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STUDENTS' PERCEPTIONS ON USAGE OF INTERNET TOOLS & RESOURCES: AN EMPIRICAL STUDY IN RAJSHAHI UNIVERSITY, BANGLADESH

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Abstract : This study attempts to explore the nature and ways of using Internet tools and resources by the students of Rajshahi University in Bangladesh. A structured questionnaire was designed with a special view to seek out the purposes and varied areas of Internet usage, satisfaction levels of users and the facilities of Internet used frequently etc. to carry out the survey. Findings of the study indicate that most of the students are using Internet resources from very recent years and they have a positive attitude towards its usage. The findings also reveal that a high percentage of students use Internet for downloading resources, study and learning, searching course materials and social networking. The study highlights the reasons as well as the current state of facilities of using Internet by the students. It also focuses on the problems that deter the frequent use of Internet and proposes the time befitting suggestions for overcoming the problems of using Internet.

Keywords: Internet use, Internet resources, Search engine, Internet café, Social network, Rajshahi University, Bangladesh.

Introduction

Bangladesh is a South Asian developing country with an area of 147,570 sq km and a large population of 152,518,015 (BBS, 2012). It was connected to the Internet in 4 June 1996 with legalizing the VSAT to operate as Internet Service Provider (ISP) (Azad and Islam, 1997). But before that, several network related firms offered off-line Internet services from 1993. There was a remarkable growth of Internet in 1997 and user boosted ten times higher

than the previous years. The country was connected to the global information super highway on May 2006. Internet is now providing ample of value added services to the users but its penetration rate is still in the tiny level 3.5% on 2011 (Internet World Stats, as on December 31, 2011) which was 0.2% in 2003 (Nasiruddin, 2003). Moreover, the Facebook penetration rate is 1.9% (Internet World Stats, as on September 30, 2012).

The universities in Bangladesh are mainly categorized into public and private universities. The public universities are autonomous and funded by the government whereas private universities are funded by non-government organizations and private bodies. At present, there are 34 public and 58 private universities in Bangladesh (University Grants Commission of Bangladesh, 2012). Internet is being used more or less in almost all public and private universities than the other higher educational institutions in Bangladesh.

Rajshahi University was established on 1953 and situated in the Northern part of Bangladesh in the Rajshahi Metropolitan City. It is the second largest public university of Bangladesh which has been contributing on the quality education since its inception. It comprises 8 faculties with 47 departments and 5 institutes. The number of student is 25000 (approximately). About 1100 teachers have been teaching that large number of students with dignity and labor. The university has been providing various degrees namely Honours, Masters, Mphil and PhD on different disciplines. The university formally connected with the Internet sometime in January 2000 when it took connection from a local commercial ISP which they replace by set upping their own VSAT in October 2002. During 2001 the authority set up its fiber-optic based own campus area LAN to connect all the departments, academic building, administrative building and central library. In 2011 the LAN has been extended up to the students' residential hall and teachers' residential area within the campus which is financed by the University Grants Commission of Bangladesh (UGC) under its HEQEP (Higher Education Quality Enhancement Project) program. The students can access into the Internet from their department lab/library, faculty lab, computer center, central library and residential hall. But not all the department lab/seminar library and faculty lab is equipped with Internet facilities. In July 2012, the authority has introduced near half a square kilometer Wi-Fi network zone to facilitate Internet facilities for the bona fide students. It needs to be mention here that, only the students of 4th year honours, masters and postgraduate level are allowed to access to Internet from the computer centre and central library of the university. Otherwise they have to facilitate personal computer, EDGE modem, WiMAX, cell phone or Internet café.

Internet is the sources of ocean like information. It provides vast amount of information on every field and subject. There are hundreds of millions web

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pages, bibliographical databases, and full-text databases available on the Internet (Prasher, 2003). Now a day's Internet has been widely used in different sectors especially in universities for the academic, research, business, entertainment and other purposes. University students are now aware on using Internet for satisfying their demand of knowledge, communication, research and education etc. This study has been carried out among the students of Rajshahi University and is limited to the extent of Internet use by them. It is the first work of its type on the students of Rajshahi University.

Objectives

The general objective of the study is to map out the Internet use of the students of Rajshahi University and to know the present situation of Internet access facilities. The specific objectives of the study are:

- To assess the frequency of Internet use by the students of Rajshahi University.
- To study the preference of browser program.
- To find out the uses of Internet tools and resources.
- To trace out the purposes of Internet use by the students.
- To determine constraints that hinder the frequent use of Internet.
- To provide valuable suggestions for overcoming the problems of using Internet.

Literature Review

A good amount of research has been conducted on the Internet use in the universities of developed countries, but there have been a few on developing countries like Bangladesh. For conducting the present study a review of related literature was completed. Nasiruddin (2003) tried to identify the level of Internet use by academic staff in Rajshahi University, Bangladesh. He studied 240 academics for accessing information and communication activities in 4 groups by academic designation and determined differences exist in Internet usage according to their academic ranks. He found that Internet use by academics is useful for some common needs and that the academic rank of users is an important factor in determining the priority of needs. Also identifies some barriers to adequate use of Internet resources.

Badu and Markwei (2005) did a work on the Internet awareness and use in the University of Ghana. In this study they found that most academic staff and postgraduate students at the University of Ghana are aware of the resources of the Internet, but use them relatively infrequently. E-mail is the most popular resource, and is used mainly for social reasons and for contacting international colleagues. Karim and Hazmi (2005) tried to understand the use, perceptions, and opinions of several postgraduate students and faculty members in a faculty of Islamic Studies at International Islamic University Malaysia, pertaining to information about Hadith on the

Internet. The findings indicated that almost all participants have referred to the Internet to get information about Hadith. The analysis of the interviews has revealed the purpose of use, method of assessment used and the underlying issues involved as perceived by the participants.

Roknuzzaman (2006) described the current state of Internet access and its usage in Rajshahi University and surveyed 47 departments of 7 faculties, 5 institutes, the university computer centre, the central library and the administrative building to examine the overall Internet access facilities and its usage by the academics, administrative staffs and research students. He produced evidence that nearly half of the responsible authorities of the various sectors are not satisfied with the existing facilities owing to several constraints and suggested future directions for better Internet access in the common interest of the university community.

Batool and Mahmood (2010) conducted a study on Internet café users in Lahore, Pakistan where they surveyed 242 users at 49 Internet cafés in the city of Lahore and found that the cafés were mainly occupied by male users. Students were the most regular users who came mostly for entertainment, chat and email facilities. Abdullah Al Mahmud (2011) investigated the attitude of private university students in Bangladesh towards Internet. Results indicated that students had positive attitudes toward using the Internet as a learning tool, adequate basic knowledge of the Internet, viewed Internet as a fastest way to reach knowledge, and Internet has a potential to be an effective training tool. It also revealed that the students exhibited positive attitudes toward the Internet irrespective of gender, again in contradiction to most other findings.

Methodology

The study was conducted on the usage of Internet tools and resources by the students of Rajshahi University in Bangladesh from 1 March to 31 March 2012. A structured questionnaire was used to carry out the research. Total 102 questionnaires were distributed randomly towards 102 students and received 100% responses from the respondents. The researchers also talked informally with the respondents to gather relevant data. The received data was then analyzed through simple graphical, tabular and percentage representation.

Findings of the Study

The study demonstrates that majority portion of the respondents have been availing the Internet facilities and services for quenching the thirst in relation to the learning, information, knowledge, research, entertainment and other diverse purposes. The findings of the study are furnished below:

Frequency of Internet Use

The frequency of Internet use has been delineated in three steps:

(a) Year-wise use

It was found in the survey that the majority respondents i.e. 34.31% of students have been using the ocean like sources of information Internet from very recent where as the least number i.e. 6.86% of students have been availing this facility from 4 years and above. Moreover, 27.45% respondents have been using from 1 year and 19.61% students have been using Internet from 2 years. Furthermore, another respondent group i.e. 11.77% has been making use of the Internet from 3 years. So, in accordance with the figure 1, it is quite understandable that the percentage of Internet usage among the students at University of Rajshahi have been rising moderately.

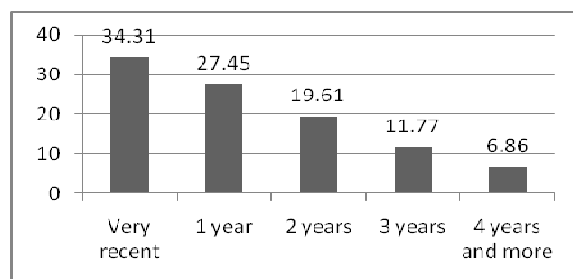
**Figure 1: Year-wise use of Internet by the Students****(b) Day-wise use in a week**

Table 1 shows the statistics of day-wise use of Internet in a week. It is seen that the maximum number (30.39%) of respondents use Internet 2 days in a week while the lowest portion i.e. 3.92% of the respondents use it 1 day only. In addition, 23.52% of the students use Internet 3 days in a week. Moreover, the percentage of using 4 days in a week is 15.70%. Only 4.90% and 6.87% respondents among the total sample use Internet 5 days and 6 days in a week respectively which is disappointing in the perspective of modern advanced technology era. Likewise, the percentage of everyday user is 14.70%.

Table 1: Day-wise use of Internet in a week

Day(s) in a week	Respondents	Percentage
1 day	4	3.92
2 days	31	30.39
3 days	24	23.52
4 days	16	15.70
5 days	5	4.90
6 days	7	6.87
Everyday	15	14.70
Total	102	100

(c) Hour-wise use in a week

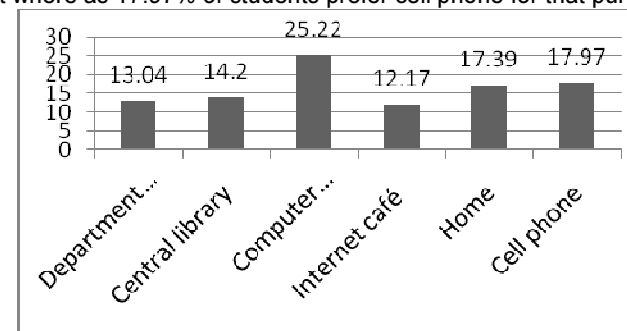
The table below reveals the information relating to the hour-wise Internet use in a week. The maximum number (39.22%) of students uses Internet 6-9 hours each week where as the least number (3.92%) of the students have been using for 17- more hours in a week. Only 0-2 hours are spent by 11.76% students, where as 22.55% students are availing the facilities of Internet 3-5 hours in a week. 10-13 hours are consumed by the 15.69% students. In addition, 6.86% of students are using Internet for 13-16 hours. So, hourly use of Internet in a week is not satisfactory one in the perspective of the advanced Information and Communication Technology (ICT) era.

Table 2: Hour-wise use of Internet in a week

Hours in a week	Respondents	Percentage
0-2 hours	12	11.76
3-5 hours	23	22.55
6-9 hours	40	39.22
10-13 hours	16	15.69
13-16 hours	7	6.86
17- more hours	4	3.92
Total	102	100

Places of Internet Use

The bar graph expresses the places where students use Internet. The big proportion (25.22%) of students use Internet in university computer center where as 14.2% of students prefers to use Internet in the central library of the university. Department lab/library is a place where only 13.04% of students are using the Internet. Because of having financial constraints, not all students can afford to obtain a computer which is why, only 17.39% student use Internet at home. The lowest number i.e. 12.17% of students choose Internet café outside of the campus as the place to utilize the Internet where as 17.97% of students prefer cell phone for that purpose.

**Figure 2: Places of Internet use**

Preference of Browser Programs

Table 3 convey succinctly about the preference of browser programs of the students where most of the students i.e. 38.24% use Explorer Internet and Mozilla Firefox is preferred by 31.37% of students. Opera has been preferred by 22.55% and 4.90% of students prefer SeaMonkey instead of the stated browsers. So the table reveals that Internet Explorer is the most popular browser program among the students.

Table 3: Preference of browser programs

Browser programs	Respondents	Percentage
Mozilla Firefox	32	31.37
Internet Explorer	39	38.24
SeaMonkey	5	4.90
Opera	23	22.55
Others	3	2.94
Total	102	100

Preference of Search Engines

The information spread out in large number of pages on the web will cause great difficulty to a user in the search for a particular piece of information in the area of his interest. The difficulty in searching the web can be overcome with the help of search engines. Any program that locates required information on the Internet is known as a Search Engine (Kumar and Vishnu, 2000). Table 4 indicates that the majority of i.e. 53.59% students prefer the search engine to locate the resources in Internet is Google, where as 37.02% of students choose Yahoo! Besides these, Bing is being used by 6.63% students. Likewise, Alta Vista and Giruji.com are preferred by 1.10% and 1.66% users respectively. Furthermore, no user uses Lycos'. So it is clear that, Google is the most preferred search engine of the students of Rajshahi University.

Multiple responses (N=181) **Table 4: Preference of search engines**

Search engines	Respondents	Percentage
Google	97	53.59
Yahoo!	67	37.02
AltaVista	2	1.10
Bing	12	6.63
Giruji.com	3	1.66
Lycos'	0	0.00
Others	0	0.00
Total	181	100

Uses of Web Directories

The graph reveals about the uses of web directories by the students of Rajshahi University where it is observed that the majority 64.4% of students have been using Yahoo! directory when 23.49% students use WWWVL

(World Wide Web Virtual Library) and only 1.51% prefer to use other directories.

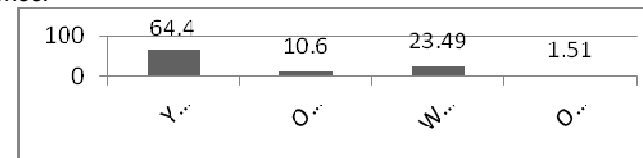


Figure 3: Uses of web Directories

Uses of Internet Tools and Resources

Students use different Internet tools and resources for their information, study and learning, communication, entertainment and so on needs. The graph reveals that 14.9% of respondents avail the facilities of WWW while the Social network/Chat 13.36% followed by Wiki (12.6%), E-mail (11.06%), Skype (10.6%), YouTube (10.14%) and FTP (9.22%). Moreover, 8.76% and 5.07% of respondents have been using Web Radio and Web TV respectively. Groups and Blogs are in marginal use and no one uses the Gopher.

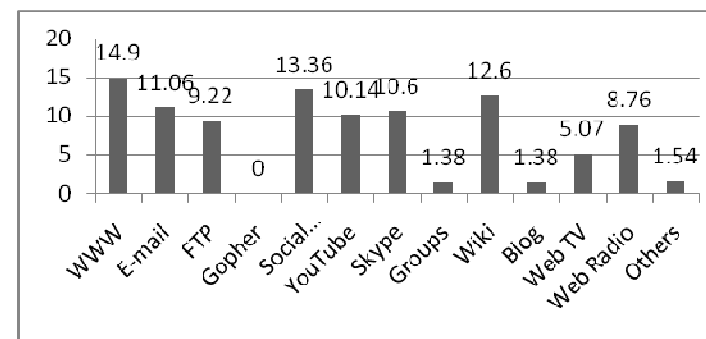


Figure 4: Uses of Internet tools and Resources

Reasons in Using E-Mail

Table 5 expresses the reasons of respondents for using e-mail. The maximum number (27.69%) of respondents use e-mail for communicating with their friends. Almost all government and non-government organization publicize their job vacancies in online, so 26.92% of students use e-mail for the application of seeking jobs where as 21.15% of respondents use for the purpose of keeping communication with the family. Likewise, 9.62% Students maintain communication with their course teachers for academic purposes. And, the least number of students i.e. 8.08% keep communication for their scholarship.

Multiple Responses (N=260)

Table 5: Reasons in using e-mail

Reasons in using e-mail	Respondents	Percentage
To communicate with course teachers	25	9.62
To communicate with family	55	21.15
To communicate with friends	72	27.69
To communicate with the professional	10	3.85
For scholarship	21	8.08
For jobs	70	26.92
Others	7	2.69
Total	260	100

Uses of Social Network

Figure 5 demonstrates that Facebook is popularly used social networking program with 70.73% of students' preference where as 17.07% of them prefer to use Twitter as social networking media. Moreover, MySpace is being used by 5.69% of students. Likewise, the least number of (1.63%) students use other social network tools.

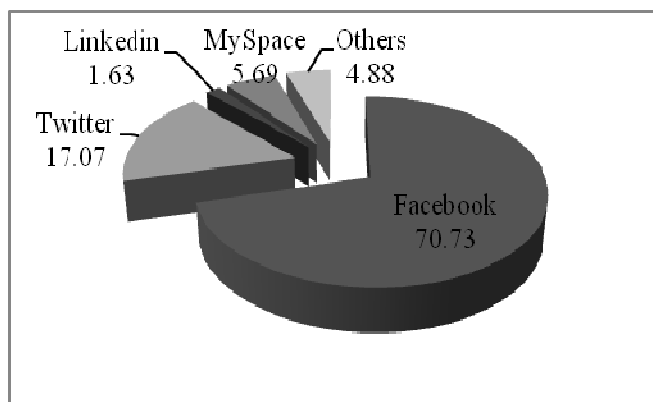


Figure 5: Uses of social Network

Download Resources from Internet

Table 6 shows about the information relating to the resources that are downloaded by the respondents from the Internet. In the study, it is found that most of the respondents download web pages (17.83%). Besides, a large portion of them (16.91%) download simultaneously text file and PDF file where as TV programs are not downloaded frequently which is 2.21%. Furthermore, e-book (13.41%), software/games (11.95%), audio/video (8.82%), photos (6.07%) and newspapers (2.76%) are also moderately downloaded by the respondents.

Multiple Responses (N=544) Table 6: Download resources from Internet

Resources to download	Respondents	Percentage
Text file	92	16.91
PDF file	92	16.91
e-book	73	13.41
Web page	97	17.83
Software/Games	65	11.95
Audio/Video	48	8.82
TV program	12	2.21
Newspapers	15	2.76
Photos	33	6.07
Others	17	3.13
Total	544	100

Purposes of Using Internet

The use of the Internet has become indispensable as we are transforming into an information society. It provides us with feasible and efficient solutions to our problems. It is a huge world which is accessible to us just on one click. It diminishes our geographic, historic, economic, and political distances (Batool and Mahmood, 2010). Table 7 represents the purposes of Internet use by the respondents. Most of the respondents use Internet for download resources (11.43%) followed by social networking (11.18%), chatting/talking (10.81%), e-mailing (8.94%), entertainment (8.32%), knowing results (6.83%) etc. Moreover, 10.68% students use internet for study & learning and searching course materials respectively.

Multiple responses (N=805) Table 7: Purposes of using Internet

Purposes of use	Respondents	Percentage
Study & learning	86	10.68
Searching course materials	86	10.68
Download resources	92	11.43
Online journal	18	2.24
Newspaper reading	31	3.85
E-mailing	72	8.94
Social networking	90	11.18
Chatting/Talking	87	10.81
Knowing results	55	6.83
Job/Business	33	4.10
Form fill up	17	2.11
Sports	23	2.86
Audio & video download	48	5.96
Entertainment	67	8.32
Total	805	100

Using Areas of Internet for Study

Student life is the life where learning should get the optimum priority compared to other activities. Table 8 reveals the information regarding using Internet by the students for the study purposes where the majority number of students i.e. 25.6% use Internet for assignment, presentation, fieldwork followed by 19.4% for lesson preparation, 8.9% for research, 8.6% for searching and collecting books, 7.82% for library and information services and 7.28% for collecting course materials. The least number of students i.e. 0.54% use Internet for distance education purposes.

Multiple responses (N=371) **Table 8: Using areas of Internet for study**

Areas of study	Respondents	Percentage
Lesson preparation	72	19.4
Assignment, presentation, fieldwork	95	25.6
Searching books	32	8.6
Collecting books	32	8.6
Reading books	8	2.16
Research	33	8.9
Library and information services	29	7.82
Online journals	18	4.9
Contact with course teachers	23	6.2
Distance education	2	0.54
Collecting course materials	27	7.28
Total	371	100

Satisfaction Level of Using Internet

Figure 6 presents information regarding the satisfaction of the uses of Internet where maximum numbers of respondents are moderately (36.27%) satisfied. The least number i.e. 5.89% of respondents are highly satisfied. Moreover, 28.43% and 20.59% respondents' satisfaction level is low and very low respectively. It reveals that a large number of students of the community are not satisfied enough with the Internet which indicates the disappointing scenario of Internet uses.

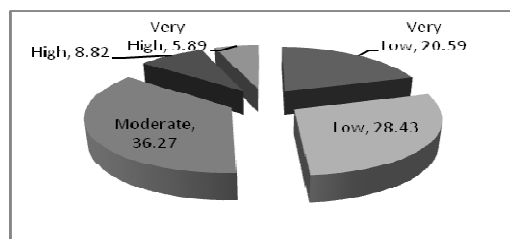


Figure 6: Satisfaction level of using Internet

Problems of Using Internet

Table 9 reveals information about the problems of using Internet by the respondents. In this study, maximum respondents 14.92%, 13.55% and 13.38% mentioned respectively that due to the interrupted supply of electricity, poor speed and high costs, they can not avail the Internet smoothly. Furthermore, the least number (0.46%) of respondents face problems regarding language used in the Internet. Moreover, another group 12.31% mentioned about the lack of space in the using places, where as 12.15% mentioned that there have wider lack of friendly atmosphere in the department lab/library, university computer center and central library which enervate their inspiration to use Internet in the university. Likewise, paucity of personal computer hinders using Internet which is 10% followed by 7.23% lack of sufficient support of service provider, 6.92% lack of time, 3.85% nonchalant attitude towards Internet, 2.92% dearth of willingness and 2.31% for the lack of experience and training. For the aforesaid reasons, the students of Rajshahi University fall in difficulties in terms of smooth uses of Internet.

Multiple responses (N=650)

Table 9: Problems of using Internet

Problems of use	Respondents	Percentage
Lack of electricity	97	14.92
Poor speed	88	13.55
Expensive	87	13.38
Inefficiency in English	3	0.46
Lack of experience and training	15	2.31
Insufficient support from the authority	47	7.23
Dearth of willingness	19	2.92
Paucity of personal computer	65	10.00
Lack of time	45	6.92
Nonchalant attitude towards Internet	25	3.85
Lack of friendly atmosphere in the using places	79	12.15
Lack of space in the using places	80	12.31
Total	650	100

Internet as the Medium of Satisfying Information Need

Information is pivotal for any developmental activities. Internet provide ocean like information in each and every field of knowledge of the earth. As of the figure 7, it is seen that 95.1% students consider Internet as the main medium of satisfying information need while the minority portion of students i.e. 4.9% thinks that it is not the medium of satisfying information need.

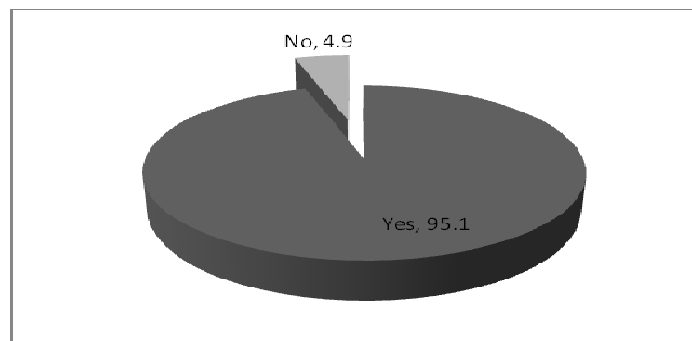


Figure 7: Internet as the Medium of Satisfying Information need.

Suggestions and Conclusion

Now a day, Internet has been using as widely acceptable tool for the purpose of academic enrichment, research effectiveness, lucrative business, communication enhancement, and entertainment across the world. The significance of Internet is undeniable factor in each sector of development. It has now become the indispensable demand like the five basic needs of every civilized human being. Development of any kind can't be imagined without the gentle touch of Internet. This study has been carried out to expose students' Internet using behavior and activities and found a large number of students getting started to use Internet from very recent. The highest percentage of respondents uses Internet in the computer center of the university. Internet Explorer is being used by the significant number of respondents as browser program as well as Google is the most accepted search engine among the students to locate resources in Internet. The majority portion of students uses Internet for assignment, presentation and fieldwork. Facebook is the most popularly used social networking system. The maximum number of respondents use e-mail for communicating with their friends and family. On the perspective of study, majority number of students downloads web pages. The extent of the satisfaction on the Internet usage and accessibility among the students is moderate.

In using the Internet, student have been facing a variety of difficulties which disheartening them to be optimist. To overcome those difficulties, and ensure a close relationship with hi-tech technology it is the right time for enticing the students towards Internet. The university authority as well as government has something to play a good role in this regard. Establishing a central Internet café in campus area would be a real praise worthy initiative. The university authority can give their attention to arrange a variety of training programs as well as day long workshop for the students to grow up their Internet habituation rate as well as effective and skilled use of Internet. If the

government and the university authority take those ardent initiatives for the hurdle less usage of Internet, students of Rajshahi University as well as all the public universities of Bangladesh will be able to use Internet for satisfying their academic, research, entertainment and other demands successfully. We should not late to take proper initiatives as input to get a fruitful outcome form the students for nation building. Otherwise it will deplete their hope and courage.

Notes and References

1. Abdullah Al Mahmud, M. 2011. Students' Attitudes towards Internet: A study on Private Universities of Bangladesh. *European Journal of Business an Management*, Vol. 3, no. 6: 9-19.
2. Azad, A. K. and Islam, N. 1997. Overview of Internet Access in Bangladesh: Impact, Barriers, and Solutions. Available at http://www.isoc.org/inet97/proceedings/E3/E3_1.HTM
3. Badu, E. E. and Markwei, E. D. 2005. Internet Awareness and Use in the University of Ghana. *Information Development*, Vol. 21: 260-268.
4. Batool, S. H. and Mahmood, K. 2010. Entertainment, communication or academic use? A survey of Internet cafe users in Lahore, Pakistan. *Information Development*, Vol. 26: 141-147.
5. Bangladesh Bureau of Statistics. 2012. Bangladesh Population & Housing Census 2011. Available at http://www.bbs.gov.bd/WebTestApplication/userfiles/Image/Census2011/Bangladesh_glanc.pdf
6. Internet World Stats. 2012. Usage and Population Statistics: Asia. Available at <http://www.internetworldstats.com/asia.htm#bd>
7. Islam, M. A. and Hoq, K. M. G. 2010. Community Internet Access in Rural Areas: A study on Community Information Centres in Bangladesh. *Malaysian Journal of Library & Information Science*, Vol. 15, no. 2: 109-124.
8. Karim, N. S. A. and Hazmi, N. R. 2005. Assessing Islamic Information Quality on the Internet: A Case of Information about Hadith. *Malaysian Journal of Library & Information Science*, Vol. 10, no. 2: 51-66.
9. Kumar, D. 2010. Faculty Use of Internet Services at a University of Agriculture and Technology. *Library Philosophy and Practice*, February.
10. Nasiruddin, M. 2003. Internet Use by University Academics: A Bipartite Study on Information and Communication. *Online Information Review*, Vol. 27, no. 4: 225-237.
11. Prasher, R. G. 2003. *Indian Libraries in IT Environment*. Ludhiana: Medallion Press, India.
12. Roknuzzaman, M. 2006. A survey of Internet access in a large public university in Bangladesh. *International Journal of Education and Development using Information and Communication Technology*, Vol. 2, no. 3: 86-105.
13. University Grants Commission of Bangladesh. 2012. Private Universities. Available at <http://www.ugc.gov.bd/university/?action=private>
14. University Grants Commission of Bangladesh. 2012. Public Universities. Available at <http://www.ugc.gov.bd/university/?action=public>
15. Vishnu, V. and Kumar, C. A. 2000. India-specific Internet Search Engines, In: Babu, T. Ashok eds. *Vision of Future Library and Information Systems*. p. 149-156.
16. Wahid, F., Furuhoit, B. and Kristiansen, S. 2006. Internet for Development? Patterns of use among Internet café customers in Indonesia. *Information Development*, Vol. 22, no. 4: 278-291.