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Use of ICT by Students: A Survey of Faculty of Education at IUB

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Introduction

ICT is often perceived as a catalyst for change, change in teaching styles, change in learning approaches and in access to information (Watson, 2005). It refers to technologies that provide access to information through telecommunications. Use of ICT has changed our conventional ways of learning and proposes the need to rethink education in terms of a more current context (White, 2010). ICT capability is fundamental to participation and engagement in modern information society. ICT can be used to find, develop, analyze and present information, as well as to model situations and solve problems. ICT enables rapid access to ideas and experiences from a wide range of people, communities and cultures, and allows pupils to collaborate and exchange information on a wide scale (Crown, 2010). Education is the first and best key area for ICT applications. ICTs can help by providing alternative possibilities for education (Casal, 2007). The purpose of ICT in education is generally to familiarize students with the use and workings of computers, and related social and ethical issues. ICT has also enabled learning through multiple intelligence as ICT has introduced learning through simulation games; this enables active learning through all senses (Gateway 2010). Use of different information communication technologies has become inevitable for students in learning. By using modern information

communication technologies, students can retrieve their required information within a short time. They can access and disseminate electronic information like e-books, e-journals and can improve their learning by using different modern ICTs in form of wireless networks, internet, search engines, databases, websites and web 2.0 technologies.

Aims of the Study

The main objectives of the study were to analyze the pattern of ICT usage by students, its availability, use of ICT by their teachers during lecture, student's knowledge of different computer applications and their opinion about ICT use in learning. Besides this, an attempt was made to investigate the:

- purpose of internet use by respondents
- impact of ICT on their study
- level of their information retrieval skills
- widely used search engines by respondents
- databases used by them
- time spent by the respondents in online information searching activities
- problems faced by the respondents in accessing e-resources and online searching

Research Methodology

A questionnaire was designed after conducting a comprehensive review of the related literature. A survey of the Education Faculty at The Islamia University of Bahawalpur (IUB) was conducted. Two hundred questionnaires were distributed among the respondents and out of which 164 were returned. Hence, the response rate of the study was 82 percent. Data were analyzed by using SPSS software version 14. Results were represented with the help of tables and different figures.

Review of Related Studies

Zakaria, Watson & Edwards (2010) conducted their research on the use of Web 2.0 technology by Malaysian students. The general opinion gathered about the integration of Web 2.0 tools into learning was positive. Result showed that students preferred using e-mail to disseminate and share digital contents. Similarly it was also found that for finding information related to education, students prefer to use search engines instead of asking friends or teachers.

Maharana, Biswal and Sahu (2009) explored the use of information and communication technology used by medical students. They found 77% of the respondents were of the opinion that ICT should be included in their syllabus. Nearly all respondents expressed their desire to have a computer lab in their college. One hundred respondents out of 128 opined that medical education is not effective without ICT based resources and services.

Saunders & Pincas (2004) examined the student's attitude towards information and communication technologies in teaching and learning in the UK. Forty-five per cent of respondents indicated that they would prefer to have more face-to-face lectures at university. The students surveyed firmly believe themselves that

ICT has a significant role to play in supporting and enhancing their university learning experience. It was also suggested that they see the use of ICT as potentially going well beyond the use of the Internet to search for resources and the use of email to stay in touch with tutors and fellow students.

Luambano & Nawe (2004) investigated the internet use by students of the University of Dare es Salaam. Findings revealed that majority of the students were not use internet due to the inadequacy of computers with internet facilities, lack of skills in internet use and slow speed of computers. It was also revealed that most students who used the internet did not use it for academic purposes. It was suggested that more computers connected to the internet should be provided and training should also be given to the students on the use of internet (p. 16).

Njagi & Isbell (2003) assessed the students' attitudes towards web-based learning resources. The study addressed the differences in attitude change, towards computer technology, for students using web-based resources and those using traditional textbooks. It was pointed out that the majority of the students in both web-based and the traditional textbook groups had owned personal computers and had Internet accessibility at their homes; it is therefore possible that computer use was equal for all groups.

Crawford (2003) searched out the use of electronic information services by students at Glasgow University. The study pointed out the insufficient numbers of PCs for students, problems with password notification and insufficient technical support. A need for sophisticated network was also found (p. 35).

Oliver (2002) investigated the role of ICT in higher education in 21st century. He stated that ICT offers a student centered learning, it support in knowledge construction, distance education, learning at anytime. It expands the pool of teacher and students as well. It was summarized that we should see marked improvements in many areas of educational endeavor. Learning should become more relevant to stakeholders' needs; learning outcomes should become more deliberate and targeted. ICTs within education have a strong impact on, what is learned and how it is learned?

Data Analysis

Respondent's Department

Two hundred students were selected for obtaining data from Education Faculty. Out of total 164 respondents, 55 (33.5%) respondents were from Commerce Department, 44 (26.8%) were from Education Department and 65 (39.6%) respondents were from Psychology Department.

Respondent's Age

Data shows that 157 (95.7%) respondents were between 20 to 25 years old, six (3.7%) were between 25 to 30 years and only one (.6%) respondent was between 30 to 35years old.

Gender of Respondents

Data shows that from total 164 respondents, twenty three (19.5%) were male and 132 (80.5%) respondents were female. (See Figure 1)

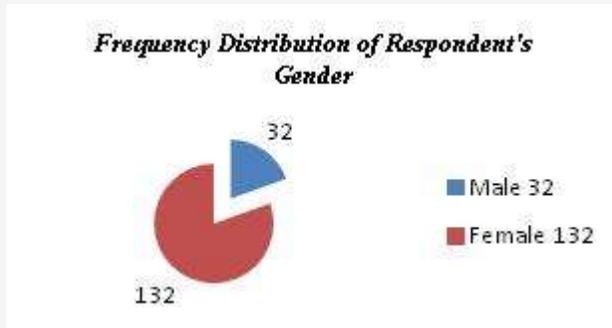


Figure 1

Availability of ICT to Respondents

Figure 4 shows that majority of the respondents no= 80 (48.8%) access ICT at their departmental computer lab, 52 (31.7%) respondents use at their class room, 15 (9.1%) respondents use library, 5 respondents (3.0%) avail it at their university hostel, 6 (3.7%) respondents access at net café while 4 (2.4%) respondents use it at their friend's home.

Use of ICT by Teacher While Delivering Lecture

Respondents were inquired that how often their teachers use ICT during lecture. Majority (mean= 2.20) reported that their teachers sometimes use ICT while teaching them.

Table1. Statistical Distribution of ICT Use By Teacher During Lecture

Sr.	ICT Use	Mean	Median	Mode	Std.
1.	Use of ICT by teacher during lecture	2.20	2.00	2	.470

Note: 1= Never, 2= Sometimes 3= Always

Respondent's Knowledge of Computer

Respondent's knowledge of computer application was analyzed. It was found that a vast number of respondents are quite confident in computer use. Use of mouse (mean= 3.15), use of Keyboard (Mean= 3.09), Customizing Desktop Environment (mean= 2.64), Window Installation (mean= 2.59), Word Processing (mean= 2.83), Microsoft Excel (mean= 2.81), Microsoft Access (mean= 2.58), Microsoft Power Point (mean= 2.60) while the respondents were found confident in using Microsoft Office Publisher and Web publishing (mean= 2.31 and 2.49).

Table 2

Table 2. *Statistical Distribution of Respondent's Knowledge of Computer*

Sr.	Student's Knowledge of Computer	Mean	Median	Mode	Std.
1.	Use of Mouse	3.15	3.00	4	.957
2.	Use of Keyboard	3.09	3.00	4	.983
3.	Customizing Desktop Environment	2.64	3.00	3	1.063
4.	Window Installation	2.59	3.00	3	1.137
5.	Microsoft Word Processing	2.83	3.00	3	1.077
6.	Microsoft Excel	2.81	3.00	4	1.071
7.	Microsoft Access	2.58	2.00	3	1.915
8.	Microsoft Office Publisher	2.31	2.00	2	1.063
9.	Microsoft Power Point	2.60	3.00	2	1.129
10.	Web publishing	2.49	3.00	3	1.058

Note: 1= Not Confident, 2= Confident, 3= Quite Confident, 4= Very Confident

Respondent's Opinion About ICT Use in Learning

Respondents were asked to give their opinion about the use of ICT in learning. Majority of the respondent was found strongly agreed that ICT have great impact on learning process (mean= 4.38), ICT accelerate learning process (mean= 4.00), ICT improves GPA (mean= 3.97), teacher should use ICT during teaching (mean= 3.84), use of ICT for getting information is better than library (mean= 3.79) while majority of the respondent did not provide their opinion regarding the following statements: I feel fear from the use of ICT (mean= 2.87), Our syllabus does not support in developing basic ICT skills (mean= 3.31), I know how to use ICT but not interested in using it for learning (mean= 3.31), I think getting information from print material/books is better than using ICT (mean= 3.46), I cannot study without the use of ICT tools (mean= 3.12), I wish that ICT should not be used in teaching (mean= 2.82), I find it time consuming to use ICT in learning (mean= 3.18). (Table 3)

Table 3. *Statistical Distribution of Respondent's Opinion About the Use of ICT in Learning*

Sr.	Student's Opinion Towards ICT Use	Mean	Median	Mode	Std.
1.	Use of ICT have great impact on learning process	4.38	4.00	4	.724
2.	ICT accelerate learning process	4.00	4.00	4	.739
3.	Use of ICT improves my GPA	3.97	4.00	4	.905
4.	Teacher should use ICT during teaching	3.84	4.00	4	1.013
5.	I feel fear from the use of ICT	2.87	3.00	2	1.258
6.	Our syllabus does not support in developing basic ICT skills	3.31	3.00	4	1.186
7.	Use of ICT for getting information is better than library	3.79	4.00	4	1.108
8.	I know how to use ICT but not interested in using it for learning	3.31	4.00	4	1.217
9.	I think getting information from print material/books is better than using ICT	3.46	3.00	3	2.777
10.	I cannot study without the use of ICT tools	3.12	3.00	4	1.168

11. I wish that ICT should not be used in teaching	2.82	3.00	2	1.361
12. I find it time consuming to use ICT in learning	3.18	3.00	4	1.307

Note: 1= Strongly Disagree, 2= Disagree, 3= No Opinion, 4= Strongly Agree

Frequency of Internet Use by Respondents

This question aimed to evaluate Internet use by students. Responses showed that 64 (39.0%) respondents use internet daily, 34 (20.7) respondents use internet twice a week, 55 (33.5%) respondents use weekly while 11 (6.7%) respondents were found as monthly user of internet.

Use of Internet by Respondents in Learning their Subject

It was inquired from the respondents that how often they use internet for learning their subjects. Study found that respondents sometimes use internet in learning their subjects (mean= 2.26). Table 4

Table 4.

Statistical Distribution of Internet in Learning Their Subject

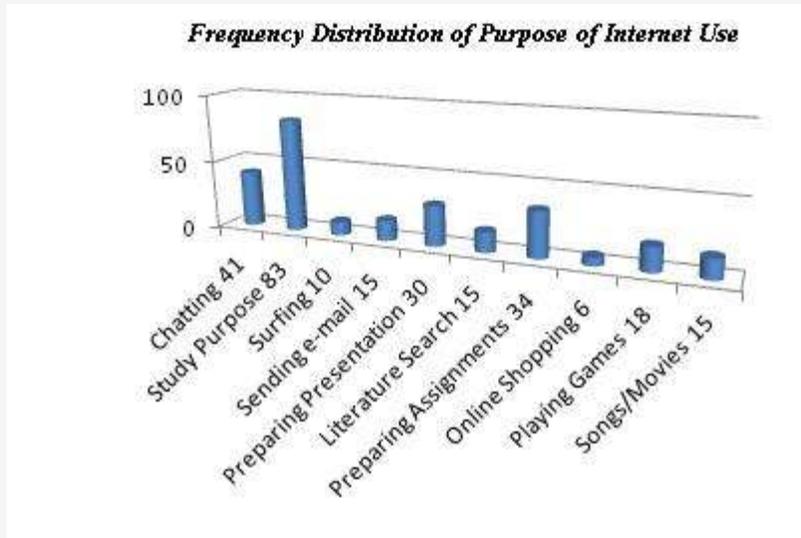
Sr.	Internet Use	Mean	Median	Mode	Std.
1.	Use of Internet by Students in Learning their Subjects	2.26	2.00	2	.542

Note: 1= Never, 2= Sometimes 3= Always

Internet Use by Respondents for different activities

An attempt was made to estimate the purpose of internet use by respondents. Majority of the respondents described that they use internet for study purpose no= 83 (50.6%) while 41 (25.0%) respondents use for chatting, 10 (6.1%) respondents use for surfing, 15 (9.1%) respondents for sending e-mail, 30 (18.3%) respondents for preparing presentation, 15 (9.1%) respondents for literature search, 34 (20.7%) respondents use for the preparation of their assignments, 6 (3.7%) respondents for online shopping, 18 (11.0%) respondents for playing online games, 15 (9.1%) respondents for downloading songs/movies, 11 (6.7%) respondents for newspaper reading, 6 (3.7%) respondents for supports information while 11 (6.7%) respondents mentioned that they use internet for writing article. (Figure 2)

Figure 2



Respondent's Information Retrieval Skills

A question was asked to inquire the information retrieval skill of the respondents. Data shows that their information retrieval skill on the internet is good (mean= 3.36). Table 5

Table 5

Statistical Distribution of Respondent's Information Retrieval Skills

Sr.	Opinion	Mean	Median	Mode	Std.
1.	Information Retrieval Skills While Using Internet	3.36	3.00	3	1.070

Note: 1= Poor, 2= Fair, 3= Good, 4= Very Good, 5= Excellent

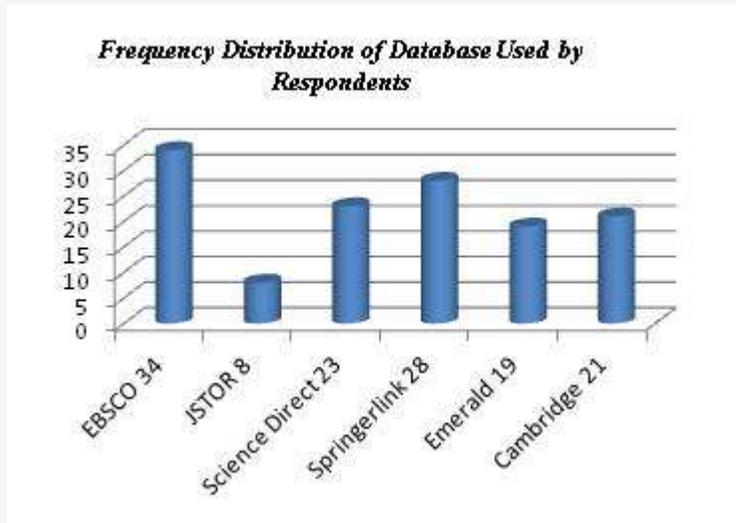
Use of Different Search Engines by Respondents

Internet use varies according to the different information needs of the users. Figure 7 shows that a vast number of respondents use Google search engine no= 126 (76.8%), 43 (26.2%) respondents were found Yahoo users, while 5 (3.0%) respondents use MSN, 3 (1.8%) respondents Alta Vista, 2 (1.2%) respondents Hot Boot, 3 (1.8%) respondents Lycos, 2 (1.2%) respondents use Netscape and none of the respondents was found as a user of l'mHalal search engine.

Use of Different Databases by Respondents

Data bases are considered to be a fine source for retrieving scholarly information. Respondents were asked to mention the databases they use. Figure 8 is evident that majority of the respondents no= 34 use EBSCO database, 23 (14.0%) respondents Elsevier (Science Direct), 8(4.9%) respondents use JSTOR, 28 (17.1%) respondents Springerlink, 19 (1.6%) respondents Emerald and 21 (12.8%) respondents use Cambridge database. (Figure 3)

Figure 3



Time Spent by Respondents in Different Online Information Searching Activities

Respondents were asked that how much time they spend per week in different online information searching activities. Results show that the respondents use the internet for 7-9 Hrs, in browsing (mean= 2.76), scanning journals (mean= 2.63) and reading e-mails (mean= 2.53), while they spend 4-6 Hrs per week in downloading articles (mean= 2.48), internet surfing (mean= 2.47) and chatting with friends (mean= 2.38). (See Table 6)

Table 6

Statistical Distribution of Time Spent by Respondent's in

Different Online Information Searching Activities

Sr.	Activities	Mean	Median	Mode	Std.
1.	Browsing	2.76	3.00	3	.606
2.	Scanning journals	2.63	3.00	3	.569
3.	Downloading articles	2.48	3.00	3	.699
4.	Internet surfing	2.47	3.00	3	.720
5.	Reading e -mails	2.53	3.00	3	.695
6.	Chatting with friends	2.38	3.00	3	.777

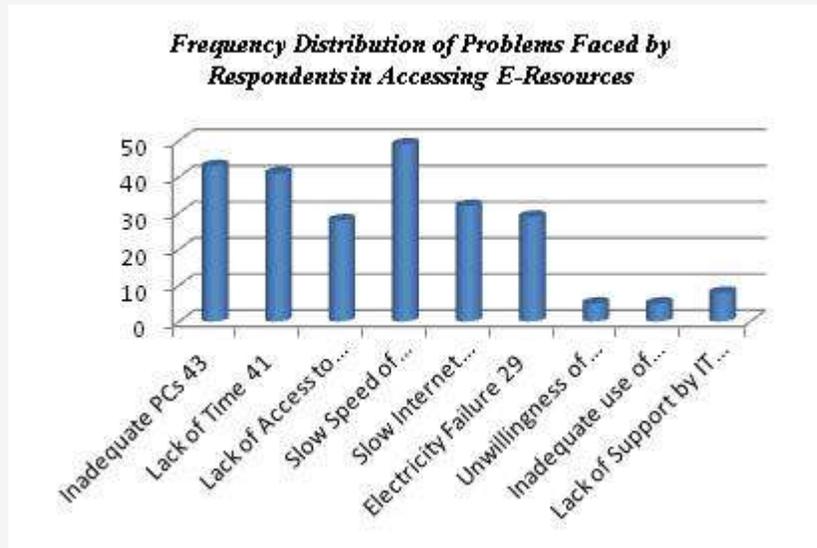
Note: 1= 1-3 Hrs, 2= 4-6 Hrs, 3= 7-9 Hrs

Problems Faced by Respondents in Accessing E-Resources

A list of different problems was provided with the respondents and they were asked to indicate the problems they face in accessing e-resources. Results show that majority face slow speed of PCs due to virus no= 49, inadequate number of PCs in Lab no= 43, lack of time to use e-resources no= 41, slow internet

connectivity no= 32, lack of access to printers in library no= 28, electricity failure no= 29, lack of support from IT staff no= 08, unwillingness of library staff for help no= 05, teachers do not use ICT resources during lecture no= 05. (Figure 4).

Figure 4

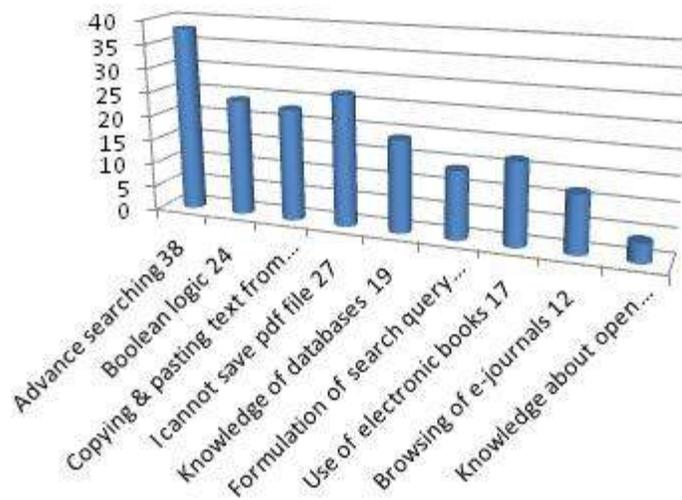


Problems Faced by Respondents in Online Searching

Online searching skills are essential for students in order to obtain required information while utilizing different databases and search engines. Through advance searching skills it is possible to obtain relevant piece of information without waste of time. Respondents were asked to mention the problems they face during online searching. Majority of the respondents was found unaware about advance searching techniques no= 38, unawareness about the use of Boolean logic no= 24, unable to select copy and paste text from pdf file no= 23, cannot save pdf file no= 27, lack of knowledge about databases related to subject no= 19, feel problem in formulating search query or keywords no= 14, lack of knowledge about browsing e-journals no= 12 and about open access journals no= 4 (Figure 5).

Figure 5

Frequency of Problems Faced by Respondents in Online Searching



Major Findings of the Study

- The study found that majority of the respondents was female and majority was between 20 to 25 years old.
- A large number of the respondents reported that they utilize ICT at their departmental computer lab.
- It was found that their teachers sometimes use ICT during lecture.
- Majority of the respondent's knowledge about computer applications was found quite sufficient for learning purposes.
- The majority strongly agreed that ICT have great impact on their learning as it helps in improving their GPA, teachers should use ICT and use of ICT is better than the use of library.
- A significant number of the respondents mentioned that they use internet daily and mostly for study purpose.
- Respondents reported that their information retrieval skills are good.
- Results showed that Google is a widely used search engine.
- It shown that the respondents use 7 to 9 hours weekly in different online information searching activities.
- Majority of the students have been facing the problems of slow speed of PCs due to viruses, inadequate number of PCs in Labs, lack of time in utilizing e-resources, slow internet connectivity and electricity failure.

The responses regarding problems revealed that majority were found unaware about the use of advance searching techniques i.e. Boolean logic and formulation of search query etc. and about the databases relevant to their subject, use of electronic books available on the internet, browsing e-journal and use of open access journals.

Conclusion and Recommendations

The integration of ICT can promote significant changes in the practices of teaching and learning and is beneficial for students, Blackmore and et al (2003). In this study, the respondents reported that their teachers sometimes use ICT during lecture. Keeping the importance of ICT in view, the study concluded that teachers should make maximum use of ICT during their lecture because it has a great impact on student's learning. Majority of the respondents admitted that they use internet for study but they do not know about advance searching techniques. Like Ozoemelem (2009) this study also strongly recommends that students should be trained to use advance searching techniques for retrieving the material of their interests. Togia & Tsigilis (2010) in their study reported that the vast majority of the participants used Internet search engines rather than specialized databases and full-text resources. Findings of this study also reflect similar result. Result showed that the Google is the most used search engine by the respondents. The study found that the available PCs in computer labs are inadequate for meeting the needs of student and they feel problem in accessing computers. It is recommended that the number of PCs should be increased. It was also found that the students of education faculty do not know about the use of electronic books. It is highly recommended that they should be trained in using electronic books, journals and open access databases relevant to their field. The current study confirms the findings of Swain (2010), Ndinoshiho (2010), Crawford (2003), Togia & Tsigilis (2010) and Ozoemelem (2009).

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