

**USE OF INFORMATION COMMUNICATION TECHNOLOGY BY THE
USERS' OF JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
(JUET), GUNA: A SURVEY**

Shakil Ahmad

(Librarian)

Deanship of Library Affairs
University of Dammam, Dammam (KSA)

Dr. Abdul Mannan Khan

(Library in charge and course coordinator)
Integral University, Lucknow- India

Dr. Suleiman Ibrahim Suleiman Alreyaee

Assistant Professor
Imam Muhammad Ibn Saud Islamic University

ABSTRACT

The main purpose of the study is to know the Use of Information Communication Technology by the Users' of Jaypee University of Engineering and Technology (JUET) and users' satisfaction about the library collection, facilities and both, traditional services as well as IT enabled services. A well structured questionnaire was administered to the faculty members, research scholars and students of the Jaypee University of Engineering and Technology (JUET) to collect data regarding the Use of Information Communication Technology and analyze the level of users' satisfaction. According to the users' responses the researchers observed that a large number of users are aware about the various types of services. It is also being revealed that majority of the users are utilizing the facilities and different services provided at JUET-Library The study also show that the majority of the user preferred Internet as a source of information to full-fill their subject related information need. The overall satisfaction levels of the users' are good.

Keywords: Information Communication Technology, Users', Jaypee University of Engineering and Technology, JUET, Guna

1. Introduction

The present century is the age of digital information system, which aims at leveraging the two-core revolutions, PC and Internet, other advancements in information processing, storage and communication technologies have revolutionized the role of the libraries and information centers all over the world. As a result, libraries are following facing new challenges, new competitors, new demands and variety of information services. The information is dynamic and unending resource that affects all disciplines and all walks of life hence, the information becomes an essential ingredient of our life and a basic input to education, research, planning and development activities. The information communication technology (ICT) is the science of information handling and processing, particularly by computers used to support communication of knowledge in scientific and technical, economical and social fields. ICT has convergence of two fold of technologies namely, computers and communication tools. In other words it is a mosaic of technologies, product,

tools & techniques have combined to provide new electronic dimension to information handling and management.

2. Jaypee University of Engineering and Technology

Jaypee Institute of Engineering and Technology, Guna was established in the year 2003 based on the MOU signed between Jaiprakash Sewa Sansthan (a not-for-profit trust sponsored by Rs. 15,000 Cr Jaypee Group) and the Government of Madhya Pradesh with an aim of becoming a Center of Excellence in Engineering and Technology. Based on our request to enable the Institute to become a State University, the Government of MP has, vide gazette extra ordinary no. 3 of 2010 dated 29th April 2010 has established Jaypee University of Engineering and Technology (JUET), Raghogarh, Guna as a private university in the State of MP under the provisions of MP Niji Vishwavidyalaya Adhiniyam 2007.

The Learning Resource Center of JUET is a major activity centre providing facilities to the students and staff for almost 15 hours a day. The library is fully classified and catalogued and users can search for information at their own. The institute uses Library management software, Alice for Windows. LRC users know the availability status of the books and other materials through the software OPAC (Online Public Access Catalogue). The library is linked with DELNET (Developing Library Network) <http://delnet.nic.in>, the users of LRC enjoy the access of reading materials through this network also. The library subscribes to journals of national and international repute.

3. REVIEW OF RELATED LITERATURE

Shampa Paul (2007) has presented a critical discussion in his on Information communication technology (ICT) in government agencies as well as educational and research institutions facilitate an efficient, speedy and transparent dissemination of information to the public and other agencies for performance of government administration activities. The findings of this study highlight the role of Internet, particularly the World Wide Web (WWW), which has made it easier for citizens to locate and download official information and to conduct transactions. Information management agencies such as libraries and knowledge centers play a vital role in supporting transparent and accountable governance in this digital era.

Dana Hanson-Baldauf and Sandra Hughes Hassell (2009) have conducted a study to present a critical discussion on information and communication technologies (ICTs) become increasingly prevalent in modern society, improving students' competency with these technologies has become a key focus of 21st century education.

Namkee Park', Raul Roman', Seungyoon Lee' and Jae Eun Chung (2009) have examined in their study the factors that influence people's adoption and use of a digital library system and tests the applicability of the Technology Acceptance Model (TAM) in the context of developing countries. The study suggested that external variables that affect perceived ease of use and usefulness need to be considered as important factors in the process of designing, implementing, and operating digital library systems. Such consideration will help decrease the mismatch between system design and local users' realities, and further facilitate the successful adoption of digital library systems in developing countries.

Eustache Mègnignéto(2010) has discussed in their study about Information policy: Content and challenges for an effective knowledge society This study presented a critical discussion of Information policy is the set of strategies and actions defined at a geographical or institutional level in order to satisfy information needs expressed by people and assure development goals. With the development of information and communication technologies (ICT), new stakeholders appear, including both information producers and consumers, raising problems relative to authenticity, reliability, and evaluation of information, and also the problem of full and effective use of information technology. As information policy aims at providing access to timely information, it should attempt also to make people fluent with technology. Toward achieving this objective some challenges are faced which are related to access to technology, computer literacy, ability to read and write, and early childhood development.

4. RESEARCH GAP

With the advent of globalization in the realm of education, there is an information explosion. The uses of Information Communication Technology are the most popular source of researching. There is a dearth of study on Information Communication Technology in the context of Indian universities. The study with regard to use of Information Communication Technology in JUET -Guna renowned institution of India is thus a novel effort.

5. OBJECTIVES OF THE STUDY

The following objectives have been pursued to study the level of use of Information Communication Technology in the referred institution:

1. To examine the level of use of Information Communication Technology services by the Users' of Jaypee University of Engineering and Technology (JUET), Guna.
2. To identify the place from where Users' of Jaypee University of Engineering and Technology (JUET) access Information Communication Technology services.
3. To find out the purpose of using Information Communication Technology services.
4. To know the problem faced by the users' while using Information Communication Technology services.
5. To find out effectiveness of Information Communication Technology services.
6. To understand various factors, which discourage users' in using Information Communication Technology services

6. METHODOLOGY EMPLOYED

This study used questionnaire-based survey method, as many similar studies conducted earlier have also used this method for data collection. This method is also preferred as it is less time consuming and economical for a scattered population. We selected a random sample of 80 users' from the institute. At institute questionnaires were personally distributed to the users'. Out of 80 distributed questionnaires 60 filled were returned back by the respondents at JUET showing overall response rate of 75 percent. The collected data were analyzed, classified and tabulated by employing statistical methods.

7. Need and Significance of the Study

In the present era of information explosion more and more publications are becoming web enabled. Most of the science and technology libraries have changed the contemporary outlooks towards the functions and services. The environment is rapidly changing to electronic environment. So we decided to conduct the study for measuring the use of Information Communication Technology by the users' in the referred institution:

8. Scope and Limitations of the Study

The objective of the present study entitled "Use of Information Communication Technology by the users' of at JUET Library-Guna". The main purpose of this study is to find out the level of Use of Information Communication Technology by the users 'of at JUET Library-Guna The investigator was able to identify some of major limitation such as:

1. The present study consists only to Information Communication Technology users.
2. The geographical area is restricted to Guna, Madhya Pradesh only.

9. DATA ANALYSIS, INTERPRETATION AND PRESENTATION

The data collected through questionnaire have been organized and tabulated by using simple statistical methods.

9.1. AWARENESS OF ICT TOOLS

It indicates that out of 24 respondents i.e. students 24(100%) was aware with computer and Internet facility, 22(91.66%) students were aware with office software, 20(83.33%) were aware with Intranet, Printer, CD-writer, Copier, 16(66.67%) were aware with Graphic software, 14(58.33%) were aware with the Scanner and Laptop, 12(50.00%) were aware with Data Projector and 10(41.66%) were with the Web Publishing Software (Table-1).

It also indicate that out of 12 respondents i.e. research Scholar 24(100%) were aware with computer, Printer, CD-writer, Copier, Scanner, 10(88.33%) were aware with the Internet& Surfing, Intranet, office Software, Graphic Software, Printer, 8(66.67%) were aware with Data Projector and 4(33.33%) were aware with Web Publishing software.

From the analysis of table –1 it is clear that 24(100%) faculty members were aware with computer and Internet and Surfing, 20(83.33%) were aware with the Office Software and Printer, 18(75.00%) were aware with Intranet and Web Publishing Software, (16.66%) were aware with Copier,14(48.33%) were aware with CD-Writer, 12(50.00%) were aware with the Graphic Software, Scanner and Laptop and 8(33.33%) were aware with the Data Projector.

Table 1
Awareness of ICT Tools

Sl. No.	Tools	No. of Respondents (N=60)			Total (60)
		Students (24)	RS (12)	Faculty Member (24)	
1.	Computer	24(100%)	12(100%)	24(100%)	60(100%)
2.	Internet & Surfing	24(100%)	10(83.33%)	24(100%)	58(96.66%)
3.	Intranet	20(83.33%)	10(83.33%)	18(75.00%)	48(80%)
4.	Office Software (MS-Office)	22(91.66%)	10(83.33%)	20(83.33%)	52(86.66%)
5.	Web publishing Software	10(41.66%)	4(33.33%)	18(75.00%)	32(53.33%)
6.	Graphic Software	16(66.66%)	10(83.33%)	12(50.00%)	38(63.33%)
7.	Printer	20(83.33%)	10(83.33%)	20(83.33%)	50(83.33%)
8.	Scanner	14(58.33%)	12(100%)	12(50.00%)	38(63.33%)
9.	CD-Writer	20(83.33%)	12(100%)	14(58.33%)	46(76.66%)
10.	Data Projector	12(50.00%)	08(66.66%)	08(33.33%)	28(46.66%)
11.	Laptop	14(83.33%)	12(100%)	12(50.00%)	38(63.33%)
12.	Reprography	20(83.33%)	12(100%)	16(66.66%)	48(80%)

9.2. APPROACH OF AWARENESS OF E-RESOURCES

It is clear from table-2 that out of 24 respondents 18 (75.00%) students were aware of ICT application with the help colleague, 6 (50.00%) research scholars were aware of ICT application with the help colleague and 4 (33.33%) got aware about the help of website. 14 (58.33%) were aware of ICT application through other means.

Table also shows that among 60 respondents 24 (40.00%) users were aware of ICT application with the help colleague and 14 (23.33%) were aware with the help of information broacher.

Table 2
Approach of Awareness of E-Resources

Sl. No.	Awareness Approach	No. of Respondents N=60			
		Students(24)	RS (12)	Faculty Member(24)	Total (60)
1.	Through Teachers	06 (25.00%)	02 (16.66%)	4 (16.66%)	12 (20.00%)
2.	Through Your Colleagues	18 (75.00%)	06 (50.00%)	-	24 (40.00%)
3.	Through Website	-	04 (33.33%)	-	04 (6.66%)
4.	Through Information Broachers of Library	-	-	06 (25.00%)	06 (10.00%)
5.	Through Faculty and Other Sources	-	-	14 (58.33%)	14 (23.33%)

9.3. FREQUENCY OF VISIT TO THE LIBRARY

It is clear from the table-3 that out of 24 respondents 16 (66.66%) students use the ICT application daily for personal purpose, 6(50.00%) research scholar use the use the ICT application daily for personal purpose, and 14(58.33%) faculty member use the ICT application daily for personal purpose.

The table also shows that among 60 respondents 36 (60.00%) users are using ICT applications for personal purpose daily, 14(23.00%) of them use several time in a week

Table3

Frequency of Visit to the Library

Sl. No.	Frequency	No. of Respondents (N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total
1.	Daily	16(66.66%)	6(50.00%)	14(58.33%)	36(60.00%)
2.	Several Times in a Week	6(25.00%)	2(16.66%)	6(25.00%)	14(23.33%)
3.	Weekly	1(04.00%)	2(16.66%)	-	3(5.00%)
4.	Monthly	1(04.00%)	2(16.66%)	-	3(5.00%)
5.	Never	-	-	4(16.66%)	4(6.66%)

9.4. ICT APPLICATIONS APART FROM LIBRARY

Table 4 concerns with display of places, which are using by the users. Table clearly indicate that out of 24 respondents i.e. students 14(58.33%) using the ICT applications at home and 4(33.33%) using at work place while faculty members 14(58.33%) using the ICT applications at cyber cafe and also 8(33.33%) use it work place.

The table also shows that among 60 respondents 26(43.33%) users are using cyber café and also 26(43.33%) users are using workplace for using the ICT applications apart from library.

Table 4
ICT applications apart from library

Sl. No.	Option	No. of Respondents (N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total
1.	At Home	-	6(50.00%)	-	6(10.00%)
2.	In commercial places (cyber cafe)	10(41.66%)	2(16.66%)	14(58.33%)	26(43.33%)
3.	Others	14(58.33%)	4(33.33%)	8(33.33%)	26(43.33%)

9.5. FREQUENCY OF USING ICT APPLICATION

It indicates the time duration for using ICT application. From the analysis it is found that out of 24 respondents 12 (50.00%) students have the 2-4 years experience in using ICT application, 6(50.00%) research scholar have more than 6 years experience and 4(33.33%) have less than one year experience³ for using ICT application and faculty members 12(50.00%) have more than 6 years experience of using ICT application (Table-5).

Table also shows that 24 respondents out of 60 are using ICT application more than 6 years.

Table 5
Frequency of using ICT application

Sl. No.	Frequency	No. of Respondents (N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total (60)
1.	Less than 1 year	2(58.33%)	4(33.33%)	-	6(10.00%)
2.	1-2 years	-	2(16.66%)	4(16.66%)	6(10.00%)
3.	2-4 years	12(50.00%)	-	4(16.66%)	16(26.66%)
4.	4-6 years	4(16.66%)	-	4(16.66%)	8(13.33%)
5.	More than 6 years	6(25.00%)	6(50.00%)	12(50.00%)	24(40.00%)

9.6. TRAINING TO USE ICT APPLICATION

It is clear from the table –6 that out of 24 respondents i.e. students 14(58.33%) go to take training of ICT application at college and 8(33.33%) learns personally or other informal means. 8 (66.66%) research scholar learns ICT application by personally or other informal means. 4(33.33%) learns at school.

Analysis of data from table –6 depicts that out of 60 respondents 20(33.33%) learns ICT application at training institute and personally or other informal means.

Table 6

Training to use ICT application

Sl. No.	Frequency	No. of Respondents(N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total (60)
1.	At School	2(08.33%)	-	-	2(03.33%)
2.	At College	14(58.33%)	4(33.33%)	-	18(30.00%)
3.	At Library	-	-	-	-
4.	At training Institutes	-	-	20(83.33%)	20(33.33%)
5.	Learnt personally	8(33.33%)	8(33.33%)	4(16.66%)	20(33.33%)

9.7. EXPERTISE IN USING ICT APPLICATION

It is clear that out of 24 respondents 16(66.66%) students was the experienced user of ICT application, 6(50.00%) research scholar was the experienced user and 4(33.33%) use it with the help of others and 8(33.33%) faculty member were expert user, experienced user and use with the help of others.

Table 7

Expertise in using ICT application

Sl. No.	Frequency	No. of Respondents(N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total (60)
1.	I am an expert user	06(25.00%)	2(16.66%)	8(33.33%)	16(26.66%)
2.	I am an experienced user	16(66.66%)	6(50.00%)	8(33.33%)	30(50.00%)
3.	I am a novice user	-	-	-	-
4.	I use it with the help of others	02(08.33%)	4(33.33%)	8(33.33%)	14(23.33%)
5.	Learnt personally	-	-	-	-

9.8. FAVOURITE ACTIVITIES TO USE ICT

20(83.33%) has favorite activities as e-mail, 18(75.00%) have online learning, (16.66%) have surfing Internet and 10(41.66%) have download documents activity using ICT application (table-8).

It also indicate 10(83.33%) research scholar using e-mail, online learning, preparing presentation document, 8(66.66%) research scholar were using surfing Internet, 6(50.00%) research scholar were using chat and 4(33.33%) research scholar were using discussion forms and download documents (table-8).

From the analysis of table-8 it is clear that 24(100%)

Table8**Favorite activities to use ICT**

Sl. No.	Favorite activities	No. of Respondents (N=60)			Total (60)
		Students (24)	RS (12)	Faculty Member (24)	
1.	E-mail	20(83.33%)	10(83.33%)	24(100%)	54(90%)
2.	Chat	04(16.66%)	06(50.00%)	04(16.66%)	14(23.33%)
3.	Discussion Forums	08(33.33%)	04(33.33%)	12(50.00%)	24(40.00%)
4.	Video conferencing	02(08.33%)	02(16.66%)	-	4(6.66%)
5.	Download music, films	10(41.66%)	04(33.33%)	16(66.66%)	30(50%)
6.	Surfing Internet	16(66.66%)	08(66.66%)	16(66.66%)	40(66.66%)
7.	Online learning (E-Learning)	18(75.00%)	10(83.33%)	16(66.66%)	34(56.66%)
8.	Preparing presentations, documents	14(58.33%)	10(83.33%)	04(16.66%)	28(46.66%)

9.9. PROFICIENCY IN USING ICT APPLICATION FOR PERSONAL PURPOSE

It is Clear that out of 24 Respondents i.e. students 18(75.00%) has very frequency for informative purpose: To find and use information. 12(50.00%) has very often frequency for communication purpose: To exchange and to transmit information with using E-mail, chat etc through Internet.

Out of 12 research scholar 6(50.00%) research scholar have very often frequency for informative purpose and communicative purpose, 4(33.33%) research scholar have often

frequency for functional: To use and manipulate existing information services and creating: To compose compile produce information.

Table-9 also indicates that out of 24 faculty member 14(58.33%) have very often frequency for informative and communicative purpose and 10(41.66%) had very often frequency for functional purpose. 4(33.33%) had often frequency for informative and communication purpose.

Table 9

PROFICIENCY IN USING ICT APPLICATION FOR PERSONAL PURPOSE

Sl. No.	Frequency	No. of Respondents(N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total (60)
1.	Informative purpose	18(75.00%)	6(50.00%)	14(58.33%)	38(63.33%)
2.	Communication purpose	12 (50.00%)	6(50.00%)	14(58.33%)	32(53.33%)
3.	Functional purpose	-	4(33.33%)	10(41.66%)	14(23.33%)

9.10 (a). PROFICIENCY IN USING ICT APPLICATION FOR PERSONAL USE

When the users were asked about the proficiency in using ICT application for personal use to them, their answers were as follows. Out of 24 Respondents i.e. students in Word Processing, 10(41.66%) were excellent and 6(25.00%) good, in presentation tool 10(41.66%) were excellent and 6(25.00%) were good in E-mail 16(66.66%) were excellent and 6(25.00%) were good in chatting 6(25.00%) were excellent and 6(25.00%) were good and in internet browsing 16 (66.66%) were excellent.

While out of 12 Research scholar 6(50.00%) research scholar were excellent in Word Processing, Spreadsheets, Presentation tool (Power Point), and e-mail. 8(66.66%) were excellent in Internet browsing and 4(33.33%) were excellent in Web page design. 6(50.00%) research scholar were good in Spreadsheets and e-mail. 4(33.33%) were good in chat.

Out of 24 Respondents i.e. faculty member of Juet 10(41.66%) were excellent in e-mail, 8(33.33%) were excellent in Internet browsing and Word Processing, 6(25.00%) were excellent in chat. 10(41.66%) user were good in Word Processing, e-mail, Internet browsing and 6(25.00%) were good in presentation tool (Power Point).

Table 10 (a)

PROFICIENCY IN USING ICT APPLICATION FOR PERSONAL USE

Sl. No.	Frequency	No. of Respondents(N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total (60)
1.	Word Processing (Excellent)	10(41.66%)	6(50.00%)	8(33.33%)	24(40.00%)
	Word Processing (Good)	6(25.00%)	-	10(41.66%)	16(26.66%)
2.	Presentation Tool (Excellent)	10(41.66%)	6(50.00%)	-	16(26.66%)
	Presentation Tool (Good)	6(25.00%)	-	6(25.00%)	12(20.00%)
3.	E-mail (Excellent)	16(66.66%)	6(50.00%)	10(41.66%)	32(53.33%)
	E-mail (Good)	6(25.00%)	6(50.00%)	10(41.66%)	22(36.66%)
4.	Chatting (Excellent)	6(25.00%)	-	6(25.00%)	12(20.00%)
	Chatting (Good)	6(25.00%)	4(33.33%)	-	10(16.66%)
5.	Internet browsing (Excellent)	16(66.66%)	8(66.66%)	8(33.33%)	32(53.33%)
	Internet browsing (Good)	-	-	10(41.66%)	10(16.66%)
6.	Spreadsheets (Excellent)	-	6(50.00%)	-	6(10.00%)
	Spreadsheets (Good)	-	6(50.00%)	-	6(10.00%)
7.	Web page design (Excellent)	-	4(33.33%)	-	4(6.66%)

9.10 (b). PROFICIENCY AND ICT TOOLS FOR STUDY/RESEARCH PURPOSE

Table gives the idea about the tools used by the users of the JUET- library Guna, which ICT tools are most useful to study/research purpose.

Data from the table indicate that in using Internet for study/research purpose out of 24 respondents i.e. Research Scholar in use of Internet 8(33.33%) were excellent, in use of e-mail 7(29.16%) were excellent and 6(25.00%) were excellent in Word Processing.

While out of 12 Research scholar 5(41.66%) research scholar were excellent in Word Processing. 4(33.33%) were excellent in use of Internet and e-mail.

Out of 24 Respondents i.e. faculty member of JUET 4(16.66%) were excellent in e-mail, and use of Internet for study/research purpose, 3(12.50%) were excellent in use of e-mail.

Table 10 (b)

PROFICIENCY AND ICT TOOLS FOR STUDY/RESEARCH PURPOSE

Sl. No.	Frequency	No. of Respondents(N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total (60)
1.	Word Processing (Excellent)	6(25.00%)	5(41.66%)	-	11(18.33%)
2.	E-mail (Excellent)	7(29.16%)	4(33.33%)	4(16.66%)	15(25.00%)
3.	Internet browsing (Excellent)	8(33.33%)	4(33.33%)	3(12.50%)	15(25.00%)

9.10 (c). PROFICIENCY AND ICT TOOLS FOR STUDY/RESEARCH REQUIREMENTS.

When the users were asked about the proficiency in using ICT application for study/research requirements, their answers were as follows. Out of 24 Respondents i.e. students in Design and maintenance of Dynamic Website(s), anybody was not excellent 4(16.66%) were not capable in design and maintenance of website. 3(12.50%) were not capable in developing software and new application.

While out of 12 Research scholar 3(25%) were excellent in Design and maintenance of Dynamic Website(s), 2(16.66%) were good in setting up and moderating discussion groups, chats, blogging etc.

Out of 24 Respondents i.e. faculty member of JUET 3(12.50%) were good in Design and maintenance of Dynamic Website(s), and nobody was capable for developing software and new application and setting up and moderating discussion groups, chats, blogging etc.

Table 10 (c)

PROFICIENCY AND ICT TOOLS FOR STUDY/RESEARCH REQUIREMENTS.

Sl. No.	Frequency	No. of Respondents(N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total (60)
1.	Design Website (Excellent)	-	3(25.00%)	-	3(5.00%)
	Design Website (Good)			3(12.50%)	3(5.00%)
	Design Website (Not Excellent)	4(16.66%)	-	-	4(6.66%)
2.	Maintenance Website (Excellent)	4(16.66%)	3(25.00%)	-	7(11.66%)
	Maintenance Website (Good)	-	-	3(12.50%)	3(5.00%)
	Maintenance Website (Not Excellent)	-	-	-	-
3.	Developing software (Excellent)	-	-	-	-
	Developing software (Not Excellent)	3(12.50%)	-	-	3(5.00%)
4.	New Application (Excellent)	-	-	-	-
	New Application (Not Excellent)	3(12.50%)	-	-	3(5.00%)
5.	Setting Up (Good)	-	2(16.66%)	-	2(3.33%)
	Setting Up (Not Good)	-	-	-	-
6.	Moderating Discussion Groups (Good)	-	2(16.66%)	-	2(3.33%)
	Moderating Discussion Groups (Not Good)	-	-	-	-

9.11. BARRIERS TO USE ICT APPLICATION

Table gives idea about the barriers to use ICT application that which a barrier have major constraints, minor constraints and not a constraint. Data from the table-11 indicates that 9(37.50%) Reliable Power supply, 8(33.33%) Connectivity Cost (Connecting to Internet), 7(29.11%) Knowledge of using ICT and Availability of online information, 6(25.00%) Availability of Internet service providers and Availability of sufficient bandwidth research scholar says that these are not constraints.

A mostly research scholar says that all barriers have not a constraints for the use of ICT application. It also indicates that faculty of JUET give the response for it as that 5(20.83%) Reliable Power supply, 4(16.66%) Connectivity Cost (Connecting to Internet), Knowledge of using ICT, Availability of Internet service providers, and Availability of sufficient bandwidth is not a constraints.

Table 11
BARRIERS TO USE ICT APPLICATION

Sl. No.	Frequency	No. of Respondents(N=60)			
		Students (24)	RS (12)	Faculty Member (24)	Total (60)
1.	Reliable Power Supply	9(37.50%)	-	5(20.83%)	14(23.33%)
2.	Connectivity Cost	8(33.33%)	-	4(16.66%)	12(20.00%)
3.	Online Information	7(29.11%)	-	-	7(11.66%)
4.	Internet Service Providers	6(25.00%)	-	-	6(10.00%)
5.	Sufficient Bandwidth	6(25.00%)	-	-	6(10.00%)

9.12. USE OF ICT APPLICATION IN LIBRARY SERVICES

It indicates that out of 24 respondents i.e. students 22(91.66%) was using Internet facility, 20(83.33%) were using the online Search, 10(41.66%) were using the reprographic Service and 08(33.33%) were using Indexing Service (Table-12).

It also indicates that out of 12 respondents i.e. Research scholar 8(66.66%) was using the Internet facility online search. 06(50.00%) were using the abstracting service and reprographic Service. 04(33.33%) was using the Surfing Internet.

From the analysis of table –12 it is clear that 11(45.83%) faculty members were using the online search and 10(41.66%) was using the Internet facility.

Table12

Use of ICT application in library services

Sl. No.	Services	No. of Respondents (N=60)			
		Students (24)	RS (12)	Faculty (24)	Total (60)
1.	OPAC	-	-	-	
2.	Article Indexing	10(41.66%)	02(16.66%)	03(12.50%)	15(25.00%)
3.	Adhoc Bibliography	02(08.33%)	02(16.66%)	02(08.33%)	6(10.00%)
4.	Abstracting Service	10(41.66%)	06(50.00%)	03(12.50%)	19(31.66%)
5.	Indexing Service	08(33.33%)	-	02(08.33%)	10(16.66%)
6.	Translation Service	02(08.33%)	02(16.66%)	02(08.33%)	6(10.00%)
7.	Surfing Internet	06(25.00%)	04(33.33%)	05(20.83%)	15(25.00%)
8.	Online Search	20(83.33%)	08(66.66%)	11(45.83%)	39(65.00%)
9.	Internet Facility	22(91.66%)	08(66.66%)	10(41.66%)	40(66.66%)
10.	Reprographic Service	10(41.66%)	06(50.00%)	05(20.83%)	21(35.00%)

9.13. ICT APPLICATION HELPS YOU

The data of the table-13 reveals that the out of 24 respondents 18(75.00%) students, 2(16.66%) RS, and 24(100.00%) faculty member) says that yes for the answer of the question does the ICT application helps you to be better informed and stay ahead or help you in any other form.

Table13**ICT application helps you**

Sl. No.	Option	No. of Respondents (N=60)			
		Students (24)	RS (12)	Faculty (24)	Total (60)
1.	yes	18(75.00%)	02(16.66%)	24(100.00%)	44(73.33%)
2.	No	02(08.33%)	08(66.66%)	-	10(16.66%)
3.	Not Sure	04(16.66%)	02(16.66%)	-	06(10.00%)

9.14. ENCOURAGE YOU TO USE ICT APPLICATION

It is clear from table-14 that out of 24 respondents 20(83.33%) students were encourage with use Free access to ICT applications and Knowledge to use ICT applications 18(75.00%), Free access to applications, Low cost/Cheaper access to technology and Availability of relevant digitized information, encourage them to use ICT application.(Table-14)

Table also shows that among 12 research scholar 8(66.66%) says that Availability of enough Time encourages them to use ICT Application. 6(50.00%) encourage with the Low cost/Cheaper access to ICT and applications, free access to applications Low cost/Cheaper access to technology, Availability of relevant digitized information Availability of ICT applications.

It also indicates that among the 24 faculty member 8(33.33%) encourage with the Free access to ICT applications and 7(29.26%) encourage with the Low cost/Cheaper access to ICT and applications.

Table 14**ENCOURAGE YOU TO USE ICT APPLICATION**

Sl. No.	Option	No. of Respondents (N=60)			
		Students (24)	RS (12)	Faculty (24)	Total (60)
1.	Free access	20(83.33%)	8(66.66%)	8(33.33%)	36(60.00%)
2.	Low cost/Cheaper access	18(75.00%)	6(50.00%)	7(29.26%)	31(51.66%)

9.15. SATISFACTION WITH LIBRARY PERFORMANCE

We can understand the satisfaction label of the users with library performance from the table-15. Data indicates that 14(58.33%) students were satisfied with the library performance.

It also shows that out of 12 research scholar 8(33.33%) were satisfied with the library performance. And also faculty member were satisfied with the library performance.

It is clear from the table that 10(41.66%) faculty member also satisfied with the library performance.

Table15
Satisfaction with Library performance

Sl. No.	Option	No. of Respondents			
		Students (24)	RS (12)	Faculty (24)	Total (60)
1.	Extremely satisfied	6(25.00%)	2(16.66%)	1(04.16%)	9(15.00%)
2.	Satisfied	14(58.33%)	8(33.33%)	10(41.66%)	32(53.33%)
3.	Neutral	2(08.33%)	2(16.66%)	-	4(06.66%)
4.	DIS Satisfied	-	-	-	-
5.	Extremely Satisfied	-	-	1(04.16%)	1(01.66%)

10. Conclusions, Findings, Suggestions and Recommendations.

Many earlier studies have suggested that several factors need to be studied to measure library effectiveness. The present study investigated Use of Information Communication Technology by the Users' of Jaypee University of Engineering and Technology (JUET), Guna. The study indicates that all respondents were well aware with the computers. It reveals that all students were aware with the internet and surfing all research scholars were aware with the scanner, CD-writer, laptop and copier and faculty at JUET were aware with internet and surfing. Most of the students were aware with ICT application through collogues and research scholars were aware through website while other faculties at JUET were aware through other faculty. A small numbers of research scholars were aware with ICT application through membership of library. In order to assess the frequency of using ICT application mostly students, research scholars and faculty member are using ICT applications daily while a limited students, research scholar are using ICT application once a week and once a month. The opinion about the searching of documents revealed that a large number of users are searching documents themselves. Most of the users are satisfied with the opening hours of library. Finding also reveals that majority of users' satisfied with the location of the library. It is also observed that most of the students were use of ICT application apart from library at work place, research scholars were using it at home while faculty of JUET were using ICT application at cybercafé and workplace. Majority of the users are not aware about Boolean logic to search the materials in

OPAC. In order to know the time duration for using ICT application among the users of the library, it is observed that majority of the research scholar were using ICT application from 2-4 years, research scholars were using it from more than 6 years. Most of the research scholar has got training to use ICT application at college, research scholars learnt personally or other informal means while other users have got training at training institute a small student have got training to use ICT application at school. it is also observed that a large number of students and research scholars were experienced user in using ICT application while faculty at JUET were equally expertise as experts' user, inexperienced user and use it with the help of others. The favorite activities to using ICT of the research scholar were E-mail, surfing internet, on line learning, research scholars favorite activities to using ICT were E-mail, online learning, preparing presentations, and surfing internet and other users favorite activity were E-mail, online surfing, download documents, surfing internet and discussion form it is interesting that no users have interest in blogging. The maximum research scholar was using Internet facility, online search as library services The maximum users of JUET were feel that ICT Application helps them to be better informed and stay ahead or help you in any other form. Majority of the users were satisfied with the library performance.

The Suggestions and Recommendations have been offered which are as follows:

- Feedback should be sought from the users and the services need to be evaluated regularly to decide their utility.
- In order to increase use of on-line resources by the users, it is recommended that frequent "information literacy" programmes should be conducted by the library to educate the users on the effective use of internet and e-resources.
- In information age society libraries must be equipped with Information Technology Enabled Services (ITES).
- Web-OPAC should be started in the library under study.
- Library should acquire high-speed connectivity to overcome the problem of slow downloading.
- In-house databases should be developed by the libraries
- To provide on-line services efficiently and effectively, number of computers should be increased in the library in all the universities.
- The staff of library must be skilled enough to assist the users when they face any problem in accessing on-line services.
- In order to satisfy users' expectations and need, it is suggested that strengthening of subject collection with special reference to research collection must be given highest priority in university libraries

11. References:

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