

# Use of Internet Resources in the S.V. University Digital Library

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## ABSTRACT

The introduction of digital information resources on Internet has revolutionised the academic world. The Internet is paving way for a great leap in the field of higher education and research. This paper is an attempt to investigate the use of Internet resources by the academic community of the Sri Venkateswara University (SVU), Tirupati. For this purpose a survey was carried out using questionnaire tool. The results show that users from all branches of science are making use of Internet resources better than social sciences and humanities. Providing training to its users at the beginning of each semester will improve its use and reduce the problems faced by the library users. The paper highlighted the various problems and issues involved in handling digital library and has given suggestions to improve the library services to meet the demands of the users.

**Keywords:** Digital libraries, subject gateways, internet resources, e-resources, social sciences, humanities

## 1. INTRODUCTION

Libraries are the lighthouses of information dissemination, an important component of any educational institution, and hub of learning activities where students, researchers, and teachers can explore the vast amount of information resources. The present age is regarded as the 'age of information' and information has become the commodity in today's context of information explosion where we are living in the information society. Information has become an essential requirement for every one's life. Each one of us requires information for our day-to-day activities. In this context, Library and Information Centres (LICs) are playing an important role in extending the required latest information services quickly to their users.

In the 1960s and 1970s, librarians were using electronic databases as a part of library services. In the 1980s, libraries started using CD-ROM versions of electronic databases. In 1990s and from 2000 onwards, Internet access and consortia approach of journals subscriptions diversified the availability of electronic information. Presently many libraries in India have provisions to access the same electronic information in multiple ways.

As electronic information and its access has grown, selection of information sources has become complex. When alternatives were limited, selection was primarily based on the access and cost factors. As CD-ROM and tape-loaded with electronic information became available, local area networks (LANs) and interfaces became important issues in their selection. Now with multiple sources of information, human, demographic, and technological factors have become important in their selection process. In addition to these, factors like training standards, password protection mechanism, links-to-holdings, and full-text availability are the parameters used by the users for the selection process. Because of the dynamic nature of electronic information, traditional selection criteria are not effective, so new criteria must be developed or adopted.

Internet has made tremendous impact on the academic activities of the faculty members, researchers, and the students. After the advent of Internet, a significant transition is seen in users' approach and the way they seek information and the methods they use in research and learning activities. This has become possible as Internet provides a wealth of new course materials and acts as a powerful supplement to the traditional ways of studying and learning. Internet is now facilitating

electronic communication, exchange of ideas, and collaboration in research globally. Internet can be accessed for the latest developments in one's area of research at an amazing speed. It also plays a significant role in distance education and conferencing and thus transforming the academicians as facilitators in providing guidance, drawing students, and steering observations. The Internet, therefore, creates an excellent academic environment where the academic community can perform their activities in a rejuvenated manner.

## 2 RELATED RESEARCH

In 2007 Indian government has taken various initiatives to increase PCs and Internet penetration all over the country. Nowadays, people have started realising the importance of Internet in their lives where it is not just a communication tool but has become an enabling tool to perform various tasks like e-learning, networking, shopping, gaming, etc.

The low cost and multimedia features have lead to tremendous growth (48 per cent) of PCs ownership across India. With the result, Internet subscribers have gone up to 32 per cent over 2008. But proportion of PC owners with Internet connection has shown a decline in growth from the last year. The widening of this gap is due to the difference in growth rate of PC owners and Internet subscribers. The gap might reduce once the Internet connectivity with non-metro and small towns increases, and digital divide and other private initiatives become more effective<sup>1</sup>.

According to Internet Governance Forum, India had 81 million Internet users in 2008. India ranks fourth in the world in terms of Internet users. The US with 220 million Internet users, tops the world; China, with 210 million users, comes in a close second followed by Japan with 94 million users<sup>2</sup>. About 9 per cent of the users are accessing the Internet primarily for entertainment and online transactions (e-commerce), which has steadily increased in the recent past. It was found that the young and older men and working women groups are using Internet mostly. Out of these people, non-working women are using Internet for searching of jobs and dating purposes in significant numbers. The time spent on the Internet increases with the age of the user. For example, weekly school children spend an average of 322 min, college students spend an average of 433 min, older men spend an average of 580 minutes, working-women spend an average of 535 min, however, non-working women spend only 334 min per week<sup>3</sup>. School children and college students find it more convenient to use cybercafé as it is the cheapest source for accessing and also providing them more privacy<sup>4</sup>. On the other hand, home and office have gained popularity amongst young and older men and working women as they find these access points more convenient and cost-effective over others. The

content they seek also involves e-commerce applications which need a secure network. This acts as a limiting factor for them than cybercafé as point of access.

Broadband penetration is estimated to be at 3 per cent in India; the country added only 750,000 broadband connections between October 2006 and September 2007. By February 2008, India had only 3.47 million broadband subscribers, far short of the targeted 9 million by 2007 set by the broadband policy. However, neighbouring countries like China, South Korea, and Malaysia are far ahead of India in the broadband penetration. India has 0.3 broadband connections per 100 persons, whereas South Korea and China have much better penetration with 29.9 and 5.0 person per hundred, respectively<sup>5</sup>.

Lubans<sup>6</sup>, Uses of Internet and digital Information Resources; Mercer<sup>7</sup> and Rogers<sup>8</sup>, Use of e-Journals; Bird *et al*<sup>9</sup> and MacDonald and Dunkelberger<sup>10</sup> Full-text databases have studied various uses of Internet. The use of digital information is gradually increasing in all subject areas particularly in all branches of science and technology.

## 3. SRI VENKATESWARA UNIVERSITY DIGITAL LIBRARY

Sri Venkateswara University (SVU) came into existence on 2 September 1954, for providing higher education and research in all the branches of learning. It was intended to fulfill the long felt need of the people of Rayalaseema area in the state of Andhra Pradesh in India for their educational advancement. The university library was established in 1955 with a small collection of 6,700 books taken from the Sri Venkateswara College, Tirupati. The present building of the library was inaugurated in July 1964 by the Late Dr S. Radhakrishnan, the then President of India. SVU became the member of the UGC-INFILIBNET in 2004 and implemented INFONET Programme. Under this programme, the V-Sat facility was established in the SVU Computer Centre to have access to Internet. The INFILIBNET has provided 512 kbps connectivity to SVU. The Computer Centre has provided Internet connectivity to all the Departments/Research Centres/Institutes in the university campus. To provide access to full-text e-journals available under UGC-INFONET Programme and from Internet resources, SVU has established a digital library by spending about Rs 23 lakhs. SVU digital library has the facility to accommodate 40 users at a time with 25 computers for this purpose.

## 4. AIM AND OBJECTIVES

The aim of the present survey is to study the use of Internet resources by the researchers at SVU, in the fields of sciences, social sciences, and humanities to determine its impact on their academic and research activities. The specific objectives of the study are: (i) to

understand the purposes for which the Internet is being used by the students, faculty members, and researchers; (ii) to know if there is any relationship between prior computer experience and the use of Internet; (iii) to identify the commonly used search engines by the users; (iv) to identify the extent of awareness of the important sites in their subject fields; (v) to understand the difficulties faced while using the Internet; and (vi) to make suggestions for improving the services at the SVU digital library.

## 5. METHODOLOGY

The survey method, using questionnaire, was used for the study to cover the maximum number of respondents within the limited time frame and collate the information to determine their responses. Keeping in view the objectives of the study, a structured questionnaire was designed and distributed to 100 users of the SVU digital library. Of the total, 50 questionnaires were distributed to students, 40 to research scholars, and 10 to faculty members. Subject-wise, 40 questionnaires were given to researchers in the branches of sciences, 40 in social sciences, and 20 in humanities. This was in proportion to the total number of researchers working in these fields in the SVU. All the users returned their responses.

## 6. DATA ANALYSIS AND DISCUSSION

### 6.1 User's Profile

The respondents in this survey were students (50 per cent), research scholars (40 per cent), and faculty members (10 per cent). Of the total respondents, 42 were undergraduates, 86 postgraduates, and 25 faculty members. The majority of Internet users (65 per cent) were from science, 20 per cent from humanities and remaining 15 per cent from social sciences. The humanities users outnumbered the social science users in using the Internet. In general social science users need more information and data for their research compared to humanities users. The reason for this may be further explored in future studies.

## 6.2 Use of the SVU Library

### 6.2.1 Frequency of Visits to the Library

The respondents were asked to inform their frequency of visits to the library. Less than half (47.5 per cent) visited daily, over a fifth (22.5 per cent) twice a week, 16 per cent weekly and the remaining 14 per cent once in a month.

### 6.2.2 Purpose of Visit to the Library

Table 1 shows the various reasons mentioned by the users for visiting the library. More than half of the respondents (51 per cent) were visiting the library for the latest articles published in current periodicals. Of the total, less than half (47.5 per cent) were visiting for keeping themselves acquitted with latest developments in the field, 27 per cent for their MPhil/PhD dissertation work, 22.5 per cent for writing papers, and 7.5 per cent for teaching purposes.

## 6.3 Computer Experience vis-à-vis Use of Internet

The majority of the respondent came to the SVU from the rural areas. However, 93 per cent were having some prior experience in handling the computers. Since schools nowadays have this subject in their curriculum 77.5 per cent of the respondents have some kind of exposure before joining the university. The remaining people learned to handle the computers on their own after joining the university. Majority of these felt that the existing systems at SVU were good enough for their use.

Table 2 shows that 63 per cent of the respondents were using Internet for more than one year, 23 per cent for more than 6 months, and 14 per cent since 3-6 months. The science students were using Internet more as it has larger impact on their education and research. All of them have a positive attitude toward the Internet and got required information for their academic, research, and personal purposes. About 70 per cent of researchers in

Table 1. Purpose of visit to the library

Purpose	Users	
	Number	Percentage
MPhil/PhD dissertation work	54	27
For writing research papers	45	22.5
Teaching	15	7.5
Scanning of latest articles published in current periodicals	102	51
Keeping themselves abreast with the latest developments	95	47.5
Others, if any please specify	4	2

Note: Respondents were permitted to tick more than one answer so the percentage is exceeding 100.

Table 2. Use of Internet

Period	Total users	Students	Research scholars	Faculty members
More than one year	63	32	24	7
More than 6 months	23	11	8	4
Between 3-6 months	14	8	4	2

the social sciences and 20 per cent of the researchers in the humanities also agreed that Internet was very useful and important for their day-to-day academic and research work.

Of the total, 80 per cent of the researchers in sciences use the Internet facility provided in their respective departments. Rest went to cybercafés because of timings problems in the university. Ninety per cent of the researchers in social sciences surf internet at their respective departments whereas 10 per cent of them use at cybercafés. The majority of the researchers in humanities who use Internet go to cybercafés due to lack of facilities in their departments. This shows that SVU digital library is unable to provide adequate systems to its campus users compelling them to go outside to cybercafés to use internet for their day-to-day information requirements. This is not a good sign for the SVU library, management should act quickly and provide more number of systems to fulfil the users' Internet requirements. Ninety per cent of the Internet use is for academic purposes by the researchers in sciences, whereas 30 per cent in social sciences, and 5 per cent in humanities.

### 6.4 Frequency of Use

Figure 1 shows that more than a third of the users (35 per cent) use Internet daily followed by 30 per cent weekly, 28 per cent monthly, and 7 per cent occasionally. Overall it was found that majority of the respondents were using Internet at least once in a week. This shows that both students and research scholars are making greater use of Internet facility more than the faculty members.

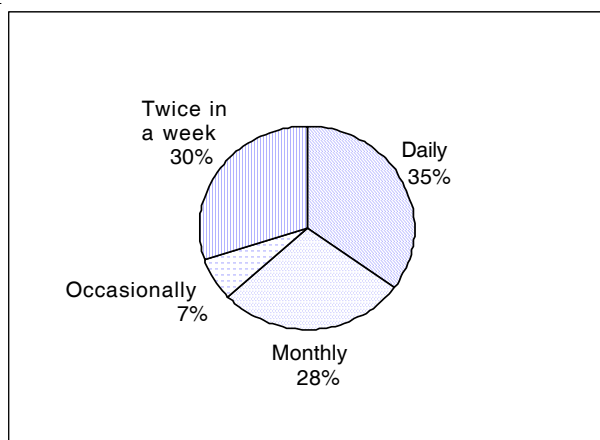


Figure 1. Frequency of Internet use in the SVU library.

Also, 80 per cent of researchers in sciences used the Internet for 3-4 h per week, whereas about 20 per cent for about 8-10 h per week. In the social sciences, while 85 per cent of the researchers' used Internet for 2-3 h per week, 15 per cent of them used for an hour per week. The use of the Internet by the majority of the researchers in humanities was only 1-2 h per week.

### 6.5 Use of Internet Resources

Table 3 shows that almost half of the respondents (49 per cent) came to the SVU digital library to use e-journals, followed by 33.5 per cent who came for theses and dissertations, 13.5 per cent for e-books, 12.5 per cent for Internet-based databases, 11.5 per cent for technical reports, 11.5 per cent for standards and patents, and 4 per cent for other purposes. Overall, the majority of the respondents came to library to use e-journals which is expected in the university environment where the main focus is on research.

Table 3. Type of Internet resources

Type of resources	Users	
	Number	Percentage
Databases	25	12.5
E-books	27	13.5
E-journals	98	49
Technical reports	23	11.5
Theses and dissertations	67	33.5
Standards and patents	23	11.5
Others	8	4

### 6.6 Methods of Learning Internet Skills

A significant proportion of the users have acquired the requisite skills to use the Internet through self-learning or from colleagues (Table 4). It is important to know that only 30 per cent of the respondents participated in Internet orientation programmes conducted by the SVU library. This shows that the users are capable of learning on their own. But the trend is not very encouraging as it may

Table 4. Methods of learning Internet skills

Method	Students	Research scholars	Faculty members	Total
Formal training	8	7	2	17
Internet orientation programmes by the library staff	15	8	-	23
Assistance from colleagues	12	8	2	22
Using manuals/handbooks	5	5	3	13
Self instruction through trial and error	10	12	3	25

leads to lots of their time wastage and without any in-depth knowledge of searching skills.

## 6.7 Internet Services at SVU

- ✘ *Digital library:* Of the total university population, only 6 per cent of the users were making use of the digital library services which is very poor utilisation of the university resources. Out of which, 13 per cent were students, 14 per cent researchers, and 25 per cent faculty members. One of the ways of improving the use is extending Internet connections to all the departments so that the faculty members could use Internet at their offices without coming to the digital library.
- ✘ *Harvesters:* It is found that 36 per cent of respondents (20 per cent of students, 57 per cent of researchers and 5 per cent faculty members) were using this service.
- ✘ *Online journals:* 39 per cent of respondents, including 50 per cent of students, 58 per cent of researchers and 26 per cent of the faculty members, were using this service. People were also using free e-journals available at the Directory of Open Access Journals (DOAJ) website.
- ✘ *UGC-INFONET journals:* Of the total, 36 per cent of respondents were using this service including 36 per cent of students, 58 per cent researchers, and 26 per cent faculty members.
- ✘ *e-journals:* 23 per cent students, 50 per cent researchers and 17 per cent faculty members were using e-journals subscribed through UGC-INFONET service.

## 7. PROBLEMS IN USING DIGITAL LIBRARY

The respondents were asked to indicate the specific problems faced by them while using Internet at the SVU Digital Library. Table 5 shows that 52 per cent respondent mentioned slow access as the main problem they faced. Other problems they had encountered include lack of e-

Table 5. Specific problems faced by users

Type of Problem	Users	
	Number	Percentage
Slow Internet access	104	52
Difficult in finding relevant information	23	11.5
Overload of information on the Internet	34	17
It takes long time to download information	61	30.5
Lack of e-mail facility	68	34
Privacy problem	28	14

Mail facility (34 per cent), slow download (30.5 per cent), overload of information on the Internet (17 per cent), privacy (14 per cent), and difficulty in finding relevant information (11.5 per cent). Most of these problems were due to lack of knowledge and experience in conducting the information searches. Since SVU's opening hours and office working hours matched, the telephone lines were busy, therefore, Internet access was normally slower. For that the university should go for broadband whose speed is much faster or alternatively for dedicated lines. Once the university appoints a trained and experienced system administrator, all these problems will be minimised and users could be satisfied.

## 8. CONCLUSION AND SUGGESTIONS

It is evident from the results that Internet has a great impact on the academic community. The researchers in various branches of sciences are making maximum use of the Internet facility provided by the university. However, researchers in other fields still rely on bibliographies and printed journals. Researchers in social sciences and humanities consider their departmental libraries are the last resort for obtaining information. Although subject gateways are available in their fields, they are not known to the researchers so they are unable to find or locate free online resources on Internet. In this context, library should provide information literacy or short term training programmes to research scholars and all the academic staff so that they can take advantage of freely available subject gateways on the Internet. For this purpose, firstly the academic staff should be encouraged to use electronic information sources for their studies and research purposes. Secondly, the librarians should provide proper training to use online information sources.

The most frequently used places for accessing the Internet are the university library (70.1 per cent) and the cybercafé (18.5 per cent). The majority of the respondents (69.4 per cent) use the Internet mainly for educational purposes and comparatively less number of respondents (34.7 per cent) for entertainment or personal purposes. The majority of the respondents used Internet for consulting technical reports (54.3 per cent), e-books (42.3 per cent), and e-journals (38.5 per cent). The most common problems faced by the majority of the respondents while surfing Internet were slow Internet connection delaying in retrieving relevant information (69.4 per cent), and difficulty in finding the relevant information (21.3 per cent). The majority (70 per cent) of respondents felt that the Internet is more useful, preferred, informative, easy-to-use, and less expensive information source that help them in saving their time. More than half of the respondents felt that dependency on the Internet has increased. The majority of the respondents were satisfied with the facilities provided by the SVU digital library.

Based on the findings of the study, the following suggestions are made to improve the use of the Internet resources by the teachers and students:

- ✂ More number of terminals should be provided in the centre
- ✂ Some computers with floppy disk/CD-ROM drives/USB ports may be provided in the library so that the users can download relevant information from the Internet and take to their departments and read it leisurely. That helps not only to them but also to others in getting more time in searching information on the Internet.
- ✂ A networked printer may be provided in the centre so that the users can take print-outs. This facility may be provided for all the users on payment basis. The centre should reduce the existing printing charge from Rs 2 to Re 1.
- ✂ The present time slot of 30 min through advanced booking may be extended to 1 h for the students. Also the centre should be kept open from 9 am to 9 pm so that the systems can be optimally used by the users.
- ✂ The e-mail may be configured and a local e-mail address may be provided to every user so that downloaded information can be uploaded to their mail boxes.
- ✂ The centre may start developing subject gateways in different subject fields which will help students in getting right kind of information.
- ✂ There is a need for extensive training programme on regular basis at the beginning of each semester. This is required for all the categories of library users so that they can use Internet-based resources optimally for their studies and research.
- ✂ In future, the Internet facility should be extended to the hostels and rooms of the teachers.
- ✂ More computers with latest specifications and multimedia kit should be installed so that users can use Internet telephony, video-conferencing, chatting and other useful services of the Internet.
- ✂ A system administrator may be appointed for providing right kind of help during their day-to-day

Internet use and also useful for conducting regular training programmes.

- ✂ Electronic version of the journals may be subscribed by the library in each subject area in which SVU is offering courses.
- ✂ Entertainment websites should be blocked so that students should not unnecessarily sit and block the computers from use by others serious users.

## REFERENCES

1. The Growing Cyber Universe in India. <http://www.squidoo.com/internet-india> (accessed on 21 March 2009).
2. <http://www.getcounted.net> (accessed on 21 March 2009).
3. Top 20 countries with the highest number of Internet users. <http://www.internetworldstats.com/top20.htm> (accessed on 21 March 2009)
4. I-Cube 2007 Summary Report Final. <http://www.scribd.com/doc/917889/ICube-2007-Summary-Report-Final> (accessed on 21 March 2009).
5. Researchsam. Broadband in India—An insight. Internet-India66rate or flag this page. <http://hubpages.com/hub/Internet-India> (accessed on 21 March 2009).
6. Lubans, J. Internet use among 3rd year students at Duke University. <http://www.lib.duke.edu/lubans/study4b.html> (accessed on 21 March 2009).
7. Mercer, L. Measuring the use and value of electronic journals and books, issues in science and technology librarianship. <http://www.library.ucsb.edu/ist1/00-winter/article1.html> (accessed on 21 March 2009).
8. Rogers, S. Electronic journal usage at Ohio State University. *College and Res. Lib.*, 2001, **62**(1), 25-34.
9. Bird, Gwen & Heekin, Janet M. Survey on the use of information sources in the field of aging. *Bull. Med. Lib. Assoc.*, 1994, **82**(1), 30-35.
10. MacDonald, B. & Dunkelberger. Full-text database dependency: An emerging trend among undergraduate library users? *Research Strategies*, 1998, **16**(4), 301-07.