Pakistan Journal of Library & Information Science, 13 (2012)

Available at http://pu.edu.pk/home/journal/8

Pakistan Journal of Library & Information Science

ISSN 1680-4465

Access and use of the internet among undergraduate students in the Faculty of Arts, University of Dhaka, Bangladesh

Md. Anwarul Islam, Muhammad Jaber Hossain
Department of Information Science and Library Management, University of Dhaka, Bangladesh
E-mail: anwar81du@gmail.com, jaberhdu@gmail.com

Abstract

The study surveyed the use of Internet among undergraduate students in the Faculty of Arts at the University of Dhaka, Bangladesh. 240 questionnaires were distributed using a stratified sampling method. A total of 190 questionnaires were returned and all were usable. The access point for using Internet among the undergraduates was mostly the computer center of Dhaka University. Findings revealed that a high percentage of the Internet was used among the undergraduates. Some problems they face in their use of the Internet include slow speed of the connection, limited number of PCs and other related issues of using Internet. The study recommends that the university and arts faculty should provide more access points for the students. Departmental computer labs, Internet facilities and incorporating ICT courses in the academic syllabi should be started to those departments where it is needed to overcome the problems. Moreover, modern net connection technologies need to be used and training program needs to be started for the undergraduates.

Keywords: Internet; Use; Undergraduate students; University of Dhaka

Introduction

Nowadays, the information highway or the Internet has changed the way of educational system which is an important means of accessing and disseminating information. Students, researchers and faculties especially take advantage of the Internet in multi-functional ways. They are using information sources and services via the Internet in their homework more frequently. Academicians increasingly depend on the Internet for educational purposes. A majority of academic and research institutions provide Internet service to students, teachers, and researchers (Kaur & Manhas, 2008). In the drive of higher education to promoting the use of Information and Communication Technology (ICT), the role of the Internet cannot be overemphasized. It provides scientists, lecturers and students, access to non-traditional sources of information at any points in the globe. The gap between the rich and poor countries is being replaced with the help of Internet and now it is fast changing method for accessing and using information and research activities (Omotayo, 2006). As a result, it is becoming more important for academic purposes. There are many writings on the use of Internet and nearly all find that Internet usage is the most prevalent amongst younger and more educated people (Hoffman, Novak & Schlosser, 2000). Many undergraduate students are using the Internet in the Faculty of Arts at Dhaka University for different purposes but there are some others who are not using this tool. Based on this fact, this particular study surveyed undergraduate students in the Faculty of Arts at Dhaka University, to see if and how they are using the Internet. Access to current literature is still a problem in Bangladesh as universities, university libraries, seminar libraries continued to contend with problems of poor funding, poor ICT infrastructure and others.

https://doi.org/10.47657%2F201213776

Background of the study

Use of computers with Internet gives birth to Information and Communication Technology (ICT). ICT, therefore, is the integration of computers with the Internet with a view to processing and dissemination of information. It has made changes in almost all aspects of access, retrieval and dissemination of information (Chachage, 2001). As a developing country like Bangladesh, Internet facilities of higher academic institutions are not satisfactory (Islam & Chowdhury, 2011). Bangladesh entered into the computer village in 1964 with the installation of an IBM 1620 machine at the Atomic Energy Commission (Dhaka). The Internet came late to Bangladesh with connectivity in 1996 (Banglapedia, 2006). In the last few years, it has grown dramatically, although obviously from a very low base. Bangladesh is one of the least developed and overpopulated nations in the world with 156,118,464 people (July 2010 est.), 7th country in the world, living in an area of 1, 47,570 km^2 and 47.9 percent people are literate (Central Intelligence Agency, 2011). ICT status in Bangladesh is not remarkable without some favorable initiatives by the government and private entrepreneurs (Islam & Islam, 2008). For the development of ICT sector especially Internet, the first connectivity of Internet was only in 1996. Though it was somewhat late, over the past few years the growth is rapid. The number of Internet users in Bangladesh as of March 2009 was over 600,000 compared to 100,000 in 2000. The latest statistics revealed that Internet users in Bangladesh were 995,560 and the penetration rate was 6% (Internet World Stats, 2010). It is worth mentioning here that Bangladesh was connected to the global information super highway with inauguration of the submarine cable by the Prime Minister of Bangladesh on 21 May 2006. The South East Asia-Middle East-West Europe-4 (SEA-ME-WE-4) project connects the country with undersea fiber-optic cable passing from Singapore through Malaysia, Thailand, Bangladesh, India, Sri Lanka, Pakistan and a number of Middle-Eastern countries to finally land in France (Islam & Rahman, 2006). In Bangladesh, however, the situation has improved to a considerable extent in recent years. Gartner, Inc. has identified the top 30 countries for globally sourced activities in 2010-2011. In Asia Pacific regions, Bangladesh is one of the best IT outsourcing countries. This is the first time that Bangladesh has been listed in the top ranking by any global research company Gartner on IT outsourcing (Outsource Offshore, 2010). National Information and Communication Technology (ICT) policy (Bangladesh, 2002) states that ICT use in every sector shall have to be accelerated in terms of information generation, utilization and applications. Considering the gravity and importance of ICT, government has already declared ICT as the thrust sector. Moreover, National Curriculum and Textbook Board (NCTB) and the Access to Information (A2I) Project have started e-book facilities for the students, teachers and users. It currently has 106 digital textbooks for primary and secondary students which were digitized as a joint effort between these two government organizations (Islam, 2011). In case of higher education, at present there are 84 universities in Bangladesh of which 53 are private and 31 are public. Dhaka University is the largest and oldest university in Bangladesh (University Grants Commission of Bangladesh, 2010). This is the first time an effort has been made to study on access and usage of Internet services for the undergraduates in the Faculty of Arts at Dhaka University. There are no other studies on ICT use at faculty level in any other university in Bangladesh. This study may trigger more such research on Internet access and usage in Bangladesh and beyond. It is hoped that the results of this study will be useful to learn from the experience of access and use of Internet for the students of different universities in Bangladesh.

Literature review

A review of literature reveals that there is a large amount of literature available on the use of the Internet in Bangladesh, and have relevant research on the areas, but no in depth study has been done on the access and use of the Internet for undergraduate students in Bangladesh. Libraries in Bangladesh began to use computers in the early 1980s. Little progress was observed in the application of computers to library services between 1964 and 1995, but there has been considerable progress since 1996. In Bangladesh, most of them relate to overall Internet access, its growth, usage, impacts, barriers, and position in the country. Azad and Islam (1997) gave an overview of the Internet access including the status of telecommunications in Bangladesh, launching of online Internet, current rates for online Internet access, providers' views, major Internet users, impacts and barriers, etc. Iqbal (1999) presented the background and growth of the local Internet, problems encountered by Internet Service Providers (ISPs), and the role of the Bangladesh Telegraph and Telephone Board (BTTB). He also provided some suggestions for improved Internet access in the country. Nasiruddin (2003) investigated the intensity of the Internet use by academics at Rajshahi University in Bangladesh. He surveyed 240 academics and

https://doi.org/10.47657%2F201213776

examined the differences in using Internet resources and the information and communication needs of the academics according to their professional ranks as lecturer, assistant professor, associate professor and professor. However, author did not explain the overall Internet infrastructure of the university. Roknuzzaman (2006) focused the status of the Internet access and usage in Rajshahi University, the second largest public university in Bangladesh. The study revealed that nearly half of the responsible authorities of the various sectors were not satisfied with the existing Internet facilities in the university. Finally, the study suggested some future directions for better Internet access in the common interest of the university community.

Rahman (2004) described the situation of Internet access in Bangladesh, the dimension as well as the potential of Internet business, and problems of Internet access. Internationally, study of the use of Internet by undergraduates has also been done. Bao (1998) surveyed Internet use at Seton Hall University in the United States. The findings reported that 40.2% of respondents used the Web on a daily basis, 38.3% weekly, and 10.7% on a monthly basis. About 10% respondents said they seldom or never used the Internet. Laite (2000) presented the results of a survey on Internet use of 406 graduate and undergraduate students from Shippensburg University in the United States. He found that the majority of graduate and undergraduate students used the Internet 1–2 times per week. E-mail was found to be the most used Internet service as 100% of the graduate and undergraduate students used it. Bennett (2001) found that 75% of Americans of ages 18 to 29 and 65% of ages 30–49 regularly went online to find information. Hewitson (2002) conducted a study on the awareness and extent to which university academic staff used and assimilated electronic information services (EISs) into their work. It was concluded from the results that Internet was the most popular information source but the factors affecting use at the expense of subscription-based services were complex. University staff, especially those with low level IT skills, frequently used the Internet because it was easy to access and provided instant results. However, users who were aware and were confident in using subscription-based services still preferred to use the internet for a variety of reasons. Omotayo (2006) surveyed the use of Internet among undergraduate students at the Obafemi Awolowo University, Ile-Ife, Nigeria. The findings revealed a high percentage use of the Internet. The access point for them was cyber cafes. The university library though linked to the Internet was yet to provide access to students. The study recommended that the university should provide access points for students. Nwokedi (2007) noted that lack of searching skills was still hindering good use of the Internet for the Faculty of Medical Sciences in University of Jos, Nigeria. The entire population of 138 academic staff members in the faculty was adopted for the research. He asserted that acquisition of Internet skills could lead to discovery of valuable research and teaching resources. Kaur and Manhas (2008) conducted a survey on the use of Internet services and resources in the engineering colleges of Punjab and Haryana states of India. Results showed that all the respondents made frequent use of the Internet because they had access either at college or at home. Nazim (2008) conducted a survey at Aligarh Muslim University (AMU) in India to determine the extent to which Internet users were aware and made use of the Internet resources and services. The study found that the majority of respondents had a five year history of Internet access. The academic staff spent more time on the Internet than the students and research scholars. Sujatha (2011) investigated the level of academic community's access to the Internet, reasons for non-use of Internet, satisfaction with the Internet facilities provided in these institutions as well as the problems faced in the use of Internet. The study revealed that the level of student's access to the Internet was low and the major reason was that at the time of the study, computers with Internet facilities were inadequate. However, majority of the students expressed their interest in the use of Internet and its resources and were enthusiastic in improving their skills in the use of the Internet. The world is going through an information revolution, which will drastically change the way. There are many factors at work against the realization of full usage of the Internet in Bangladesh, amongst which are infrastructure problems, power supply and cost of connectivity (Islam & Islam, 2008).

Dhaka University and the Faculty of Arts

On the first day of July 1921, the University of Dhaka started its journey with three faculties, 12 departments, 60 teachers, 877 students and three dormitories (Halls of residence) for the students. At present, the university consists of 13 faculties, 66 departments, eight institutes, and more than 30 research centers. The number of students and teachers has risen to about 33,000 and 1,500 respectively. Established in 1921, the faculty of Arts is the largest faculty of the university, consisting of 15 departments. The academic activities of these departments are conducted by the administration of the Faculty. Four research journals, two in Bengali and two in English are published every year from this faculty (University of Dhaka, 2011). In order to conducting this study on access and use of Internet for the

https://doi.org/10.47657%2F201213776

Arts Faculty undergraduate students, it is needed to know the Internet using opportunities for the students. Table 1 shortly focuses the ICT status of 15 departments of the Faculty of Arts.

Table1. ICT status of the departments in the Faculty of Arts

Name of the department	Computer Lab	Internet facility	ICT courses in syllabus	Degree offered B.A (Honors), M.A., M.Phil., PhD
Arabic	No	No	No	Yes
Bengali	No	No	No	Yes
English	Yes	Yes	No	Yes
History	No	No	No	Yes
Information Science and Library Management	Yes	Yes	Yes	Yes
Islamic History and Culture	No	No	No	Yes
Islamic Studies	Yes	Yes	Yes	Yes
Linguistics	Yes	Yes	No	Yes
Pali and Buddhist Studies	No	No	Yes	Yes
Persian Language and Literature	No	No	No	Yes
Philosophy	Yes	Yes	No	Yes
Sanskrit	Yes	Yes	Yes	Yes
Theatre and Music	No	No	No	Yes
Urdu	No	No	Yes	Yes
World Religions	No	No	No	Yes

Source: Data were complied by using Dhaka University Academic Calendar, using respective department website links and field visits.

It is evident from the Table 1 that ICT status of these departments is very frustrating and most of the departments of the faculty do not have computer and Internet facilities. At present Dhaka University offers Wi-Fi, wireless and broadband Internet facilities for the students. Out of 15, only six departments have broadband Internet connection and computer lab facilities. It is very difficult to believe this status in this age of ICT. In case of ICT courses, it is clear that only five departments offer more or less ICT related courses. It is very frustrating that 10 departments do not have ICT related courses. It is encouraging that some departments wish to introduce ICT course in their syllabi as they feel the necessity of incorporating ICT courses in the academic syllabi. Reality is different, as it will take time to introduce the courses due to complex administrative process. Similarities are that all departments have Bachelor of Arts, Honors (B.A. Honors), Master of Arts (M.A), Master of Philosophy (M.Phil.) and Doctor of Philosophy (Ph.D.) programs. However, the Faculty of Arts, as an apex body of these departments, is trying to provide ICT facilities in different ways. Arts Computer Center (ACC) is the only assigned computer center for the Arts Faculty students. This center offers two courses for the students. These are “Fundamental Course on Computer” and “Database Management System”. ACC is equipped with 15 computers with broadband connections and here the students can browse Internet with nominal charges. Beside these, Central Library of Dhaka University and Dhaka University Cyber Center (DUCC) also offer Internet facilities for all the students of the university with charges. In Dhaka University Library, students can enjoy the Internet facility for 30 minutes in a day without charges and DUCC offers Internet card for the students. This card contains 300 minutes and students purchase the card by giving 60Tk. As per the provision by purchasing the card a student uses A/C number, enters the hidden pin number and then enjoys Internet browsing. This card expires after 180 days. Moreover, it is observed that students are using now mobile phone Internet and a large number of students are going to private cyber cafes for browsing Internet regularly (Islam & Islam, 2005).

Objectives of the study

This study aimed at harvesting on the use of Internet by undergraduate students of the Faculty of Arts at Dhaka University. The specific objectives included:

- Identify whether or not respondents have access to the Internet and if they do, to find out the availability of the Internet access points;

https://doi.org/10.47657%2F201213776

- Find out the respondents' experience of using Internet, extent of using Internet and the ways by which they were introduced to it;
- To understand the search tools of the Internet users, determine how often the respondents surf and their purposes of surfing;
- Find out significant factors of Internet use and if there is any gender bias in Internet use; and
- Finally measuring the quality of Internet services and identifies the problems faced by the users.

Research methodology

This study is based on survey (questionnaire) method. A structured questionnaire was designed to collect data from the undergraduate students of the Faculty of Arts. Following dimensions were measured by the survey: access and use of Internet, use pattern, gender factor analysis, measuring quality Internet services at the users' point of view and encounter the problems. A total of 240 questionnaires were distributed to undergraduates in the Faculty of Arts using a stratified random sampling technique. For this survey, all undergraduates were contacted in their scheduled classes and given an explanation of the study. To maximize the response rate, students were advised that their responses would be completely anonymous and the data would only be used for the purposes of this study. One hundred and ninety questionnaires (79.2%) were returned. The sample consisted of 108 male (56.8%) and 82 (43.2%) female undergraduates. The respondents were all in their late adolescent and the participants also varied in their year of study, which ranged from first to fourth years. All the respondents received and completed the questionnaire, which consisted of 20 questions. The questionnaire was divided into two sections. First part addressed the demographic characteristics while the second section focused on the use of Internet facilities and associated factors. The obtained data were then evaluated using SPSS, and the findings have been interpreted.

Results

The present study shows issues relating to access and use of Internet among undergraduate students in the Faculty of Arts. As an overall trend, it is clear that using Internet by the undergraduates is very inspiring.

As shown in Table 2, the data revealed that out of 190, 186(97.9%) had used the Internet. Only four (2.1%) students had never used the Internet. This proportion (2.1%) may look minimal and suggests over-whelming accessibility of the respondents to Internet facilities.

Table 2. Use of internet by undergraduates

Do you use internet?	Frequency	Percent
Yes	186	97.9
No	4	2.1
Total	190	100.0

Access points for Internet use

Table 3 shows Internet access points used by the undergraduates. Internet can be used in different places according to the convenience of the users and availability of access facility. Sixty seven respondents (35.3%) indicated that they used Internet in the University Cyber Center, followed by its use at departmental computer lab (33.7%), at home (32.6%), cyber cafe (20%) and at Central Library (9.5%). It also shows that 9.5% used Internet services in the faculty computer center. At the same time, a good number of students (17.4%) reveal that they used Internet in other places.

Table 3. Internet access points (Multiple choices)

Access points	Frequency	Percent
Library	18	9.5
Departmental computer lab	64	33.7
University Cyber Center	67	35.3
Faculty Computer Center	18	9.5
Home	62	32.6
Cyber café	38	20.0
Others	33	17.4

https://doi.org/10.47657%2F201213776

Frequency and experience of Internet use

In order to assess the frequency of using Internet services, the respondents were asked to indicate any one out of four categories of time lag. The frequency of use among respondents ranged from daily use to not often use. Regarding frequency of Internet use by the respondents, table 4 clearly reveals that most of the students used Internet whenever it was needed to them. Almost 38 percent students used Internet whenever it was needed to them, 31 percent used Internet on daily basis. Further 22.6 percent respondents were using it once in a week and 7.9 percent used the Internet not often. Frequency of Internet using ratio presents that Internet use depends on their needs. At the same time, experience of Internet varied among respondents. The respondents were asked to indicate their experience of using Internet. It is shown in table 5 that that the largest proportion (46.8%) was found among those with 1-2 years' experience. Among other groups, 49 (25.8%) had less than 6 months; 37 (19.5%) had between 3-4 years' experience and 13 (6.8%) users had other length of Internet experience.

Table 4. Frequency of Internet use

Frequency of use	Frequency	Percent
Daily	59	31.1
Frequently in a week	43	22.6
Whenever need	72	37.9
Not often	15	7.9
Missing	1	.5
Total	190	100

Table 5. Experience of Internet use

Length of experience	Frequency	Percent
Less than 6 months	49	25.8
1-2 Years	89	46.8
3-4 Years	37	19.5
Others	13	6.8
Missing	2	1.1
Total	190	100

Internet skills acquisition

Adams and Bonk (1995), in a study, found that the most common obstacle for the Internet users was their lack of knowledge on using Internet. Though Faculty of Arts has not provided any formal training program for using Internet, 15.3% students have stated that they have completed a training program on Internet use (table 6). Many were only taught by their friends (28.4%) and most of the students (30.5%) mentioned that they learned to use Internet with trial and error methods. It is very encouraging that the students are now learning Internet with their own effort.

Table 6. Learning Internet use (Multiple choices)

Learning methods	Frequency	Percent
Trial and error method	58	30.5
With the help of friends	54	28.4
Completed a training program on Internet use	29	15.3
Others	15	7.9

Respondents' favorite search engines

It was also important to find out the respondents' favorite search engine. It is found that Yahoo! and Google were their favorite search engines. Google was the major search engine used by 114 (60%) respondents. This could be as a result of the fact that many respondents use the Internet for Google doc, Google earth, Gmail, and other purposes. Yahoo! is the second highest choice of the students as 26.8% used this search engine. Search engines like Alta Vista, Web Crawler and others were not popular among the respondents, as shown in table 7.

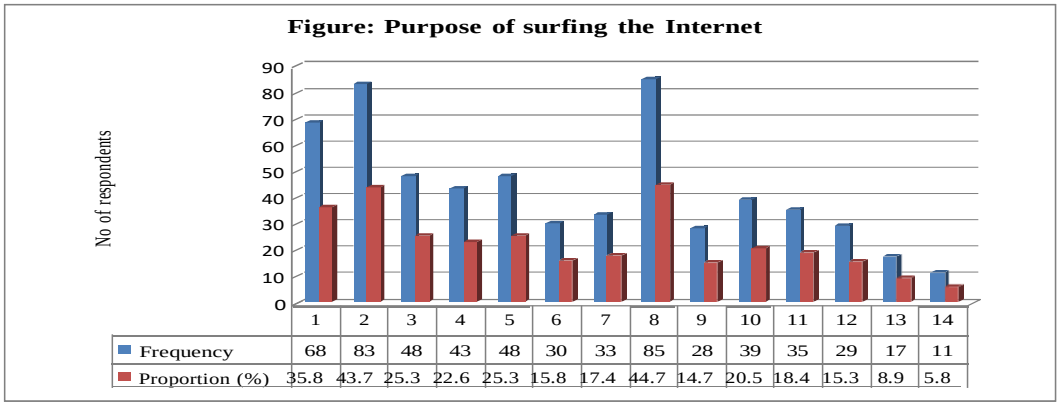
https://doi.org/10.47657%2F201213776

Table 7. Favorite search engine

Search engine	Frequency	Percent
Google	114	60.0
Yahoo	51	26.8
AltaVista	4	2.1
Others	7	3.7

Purpose of using the Internet

Internet use has both advantages and disadvantages. It depends upon the purpose of use. If it is purposely used, it helps to increase knowledge and keeps oneself abreast of the latest developments. The graph (figure 1) compares the reasons for using Internet by the students. It can be clearly seen that reasons of using Internet in many cases did not correlate. It shows that the Facebook has the most significant effect of using Internet. In the graph, 44.7% undergraduate students used Internet for Facebook, 43.7% used for e-mail, 35.8% for conducting course work, 25.3% for both browsing websites and downloading information, followed by using e-resources 22.6%, entertainment 20.5% and chatting 18.4%. On the other hand, purpose of using Internet is also associated with reading newspaper, software downloading and sports update as responses of these features are almost the same. It is also seen that 8.9% undergraduates replied that they used Internet for all purposes. It is very significant that at undergraduate level purposes of using Internet have been spreading. As an overall trend, it is clear that undergraduate students have different purposes of using Internet and it depends on their necessity. As they use Internet for academic purposes at the same time, they are using it for other purposes. As for net socialization, using of Internet for Facebook has become the top priority of the students.



Note:1=Conducting course work, 2= E-mail use, 3= Browsing website, 4= Using e-resources, 5=Information downloading, 6=Reading newspaper, 7=Software downloading, 8=Facebook, 9=Sports update, 10= Entertainment, 11=Chatting, 12= News and media, 13=All of the above, 14=others.

Figure 1. Purpose of using Internet (Multiple choices)

Internet use variables and gender

Results of cross tabulations on gender revealed no significant difference between male and female students on use of the Internet. If we compare the *P* value with .05 which is standard then we can find χ^2=.078, *P* value=.780 which is greater than .05, i.e., *P*>.05. More males compared with females had used Internet in the study. On the other hand more females compared with males had used the Internet at home (56.1%) while a higher proportion of male students (53.7%) made use of Internet in university and others places (χ^2=9.65, *P* value=.008). There are significance differences between male and female students using Internet in the home and university. Females tended to shy of using Internet in university. There was no significant gender difference on the experience of Internet users. Male users were more experienced than female users and the years of using Internet were also in favor of male users. Only in 3-4 years variable, female users were ahead of male users as female users were 23 (62.2%) and male users 14 (37.8%) (χ^2=.532, *P* value=.095). Students who selected search engines as the most important means of information retrieval were asked to record the three search engines they used most frequently.

https://doi.org/10.47657%2F201213776

Most of the students (60%) marked the Google search engine as their first preference. Yahoo! (26.8%) follows it Alta Vista (2.1%) and others (3.7%).

In case of cross tabulation between male and female, Google is used by 82.5% female and 77.5% male and 39.7% female and 32.5% male for Yahoo!. Very few of them use Alta Vista as a favorite search engine of them. There are no significances between these variables as Google (χ^2=.554, *P*=.457); Yahoo! (χ^2=.792, *P*=.373); Alta Vista (χ^2=.606, *P*=.436).

In results of cross tabulation on gender and purposes of using Internet, there are significant gender differences between two variables respectively, i.e., sports update and news and media (χ^2=7.233, *P* =.007) and (χ^2=8.058, *P*=.005). No other significance differences were found on other variables. These are mentioned in table 8.

Table 8. Gender and purpose of using internet

Variables	Pearson chi-square	
	X^2	P
Conducting course work	4.686	.096
E-mail use	0.767	.381
To browse website	2.353	.125
Using e-resources (book, journal)	0.51	.475
Information downloading	0.003	.958
Reading newspaper	3.043	.081
Software downloading	0.034	.854
Face-book	0.284	.594
Entertainment	0.759	.383
Chatting	0.383	.536
All of the above	0.071	.79
Sports update	7.233	.007
News and media	8.058	.005
Others	0.532	.466

Satisfaction of Internet use and gender

The results on the satisfactions of Internet use of the respondents revealed that there are no significant differences on the factors examined (table 9). Cross tabulation shows that (χ^2=1.443, *P*=.486) satisfaction of using Internet among male and female are not significant in the present study. On the frequency of satisfying using Internet, 16.8% respondents are satisfied, 31.1% are partially satisfied and 26.3% are not satisfied at all with the Internet services that they are getting from different access points from the university.

Table 9. Gender and feature of e-resources

Variables	Pearson chi-square	
	X^2	P
Quick retrievability	0.16	.898
Up-to-date information	.950	.330
Free availability	1.159	.282
Full-text searching	.004	.951
Links to other resources	.014	.905
Other	1.947	.163

Results of Chi-square tests for gender revealed that there was no significant difference between male and female students to prefer on different features of e-resources. Students were asked which features of e-resources they consider to be the most important for the efficiency of their research. Among them 52.6% prefer up-to-date information, 23.7% prefers free availability, 15.8% prefers quick retrievability and it is followed by full text searching 10.5%, others 3.2%.

Satisfaction with Internet services

The level of overall satisfaction with the content and services of e-resources provided by the university library are discussed in table 11. The results of the gender and satisfaction of e-resource services revealed some significant differences on the factor examined in table 10. Coverage of subject

https://doi.org/10.47657%2F201213776

had influence between gender and e-resources of university libraries (χ^2=15.884, *P*=.007); (χ^2=12.015, *P*=.035).

Table 10. Gender and overall satisfaction with internet services

Variables	Pearson chi-square	
	X^2	P
Level of materials available	8.800	.117
Coverage of subject	15.884	.007
Ease of access	7.877	.163
Ease of use	5.374	.372
Availability of computer facilities in the university	8.208	.145
Adequate bandwidth to access the resources	12.015	.035
Easy navigation to resources from library website	1.897	.863
Overall user satisfaction	4.256	.513

Table 11. Overall satisfaction

Level of satisfaction	Frequency	Percent
Lowest	14	7.4
Low	56	29.5
Moderate	102	53.7
High	16	8.4
Highest	1	0.05
Not applicable	1	0.05
Total	100	100

It is observed from table 11 that most of the students' satisfaction levels is moderate as 102 (53.7%) showed that they were moderately satisfied of e-resource services provided by the university. Overall satisfaction level for 56 (29.5%) respondents was low and most important to know that 14(7.4%) respondents satisfaction level was the lowest. Satisfaction level for high and highest among the respondents was the same as both of numbers are only one (0.5%). However, more of students were not satisfied with the e-resource services provided by the university and very few of them were satisfied.

Problems in using e-resources

Internet use is not without problems. Respondents indicated the problems they encountered. These included time wastage as a result of the ''slowness'' of the connection, inadequate knowledge of how to navigate on the Internet, limited number of titles available, do not have access facilities from home and so on. It is evident from table 12 that most of the undergraduates (27.9%) faced the problem that they did not have enough computers to use Internet while the second highest number (23.7%) claimed that slow download speed was the problem in using Internet.

Table 12. Problems encountered by internet users

Problems	Frequency	Percent
Only a limited number of titles available	27	14.2
Do not know how to use these resources	31	16.3
Difficulty in finding relevant information	44	23.2
Do not have access from home	25	13.2
Limited access to computers	53	27.9
Slow download speed	45	23.7
Others	7	3.7

Discussion

The results on access to Internet confirm the statement of Islam and Tsuji (2011) that in Bangladesh though connectivity is limited, people are increasingly gaining access to the Internet. The data obtained in this research indicate that the students used Internet mostly for Facebooking, e-mailing

https://doi.org/10.47657%2F201213776

and academic purposes. Gender based analysis revealed that more males compared with females had used Internet in their study. The majority of the respondents surfed the Internet through university cyber center even though Arts Faculty provides Internet access points for them. Likewise, we can explain low number of students (9.5%) gaining access to the Internet from the faculty computer center due to the limited facilities. The present study confirms that more students visit university cyber center than other access points. Most undergraduates do not go through any formal training on how to use the Internet. They learn through trial and error methods, with the help of their friends and some of them completed training program. This was further proved by the present study that majority of the respondents use the Internet only for Facebooking purposes because they have lack the skill to use it effectively for other purposes. It is also found that undergraduates have not been taking full advantage of the vast information on the Internet, because they lack adequate knowledge of its use. Undergraduates need to be taught by library staff about how to find information on the Internet, just as they have been doing for many years when teaching how to find information in the library. Studies on the use and usability of Internet by the students' needs to be made on regular basis. Most of the students (37.9%) use Internet whenever they needed and 46.8% have 1-2 years' experience of using Internet. At present only six departments have Internet and computer lab facilities. As it is widely known, the Internet is not only an important tool for e-mail, chat, and entertainment purposes but also for research and accessing library websites. These results accord with the answers given to the question "how do you reach information?" It is worth the attention that most of the students (53.2%) prefer search engines for reaching information and that there are some other students (22.6%) who access information using the library website.

Recommendations

The present study was designed to access and use of the Internet among undergraduates in the Faculty of Arts at Dhaka University. The students have embraced the Internet but the university authority should make efforts to provide access to them directly in the Arts Faculty or in the university as a whole. To promote better and efficient use of Internet for academic, research and other purposes, the following recommendations should be considered for implementation.

- As the study covers only Arts Faculty's undergraduate students, faculty computer center facilities should be increased to attract more students. Dhaka University does not have any training program for the students on how to use the Internet. So training programs are needed to be arranged and more Internet facilities should be provided to students.
- The faculty should also include in its plans provision of computer laboratories and Internet facilities for each department where students can have access to the Internet. Leaving students to the commercial cyber cafes is limiting their use. High speeds Wi-Fi is needed to be developed by Arts Faculty, so that faculty members and students can use online e-resources and Internet within the campus according to their suitability.
- E-journals and e-database, e-books and other e-resources (both online and offline) should be acquired by the Central Library. Infrastructure facilities such as extension of LAN connection with all departments, procurement of CD mirror server, etc. should be developed. The speed of Internet needs to be increased for quick access to the available e-resources.
- The LIS professionals of the Central Library have to create more awareness on e-resources. In this context the website of library, newsletter of the institution should highlight the available e-resources at the library regularly. The Central Library needs to arrange various orientation and training programs for faculty members and students for the optimum use of available resources.
- The university library should not only make efforts to provide access to its undergraduates, it should also include the use of Internet in its library instruction course which it teaches all freshmen. Finally, ICT related course should be incorporated in different departments of Arts Faculty as very few of them have the courses in their academic syllabi. The university library should be well funded by the government so that it can provide access for students. Every undergraduate should be able to use the Internet.

References

Adams, J. A., & Bonk, S. C. (1995). Electronic information technologies and resources use by university faculty and faculty preferences for related library services. *College and Research Libraries, 56*(2), 119-131.

https://doi.org/10.47657%2F201213776

Azad, A. K., & Islam, N. (1997). *Overview of Internet access in Bangladesh: Impact, barriers, and solutions*. Retrieved from http://www.isoc.org/inet97/proceedings/E3/E3_1.HTM

Bangladesh, Ministry of Science and Information Communication Technology. (2002). *National information communication technology policy*. Dhaka: The Ministry.

Banglapedia. (2006). *ICT in Bangladesh.* Retrieved from http://www.banglapedia.org/httpdocs/HT/C_0328.HTM

Bao, X.-M. (1998). Challenges and opportunities: A report of the 1998 library survey of Internet users at Seton Hall University. *College & Research Libraries, 59*(6), 535-543.

Bennett, G. (2001). Who is on the Internet? *IDEA Personal Trainer*, *12*(14), 6-12.

Central Intelligence Agency. (2011). *The world factbook.* Retrieved from www.cia.gov/cia/publications/factbook/geos/bg.html

Chachage, B. L. (2001). Internet cafes in Tanzania: A study of the knowledge and skills of end users. *Information Development, 17*(4), 226-33.

Hewitson, A. (2002). Use and awareness of electronic information services by academic staff at Leeds Metropolitan University-A qualitative study. *Journal of Librarianship and Information Science*, *34*(1), 43-52.

Hoffman, D. L., Novak, T. P., & Schlosser, A. (2000). The evolution of the digital divide: How gaps in Internet access may impact electronic commerce. *Journal of Computer- Mediated Communication, 5*(3). Retrieved from http://jcmc.indiana.edu/vol5/issue3/hoffman.html

Internet World Stats. (2010). *Bangladesh Internet usage, broadband and telecommunications reports.* Retrieved from http://www.internetworldstats.com/asia/bd.html

Iqbal, S. M. (1999). *Internet in Bangladesh: State of art and changes needed to prosper*. Bangladesh Internet country paper presented in Workshop on Internet: South Asian realities and opportunities, April 5-8. Retrieved from http://216.152.71.161/Bangladeshinternet.html

Islam, A., & Rahman, A. (2006). Growth and development of information and communication technologies in Bangladesh. *The Electronic Library*, *24*(2), 35-146.

Islam, M. A. (2011). E-books in Bangladesh: New horizon. *CNEWS (Voice of Technology)*, June, 44-45.

Islam, M. A., & Chowdhury, S. (2011). Assessing the impact of Internet in library and information services: A study of some higher academic institutions in Bangladesh, London: LAP Lambert.

Islam, M. A., & Islam, M. M. (2008). Community information centers: A step to bringing connectivity of the rural communities in Bangladesh. In *Proceedings of the Planner-2008 Convention on Open access, open source, open libraries* (0)3, 6-7 November, Nagaland University, Nagaland, India, 55-69.

Islam, M. A., & Tsuji, K. (2011). Bridging digital divide in Bangladesh: Study on CIC. *The Electronic Library*, *29*(4), 468-478

Islam, M. M., & Islam, M. S. (2005). Cyber cafes in Dhaka city: A study on patterns of users and information services. *The Dhaka University Studies*, *62*(2), 153-173.

Kaur, A., & Manhas, R. (2008). Use of internet services and resources in the engineering colleges of Punjab and Haryana (India): A study. *International Information and Library Review, 40*, 10-20.

Laite, B. (2000). *Internet use survey: Analysis.* Retrieved from http://www.ship.edu/_bhl/survey

Nasiruddin, M. (2003). Internet use by university academics: A bipartite study on information and communication. *Online Information Review*, *27*(4), 225-237.

Nazim, M. (2008). Information searching behavior in the Internet age: A users' study of Aligarh Muslim University. *International Information and Library Review*, *40*, 73-81.

Nwokedi, V. C. (2007). Impact of internet use on teaching and research activities of the academic staff of Faculty of Medical Sciences, University of Jos: A case study. *Gateway Library Journal*, *10*(1), 13-22.

Omotayo, B. O. (2006). A survey of Internet access and usage among undergraduates in an African university. *The International Information and Library Review, 38*, 215-224

Outsource Offshore. (2010). *Gartner lists Bangladesh in the top 30 IT outsourcing destinations*. Retrieved from http://www.outsourceoffshore.info/

Rahman, M. A. (2004). Internet revolution in Bangladesh. *The Bangladesh Observer*, January 24, p. 14.

Roknuzzaman, M. A. (2006). A survey of internet access in a large public university in Bangladesh. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), 2*(3), 86-105.

Sujatha, H. R. (2011). Analysis of Internet use in undergraduate colleges of Mangalore. *DESIDOC Journal of Library & Information Technology*, *31*(3), 35-40.

https://doi.org/10.47657%2F201213776

University Grants Commission of Bangladesh. (2010). *Universities in Bangladesh.* Retrieved from http://www.ugc.gov.bd

University of Dhaka. (2011). *Dhaka University prospectus*. Dhaka: Registrar.

https://doi.org/10.47657%2F201213776