Chapter III
Review of Literature

The first step in any investigation involves reading what other people have studies about the subject under study. In order to get an idea about the past studies conducted in the internet utilization and academic activities of faculty members in the universities an exhaustive literature search was carried out. These relevant publications will give an idea about what has already done in internet utilization, how these analysis are carried out and what methodologies have been followed. Hence an exhaustive literature search survey has been carried out and important articles from journals, conference proceedings, chapters in books and information from internet sources were collected. In this chapter, review of related literature published in the area of internet utilization is presented in chronological order, which will give an overview of the research conducted in this area earlier.

Trivedi and Joshi (2008) conducted a study among faculty at Pramukhswami Medical College and Shree Krishna Hospital of H M Patel Centre for Medical care Education and Research, Karamsad, Gujarat, India. The survey included 194 health care professionals of which 116 were males and 78 were females. Questionaire was the instrument used for the survey. More than three-fifths of respondents reported that their level was “just conversant,” with 30 percent “well conversant.” Most of the respondents had some computer knowledge, more than three quarters had no formal computer training. The faculty members use computers to access online journals, teaching materials, dissertations and for communication through e-mail. The purpose of searching was for obtaining health information for students and patient care. The study opined the need for formal training for all levels of staff. Library professionals on campus could take the initiative to improve and expand internet searching and use. Librarians might prepare a list of subject websites, data useful to researchers, link to free online databases and place them on the library website.
Biradar and Kumar (2008) investigated Students and Faculties' searching behaviour and the internet use of search engines for retrieval of scholarly information. The study investigated the use of search engines, use of popular search engines, factor that influenced on search engines use, use of search strategy for information retrieval and also to know the methods of learning search strategy by students and faculties in the university background. 120 questionnaires were distributed to students and faculties of Kuvempu University, Shimoga. Of these, 100 users filled and returned the questionnaires. Equal number of students and faculties and also equal proportion of science and social science department's respondents were considered for the study. 96% of faculties and 76% of students used internet for different purposes. Many of the respondents reported that the information available on the Internet had proved to be a great asset and they responded that with internet resources their professional competence were improved and they were abreast with the latest information. According to the frequency of Internet use a large number of faculty members frequently used Internet for their academic work regularly. The major purposes of internet were Study/Teaching, Research and sending e-mail.

The most popular used search engines by students and faculties were Yahoo and Goggle. Search engines such as Alta Vista, Hotpot, Lycos, Euroseek, Excite, Northenlight were meagerly used by the users. The factors influenced on the use of search engines were search engines popularity, more information and user friendliness. The respondents adopted help messages in the search engines, help from friends and reading books were used to learn the search strategy for internet information. The study found that majority of the users was not aware of different search engines except Google and Yahoo. For improving the use of search engines, Library authority should take initiatives to improve the information searching on the internet among users by providing formal training and prepare lists of search engines and their techniques for retrieving relevant information.
A joint study was conducted by Ansari and Jilani (2008) among the students of the Delhi university during the academic year of 2006-2007. The objectives of the study were:

1. gender ratio among users of the internet.
2. level of use of existing internet services.
3. purposes of use of internet services.
4. most frequently used search engines by the students.
5. most common service used by the students.
6. most favourite job related sites.
7. problems faced by the students while using internet services; and
8. views of the students regarding the replacement of library by internet in the future.

Due to slow speed in the departments, users preferred to use the internet facility in the Delhi University Computer Centre. 100 questionnaires were analysed. Among the respondents 32% were undergraduates, 62% post graduates and 6% research scholars. In the gender wise distribution, 63% were males and 37% were females. The investigator found out that for girls there was internet facility in the ladies hostels and therefore they preferred to access the internet from the hostel. Regarding the timing is concerned among undergraduate students 22% used the internet for about 30 minutes in a day, while 68.8% spent between one-two hours, 12.5% between two-four hours and about 0.3% spent more than 4 hours on the internet. Among the post graduate students, the corresponding figures being approximately 24%, 58%, 13% and 5% respectively. In the case of research scholars 33.3% of research scholars, they spent less than 30 minutes and an equal percentage between one-two hours while 16.6% used between 2-4+ hours. From the timing of using internet it was clear that the largest number of users in all three categories used the internet between one-two hours. Internet explore was the more widely used browser.

The purpose of using internet by Undergraduate students and PG students were for academic achievements and competitive examinations. But research scholars were using internet for research purposes. E-mail, WWW and Chatting were the most commonly used internet services by the students. The percentage of downloading the
software steadily increased with the level of education ie. it was least among undergraduate students and highest with research scholars. Trial and error method and guidance from friends were the mode of learning internet skills by the respondents. The most preferred job related site for UG and PG students was naukri.com and for research scholars it was carrera.com. According to respondents search engines were the sources for providing information for various sites. Google, Yahoo and Alta Vista are the most popular search engines for students in that order of preference. Slow speed was the major problem faced by the respondents. A good number of respondents indicated that internet was more informative, less expensive and time saving in comparison to conventional documents. All the respondents were having a feeling that the internet could help them to building up their careers.

Biradar and Kumar (2008) conducted a study of search engines used by research scholars and faculty members of physics departments in the universities of Karnataka state. The objectives of the study were use of various search engines, frequency of use of search engines, factors that influence use of search engines, use of search strategy by Physics research scholars and faculty members in the universities of Karnataka State. The respondents included all the 189 research scholars and 103 faculty members in the department of physics in six universities in Karnataka state and the Indian Institute of Science, Bangalore. The analysis of the study revealed that most of the respondents could be considered as internet users. Majority of the respondents responded that they had used search engines to retrieve information on the internet and only a few of them mentioned that they have not used search engines. Google and Yahoo were the most frequently used search engines followed by Altavista, Lycos and Hotbot. The search engines such as Excite, Northern Light, Euroseek and Infoseek have not been used. 84.3% of the respondents were aware of search strategy of different search engines. The help message in the search engines home page helped the respondents to study the search strategies followed by the using books and articles. The factors that influenced the use of search engines were popularity of search engines, more information can be accessed, easy to connect on the Internet, user friendly etc. The investigators put forwarded a suggestion to librarians that, librarians should organize workshops on use of search engines and also assist the users at the time of searching literature using search engine.
Riahinia and Azimi (2007) carried out a study among the females of Tarbiat Moalem University in Tehran. The objectives of the study were use of internet among females, their favorite sites, issues and their attitude towards using the internet. The population includes all females affiliated to TMU, grouped into three categories: academic staff, master and doctoral students, and staff members. A quota sampling was conducted in which 25 percent in each category of the population were asked to complete the questionnaires. The response rate was from 80 respondents. This number included 40 students with an average age of 26, 21 faculty members with an average age of 50 and 19 staff with an average age of 41. Among the respondents 40% used the internet an average of one to five hours per week and 9% use 5-20 hours per week of internet services. The average use of internet through all three groups was just over two hours per week. 50% of students, 26% of faculty members and 24% of staff had used the internet resources and services. Those who were using women-oriented web sites constitute 18% of faculty members, 47% students and 35% of staff. Concerning the use of internet per week and its relation to safety it was found that as the use of the internet increases the feeling of security decreases. Regarding the different kinds of internet services used by women, it was clear that e-mail had the highest use followed by new discoveries, search for resources and gaining information. Women were interested in e-mail because of their very nature of secrets and whispered talks. In the academic environment women would keep their favorite style of writing by e-mail.

The problems encountered by the respondents are low speed connection, lack of facilities, language barriers and the high costs of scientific resources. From the study, students’ use of internet had been more than other categories, while staff members were ranked at the bottom. This was due to students using internet for their preparation to class assignments, search for resources and review for their dissertations. When the study included the variable of age of respondents, it would be clear that as the respondents ages grew the average use of sites devoted to women fell and vice versa. This may come from the assumption that as the females grew older they would be less interested in romance and fantasies and special issues related to women’s characters and responsibilities. In this study respondents did not use the internet for seeking friends because they feel insecurity in cyberspace and the chances
of harassment. The study concluded that in Iran this was the time for thinking a digital world with more women’s participation and a safer electronic place having mutual relationships and move toward for further discoveries.

Madhusudhan (2007) conducted a study among the 60 science and technology research scholars at Central Science Library, in the Delhi University Library system. Central Science Library has more e-resource, journal databases and full text scholarly electronic journals. The library have 30 computers with free internet services. The major purpose of the study was to find out the current trends in information search through internet and the problems while searching internet information by the research scholars. The other objectives of the study were:

1. To study the role of internet in information dissemination and transfer;
2. To find out the research scholars’ awareness in using internet resources;
3. To assess the use of internet as an information source by the research scholars in the fields of science and technology;
4. To identify the problems faced by the research scholars in searching of information through internet; and
5. To suggest ways and means for the better utilization of internet resources.

The response rate of the study was 85%. Tools used in the study were questionnaire, observation and informal interview using stratifies method. 66% of the respondents visit the library for e-journals and databases. The mostly used databases were Sci Finder scholar, Scopus abstract and citation databases and the e-journals were IEEE & IEL online. During library visit research scholars tend to spend more time on the internet due to free access of internet. Those who were using internet in CSL had some idea about the internet and its services. Concerning the frequency of internet use 70% of research scholars used it daily, 16% used it more than two or three times in a week, 12% used once a week and 2% used occasionally. Through search engines majority of the research scholars accessed information from internet and the most preferred search engine was Google followed by Sirus, Yahoo, Altavista, Lycos, webcrawler and Infoseek. 74% of the research scholars preferred keyword searches for browsing information. The second preference was for the author searches followed
by subject, journal title and title of the article. The least preferred search technique was the date of publication.

The most preferred advanced search technique among the research scholars was field searching followed by phrase search, Boolean search and truncation respectively. For internet searching 57% of respondents sought help from the library staff. From this it was cleared that research scholars were not being systematically taught to effectively search the information on the internet. 51% of the students strongly recommended that the internet had made research work easier for them. A vast majority of the respondents used the internet for communication via e-mail followed by browsing through the web. FTP was the least used internet service by the research scholars. 98% of research scholars were more concerned about easy to use downloaded materials for their research. 68% of the respondents had the opinion of use of the internet had created high dependency value on their research work. 47% of the research scholars had expressed full satisfaction with internet services. The problems enumerated by the respondents were low band width, retrieval problems, insufficient time and teaching. The suggestions made by the respondents such as provide more computer with internet facilities, more journals should be converted into electronic versions and high bandwidth provision. CSL should design and develop Multimedia presentation (flash) for internet resources. Entertainment sites should be locked in the CSL internet facilities, redesign CSL website with active links and content and also user friendly to access online resources.

**Saravanan and Mary (2007)** conducted a study of teacher’s approach to Internet and Online Information sources. The objectives of the study included:

1. To understand the purposes for which the college teachers are using the Internet.
2. To know the frequency of using internet sources by the college teachers.
3. To study the teacher’s approach to the Internet and online information resources.
4. To analyse the search strategy adopted by the college teachers when browsing internet and online information resources.
5. To identify the most preferred search engine used by the teachers when accessing internet sources.
The study was based on a sample of 60 respondents who had participated in the Orientation Course and the Refresher course in English at Academic Staff College, Kariyavattam, University of Kerala, November 2005. The investigator had adopted survey method for data collection using stratified random sampling method and descriptive statistics had been used for the interpretation of the data. The analysis showed that the purpose of using internet sources by the majority of the college teachers was for the preparation of classroom teaching and the average time spent for accessing internet information resources were less than 5 hours in a week. Teachers were depending more on traditional source than e-source. Their approach to internet resources were similar to traditional sources and the order of accessing internet information were abstracts, content summaries, judgment about content, bibliographies and various links. Most preferred search engine used by the college teachers was Google and the most preferred format of information was PDF. Most of the teachers were following simple search. Only 49% of the college teachers had quality awareness towards internet information resources. The study also found that knowledge of college teachers towards various quality parameters such as filtration, currency of information, supporting system, copyright and reliability of information were poor. The financial assistance from the UGC for computer and internet facilities had not been properly utilized in the colleges. The study concluded with the following suggestions:

1. Compulsory computer literacy to all the teachers.
2. Formal training on how to browse or download from the internet and online sources.
3. Seminar and workshop may be organized periodically for the college teachers both regional as well as at national.
4. In IR oriented courses part of the curriculum may be centered on step by step of browsing and conduction search strategy and how to filter the information may be included.
5. Day to day activities of the teacher in a classroom must be centered on the quality of internet information sources.
The study concluded with a point that it was the responsibility of the UGC and the Head of the institution to utilize the fund for computer and internet facilities properly.

Khare et al, (2007) conducted a survey to study the pattern of internet use of Ph.D scholars of Dr. H.S. Gour University, Sagar, Madhya Pradesh. The objectives of the study are:

1. To know the purposes of using internet by research scholars,
2. To ascertain the knowledge of users about the internet resources,
3. To identify the popular search engines,
4. To determine the level of their satisfaction with the services, and
5. To suggest ways of providing better internet services to users.

The study also formulated the following hypotheses:

1. In the present IT age the research scholars would be aware of internet resources and services and hence extensively use internet for research purpose.
2. Internet being a source of information would be of immense help to Ph.D research scholars.
3. In present information age, internet connectivity would be provided by the central library and the departments of the university.

Questionnaire was the methodology adopted for the study. A sample population for the study included 100 Ph.D scholars with 10 scholars from each of the ten faculties. From the study it was found that 66% of research scholars use internet and 34% were non users of internet. The purposes of the users of internet were educational, job search, entertainment, communication and business. E-mail was the most commonly used internet services and there were no users of TELNET and USENET service. Google, Yahoo, Web crawler were the most used search engines. The difficulties faced by research scholars in using the internet were technical problems, language related problems and network related problems. Regarding the satisfaction with the information retrieved from the internet, 42.42% users were of the view that retrieved information was not pin-pointed, 30.30% believed that information is sufficient, 19.7% believed that is not fully sufficient and 7.58% users believed that
retrieved information from the net was not sufficient for their research purpose. The reasons for the dissatisfaction of internet services in university library were computer system related problems, feel access time was slow, lack of adequate number of computers and low speed of connectivity. The hypotheses formulated in the study were verified and found that the first two hypotheses were satisfied with the result of the usage of 66% of the respondents for research purposes. The third hypothesis was also satisfied as internet connectivity was provided by the Central Library of the university and the teaching departments. The investigators had put forward some suggestions such as development of internet awareness especially among female Ph.D scholars, short training, provide adequate number of computer in each department with internet facilities and for language problem a short course in English also be provided.

Shihab (2007) investigated a survey of internet use among the faculty members in library profession and librarians in different parts of Kerala with the following objectives.

1. To find out the extent of the use of internet services among library professionals.
2. To identify the main internet resources and services utilized by library professionals.
3. To find the different purposes for which the internet is being used among library professionals.
4. To identify the search engines and browsers used by library professionals.
5. To find out the problems faced by the respondents while using the internet.

Among the 120 respondents 90 library professionals had responded. Out of 90 respondents only 43% were using internet daily. 19% used the internet 2-3 times a week and more than 12% used internet once in a week. But most of the library users were aware of internet and its resources. 83% of respondents were having e-mail id. Concerning the amount of time spent on the internet, 53.85% used for 0-1 hour, 26.9% for 2-4 hours, 3.8% for 5-6 hours and 3.8% for 7-9 hours in a week. Only 11.5% have using the internet more than 10 hours in a week. Among the library professionals most frequently used location was their offices. The purposes of using
internet by them were for information search, academic purpose, and communication purpose and for entertainment purpose. The most preferred internet resources were e-journals and e-books followed by conference proceedings and technical reports. Google was the most widely used search engine followed by Yahoo, Alta Vista and Lycos. The problems faced by the library professionals while internet using were slow access speed, irrelevant information, lack of quality information, overloaded of information, more time in downloading PDF files and privacy problems. The study concluded by suggesting to the library professionals to improve the skills required for information searching on the web and thereby the library services could be supplemented by the internet services to the users in getting right information at the right time.

Cheiemek etal, (2007) conducted a study among the users from five institutions in south western Nigeria. The population consisted of 250 persons stratified into 3 groups; lecturers, undergraduates and Post Graduate students from the above five institutions. Out of 223 returned questionnaires 200 were selected for research purposes. The objectives formulated in the study were the level of usage of internet and formal library facilities for research purposes in Nigeria and whether these facilities were complementary and provide equal satisfaction and what were their discrepancies. Regarding the purpose of using academic libraries, 58 respondents were using for general reading, 60 for preparation of examination and 82 for research purposes. Concerning the purpose of using internet 61 used for general reading, 50 for preparation of examination and 89 for research purposes. Among the 200 respondents 177 respondents were using internet often. 165 respondents were using internet at cyber café, 25 at office and 10 at home.

From the analysed data it was clear that there was no perceived significant difference in staff efficiency and ease of use of facilities in academic libraries and online environment. However there was significant difference in users; perception of speed of access to needed research materials, availability of current and up to date materials, cost of access and distractions within the facilities. The study suggested that academic libraries should be equipped with modern infrastructure and made provision in the budget for training programmes and reduce internet costs across the country.
The investigators opined that Librarians must be trained in the use of current technologies to them in the discharge of their duties.

Mahajan (2006) has conducted a survey to study the use of the internet by the researchers at Punjab University, Chandigarh in all the three field of knowledge-sciences, social sciences and humanities, so as to determine its influence on their academic life. 200 questionnaires were distributed, 80 researchers in sciences, 80 to researchers in social sciences and 40 to researchers in humanities. 80% of science researchers and 90% of social science researchers used internet at their respective departments. But in the case of humanities researchers cyber cafes were the internet accessing point. 90% of science, 30% of social science and 5% of humanities researchers use internet for academic purpose. The study revealed that researchers in sciences are more positive about internet use and its impact on their educational needs. All the science researchers had gone online to access information from the e-journals that were available through the university library whereas only 40% in the social sciences and 5% in humanities were using online journals. Researchers use electronic resources more than paper resources as they were confident to find resources through internet rather than paper resources. The other purposes of using internet were document delivery services, online job seeking, publishing research papers in e-journals etc. The majority of researchers in all fields who used internet for accessing information use search engines like Yahoo, Google, Infoseek and Altavista. Most (99%) of the science researchers and 50% of the social science researchers agreed that internet had a positive impact on their study and research, while researchers in humanities did not agree with the above statement. According to Mahajan, for the maximum utilization of internet resources, firstly the academic staff should encourage the use of electronic information sources and the librarians should provide proper training in the use of online information sources.

Al-Ansari (2006) investigates the patterns of internet use among faculty members at various colleges of Kuwait university. The objectives of the study were patterns of internet use, purposes for using internet resources, the influence of internet on research and teaching, search engines used by the faculty members and difficulties faced by the faculty members. The study was limited to four colleges of Kuwait
university, i.e., Sciences, Engineering, Social Sciences, and Arts. Due to their large number, it was decided to take half of the faculty members from each college, the sample came to 246. Questionnaire was distributed to the faculty members and the response rate was 62.6%. Out of 154 respondents 11 faculty members neither used a computer nor the internet. Because of this non-use of internet by 11 respondents, data was analysed with the use of remaining 143 questionnaires.

Among the respondents 78.3% were males and 21.7% were females. By the age wise distribution 14.7% were 35 years or younger, 47.6% were between 36 and 45 years, 25.9% were between 46 to 55 years and 11.9% were 56 years or older. Most (64.7%) of the respondents above 55 years of age were professors and those having under 36 years age were assistant professors. 16.8% of the respondents have been using the internet for 11 or more years, 46.9% for 6 to 10 years, and 36.4% for up to 5 years. Assistant professors have been using the internet for longer years than other ranks and that the respondents with higher ranks seem to have started using the internet later. 25.9% of respondents spend 10 or more hours per week using the internet, 22.4% spend 7 to 9 hours, 18.2% spend 4 to 6 hours and 33.6% spend up to 3 hours. 51.7% of the respondents spend less than one hour per day using the internet. Self instruction was the most commonly used learning method of internet followed by assistance of colleagues and friends.

Regarding the use of internet sources, 93.7% of the respondents use e-mail, 83.9% use search engines and 65.7% use www resources. The least used internet resources are FTP and Gopher. Science and Engineering faculty use the internet as a communication and research information medium much more than Social Science and Arts faculty members. Engineering faculty members are the top users of the internet for searching software. The primary use of internet information is for research and publication and for personal interest and less so for teaching and class assignments. Regarding the preference of internet services, e-mail ranked 1, catalogs and databases ranked 2; e-journals ranked 3 and WWW resources ranked 4. The most popular used search engines are Yahoo, Alta Vista, Info Seek and Google in that order. Respondents reported that internet have had a very positive impact on the work of the faculty members. The major impacted areas are saving time and obtaining fast and up
to date information. The problems identified by the respondents are slow access speed, lack of time and lack of access to the internet from home. 69.2% of the respondents reported the need for training in advanced search techniques. The study concluded with some points of further research to measure internet use skills of faculty, staff and students in a more concrete manner so that different training packages can be prepared for various groups.

The study of Kumar and Kaur (2006) was to analyse the use of the internet among the teachers and the students of engineering college's three states of India such as Punjab, Haryana and Himachal Pradesh. The objectives of the study was to assess various aspects of internet use, frequency of internet use, methods used for learning internet skill, most frequently place of internet use, 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 colleges. For selecting the sample, 30 respondents from each college taking at least five from each branch of each college under study. Among the five respondents, 2 were teachers and 3 were undergraduate students. From the above sampling technique 1980 respondents were selected. Questionnaire method was used for data collection and from 1980 samples, 658 teachers and 945 students were responded.

Majority of the respondents had been using internet an average for more than 2 years and most of them use it 2-3 times in a week. 33.7% of respondents used the internet for 2-4 hours a week and only 5.1% had used internet for less than one hour a week. College or work place was the most frequently used place for the respondents. Trial and error method was the most commonly used for learning internet skills. Guidance from colleagues, self instruction and training was also used by the respondents for learning internet skill. Internet was most commonly used for educational purposes and least used for entertainment purposes. The other purposes of using internet were research and communication. E-mail had been the most popular internet service used by 99.9% of the respondents. Next commonly used service was WWW. The other services were Search engines, Chatting, FAQs, FTP, Telnet, and BBS. Using of Archie and Discussion groups were very low. The problems of internet
for the respondents were slowness of network communication, slow access speed, difficulty in finding relevant information, overload of information on the internet, and the privacy problems. Most of the respondents used Search engines for browsing internet. The other modes for browsing internet are type the web address directly and use of subscription databases. When comparing internet to conventional documents, respondents opined that internet was time saving, more informative, less expensive and more useful than conventional documents. Regarding the influence of internet on academic efficiency, respondents reported that due to the availability of latest and instant access to information on the internet, dependency on internet had increased, research process expedited, and the professional competence improved. While dependency on internet increased the use of conventional documents had decreased. Only 33.1% of respondents are fully satisfied with the internet facilities, 33.1% were partially satisfied and 13.2% were least satisfied. A majority of the respondents were having the opinion that internet cannot replace library services and it can only supplement library services.

The study suggested improving internet services by increasing the timings of the internet services, providing more computers with latest internet specifications, more efficient technical staff and providing printing facility. The study also recommended putting academic news at the web sites of the colleges and display of important web sites in the notice boards.

Adogbeji and Toyo (2006) conducted a study to assess the level of internet usage among the academic staff of the Delta State University, Abraka to determine the impact of the internet on research. Among the 485 faculty members 20% were selected from the five faculties of arts, science, education, social science and medical sciences. The sample constituted 100 respondents. Questionnaire was distributed to the respondents and the response rate was 70%. All the academic staff in the study reported that they had access to the internet. 88.6% had access to the internet through cyber cafes. 41.4% of the academic staff had been using internet for about 1-2 years; 35.7% and 8.6% have been using it for about 3-4 years and less than one year respectively. Only 14.3% had been using the internet for five years or more. Most of the academic staff used the internet for E-mail, searching for research and academic
materials and for communication with friends and relatives. A good number (81.4%) spent less than 10 hours per week on the internet. This may be due to the cost of internet services and inadequate computers at cyber café. 97.1% of academic staff opined that the internet had made research work easier. Regarding the benefits of the internet browsing 92.9% of academic staff had benefited from the use of the internet though down loading of related information materials for research. 7.1% of academic staff were having the opinion that of internet benefited through making choice of research topic easier and ease the sending and receiving of mails. For research internet provided quick access to academic materials, ease of communication, ease of choice of work and access to relevant and up-to-date information. Regarding the impact of the internet on research 82.9% of academic staff revealed the fact that the use of the internet had created a great impact on their research work. Only 2.8% mentioned that they had not experienced any impact on research by the internet. Adogbeji and Toyo suggested that the university should set up an internet centre for staff with more access points and should organize formal training in internet. Next, the academic staff should change their orientation and attitude towards internet.

Anunboi (2006) conducted a study among 1200 students of Federal University of Technology Owerri (FUTO), Nigeria with a view to identify the rate and purpose of internet use by students in order to be well positioned to provide effective internet services to them. Questionnaire was randomly distributed to 1200 students out of which 67.6% were returned. The survey showed that 95.5% male and 90.4% female students had used internet. Internet centre and university were the commonly used place for internet access. Most (50.2%) of the students accessed internet only once in a week and only 3.5% used internet daily. According to Anunboi students used internet for the purposes such as entertainments and sports, academic purposes, correspondences and social and business purposes. The areas of academic activities these students focused on the internet included according to their responses are knowledge improvement, collection of materials for assignment and collection of materials for research, projects and assignment. The enumerated purposes were achieved through accessing and downloading academic material, access and downloading software, visiting other university sites and sending or receiving e-mails.
The recommendations marked by Anunboi are:

1. University libraries should install and provide internet services in their libraries and such services could be provided at subsidized rates and thereby reduce students the risk of searching for information outside the library. By doing so, libraries could generate funds and maintain its integrity:

2. Since university students use internet heavily, the use of library programme in universities should be reviewed to include the use of internet as a form of literature search;

3. The libraries which have installed the internet should embark on capacity building on staff who will use their knowledge of library operation to explore the internet and give adequate services to internet users.

**Hinson and Amidu (2006)** carried out a study among the final year students of Ghana’s oldest business school to evaluate the level of awareness and utilization of the internet for academic research and learning. The objectives enumerated in the study were as follows:

1. The level of awareness of the internet among students and its various applications;
2. The level of access students have to the internet;
3. Strategies adopted in locating information on the internet;
4. Strategies adopted in locating information on the internet;
5. The uses of the internet as a learning tool;
6. The uses of the internet as a research tool.

The research instrument used was a structured questionnaire with both open and close ended questions. 240 students in final year were interested in filling questionnaire and out of 240, 180 usable questionnaires were received representing a response rate of 75%. 42% of the respondents indicated that they were introduced to the internet by friends/family members. The other sources of getting information regarding internet was from courses and self initiative. The factors that attracted to the internet by 69% of respondents were information convenience, educational use and the possibility of finding information. 48% of respondents reported that their lack of
skills in the use of the internet was the obstacle for using internet. Regarding the use of internet services for research 36% of respondents always use E-mail, 2% always use Telnet and 2% always uses Discussion groups. For learning, students used E-mail and WWW while for research they have used E-mail, Telnet and Discussion groups. 49% of respondents have used search engines, 7% used meta search engines and 40% students information gateways for locating information for their purposes. But one half of the respondents rarely or never used any sort of internet search/retrieval tools for locating information and this is points to a need for training of internet.

The recommendations made by the investigators were urgent steps for providing more access points and orientation, mechanism for constantly upgrading skills of faculties, head of the departments and lecturers and ensuring continuous access to the internet would also help increase the level of awareness and use in research and learning among the students.

Lal et al, (2006) studied the use of internet among students and resident doctors of Maulana Azad Medical College, Delhi. Respondents of 449 were selected from 1st, 3rd and 5th semester of MBBS students, Post Graduate students and senior residents working in various specialties. Among the respondents 85.1% were observed as higher users of computers. 90.6% of respondents were aware of the internet café in the medical college campus. Post Graduate students and senior students were more aware than the UG students in the medical college. The major purpose of using internet were educational such as visiting websites providing information related to the medical field and this purpose was mostly among the PG students and the Senior residents. But surfing, chatting and entertainment were mostly among the UG students. Senior respondents used internet for preparing seminar and research work. Among the respondents who were using internet at internet café, 50.8% were dissatisfied with its service due to slow speed, and inadequate computers, out of order frequency was more, inadequate hardware and software of the computers. These dissatisfaction points at medical college cause great use of internet at home by 62.4%. The study suggested is providing training as how to use internet effectively which will encourage the students to use internet.
Badu and Markwei (2005) conducted a survey among the randomly selected sample of 175 academic staff and 216 post graduate students from the faculties of arts, social sciences and science of the University of Ghana. The study answers to the following questions:

1. Are staff and students aware of the internet and its resources?
2. How often do they use these services?
3. For what purposes do they use the internet resources?
4. What is perceived usefulness of the internet to staff and students?
5. What are the reasons for non-use of the internet?

The questionnaire was the instrument for data collection and a total of 123 and 121 questionnaires were returned by staff and students respectively. All the respondents from both staff students indicated that they are aware of the internet. E-mail was the most well known resource among the respondents followed by the WWW, discussion groups, usenet news and file transfer protocol in descending order. Telnet, Gopher and Wide Area Information Server were not well known among both groups. It was also clear that in all cases, the staff were more aware of the resources of the internet than the students. This was due to academic staff often travel abroad for conferences, courses, international seminars. 69.9% of staff and 55.4% of students indicated that they were using internet. E-mail was the most used internet resource among both staff and students followed by the WWW used by 47.2% of staff and 43.8% of students. Other resources were used by less than 20% of respondents in both groups.

Igun (2005) conducted a study among users in a cyber café run by the Delta State University, Arbaka. The study focused to find out the self reported level of internet skills, sources of such skills, and the additional skills desired, preferred ways of acquiring the skills and how the internet has influenced and affected their research. 100 questionnaires were distributed to first 100 persons using the university cyber café on a week day. The response rate was 81%. Among the respondents male and female constitutes 56% and 44% respectively. Among the 81 respondents 72 were students and the rest was staff and other category. Most of the respondents indicated they started using the internet several years ago. 78% of respondents acquired their internet use skills from online or through colleagues or friends. A university course
for internet was a help for only 4.9%. 53% of respondents were rated their internet skills average and 98% indicated that they needed to improve their skills on the internet. E-mail and WWW was the internet skills users want to improve much. Only a few numbers were interested in studying discussion groups, news groups, telnet and OPAC, search engines and home pages. This was due to their were not being familiar with these applications. Continuing education was the most preferred way for studying internet skills. Self study and learning from friends were the other two methods for studying internet skills. Regarding the influence of internet 54% indicated that after the use of internet they talk less on phones and 35% indicated that they now browse less printed materials. Concerning the influence on research 52% responded that the use of the internet has helped them to quickly update their research. The study concluded that there was urgent need for more internet connectivity in Delta State University and provide training for internet skills for both staff and students.

Dadzie (2005) investigated the use of electronic resources by students and faculty of Ashesi University, Ghana to find out the level of use, the type of information accessed and the effectiveness of the library’s communication tools for information research. The tool used in this case study was questionnaire and this was distributed to all students, faculty and administrative staff. The population was 169 and the response rate was 83%. Among the samples 87% were students and 13% constituted faculty and staff. 85% of respondents mentioned that their first point of call for information was internet and the remaining respondents sought information from library. Regarding the tools for searching information from internet, 51% responded that they used search engines, 14% indicated that they just browsed, 13% used meta search engines and 7% indicated that they used the scholarly databases subscribed in their library. Concerning the purposes of using internet 27% indicated that the information was for educational purposes; 27% for news; 18% for entertainment and 11% for sports. The most used search engines are Google and Yahoo. Only 16% of respondents used information gateways and the most commonly used gateway was Pinakes. Emerald, Academic Search Premier and Blackwell-Synergy were the most commonly used scholarly databases by the respondents. Library brochure and Orientation program were the tools for disseminating information about electronic resources. Regarding the library’s priority, 83%
indicated that the library should maintain the quality and quantity of its print collection; 79% indicated installing more computers to the library.

The study found that when users did not have access to electronic resources as a result of lack of PCs they would be content to use the library’s print resources. From this information, the investigator stated that the print resources in any academic library are expected to complement the electronic ones. Problems encountered by the respondents were inadequate PCs, lack of information regarding the use of electronic resources and lack of time. Dadzie suggested introducing information competency across the curriculum with the active involvement of faculty or the introduction of a one unit course to teach information competency at all levels at the university.

Kumar and Kaur (2005) conducted a study among students and teachers of engineering colleges at Punjab. The objectives of the study were:
1. To study the use of the internet by the teachers and students in engineering colleges under study.
2. To study the various internet resources and services used by the respondents on the internet for various activities of teaching, learning and research.
3. To identify the different purposes for which the internet is used by teachers and students.
4. To examine the impact of internet on the various activities like teaching, learning and research.
5. To find out the problems faced by the respondents while using the internet.

Thirty respondents were selected randomly from each college taking at least five from each branch of each college under study. Among the five samples from each college two were teachers and three undergraduate students. From the above sampling method, there were 960 respondents and questionnaire method was used to collect data. Among the 960 respondents, 334 teachers and 474 students responded. Majority of the respondents had 2-4 years of experience of using internet and used internet 2-3 times a week. Regarding the amount of time spent on the internet, a good number of respondents used 2-4 hours a week. College was the most used location for accessing internet. According to respondents’ internet use, it was primarily used for educational purpose and then for research, communication and entertainment purposes. Regarding
the use of Internet resources, 54.3% used the Internet for consulting technical reports, 42.3% for e-books and other uses were e-journals, databases, conference proceedings, theses and dissertations. E-mail was the most popular service used by the respondents and this had been used by every respondent. WWW was the next popular service with the use of 99.7% of respondents. 73.6% of the respondents used the Internet for Chatting and 50% for Frequently Asked Questions. The use of Discussion groups, Archie, Bulletin Board, Telnet, FTP ranges between 11.5% to 35%. The major purpose of e-mail was for communication followed by academic and pleasure purposes. The most commonly faced problem with Internet was slow access speed. Comparing the benefits of Internet over conventional documents, respondents reported that Internet was easy to use, more informative, time saving, more useful and less expensive in comparison to conventional documents. Due to the use of Internet, respondents opined that their professional competence has improved and expedited their research process. Majority of the respondents were partially satisfied with the facilities of the Internet.

As a conclusion the study made these suggestions as the time of Internet service should be increased, Internet facility should be extended to the hostels and rooms of the teachers, provided computers with latest Internet and printing facilities, appoint more efficient technical staff, subscription of e-journals and all the engineering colleges should develop their own web site. The study also suggested taking further research in different types of users' behavior and attitudes towards the Internet.

Luambano and Nawe (2004) studied the Internet use by students of the University of Dar es Salaam. The study also found out the level of student's access to the Internet, the problems students faced in Internet use as well as recommendations by respondents as to what should be done to address the problems. The population of this study comprised students, academic staff, and computer laboratory staff. A total of 100 respondents were selected for the study. Among the 100 respondents 90 were students, 5 members from both faculties and staff at the computer section. Questionnaire, interview, focus group discussion and personal observation were the tools used for the study. 86.3% responded that they were using the Internet. Computer laboratories, university library and Internet cafes were the places of access of Internet.
The internet was becoming popular in 1996. 46.3% respondents had been using internet by more than two years; 22.6% had been using less than one year and 17.5% for one year. Most respondents spent between one to two hours per one internet session. Majority of the respondents acquired their internet use skills through teaching by friends and self teaching. Computer laboratories were the major access points for accessing internet. Respondents also used university library and internet cafes as access points. 68% responded that they used internet for electronic communication (E-mail). 50% reported that they were using it for browsing and 34% using it to access online journals. WWW were used to academic purposes, entertainment, sports, to access news etc. Students use the internet for academic purposes. E-mail was used for communication with friends, with other students, with lecturers and for participating in discussion groups. Among the respondents Google was the most preferred search engine followed by Yahoo. The reasons that hinder the affective use of internet by students and teachers were inadequate computers with internet facilities, slow internet connection, lack of skills, lack of motivation and frequent power cuts. The study concluded with the following suggestions such as provide adequate computer with increased speed internet facilities, formal training to whole students, teachers and staff and constant availability of power.

Ur Rehman and Ramzy (2004) carried out a study among the health professionals working in the three teaching faculties of Kuwait university. The major objectives of the study were to analyse the patterns of internet use, the internet skills of the health professionals, the perceived impact of this resource on their personal and professionals conduct and the difficulties encountered by them while using the internet. The total number of faculties in the three departments of medicine, dentistry and pharmacy were 180. 171 faculties were selected for the study. Questionnaires were distributed and the response rate was 76.6%. Out of 131 respondents only four indicated that they used computers, but did not use the internet and hence they were excluded from further analysis. Majority of the respondents had accessed internet from their office and home was the next access venue for internet. 49.6% of respondents had been using internet for more than 36 months. 32.3% and 11% of the respondents had been using internet for 36 months and 12 months respectively. Only a few members reported that they had been using internet for six months. From this
analysis it became clear that an overwhelming majority of the respondents had been using the internet for years and they are expected to be proficient, comfortable and experienced users of the system. Regarding the frequency of use of internet 80.3% stated that they used it daily and a few members were using once in a month and rarely.

Concerning the perception of using internet 65.4% perceived internet as extremely valuable and 29.95% perceived it to be quite valuable, while 4.7% perceived it to be moderately valuable. More than half of the respondents used internet for sending and exchanging files and documents on a daily or weekly basis. A good number of faculties used the internet for getting instructional materials. The other purposes of using internet are for personal use, reading newspapers, magazines and downloading software. Self instruction was the most commonly used mode for learning internet by the respondents. For self instruction online help, documentation, library guides and brochures were used. 86.6% expressed the opinion that they have to improve the internet use capabilities. 67% expressed interest in developing skills for web searching which was followed by internet phone use. 52.8% wished to develop skills in web site design. The other interesting areas to improve were e-mail, telnet, discussion groups, FTP and chatting. Regarding the impact of the internet on faculty's personal and professional life 88.2% felt that the internet provided better access to information. 77.2% stated that through the internet they had better professional contacts with distant colleagues and organisations. By the use of internet, faculty members were able to use different channels of communication for their research and publication work. Another major impact was that as a result of internet use the frequency of using library and printed materials was reduced so much. Slow response rate and lack of time to internet access are the major problems faced by the faculty members. The other problems encountered were lack of training, obsolete hardware, network connection cost, few work stations, poor quality of resources available on the internet, failure of hyper links etc.

The investigator also found that health professionals were not competent in using some of the internet applications and they were eager to develop their abilities in telnet, ftp and other file transfer systems. For that the university should take
appropriate policy matters for encouraging and training the various internet facilities to the faculty members.

Madell and Muncer (2004) surveyed among the English secondary school students to determine whether or not gender differences exists in the internet use activity and to inform later studies of more specific aspects of this activity. 1300 students aged between 11 and 16 years old, in four different wards of Stockton-on-Tees were selected for the study. Among the respondents 50.5% were males and 49.1% were females. Questionnaires were distributed to the respondents for collecting data. 83% of the respondents stated that they had used internet. In gender wise distribution 85.7% males and 80.2% females had used internet. Respondents who were not using internet stated that lack of access to internet facility, lack of interest or motivation, lack of knowledge about how to use the internet, cost of computer hardware and software and lack of time. For non-usage of internet by gender wise distribution, girls were more likely to give the reason, "no one in household knows how to use it" than boys. In the use of E-mail, there was not a significant difference between the genders. However males were significantly more likely than females to use the internet for the WWW. The model category for participants use the internet for E-mail and the WWW was "few times a week". 77.6% of males had an E-mail address as opposed to 70.1% of females. This was a significant difference. 22.3% of males had a web page as opposed to 10.4% of females and this difference was also significant. With regard to gender differences, it was found that the number of hours per week that males used the internet was significantly higher than the number that females used it. Regarding the purpose of using internet 67.3% used the internet for playing/downloading music followed by general browsing by 56%. 54.8% used internet for E-mail and 28.2% for finding information related to education.

Boys were more likely than girls to use the internet for playing or downloading music, browsing to find out information about goods and services, buying or ordering goods, tickets or services, downloading software, including games and also using the net for accessing government or official services. However girls used the internet more than boys for using E-mail, finding information related to education and using chat rooms or sites. In age wise distribution, there was no significant association between gender and use of the internet for personal
banking/investment/financial activities, looking for job related and other purposes. For getting information regarding new web sites and web pages, 87.3% were getting assistance from their friends. 47% respondents were getting support from magazines/news papers. There were significant gender differences in finding out about new web sites/web pages via hyperlinks from other web pages, from internet search engines and from internet directories. Boys were more likely to use these methods than girls. There was significant association between gender and location of internet at work place, school/college/university, internet café/shop and other location. Boys were more likely to top the use internet at all these locations than girls. More boys than girls were using internet. But girls were more confused than boys while using internet. The problems faced by the students were irrelevant pop-up information, poor quality of information, too much of information, length of pages was too long etc. Males did not perceive the internet to be any more important in their lives than females.

The investigators concluded with the statement that most of English secondary school children were aware of and use the internet regularly and are comfortable with and enthusiastic. By improving the internet awareness and facility to school children, the policy of Government to achieve their aim of allowing every one who wants to access to the internet by 2005.

The use and non use of internet facilities of the academic staff of selected disciplines in the physical and biological sciences drawn from the 10 universities in the south western part of Nigeria was investigated by Ehikhamenor (2003). Of the 467 samples 79% responded to the questionnaire. Among the samples the largest age group was that between 41 and 50. Next was the age group between 31 and 40. Of the 79% of respondents 50.4% had access to the internet. Most of the respondents used mainly private internet outfits, which were mostly commercial. Majority of the respondents learnt internet services through a course given in their universities, either by the computing centre or the library. They also learnt through self instruction and assistance from colleagues. 82% of respondents had used internet for over one year. 43.7% had used the internet for over two years. A greater proportion of the senior lecturers than scientists of other ranks had used the internet for over two years. The
A chi-square test showed that the duration for which the scientists had been using the internet had some relationship to age. Concerning the frequency of using internet, 40.1% of the respondents spent between one and two hours a week, 22.5% spent between three and four hours and 26.2% spent between five and six hours on the internet per week. Only 7.2% reported spending 15 hours per week. The most commonly used internet services were E-mail, catalogues and databases, Electronic journals, WWW resources and free software. Very few respondents used the Gopher, Telnet, FTP or others. E-mail was mostly used by Botanists. The most frequent users of WAIS were the Statisticians, Chemists, Computer Scientists and Microbiologists. The greatest users of E-journals were the Botanists and Chemists. Uncover, American Chemical Society, Wiley InterScience, Elsevier and Ingenta were the most commonly used web sites and databases. Yahoo was the most popular search engine among the researchers. The others are FTP archives, WWW virtual library, Savvy and Magellan, Infoseek, Excite, WWW Worm and Web Crawler were sometimes used.

The problems faced by the researchers were no access to a computer, institutional tardiness, insufficient knowledge about internet resources, ease of use and cost of internet services. However, 84.3% of agricultural researchers believed that the internet will become indispensable in their research in the future.

Uddin (2003) identified six categories of information and communication needs of lectures of Rajshahi University, Bangladesh. For that the author selected 30% of sample from the population of 799,240 teachers. The sample was stratified into four groups by academic designation such as Lecturer, Assistant Professor, Associate Professor and Professor. Random selection of 30% from each category of teaching was selected. The objectives formulated in the study were:

1. To explore what proportion of academics are actually making use of some internet resources;
2. To measure the effect of academic rank on the frequency of internet resource use;
3. To identify differences in key information and communication needs based on academic interests among different ranks;
4. To measure the level of contribution that the internet makes in meeting information and communication needs; and
5. To identify the reasons for potential reluctance or dissatisfaction in using the internet.

For data collection the questionnaire method was used. The level of using internet resources and the differences of internet use among the staff were measured by identifying five categories of activities such as e-mailing, browsing, downloading, using newsgroups and recreation. To measure the frequency of internet usage Likert scale was used. For information needs the categories identified were education/research publications, professional study, seminar/conference announcements, job vacancies and library and information services. The categories in communication were expert in own field, overseas friends/colleagues, overseas education/research organization, local friends/colleagues, academic supervisor and students. Among the respondents 90.3% were males and 9.6% were females. Most of the respondents were between 25-32 years. Only 8.7% of respondents reported that they have never used computers. A good number of respondents had access to the internet from their offices or departments. The most commonly used internet service among them was e-mail, which was used by 88%. The other used services were World Wide Web by 71%, and Downloading files or journals by 56%. Other resources such as Newsgroups, Mailing lists, Audi-video, Internet relay chat and Internet telephony were used by a minority of respondents. The academic staffs had a short span of internet accessing experience of six months to a year. Regarding the frequency of using e-mail most of the respondents indicated a high use of e-mail at least once a day. For browsing, Lecturers, Assistant Professors and Associate Professors were more users than Professors. Downloading of information was carried out by the academics only a few times a month. Regarding newsgroup discussion and recreational activities, almost all the academics were having the same pattern of low usage.

Junior staff were accessing internet more for education/research institutions, and higher studies information than senior staff. But senior staffs accessed internet more for job vacancies information and information on seminars and conferences than junior staff. Regarding the use of internet for communication activities, more junior staffs had used it for communication with subject experts, overseas education/research institutions and academic supervisors than senior staff. But both the junior staff and senior staff had less use internet for communication with overseas friends, local friends and colleagues and contacting of students. The study among the university
academics showed that internet use by them was related to some more common needs and that some information and communication needs are dependent on proper access to internet facilities. University authorities should do the needful to overcome the obstacles faced by the university academics for the effective usage of the internet. Provide broadband internet facility and formal training of internet resources to university academics were the two urgent needs for the internet usage.

Maheswarappa and Ebnazar (2003) conducted a study of the use of internet resources and services in Gulbarga town. The objectives of the study were:

1. Demographic background of internet users such as environment, occupation, educational qualifications, age and gender;
2. Computer background of internet users such as knowledge of computers, place of access to computers, type of computers that they were using, operating system and the software that they were familiar with and the purposes of using computers;
3. Use of internet resources and services in Gulbarga city, specifically to know: since how long they have been using and their overall ability in using internet; the places of accessing internet and how often they access; the time spend, the purpose, the frequency of use of different file formats and the places of access; the frequency of use of different file formats and the places of access; the subjects on which they search websites and the web pages/home pages created by them; the search engines most often used and the steps taken after accessing and retrieving information; the opinion about internet facility and the extent of its usefulness as a tool for communication and as a source of information; and the difficulties in accessing and using the internet.

Questionnaire method was used for data collection and the sample selected from private, public sectors, university and colleges and that constitutes 123 internet users. The results of the study were summarised as follows:

1. Most of the respondents used computers at work place using Pentium systems and familiar with Windows 98 and MS Office.
2. Majority of the respondents using internet since last six months and half of them have an average ability.
3. 93% of the respondents were using internet for sending e-mails followed by visit to web sites.
4. Most frequently used internet resources were E-mail and WWW.
5. The most commonly used file format was document file formats.
6. The subject areas of web sites visited were diverse in nature.
8. Most frequently used search engines were Yahoo, Rediff, MSN and Lycos.
9. Majority of the respondents prefers to read instantly on the monitor and search the internet on their own.
10. 70% of the respondents had not received any instructions in the use of internet and felt the need for training.
11. 69.9% of the respondents were not satisfied with the facilities available for surfing internet in Gulbarga city and
12. Slow accessibility, getting connectivity and lack of training were the major difficulties faced in the use of internet.

Adika (2003) conducted a study among faculty members of the three older universities in Ghana namely, the University of Ghana, The Kwame Nkrumah University of science & technology and the University of Cape Coast. The objectives formulated in the study are:

1. The level of awareness among faculty of the internet and its services; as well as their motivation to use its services.
2. The access faculty have to the internet.
3. The level of internet use among faculty and the internet services used.
5. Impact of the internet on the use of up to date information by faculty.

For conducting the study a sample of 130 respondents were selected from a population of 1300 faculty members from the three universities. The questionnaire was used as the tool for collecting data and the response rate was 81.5%. Among the respondents, only 40.6% have internet connection at their departments. 24.5% of
respondents responded that they have never used the internet. The investigator commented that this low rate of usage of internet was against the natural assumption of faculty would be at the forefront of the use of the internet, because information forms an integral part of research, teaching and learning. The mass media acts as the major sources of providing information regarding internet. The non users remarked that colleagues and professional association encouraged them to use the internet. For majority of the respondents, work place is the major important access point. E-mail has been the most frequently used internet service. Next major used internet service is web browsing. The respondents did not use the other internet services such as Discussion groups, FTP and Telnet. Internet was mostly used for communication. The mode values in this study shows that most of the respondents used the internet sometimes to find information for lecture notes, for research projects and up to date their knowledge in their area of specialization. A vast majority of users performed their search through WWW. For searching in the internet they have been using Search Engines. Only a few members used information gateways for accessing information. Faculty members used the information from internet to upgrade their knowledge in their area of specialisation. The problems faced by the respondents in using internet were lack of access of internet, cost of computer accessories and lack of internet skills. The study expressed the opinion that inspite of the internet benefits, internet use in Ghana was still very low among university faculties. For improving the use of internet the author suggested to provide formal training in internet and also develop a mechanism for constantly upgrading skills of faculty members for the continued access to the internet. Then only the faculty would gain the benefits of obtaining relevant and up-to-date information from the internet to perform their duties.

Kumabr and Shirur (2003) conducted a to find out the exploitation of internet resources by Sree Jayachamarajendra College of engineering (SJCE) with use of questionnaire method. The objectives of the study were the purposes for which the academic community in SJCE was using the internet; the relation between prior computer experience and the use of internet in SJCE; how far internet services had been utilized; from which channels users were getting latest information about web sites/search engines; most used internet services; the satisfaction level of users regarding working hours. Infrastructure facilities etc. Among the 100 respondents 79 members were responded. The findings of the study was as follows:
1. Most of the respondents had started using internet for more than one year.
2. 30% of academic community used the internet 2-3 times in a week.
3. Most of the users learned internet through the assistance of colleagues and friends.
4. 97% internet users indicated that they were using internet for e-mail service, while 55.7% used to obtain copies of articles;
5. 44.3% of users acquainted with the search engines through colleagues and friends followed by 17.7% through professional books and journals.
6. 53% users have got sufficient results at the time of searching the information on internet.
7. 39% of the respondents indicated that they were facing problems in using internet.

_Dulle et al., (2002)_ conducted a study among agricultural researchers in Tanzania for identification of application of information technology in their research programmes. Data collection involved questionnaires to researchers selected randomly at 13 research centers selected from seven agricultural zones in Tanzania. 321 questionnaires were distributed and the response rate was 76.3%. Out of 244 samples, 170 respondents reported having access to either e-mail or the internet. Among the 170 respondents 126 had both internet and e-mail access while 44 respondents had access to e-mail only. Many respondents used their faculty/institute and departmental computer laboratories. A small number accessed internet through their office computers. On the use of the internet for information search, out of 126 respondents who reported to have access to it, 79.3% used it frequently for information search while the rest never or rarely used it for that purpose. Regarding the usefulness of internet, 29.8% rated it as excellent, 41% very good, 15.9% good and 7.9% as poor. Regarding the use of e-mail, 46.1% of the respondents reported using it often or sometimes for information request to their faculty/institute/departmental libraries. 53.9% of the respondents reported rarely or never using e-mail for information requesting purposes from such sources. In short, e-mail was not commonly used by most of the respondents for information request purposes. But in the case of using CD-ROM databases, 64.3% of respondents had used and the remaining 35.7% had never used such a technology. Regarding the
problems encountered for using internet, the respondents reported that it was increasingly becoming difficult to retrieve the right information from the internet as more and more untrained people want to access information. The other problem faced was several online catalogues includes only indexes and abstracts. As more useful information becomes available users were required to pay.

Agricultural researchers finally opined that internet as a research tool could be more beneficial if institutions subscribed to important information and internet users were trained on how to use it effectively.

*Applebee etal, (2000)* conducted a first ever-nationwide qualitative survey of academic staff use of the Internet among the academics from Australian universities.

The aims of the study were:

1. To identify the frequency and type of use of the internet by academics within specified disciplines in Australian universities.
2. To record perceptions of these users towards the internet, together with other demographic data, in order to identify barriers to the effective, or more effective, use of the internet.
3. To determine whether as a means of overcoming the problem of distance, more use was made of the internet by academics in universities isolated geographically, than by academics who are in large metropolitan areas.

A stratified random sampling of 1054 academics were selected for the study from all australian universities. A total of 30 participants were chosen from each university. Mailed questionnaire was used for the survey. The academics were divided into 3 disciplines such as arts or humanities; business, management or commerce and the sciences. The response rate of the survey was 51.3%. 95.6% of the respondents had access to the internet through their personal computers in their offices. 31.5% reported that they had dial-up connection. Many of the respondents did not know about their type of internet connection. Only 9.6% of academics had getting excellent supporting services to internet. The academic staff considered themselves as have the internet skills to use the internet efficiently. Academics most commonly used E-mail
for communicating between campuses for meetings. But a vast majority of respondents indicated that they never used E-mail to communicate with students. Those who used it were electronic discussion groups or news groups for research, teaching, publication and community service or for contribution to a profession or industry. The web was marked as being most useful for research, personal use, teaching and least useful for administration, community service or for entertainment. 96.2% of the respondents stated that access to library catalogues benefited their research activities. Those who were using document and delivery services found that it was useful for research, teaching and publication.

The study found that academic discipline and frequency and type of internet use were indeed associated and similarly there was association between the frequency and type of internet use and the level, terms or mode of employment of academics. The proportion of academics who found the web useful for teaching increases as the perception of skill moves from beginner to expert. Academics with better computing skills use the internet more frequently. The barriers encountered by the academics were infrastructure deficiencies, work load and lack of time.

The results of the survey confirmed that academic use of the internet is a given fact and that university administrators must take the continued provision of this into consideration in future financial planning discussions. E-mail and the web in particular have become essential for academics at all level to enhance their research, publication, professional contributions and communicate with colleagues and students, locally and internationally, which also keeping in touch with administrative process.

**Pangannaya (2000)** conducted a study of 100 internet users at Mysore University Library. The specific objectives of the study include:
1. To understand the purposes for which the internet is being used by the students, faculty and researchers.
2. To know if there is a relationship between prior computer experience and the use of internet.
3. To identify the different search engines used by the academic community.
4. To identify the extent of awareness of the important sites in their subject fields.
5. to understand the difficulties faced in using the internet.
6. To make suggestions for improving the services of the Mysore University library Internet centre.

100 structured questionnaires were distributed. Among 50 questionnaires were distributed to the students, 25 each were distributed among the faculty members and research scholars respectively. In each group, random sampling method was used to select the sample population. The response rate of the academic community is 56%. Respondents from Science disciplines were using internet more than other disciplines. 78% of the internet users had started using the internet facility. After the introduction of service by university library, most of the users were making use of the facility at least once in a week. Most of the respondents indicated that self training and assistance from the colleagues were the methods of learning internet skills. The various purposes for which academic community was making use of the Net were E-mail, keeping up to date, factual information, and answering specific questions, prepare assignments/seminars, entertainment, job searching etc. E-journals, Discussion lists, Bibliographic databases, document delivery service, and table of contents were the services used by the academic community with internet. The most commonly used search engine is Yahoo followed by Altavista, Infoseek and Hotbot. The difficulties faced by the users were present time slot is insufficient, unaware of the important sites in their subject, long time to get connected to a particular site, unaware of formulation of queries and retrieval of irrelevant materials.

The study concluded with the suggestions such as provide more number of high bandwidth computer terminals with printing facility, provision of extensive training programme, extension of time slot and the provision of web page links of important sites etc.

The pattern of internet use among 608 upper secondary science students from 14 schools in Kuala Lumpur, Malaysia has been done by Wee (1999). The main objectives were the effects of the internet on the students learning process, the usefulness of the net and problems associated with its use. 51.5% of the students indicated that they use the internet. Self teaching was the most commonly used
method for acquiring internet skills among the school children. Students also learned internet from their friends, teachers, fathers, siblings and from attending learning programmes. The study also showed that the locality where internet terminals were placed is related to its usage. School centre was the best place for students to access internet. 70.6% of the respondent spent five hours or less per week accessing the internet. Only a few students used ten hours per week on internet. WWW was the most commonly used internet function. E-mail and Newsgroups were also used by the respondents. The majority of the respondents accessed the web more than once a week and the most popular used net browser was Internet Explorer followed by Netscape. The most commonly used search engine was Yahoo followed by Alta Vista, Info seek and Web Crawler respectively. Those who were using web mainly used it for study related purposes.

Regarding the use of E-mail, only a relatively small percentage of the respondents accessed E-mail every day. The more common frequency of e-mail use was more than once a week. The common uses through E-mail were correspondence with parents, brothers and sisters and friends. The study purposes used through E-mail were exchange of information with foreign friends, discussing mathematics, history and other home work, asking for information on subject assignments. The use of internet was significantly related to the locality of internet access. But the use of internet and the level of education were not related to the level of education. The findings of demographic variables and internet use were as follows:

- Children of parents who received higher education were more likely to be internet users.
- The students from families with higher income were more likely to use the internet.
- There was a significant relationship between gender and use of the internet.

Regarding the impact of internet, a great majority of the respondents had the opinion that internet did not affect one’s learning process. Those who had positive effect mentioned that internet had increased their scope of knowledge and broadened their minds and also increased their English proficiency. Common reasons quoted by non users are lack of internet skills, non availability of internet facilities at home and
in school. The advantages mentioned by the respondents were internet provides fast and efficient access to information, lots of information, easiness of getting information, wide variety of information and up-to-date of information. The study also brings out the disadvantages of internet such as time consuming, reliability of information, difficulty to find desired information, incompleteness of the information and the presence of pornographic materials etc.

Wee opined that information skills as well as internet skills should be taught to all students and integrated in the school's curriculum. By doing this, the students can fully reap the full benefits of this information superstore to complement traditional sources in fulfilling their information needs.

Singh (1998) conducted a study to determine how librarians in Malaysia use the internet for work related purposes. The study was also intended to find out the type of services for which the internet was used, the frequency and purpose of use, the problems faced and the opinion on the need for the internet and its contribution to efficiency in the library. The methodology adopted was mailed questionnaire to the sample of the study which included combining the membership list of the Library association of Malaysia and all registered attendees at the 10th CONSAL meeting in 1996 who had a Malaysian Library address. A random sample of 50% of the population was selected for the survey. The response rate of the survey was 53.9%.

All the respondents had heard about the internet and 90.4% of them used it either at their place of work or at home or both. The initial modes of learning to use the internet were through a course or training session, self taught and or from a friend. According to the type of library, it was noted that academic library users spent more time on each access to the net as well as more time per week compared to other libraries. 97.3% of respondents indicated that they used e-mail and the main use of e-mail were for correspondence, primarily with overseas colleagues, for answering queries, sending out notices and minutes of meetings, communication with publishers and inter library loan or document delivery matters. All the respondents mentioned that they used WWW for information retrieval, answering reference queries, checking cataloguing data from other library catalogs and keeping posted with the information
on the latest publications. The major search engines used were Yahoo, Infoseek, Web Crawler, Excite, Magellan and Alta-Vista. The browsers used for browsing were Netscape and Internet Explorer. The number of sites visited per month by the respondents varied from 2 to 200. A comparison of the time spent on E-mail and the WWW showed that academic librarians spent more time on E-mail as compared to the respondents from other libraries. 28.2% of librarians responded that they had used Newsgroups frequently. Regarding the use of Telnet and FTP 62% had used telnet and 31.5% have used FTP. Telnet users used it for accessing OPACs and Library Catalogues of other institutions and Bibliographic databases. Those who were using FTP used it for downloading articles, news, antivirus software and software for the enhancement of the net. 82.7% of Librarians expressed the opinion that internet was an essential tool while 14.74% had the opinion of internet was useful occasionally.

Regarding the contribution of internet to improving efficiency, 65.3% reported that it had increased the efficiency a great deal and 32% marked a fair amount of improvement in efficiency. The major problem faced by librarians was the lack of time and only 18.7% indicated the lack of skills of internet. 67.6% respondents had the opinion about the type of materials should not be available in net were pornographic materials, racially sensitive materials and confidential items.

Singh concluded with a statement that as intermediaries between complex information resources and a diverse clientele, the findings on information seeking and retrieval can lead to a better understanding of worker productivity in general.

Obst (1998) conducted a study on the use of internet resources by German medical professionals. The objectives of the study were intensity of internet usage, preferred services and resources and advantages of using the internet. 300 questionnaires were distributed and ninety complete questionnaires were returned. The study found that all the respondents were aware of various internet resources. All the respondents in the study used E-mail and 85.6% used news groups followed by WWW, FTP, Gopher, Archie, Telnet Veronica and the Internet Relay Chat. 83.7% of the respondents used the internet from one hour a week to two hours a day. The study concluded with the suggestions such as presentation of internet resources, internet
introduction courses, evaluation of the internet resources, databases, OPAC and ILL via internet.

Lazinger et al, (1997) conducted a study among the faculty members in various disciplines in the Hebrew University of Jerusalem to find out the internet use, differences in usage of internet among various disciplines and perceived importance of the internet between two major groups of faculty members those in the sciences and agriculture and those in humanities, social sciences or law. The tool used in the study was questionnaire. Most of the faculty acquired Internet skills from training courses. From the study it became clear that faculty members in science and agriculture group were used more than social science and humanities group. E-mail was considered as the most commonly used Internet service and it was used for correspondence with colleagues about research issues. The other Internet services used by the faculty members were FTP, List servers/newsgroups and Search interfaces. Regarding the influence of internet, faculty members had the opinion of increase in cooperation with colleagues with improved access to databases and research updates.

Conclusion

It is observed that in these studies different methodologies have been used and different aspects of internet use has been dealt with. After reviewing all the articles, a clear idea is arrived to carryout the present study.


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