



# Internet and Its Use in the Engineering Colleges of Udaipur, Rajasthan, India: A Case Study

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## Abstract

*This study aimed at the purpose for which the Internet is used, its impact, problems faced by the Engineering college students and teachers and its services provided in the engineering colleges of Udaipur. For this structured questionnaire were planned to collect the data. The survey found out that, 92.85% of the total respondents use Internet only for e-mail, 85.71% respondents are using Google as the favorite search engine for accessing information, and facilities available in their colleges. The present study shows and define the various aspects of Internet use such as, frequency of internet use, frequently used place, frequently used sites, purposes for which the Internet is used, use of Internet services, ways to browse the information from the Internet, problems faced by the users and satisfaction level of users with the Internet facilities provided in the engineering colleges who has invested large amount for it. The result of the survey also provided information on how beneficial the Internet is over traditional documents. It was found that the Internet was inseparable part and plays a very important role for teaching, learning and research purpose. Some suggestions have been coup up to make the service more beneficial for the academic community of the engineering colleges.*

**Keywords:** Internet use, Engineering Colleges, Teachers, Students, Udaipur, Rajasthan.

## Introduction

In today's world Internet facility has grown immensely over the years. It is the era of Internet i.e. network of networks has emerged as the most powerful tool for an instant access to information. Internet has become the most used information source that empowers the common people to get any latest information in nano-seconds and just a click away at any time and at any place in the world<sup>1</sup>. The Internet has become the most widely global digital information library which provides the fastest access to any kind of information in the world. Today's users can no longer depend on traditional information sources to deal with today's developments in their respective fields<sup>2</sup>. Engineering colleges are playing an important role in imparting technical education; Colleges require very high cost to provide such education to their students therefore the Internet with its advantages, make the way for colleges of developing countries to access information at a very lower cost and provides latest and pinpointed information to the engineers, who are outcome of these colleges. The engineering college education is important for the development of any country. The graduates of the engineering colleges are very much needed for the scientific expansion of the country. To making graduate's more complete and modern in the work force, information is vital, to access information and keep alongside each other with the new developments, internet connectivity is become as essential as basic human needs, with all this factor, This survey has been conducted to know the internet facilities and internet usage pattern amongst the students and faculty members of the colleges of Udaipur city of Rajasthan state<sup>1,2</sup>.

**Need for the Present Study:** In today's era number of people accessing internet has coupled up with the passing time and the information provided on the web. Internet is the modern and basic way for the information access in many departments basically in teaching, learning and research. Teachers and students are depending more and more on the Internet for their various educational purposes. The present survey is, therefore, an attempt to assess the effectiveness of Internet as an educational tool, and what role it actually plays in the educational system with special reference to the engineering colleges in the Udaipur City.

The Internet is an indivisible part of today's engineering educational system. Engineering colleges invest a good amount on providing this facility to both the teachers and students as internet has become the inseparable part of today's engineering educational system. It is, therefore, important to find out up-to what extent they are using this facility for their enrichment purposes as well as to gain and give information as and when needed. As an engineering colleges provide internet facility to both the teachers and the students and expert them to use for educational purpose at any time. It is very necessary to conduct a survey to determine whether internet is used for academic activities in a right manner and help to increase the academic efficiency of the target users. The study or survey will also help us to find whether the information so provided is satisfactory for the users and engineering college can feel the satisfactory feeling of providing internet access to their teachers as well as their students that the amount so invested is used properly. The

study has particularly been taken up to assess the benefits of Internet over old documents<sup>3</sup>.

**Scope of The Study:** The scope of the present study is limited to the following: i. The study includes only those engineering colleges which are occupied in imparting degree level courses in the field of engineering and technology. ii. The study is mostly concerned with the engineering colleges functioning within the territorial authority of the Udaipur City, Rajasthan. And were duly approved by All India Council for Technical Education (AICTE).

**Objectives:** The present study is an attempt to find out the use of Internet by the students and teachers of Udaipur City of engineering colleges. The study was conducted with the following objectives: i. To study the use of the Internet by the teachers and students in engineering colleges. ii. To study the various internet resources and services used by the respondents on the internet for various activities of teaching, learning and research. iii. To find out the problems faced by the users while using the Internet.

### Research Methodology

Students admitted in the Bachelor of Technology (B.Tech.) in various disciplines and teachers at the engineering colleges of Udaipur selected for the target population for this study. The questionnaire method has been used to collect the data for the present study and to select the sample population; random sampling method has been used. The sample was random in the sense that the sample for the present study consisted of teachers and students selected randomly from 11 engineering colleges of Udaipur.

**Analysis: Internet Facilities in Engineering Colleges: System details of the engineering colleges:** Table 1, shows the number

of systems available in each engineering colleges. And the storage capacity, availability of multimedia kit and the type of the modem for Internet connectivity and number of web server.

**States of telecommunication network service in engineering colleges:** It is observed from the table 2, that out of 11 engineering colleges 9 (70.25%) of them having ISDN connection and the remaining two (29.75%) has broadband Internet. It is evident from the study that broadband connection is still not widely used for faster Internet access in engineering colleges.

**Internet service provider for engineering colleges:** From table 3, it is clear that STPI is providing Internet services to 5(42.55%) engineering colleges. BSNL is providing Internet services to 4(28.89%) engineering colleges. ERNET and Bharti online are providing internet services to each (14.28%) engineering colleges respectively.

**Purpose of Internet service:** We can identify from the table 4, that, Internet facility is adopted as the part of curriculum 11(100%), 5(70.25%) engineering colleges are providing internet facilities to faculty and students to provide hands-on experience on various practical experiments with voice and multimedia packages.

**Use of Internet by the Users of Engineering Colleges: College-wise distribution of respondents:** The table 5 depicts the college wise distribution of the respondents out of 80 questionnaires 70 filled questionnaires were collected. Questionnaires were distributed according to the strength of students in the respective colleges and the investigator concentrated more on the information science and computers science engineering graduates to collect the data.

**Table-1**  
**System details**

S. No.	Name of the Colleges	System Details				
		Number of Computers	Web Server	Hard Disk Capacity	Multimedia Packages	Modem Speed
1.	Pacific College of Engineering, Udaipur	11	-	40GB	Yes	D-link, 128kbps
2.	Pacific Institute of Technology, Udaipur	13	-	80GB	Yes	D-link, 128kbps
3.	Pacific Institute of Engineering, Udaipur	10	-	40GB	Yes	-
4.	Geetanjali Institute of Technical Studies	15	-	80GB	Yes	-
5.	Aravali Institute of technical study	8	-	-	Yes	-
6.	Maharaja College of Engineering	8	-	40GB	Yes	-
7.	Sunrise College of Engineering	7	-	-	Yes	-
8.	S.S College of Engineering	8	-	-	Yes	-
9.	Techno India NJR Institute of Technology	20	One	80GB	Yes	D-link, 128kbps
10.	College of Technology and Engineering	15	two	80GB	Yes	-
11.	College of Dairy and Food Science Technology	10	Two	40GB	Yes	-

**Table-2**  
**States of telecommunication network**

Type of Internet Connection	Number of Engineering Colleges	Percentage
ISDN	09	70.25
Broadband	02	29.75

**Table-3**  
**Internet service provider**

ISP'S	Number of Engineering Colleges	Percentage
STPI	05	42.55
BSNL	04	28.89
ERNET	01	14.28
BHARTI Online	01	14.28

**Table-4**  
**Purpose of Internet services**

Purpose	Number of Colleges	Percentage
It is a part of curriculum	11	100.00
To provide on line demonstration/ hands on experience	05	70.25
For commercial use	00	00.00

**Table-5**  
**College-wise distribution of respondents**

Engineering Colleges	Number of Questionnaire	Number of Respondents	Percentage
Pacific College of Engineering, Udaipur	10	9	12.85
Pacific Institute of Technology, Udaipur	8	8	11.42
Pacific Institute of Engineering, Udaipur	8	7	10.00
Geetanjali Institute of Technical Studies	7	6	8.57
Aravali Institute of technical study	8	7	10.00
Maharaja College of Engineering	6	5	7.14
Sunrise College of Engineering	6	6	8.57
S.S College of Engineering	7	5	7.14
Techno India NJR Institute of Technology	7	7	10.00
College of Technology and Engineering	6	5	7.14
College of Dairy and Food Science Technology	7	4	5.71

**Table-6**  
**Status-wise distribution of respondents**

Status	No. of Respondents	Percentage
Students	42	60
Teachers	28	40

**Status-wise distribution of Respondents:** Table 6, shows that out of 70 respondents 42(60%) consist of students, while rest of the respondents were faculty members, 28(40%).

**Formal Computer Training:** Table 7, clearly indicates that out of 70 respondents 46(65.71%) respondents have formal computer training, and the 24(34.28%) respondents have not gone for any formal computer training, the below data helps us

to know that high proportion of the respondents have formal computer training before using the Internet.

**Table-7**  
**Formal computer training**

Formal Computer Training	No. of Respondents	Percentage
Yes	46	65.71
No	24	34.28

**Frequently used search engine:** Table 8, made it clear that 60(85.71) respondents use Google as the favorite search engine to access information, followed by Yahoo 52(74.28), 40(57.14) respondents are using MSN, 25(35.71) are using Alta Vista, 16(22.85) are using Ask Jeeves, 10(14.28) respondents are using Lycos, Look Smart, 06(8.57) are using Dog Pile as the favorite search engine.

**Table-8**  
**Frequently used search engine**

Search Engines	No. of Respondents	Percentage
Google	60	85.71
Yahoo	52	74.28
MSN	40	57.14
Alta Vista	25	35.71
Ask-Jeeves	16	22.85
Dog-Pile	10	14.28
Others (Look smart, Lycos)	06	8.57

**Purpose of using Internet:** Table-9 depicting the purpose of using internet in engineering colleges by its faculty and students. 65(92.85) respondents use internet for using e-mail, 52(74.28) respondents use internet for entertainment purpose followed by 48(68.57) use internet for prepare assignments and seminars, 40(57.14) were using internet for career opportunities, 34(48.57) were using for keep abreast with new development in their respective area of study, 15(21.42) were using for publications of papers and 05(07.14) were using for some other purposes.

**Table-9**  
**Purpose of using Internet**

Purposes	No. of Respondents	Percentage
E-mail	65	92.85
Entertainment	52	74.28
To prepare assignments/seminars	48	68.57
Career opportunities	40	57.14
Keeping abreast with new developments	34	48.57
Publication of papers	15	21.42
For other purposes	05	07.14

**Benefit of Internet over Conventional Documents:** Table 10 exhibits that more than (95.71%) of the respondents feel that in comparison to conventional documents, the Internet is easy to use (92.85%), more informative (85.71%), time saving (82.85%), more useful and (75.71%) respondents also admit that it is less expensive and (68.57%) more preferred in comparison to conventional documents.

**Table-10**  
**Benefit of Internet over Conventional documents**

Benefit	No. of Respondents	Percentage
Easy to use	67	95.71
More Informative	65	92.85
Time saving	60	85.71
More useful	58	82.85
Less expensive	53	75.71
More preferred	48	68.57

**Problems faced by the Users:** The most common problem faced by the users is that of slow internet access speed which takes a lot of their precious time to retrieve the relevant information and the other problems are overload of information on the internet, privacy problems, retrieval of unwanted pages, URL (Domain name) problems, System hang-up, Virus effected and Power failure are the main problems which were faced by the users<sup>4</sup>.

## Results and Discussion

**Findings:** Major findings of the survey are: i. Out of 11 engineering colleges, 09 of them are having ISDN connecting for speedy Internet access. ii. STPI Stands first (42.55%) as the Internet service provider for engineering colleges surroundings of Udaipur. iii. It is found from the study that (65.71%) of respondents have formal computer training. iv. Google (85.71%) has got the highest number responses as best search engine for finding required information. v. (92.85%) of respondents were using internet only for e-mail and another important findings of the study was 74.28 % were using Internet for accessing entertainment-oriented information. vi. Retrieval of unwanted pages is the major problem of the users while accessing the information.

**Suggestions:** Based on the findings of the study, the following suggestions are recommended to improve the use of the Internet among the academic community i.e. teachers and students of engineering colleges under study: i. The time of internet service should be increased, if possible the service should be round the clock. So that users can avail maximum utilization of this service. ii. The internet facility should be extended to the engineering college hostel and rooms of the teachers. iii. More computers with latest specifications and multimedia kit should be installed, so that users can use video-conferencing, chatting, Internet telephony, and other useful services of the internet. iv. Some printers should be installed in the Internet sections of the colleges, so that the users can get print outs of their study material and other important documents at nominal charges. v. More experienced and efficient technical staff should be appointed and they should be present in the internet section for expert advice to the users. vi. Necessary training facilities to be provided to the users to make use of the Information resources available on the internet<sup>5</sup>.

## Conclusion

The internet facility has enabled the teachers and students to enhance their academic excellence by providing them the latest information and access to worldwide information. The present study has highlighted the existing situation of the internet services provided by the engineering colleges of Udaipur. The situation is not, however, very satisfactory from the library point of view. Only some engineering college libraries have Internet facility, and even this is not extended to the users. So, it should be extended to all the engineering college libraries. The

information on the internet is not usually available in an organized way and the users are unable to get pin pointed information from the Internet. In order to make the Internet more beneficial, the library staff who have acquired a good deal of efficiency in the collection, organization and retrieval of information should feel duty-bound to see that the users are able to obtain right information at the right time. For this, they should organize and classify the information on a website in such a way that the users are able to find easily the information they need for their studies and research purposes. The library services supplemented by Internet services can prove a great boon to the users in getting the right information at the right time.

The present study has determined on the most frequent users of internet in the engineering colleges i.e. the teachers and the students. The scope of the study was limited to the engineering colleges of Udaipur. There is a vast scope for future research in different types of users' behavior and comparison of users' behavior and attitudes towards the Internet.

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