and commerce and computer science. The total number of such colleges in Kashmir valley is 20 in which 11 are falling in rural areas and 9 in urban areas.

6. LIMITATIONS

The study was involving the college students, and therefore, it was not projectable to the entire population. Further, the information collected was based on a small

group (*n*=302) of college students who used internet, and hence, the results cannot be applied to entire new generation students.

7. DATA ANALYSIS

7.1 Frequency of Internet Use

The results depict that 80.47 per cent of college students use internet ranging from daily to weekly in which 25.17 per cent used it daily, 31.46 per cent 2/3 times/week, and 23.84 per cent once a week. The area-wise break up of data showed that urban students were frequent users of internet than rural students as 73.95 per cent of rural students used internet ranged from daily to weekly compared to 84.70 per cent of urban students (Table 1).

Table 1. Frequency of the internet use by rural and urban students

Frequency of internet use	Total	Rural	Urban
Daily	76/302 (25.17)	25/119 (21.01)	51/183 (27.87)
2/3 times/week	95/302 (31.46)	36/119 (30.25)	59/183 (32.24)
Once a week	72/302 (23.84)	27/119 (22.69)	45/183 (24.59)
2/3 times/month	43/302 (14.24)	22/119 (18.49)	21/183 (11.48)
Once a month	16/302 (5.30)	9/119 (7.56)	7/183 (3.83)

**Figures in parenthesis indicate percentage*

7.2 Places of Using Internet

The data discloses that majority of the students (33.44 %) used internet at commercial cyber cafes followed by home (26.16 %) and college (19.21 %). The regional data showed that rural students mostly used internet at home (29.41 %), followed by college (21.85 %) and commercial cyber cafes (18.49 %) whereas urban students mostly use internet at commercial cyber cafes (43.17 %), home (24.04 %), and college (17.49 %). It is also clear from the data that rural students used community information centres (14.29 %) more than urban students (2.73 %) as most of these centres are located in rural areas (Table 2).

7.3 Purposes of Internet Use

It is clear from the study that students used internet primarily for information (36.42 %) followed by education (28.15 %), communication (16.89 %) and audios and videos (12.91 %) respectively. A small number of students (5.63 %) used internet for other purposes (especially downloading online games and images). The results further revealed that urban students used internet more for information (39.89 %) than rural students (31.09 %), whereas more rural students used internet for education (35.29 %) than urban students (23.50 %) (Table 3).

Table 2. Place of using the internet by rural and urban students

Place of using internet	Total	Rural	Urban
Commercial cyber café	101/302 (33.44)	22/119 (18.49)	79/183 (43.17)
Community information centre	22/302 (7.28)	17/119 (14.29)	5/183 (2.73)
College	58/302 (19.21)	26/119 (21.85)	32/183 (17.49)
Home	79/302 (26.16)	35/119 (29.41)	44/183 (24.04)
Cell phone	34/302 (11.26)	16/119 (13.45)	18/183 (9.84)
Others	8/302 (2.65)	3/119 (2.52)	5/183 (2.73)

**Figures in parenthesis indicate percentage*

Table 3. Purposes of internet use

Purpose of internet use	Total	Rural	Urban
Information	110/302 (36.42)	37/119 (31.09)	73/183 (39.89)
Communication	51/302 (16.89)	20/119 (16.81)	31/183 (16.94)
Education	85/302 (28.15)	42/119 (35.29)	43/183 (23.50)
Audios and videos	39/302 (12.91)	14/119 (11.76)	25/183 (13.66)
Others	17/302 (5.63)	6/119 (5.04)	11/183 (6.01)

**Figures in parenthesis indicate percentage*

7.4 Use of Internet/Web Sources

The data shows that 63.91 per cent students used e-newspapers, 39.07 per cent used e-magazines, 23.84 per cent used e-books, and 13.91 per cent used e-journals. Besides these sources, 47.02 per cent used other sources like general websites, news channels, sports channels, dictionaries, encyclopaedias, and many others.

The region-wise break up of data shows that urban students used e-newspapers (65.03 % versus 62.18 %) and e-books (25.68 % versus 21.01 %) more than rural students whereas rural students used e-magazines (42.86 % versus 36.61 %) and e-journals (15.13 % versus 13.11 %) more than urban students (Table 4).

7.5 Reasons to Use Web Sources

The students highlight and related many useful features of web sources like accessibility, interactiveness, up-to-date, timeliness, wide coverage, and multimedia. Up-to-date information (40.73 %) was rated as the best feature followed by timeliness (24.17 %).

Table 4. Use of internet sources

Type of internet source	Total	Rural	Urban
E-books	72/302 (23.84)	25/119 (21.01)	47/183 (25.68)
E-magazines	118/302 (39.07)	51/119 (42.86)	67/183 (36.61)
E-newspapers	193/302 (63.91)	74/119 (62.18)	119/183 (65.03)
E-journals	42/302 (13.91)	18/119 (15.13)	24/183 (13.11)
Blogs	65/302 (21.52)	24/119 (20.17)	41/183 (22.40)
Wikis	112/302 (37.09)	40/119 (33.61)	72/183 (39.34)
Online libraries	42/302 (13.91)	16/119 (13.44)	26/183 (14.21)
Databases	74/302 (24.50)	31/119 (26.05)	43/183 (23.50)
Others	142/302 (47.02)	59/119 (49.58)	83/183 (45.36)

**Figures in parenthesis indicate percentage*

The region-wise information shows that rural students use online sources more than their urban counterparts due to remote access and up-to-date features, whereas urban students used online sources more than their rural counterparts due to interactive and timeliness features (Fig. 1).

7.6 Use of Search Engines

The most widely used search engine is Google (56.95 %) followed by Yahoo (22.19 %). The area-wise figures show that rural students use Google (61.34 % versus 54.10 %) more than urban students whereas urban students use Yahoo (21.85 % versus 22.40 %) slightly more than rural students (Table 5).

Table 5. Use of search engines

search engine	Total	Rural	Urban
Google	172/302 (56.95)	73/119 (61.34)	99/183 (54.10)
Yahoo	67/302 (22.19)	26/119 (21.85)	41/183 (22.40)
Rediff	15/302 (4.97)	4/119 (3.36)	11/183 (6.01)
Altavista	28/302 (9.27)	10/119 (8.40)	18/183 (9.84)
Others	20/302 (6.62)	6/119 (5.04)	14/183 (7.65)

**Figures in parenthesis indicate percentage*

7.7 Problems Faced While Searching

The students faced various problems while searching the internet. The widely faced problem was information overload–too many hits (39.74 %), followed by internet illiteracy–lack of internet operating/searching skills (23.84 %), financial barrier–paid information (15.89 %), and information pollution–too many irrelevant hits (13.91 %).

The other problems faced were lack of downloading facility, restricted access, language barrier, etc. It is also visible that urban students felt information overload (44.81 % versus 31.93 %) more than rural students whereas rural students faced information pollution, financial barrier, and internet illiteracy more than urban students (Table 6).

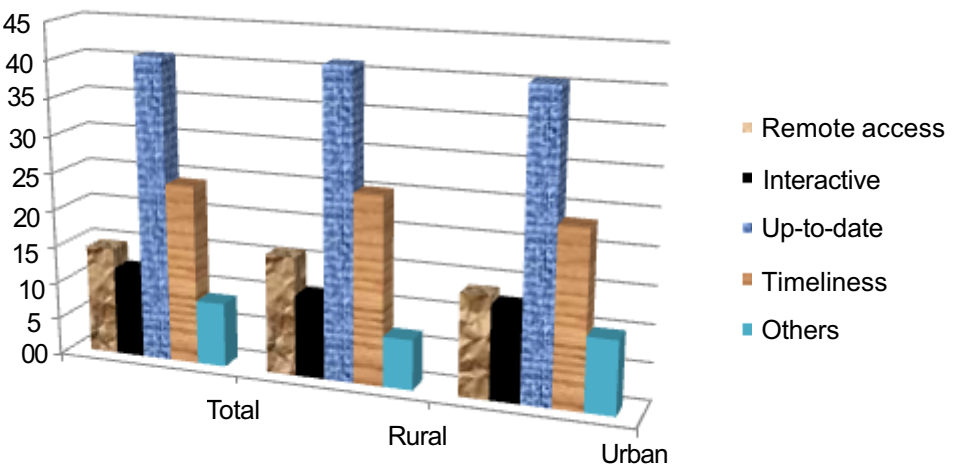

Figure 1. Reasons to use web sources (region-wise).

Table 6. Internet searching problems

Internet searching problems	Total	Rural	Urban
Information overload	120/302 (39.74)	38/119 (31.93)	82/183 (44.81)
Information pollution	42/302 (13.91)	17/119 (14.29)	25/183 (13.66)
Financial barrier	48/302 (15.89)	23/119 (19.33)	25/183 (13.66)
Internet illiteracy	72/302 (23.84)	32/119 (26.89)	40/183 (21.86)
Others	20/302 (6.62)	9/119 (7.56)	11/183 (6.01)

**Figures in parenthesis indicate percentage*

8. FINDINGS

The analyses of data reveal the following:

- Majority of the students were frequent users of the internet, using internet ranging from daily to weekly in which urban students were more than their rural counterparts.
- Majority of the students used internet at commercial cyber cafes, followed by home and college, respectively. Rural students mostly used internet at their homes whereas urban students mainly use Internet at commercial cyber cafes.
- Most of students used internet for getting information followed by education and communication, respectively. Majority of the urban students used internet primarily for information whereas rural students mainly used internet for education.
- Majority of students used e-newspapers whereas other internet sources like e-magazines, e-journals, e-books, encyclopaedias, and dictionaries were not explored to a larger extent. Urban students used e-newspapers and e-books more than the rural students whereas rural students used e-magazines and e-journals more than the urban students.
- Majority of the students used Google followed by Yahoo. However, rural students used Google more than urban students whereas urban students used Yahoo slightly more than these rural students.
- The students used, irrespective of regional differences, web sources due to their up-to-date and timeliness features.
- The students faced various problems while searching the internet. The widely faced problem was information overload, followed by internet illiteracy. Urban students faced information overload more than rural students whereas rural students faced information pollution, financial barrier, and internet illiteracy more than urban students.

9. SUGGESTIONS

The following suggestions are made for optimum utilisation of internet:

- The authorities should take immediate steps to establish browsing centres in all rural and urban colleges with fast internet connectivity. The adequate facilities in terms of space, staff, and technology (number of computers, etc.) should be available for maximum utilisation of internet sources and services. The rural colleges shouldn't be ignored in any condition as it can widen the gap of digital divide.
- The internet facility should be extended to libraries, reading rooms, and hostels to increase internet access and usage.
- Rural students do not have adequate internet facilities in their localities. There is a need to establish more commercial cyber cafés, community information centres in towns and information kiosks in villages to overcome this problem.
- The administrators and information professionals should take adequate steps to make students aware about the proper use of the internet and make their use focused and purposeful.
- Internet sources like e-journals, e-books, encyclopaedias, dictionaries, wikis, blogs, etc., are not highly used by the rural and urban students. The student should be made aware about these sources and their impact on educational achievements through internet literacy programmes.
- Library and information professionals should make themselves aware of the open access resources like repositories, digital libraries, databases, directories, and others using which they can access quality information free of cost.
- Library and information professionals should take appropriate steps to make the students aware about how to find relevant information from the internet. For this purpose, the need is to conduct workshops to train them in internet searching. The workshops should focus on internet search tools, techniques, and tips. The students should be made aware about the search tools like search engines, subject-specific search engines, gateways, portals, metasearch engines, directories, invisible web search tools,etc.
- Internet illiteracy (operating skills) is one of the major problems that needs immediate attention. The training programmes should be conducted to increase the internet skills of the students. These programmes should focus on all aspects of the internet literacy.

The expertise of library and information professionals and information technology professionals need to be tapped to conduct training and refresher courses for students to make them internet literates. The special programmes should be conducted for rural students as the problem of internet illiteracy is more common among rural college students.

To make the internet use effective in academics, the serious approach by authorities is needed to implement these suggestions on a timely basis.

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