

**INTERNET USAGE PATTTERN OF ENGINEERING STUDENTS: A  
STUDY OF TWO ENGINEERING COLLEGES IN SIVAGANGAI  
DISTRICT, TAMILNADU STATE (INDIA)**

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**ABSTRACT**

*The International Network / Network of Networks / Global Network – the preferred term Internet - has become the online 24 hours / 365 days non-stop information service provider in this era of technological superhighway. Use of multi-media resources which are available in this global network of networks has brought a lot of positive and creative changes among the academic community. This study aims at analysing the internet usage pattern of engineering students of two engineering colleges viz. Pannai College of Engineering and Technology and Pandian Saraswathi Yadav Engineering college located in Sivagangai District. A sample size of 150 engineering students was selected by random sampling method. The data required for the study was collected through a questionnaire. The findings of the study: 86.67% of the respondents belong to the Tamilnadu who use the electronic resources in engineering colleges of Sivakangai district. 29.33% of the respondents belong to the category of first year B.E students. All the 150 respondents (100%) use the Internet. 42.67% of respondents access the internet from their department/office. 28.67% of the respondents use the Internet for preparation of class notes. 43.33% of the respondents use the Internet an hour per day. 48% of the respondents use Google chrome Browser for accessing information from internet. 52% of the respondents use Google in search of information from Internet. 52% of the respondents access to getting information from the internet giving URL. All the respondents use E-mail for communication.54.67% of the respondents use G-mail provider .43.33% of the respondents check E-mail daily. 65.33% of the respondents' level of use of Internet skill is intermediate. 43.33% of the respondents learn through guidance from friends. 34.67% of the respondents report that lack of facilities is the prime problem while using electronic resources.*

**Keywords:** *E-resources, Search engines, search strategy, awareness of e-resources, advantages, limitations, learning modes.*

**INTRODUCTION**

The Internet today gives access to an overwhelming amount of information, data and electronic information services. The Internet enables efficient and effective communication. It is as easy to communicate with people around the globe, as it is to communicate with people in the next building. Using tools like e-mail, mailing lists and news groups, the human network of any individual can be expanded to include others with similar interests all around the world. These communication tools allow us to share ideas, collaborate on projects and ask questions and request information from experts, researchers, professionals and enthusiasts in a wide variety of fields.

When it comes to education and research Internet is paving way for a great leap and sure library and information centers has no exception. The Internet made the information on our finger tips. The libraries of the developed world has adopted the Internet facilities to provide the fast and better library services to its patron but this is not the case with many developing nations and third world countries. The libraries of the third world countries still do not have the basic Internet access facilities in many cases because of the poor funding and budget crisis, while we are talking about web 2.0 in countries like United States, Europe and other developed nations. This paper has also tried to explore broadly the importance of Internet with regard to access of information sources and its utilities for library patrons in academic organizations and institutions.

**REVIEW OF LITERATURE**

Mani Kumar & Basavaraja Karapudi (2012) examined the use of internet by the students of IBS-Bangalore, in order to determine the level usage, the major purpose behind accessing the internet and the required search strategy and information literacy skills to use Internet. The study revealed that usage of internet is very high among the students of ICFAI Business School. Maraddi & Konnur (2012) conducted a study on Internet use and its impact among the education colleges of Gadag city using structured questionnaire and found that 98.89% of the total respondents use Internet only for e-mail facility and 94.44% respondents are using Google as the favourite search engine for accessing information.

Christopher & Maria-Gorretti (2012) used questionnaires to study the internet usage among 1000 secondary schools students Benin City, Nigeria and found that students have the capacity to use the internet which they learnt from friends and family members. Students access the internet from their homes and cyber cafes since they are denied access in their respective schools while most of the students use the internet for educational activities. Shambare, Rugimbana and Sithole (2012) examined SNS usage habits of 256 South African students using questionnaire and confirm the popularity of Face book. Faster Internet access and cheaper 3G technology, as well as Smartphone telephony, are enablers that influence adoption of social networking positively.

Ogunjobi & Fagbami (2012) examined the use of the Internet by researchers in Agricultural Research Institutes in Ibadan, Oyo State, Nigeria using questionnaires and found that the researchers used the Internet mostly for research purposes (76.53%), communication (40.82%), knowledge acquisitions (20.41%) and news sourcing (10.20). A slow Internet connection (75.51%) is the major problem in the use of Internet. The researchers are ready to use the Internet for their research work Adekunmisi, Ajala & Iyoro (2013) performed a study to determine Internet access and usage by the undergraduate students of Olabisi Onabanjo University, Nigeria by collecting data from 200 undergraduate students with the use of a

questionnaire and found that majority of the respondents were Internet literate with 32.50% of the respondents browsing the Internet daily; 37.50% weekly, 13.00% fortnightly and 17.00% monthly. The most used Internet facilities are the e-mails, WebPages, search engines and chatting facilities for communication, academic activities and for sourcing of information and knowledge.

Thukaram (2013) conducted a study to find out the internet use pattern of Research Scholars of Ramesh Mohan Library, English and Foreign Languages University, Hyderabad using questionnaires and found that large numbers of the scholars are interested to use the internet several times in a day. Most of the respondents are using internet for more than one hour. A large numbers of research scholars are using the Internet for E-Resource (51.84%) and (43.20%) for Research-based Information. The majority of users are satisfied while using the Internet. The Google is the only search engine used by the scholars. Mahipal, & Bairagi (2013) studied the use of internet by Students of Bastar Vishwavidyalaya Jagdalpur . The study proved that 100% Students were aware to use internet services. Majority of the students are satisfied with internet service available to them.

Sekhar & Pulla Reddy (2013) analysed the internet usage pattern of 1,650 users of libraries of Sri Venkateswara University, Tirupati, and University of Hyderabad, Hyderabad using questionnaire method and found that most of the users (94.36%) have knowledge to use computers and Internet. Most of the users (96.61%) have access to Internet facility in their libraries. More than one-third of the users (34.91%) use Internet facility daily and 29.92 per cent of the users spend on an average 2 hours per week for using Internet. Majority of the users (78.69%) are using Google search engine. 'Insufficient number of computers' and 'lack of awareness on search techniques' are the major problems faced by the users in the use of Internet facilities. Rama Murthy & Raghunatha Reddy (2013) carried out a study to determine Internet searching and usage by the undergraduate students of Dr.NTR University of Health Sciences, Andhra Pradesh by collecting data from 235 undergraduate students with the use of a questionnaire and found that majority of the respondents were Internet literate with 48.50% of the respondents browsing the Internet daily; 25.75% weekly, 11% fortnightly and 14.750% monthly. The most used Internet facilities are the e-mails, WebPages, search engines, and chatting facilities for communication, academic activities and for sourcing of information and knowledge.

Sivagamasundari & Sivasami (2014) conducted a survey on the use of internet and e-resources by the faculty members and students of business management institutions of Chennai. The findings reveal that: 42.16% of them are accessing e-resources for 2-4 years; 21.72 % of them are using e- resources for their study purpose; 56.79% of them strongly agree that enough computer literacy should be given; 42.28 % of them are satisfied with internet e-resources.

## **OBJECTIVES OF THE STUDY**

The researcher has the following objectives for her study, inter alia :

- To provide gender-wise and department-wise distribution of the respondents.
- To find out how long the respondents have been using Internet with what range of internet use skills.
- To list the primary purpose of using the library by the respondents.
- To trace out the preferred location of the respondents to browse internet.
- To identify the modes by which the respondents have learnt about internet use skills.

- To catch out the favourite search engines and search strategies used by the respondents.
- To ascertain the problems faced by the respondents in accessing and using internet.
- To note down the use of online electronic journals by the respondents.
- To register how the library internet infrastructure is ranked by the respondents and
- To find out the overall satisfaction of the respondents on internet services offered in the college library.

## METHODOLOGY

**Research Type :** The study undertaken by the researcher belongs to descriptive research study. The researcher has used survey method in his study.

**Sample Size :** The researcher collected data from two engineering colleges in Sivagangai District by name Pannai College of Engineering and Technology and Pandian Saraswathi Yadav Engineering College .120 B.E students and 30 M.E students were randomly selected as the sample for the study.

**Tool for Data Collection:** Questionnaire is the tool selected by the research for collecting data from the chosen sample. A simple but a clearly presented questionnaire with 15 questions was used as a tool. No open ended question was included.

**Method of data collection:** The data was collected from the sample users in the month of April 2014. The questionnaires were distributed to the B.E and M.E students by the researcher personally.. The duly filled-in questionnaires were collected back from them immediately after they were filled. Out of 170 questionnaires distributed to the respondents, the research was able to get back only 150 duly filled-in questionnaires.

**Data Analysis and Interpretation:** The data collected was simplified by means by tables – single column and double column or triple column tables – prepared with the help of coding with tally marks. The tabulated data was analysed with simple percentage method in MS Excel to draw necessary inferences.

## ANALYSIS AND INTERPRETATION

### Gender-wise distribution of Respondents

Table 1 : Gender-wise Distribution of Respondents

S.No.	Gender	No. of Respondents	Percentage
1.	Male	92	61.33
2.	Female	58	38.67
Total		150	100

Table displays the Gender-wise Distribution of Respondents. Among them 92 respondents (61.33%) are male whereas 58 respondents (38.67%) are female. Therefore the number of male respondents is more than the number of female respondents in Sivagangai District Engineering colleges who use electronic resources.

**Study Year-Wise distribution of Respondents**

Table 2 : Study Year-Wise distribution of Respondents

S.No.	Status	No. of Respondents	Percentage
1	<b>B.E Students</b>		
	First year	44	29.33
	Second year	28	18.67
	Third year	23	15.33
	Final year	26	17.33
2	<b>M.E Students</b>		
	First year	18	12
	Second year	11	7.33
Total		150	100

Table 2 shows the Study Year-wise distribution of respondents. Forty four respondents (29.33%) belong to First year B.E students. Twenty eight respondents (18.67%) belong to Second year B.E students. Twenty three respondents (15.33%) belong to Third year B.E students. Twenty six respondents (17.33%) belong to Final year B.E students. Eighteen respondents (12%) belong to first year M.E students. Eleven respondents (7.33%) belong to second year M.E students. Hence most of the respondents belong to the category of first year B.E students.

**State -wise distribution of Respondents**

Table 3 : State -wise distribution of Respondents

S.No.	State	No. of Respondents	Percentage
1	Tamil Nadu	130	86.67
2	Other state	20	13.33
Total		150	100

Table 3 shows the State -wise distribution of Respondents. Among the overall 150 respondents, 130 (86.67%) respondents belong to Tamilnadu whereas 20 (13.33%) respondents belong to other state. Hence most of the respondents belong to the Tamilnadu who use the electronic resources in engineering colleges of Sivagangai district.

**Use of Internet**

Table 4: Use of Internet

S.No.	Option	No. of Respondents	Percentage
1	Yes	150	100
2	No	-	-
Total		150	100

Table 5.12 shows the use of Internet among the respondents. In this study reveals that all the 150 respondents use the Internet. The 100% of usage Internet of their Academic activities.

#### Location of access of Internet

Table 5: Location of access of Internet

S. No.	Location	No. of Respondents	Percentage
1	Department/Office	64	42.67
2	College library	45	30
3	Hostel	27	18
4	Other Places	14	9.33
Total		150	100

Table 5 explains the location of accessing internet. Among the 64 respondents, (42.67%) access the Internet from their department/office. This is followed by, 45 respondents (30%) access the Internet from the college library. Twenty seven respondents (18%) access from hostel. Besides cited above, there are some other locations also (9.33%). Hence the majority of respondents access the internet from their department/office.

#### Purpose of using Internet

Table 6: Purpose of using Internet

S.No.	Purpose	No. of Respondents	Percentage
1	Research work	22	14.67
2	Subject Specific Information	31	20.67
3	Preparation of class notes	43	28.67
4	Entertainment Information	6	4
5	To update knowledge	13	8.67
6	Employment Information	5	3.33
7	E-mail	30	20
Total		150	100

Table 6 describes the purpose of using Internet. In this study, 22 respondents (14.67%) use the Internet for Research work, 31 respondents (20.67%) use for getting subject specific information, 43 respondents (28.67%) use for preparation of class notes and 6 respondents (4%) use for entertainment. Thirteen respondents (8.67%) use for getting updating knowledge. Five respondents (3.33%) use for getting employment information. Thirty respondents (20%) use for e-mail. Therefore majority of the respondents use the Internet for preparation of class notes.

**Duration of using Internet per day**

Table 7 : Duration of using Internet per day

S.No.	Duration	No. of Respondents	Percentage
1	1 hour	65	43.33
2	1 - 2 hour	33	22
3	2- 4 hour	25	16.67
4	4-6 hour	18	12
5	6-8 hour	7	4.67
6	More than 8 hours	2	1.33
Total		150	100

Table 7 shows that 65 respondents (43.33%) use the Internet an one hour every day. This is followed by 33 respondents (30.31%) who use the Internet one to two hours per day whereas 25 respondents (16.67%) use two to four hours per day. In this study, 18 respondents (12%) use the Internet four to six hours per day whereas 7 respondents (4.67%) use the Internet six to eight hours per day. Two respondents(1.33%) use the internet more than eight hours per day. Therefore, it is inferred that majority of the respondents use the Internet an hour per day (43.33%).

**Browser to use of Internet**

Table 8 : Browser to use of Internet

S.No.	Browser	No. of Respondents	Percentage
1	Internet Explorer	31	20.67
2	Opera	23	15.33
3	Google Chrome	72	48
4	Mozilla firefox	21	14
5	Netscape Navigator	3	2
Total		150	100

Table 8 observes that 31 respondents (20.67%) use Internet Explorer for accessing information from Internet. Twenty three respondents (15.33%) use Opera browser. Seventy two respondents (48%) use Google Chrome web browser. Twenty one respondents (14%) use Mozilafirefox browser. Three respondents (2%) use Netscape Navigator. Therefore majority of the respondents use Google chrome Browser for accessing information from Internet. Second rank goes to Internet Explore.

**Use of Search Engines**

Table 9: Use of Search Engines

S.No.	Search engines	No. of Respondents	Percentage
1	Google	78	52
2	Yahoo	42	28
3	MSN	18	12
4	Altavista	7	4.67
5	Bing	5	3.33
	Total	150	100

Table 9 reveals the use of Search Engine. In this study, 78 respondents (52%) use Google search engine for searching information from Internet. Forty two respondents (28%) use Yahoo. Eighteen respondents (12%) use MSN. Seven respondents (4.67%) use AltaVista. Five respondents (3.33%) use Bing. Therefore majority of the respondents use Google in search of information from Internet.

**Ways of Access to get the required Information from the Internet**

Table 10: Ways of Access to get the required Information from the Internet

S.No.	Option	No. of Respondents	Percentage
1	By giving	72	48
2	By giving URL	78	52
	Total	150	100

Table 10 expresses the various ways of access to get the required information from the Internet. Among 150 respondents, 72 respondents are (48%) by giving keyword whereas 78 respondents (52%) by giving URL. Hence the majority of respondents access to getting information from the internet giving URL.

**Use of E-mail for communication**

Table 11 : Use of E-mail for communication

S.No.	Option	No. of Respondents	Percentage
1	Yes	150	100
2	No	-	-
	Total	150	100

Table 11 shows that 150 respondents (100%) use E-mail for communication. It is easy to send the communication to anywhere in proper time. Therefore all the respondents use E-mail for communication.

**Use of E-mail provider**

Table 12 : Use of E-mail provider

S. No	E-mail Provider	No. of Respondents	Percentage
1	Yahoo	37	24.67
2	Hotmail	11	7.33
3	G-mail	82	54.67
4	Rediffmail	17	11.33
5	VSNL	3	2
Total		150	100

Table 12 elicits the use of E-mail provider. Among the 37 respondents (24.67%) use Yahoo whereas 11 respondents (7.33%) use Hotmail. Eighty two respondents (54.67%) use G-mail whereas 17 respondents (11.33%) use Rediffmail. Three respondents use (2%) VSNL. Hence the most of the respondents use G-mail provider (54.67%).

**User Category of Internet Skills**

Table 13: User Category of Internet Skills

S. No	Category	No. of Respondents	Percentage
1	Beginner	18	12
2	Intermediate	98	65.33
3	Expert	34	22.67
Total		150	100

Table 13 expresses the user's category of Internet access skill of the respondents. Eighteen respondents (12%) report that their level of use of Internet access skill is beginner, 98 respondents (65.33%) report that their level of use of Internet skill is intermediate and 34 respondents (22.67%) report that their level of use of Internet skill is expert respectively. Hence most of the respondents' level of use of Internet skill is intermediate. Also suggests that librarian/authority should conduct the training programme to improve the respondents' level of use of Internet skill.

**Methods of Learning Internet Skills**

Table 14: Methods of Learning Internet Skills

S. No	Methods	No. of Respondents	Percentage
1	Guidance from friends	65	43.33
2	Library Staff	38	25.33
3	Trial and Error method/Self	32	21.33
4	Training Programmes	15	10
Total		150	100

Table 14 shows the methods of learning internet skills. In this study, 43.33% of the respondents learn through guidance from friends, 25.33% of the respondents learn internet skills from library staff, 21.33% of the respondents learn from trial and error method and 10% of the respondents learn through training programmes. Hence most of the respondents learn through guidance from friends.

### Problems in using Internet

Table 15: Problems in using Internet

S.No.	Problems	No. of Respondents	Percentage
1	Lack of facilities	52	34.67
2	Power Failure	15	10
3	Lack of knowledge	20	13.33
4	Limited access to computers	28	18.67
5	Lack of time	23	15.33
6	Lack of training	12	8
Total		150	100

Table 15 shows the Problems to be faced while using electronic resources. In this study, 52 respondents (34.67%) report that lack of facilities is the prime problem while using electronic resources. Fifteen respondents (10%) report that power failure. Twenty respondents (13.33%) report that lack of knowledge. Twenty eight respondents (18.67%) report the limited access of computers. Twenty three respondents (15.33%) report the lack of time. Twelve respondents (8%) report the lack of training. Therefore, majority of the respondents report that lack of facilities is the prime problem while using electronic resources.

### SUGGESTIONS

- More researchers are to be encouraged to use the library e-resources to write articles for journals or to prepare papers for conferences and seminars.
- The scholars may be taught on various search features available in Google. And the scholars are to be introduced to various search engines apart from Google so as to enable them search for different kinds of e-resources effectively.
- Various search strategies that can be employed in search process may be intimated to the scholars.
- Enough ICT infrastructures are to be made available so as to facilitate the scholars to continue using Internet every day.
- A comprehensive orientation class may be organized for the full-time scholars on the availability and use of e-resources, department-wise. Because most of the respondents felt that lack of knowledge is a major constraint in using available e-resources.
- The connectivity problem being encountered by the scholars should be rectified by adapting broadband internet connection of good speed.

### CONCLUSION

The e-resources play an ineluctable role in the scientific research activities of the research scholars. The libraries should conduct user education programmes for their research patrons enlightening them on the existence and uses of various subscribed and free e-journals, e-

bibliographic databases and full text e-databases. The use of such e-resources needs to be measured from time and again to get right feedback from the users on their usability, currency, flexibility and suitability. These impact studies will give some valid insight to the library administrators to plan further towards uplifting e-resource usage among the library patrons.

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