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USE OF ICT BY RESEARCH SCHOLARS: A SURVEY OF ALAGAPPA UNIVERSITY, KARAIKUDI, TAMILNADU

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ABSTRACT

The information and communication technology revolution is sweeping through the world and the gale has even caught up with developing countries like India. Information and communication technologies have introduced new methods of teaching and conducting research and have been brought into education facilities for online learning, teaching and research collaboration. While some college communities in some countries enjoy free or inexpensive Internet access, students and faculty/staff in India must pay for time spent accessing the Internet, whether at a cyber café or in the library (some of the library they are providing free access). To improve ICT services in the library, therefore, researchers need to show how research scholars and faculty/staff are using the Internet in the academic environment. Information and communication technologies have given rise to new modes of organizing the educational environment in schools and new concepts in the teaching process as well as the remodeling of the roles played by the participants in the educational process. The results of the study shows that 112(85.49%) respondent for download the e-resources, 23(17.56%) respondents for online shopping, 104(79.39%) respondents for prepare assignments. The study also reveals that most of the respondents opined the impact of ICT in Higher education as excellent (54.19%),

Keywords: Information and Communication Technology, Internet, Search Engine, E-resources, Academic Library, Research Scholar

INTRODUCTION

The term ICT includes any communication device or application, computer and network hardware and software, satellite systems and so on. A country's development depends on the extent of use, speed of access, and skill application of ICT systems. The utilization of Information and communication Technology has become an indicator of the level of the nation's wealth. Countries, which do prepare for ICT but not use it, are likely to lose their global competitiveness. Now-a-days, Information and Communication Technologies have been regarded to have a pervasive influence on the economy as well as other parts of society. The

information and communication Technology is widely considered as the most important revolution humankind has experienced since the industrial revolution and the development of movable type printing techniques.

ALAGAPPA UNIVERSITY

Alagappa University reaccredited with 'A' Grade by National Assessment and Accreditation Council (NAAC) is located at Karaikudi in Tamil Nadu. The 440 acre green and lush campus houses all the academic and research activities. This University has emerged from the galaxy of institutions initially founded by the great philanthropist and educationist Dr. RM. Alagappa Chettiar. Alagappa University was brought into existence by a Special Act of the Government of Tamil Nadu in May 1985 with the objective of fostering research, development and dissemination of knowledge in various branches of learning. Alagappa University is recognized by the University Grants Commission (UGC) of India. The University has 10 schools comprising 20 Departments 3 Centres and 3 Constituent Colleges. It has 24 Colleges affiliated to it in the revenue districts of Sivaganga and Ramanathapuram and 4 Evening colleges run by the University. The University's motto is "Excellence in Action" and the University keeps before it the vision of excellence in all spheres of its action.
Review of related studies

Jebamalar et.al (2013)[1] surveyed the use of ICT based Resources and Services among the Users of Arts and Science Colleges Affiliated to Manonmaniam Sundaranar University and the findings in the paper out of 179 research scholars, 31.84% of them faced slow access speed while accessing ICT based resources and services.

Dhanavandan (2012)[2] describes the Use of Digital Library Resources by the Engineering professionals in the engineering colleges at Cuddalore District, and investigates the current state-of-the art information through the digital library resources. The 33.7% users feel that lack of information is the problems with access of digital library resources. The findings of this study would assist the internet browsers to improve their level.

Tiwari and sahoo (2011)[3] examined the infrastructure and Use of ICT in University libraries of Madhya Pradesh. They found 84% computers in working condition and all the university libraries of the state use computers mainly for Acquisition, Data entry, OPAC and internet facilities. The internet facility is available in 49% computers. More or less, a total number of 18 problems have been identified in university libraries of the state.

Helaluddin (2010)[4] described in his study the current position of libraries in ICT environment in Faridabad district of Haryana state. Various services provided by libraries with support of information and communication technologies to their users have been observed and discussed with the library professional and their user.

Maharana, Biswal and Sahu (2009)[5] explored the use of information and communication technology used by medical students. They found 77% of the respondents were of the opinion that ICT should be included in their syllabus. Nearly all respondents expressed their desire to have a computer lab in their college. 100 respondents out of 128 opined that medical education is not effective without ICT based resources and services.

Sharma et.al.(2009)[6] described that ICT in research libraries of Haryana all the libraries are well

strengthen in ICT and are able to meet the requirements faced. NITK library expensed more on various resources rather than NDRI and NBAGR. The study showed that the trends of libraries have been diversified; these are giving more significance to various aspect of ICT such as internet, e-mail, online databases, online journals, e-books, e-thesis, online FAQ etc. In the ICT race coming time will not give a pause and it is an unavoidable tool in all kind of libraries to survive in the future.

Saunders & Pincas (2004)[7] examined the student's attitude towards information and communication technologies in teaching and learning in the UK. 45% of respondents indicated that they would prefer to have more face-to-face lectures at university. The students firmly believe themselves that ICT has a significant role to play in supporting and enhancing their university learning experience. It was also suggested that they see the use of ICT as potentially going well beyond the use of the internet to search for resources and the use of email to stay in touch with tutors and fellow students.

Oliver (2002)[8] investigated the role of ICT in higher education in 21st century. He stated that ICT offers a student centered learning, it support in knowledge construction, distance education, learning at any time. It expands the pool of teacher and students as well. It was summarized that we should see marked improvements in many areas of education endeavour. Learning should become more relevant to stakeholder 'needs; Learning outcomes should become more deliberate and targeted. ICT within education have a strong impact on, what is learned and how it is learned?

Asefeh and Nosrat (2007)[9] carried a survey to investigate the relationships between awareness and use of digital resources among students in Isfahan University of Medical Sciences. A questionnaire was design with descriptive method was randomly used for survey. 250 users of the Medical libraries and information centers affiliated to Isfahan university of Medical Sciences were taken for survey. The results were founding the paper titled "Awareness and use of digital resources in the libraries of Isfahan University of Medical Sciences, Iran" that 70 percent of students were aware of digital resources, but 69 percent have used them; 62 percent were aware of offline databases and 19 percent were only using them through Central library LAN network. About 70 percent were aware of online databases, accessible via Central library web site and 53 percent have used them In total 87 percent of students felt that the available data met their information needs. Infrequent periodic orientation and lack of education on use of offline databases and fewer terminals connected to the server in the Central library, due to these factor students had less use offline databases. Users are faced with problems like low speed connectivity and shortage of hardware facilities.

Kanwal, Ameen (2008)[10] studied the "Barriers in Collection Sharing among Libraries of Pakistan: University Library Managers' Viewpoint". A survey method was used to explore the barriers to collection sharing among the well-established chartered university libraries situated in the major cities of Pakistan. The survey followed a qualitative design based on an interview technique of data collection. Twenty chief/head librarians from five major cities of Pakistan were interviewed. In-depth, semi-structured interviews were conducted at the librarians' workplaces during 2003 to 2004. The results of the present study revealed that various technical, procedural, psychological, and behavioral barriers in achieving planned and meaningful collection-sharing (CS) programs still prevail. It suggests analyzing the possibilities, opportunities, and challenges of CS in the emerging paradigm.

AIMS AND OBJECTIVES

The main objective of the study were to analyse the pattern of ICT usage by research scholars, its availability, Scholars knowledge of different computer applications and their opinion about ICT use in higher education and research. Beside this, an attempt was made to investigate the:

- To explore the role of ICT in Higher education and Research;
- To assess the use of electronic information resources by Research Scholars;
- To identify and analyse specific factors that have hindered the use of electronic information resources by research scholars;
- To examine research scholars attitudes towards use of ICT in Higher education and research;

RESEARCH METHODOLOGY

A questionnaire was designed after conducting a comprehensive review of the related literature. That questionnaire have 25 questions spread over seven sections; i) General profile of the respondent, ii) Attitude towards ICT, iii) Use of ICT by research scholar, iv) ICT enabled library facilities, v) ICT literacy of Research Scholars vi) Use of Internet, vii) Constraints in Use of ICT. A random sample of 150 (50%) of 300 research scholars of Alagappa University, karaikudi, was selected and questionnaire were distributed among them. Of those 131 questionnaires were returned completed.

Data Analysis and Discussion

Attitude of Research Scholars towards ICT

The survey found that a majority of respondents believe that ICT is essential for higher education and research. In order to assess the attitude of research scholars towards ICT, they were asked whether they felt that higher education and research would not be effective without ICT.

Table 1. Effectiveness of higher education and research

Higher education and research will not be effective without use of ICT tools and techniques	Frequency	Percentage
Strongly Agree	111	84.74%
Agree	14	10.67%
Partially Agree	6	4.59%
Disagree	0	0%

Nearly 84% of respondents strongly agree that higher education and research will not be effective unless ICT tools and techniques are used in the research process. Further, it is evident from this data that the scholars realize that ICT tools and techniques should become a part of higher education and research.

Need for ICT enabled Library facilities

Research Scholars were asked to put forth their recommendations about ICT faclilities.

Table 2.ICT faciliteies recommended by Research Scholars.

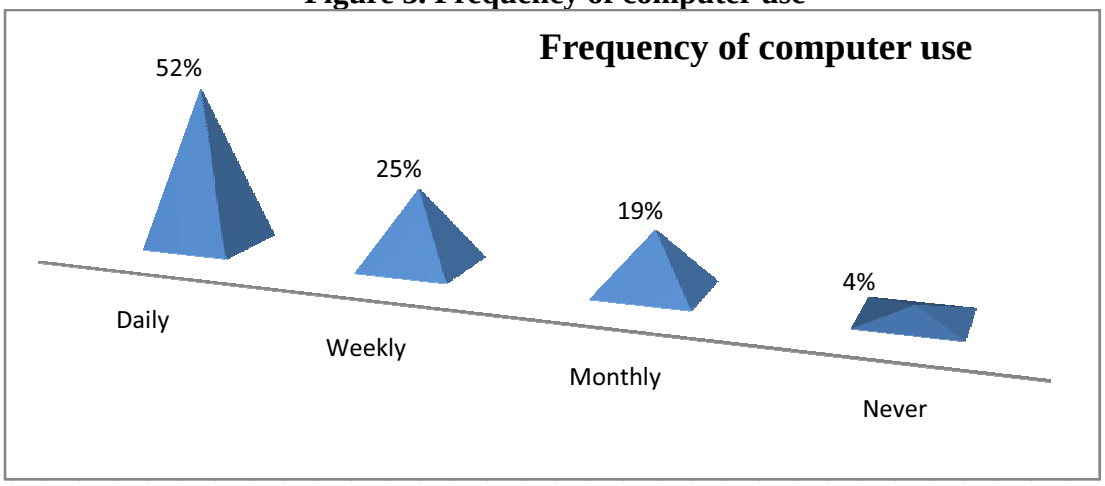
ICT facilities	Frequency	Percentage
Library websites	91	69.46%
E - Resources	103	78.62%
Digital library facility	78	59.54%
Automation of library	82	62.59%
Local Area Network for library	60	45.80%

Data represented in table and figure 2 indicates ICT facilities recommended by research scholars. It could be noted that three quarters of respondents recommended e-resource for remote access to library resources and services. More than 69 % recommend a library websites and equal number recommended Automation of library. Only 45% of research scholars recommended local area network for library.

Use of ICT by Research Scholars

The state of computer use by research scholars is encouraging. Nearly half use a computer daily, with another quarter weekly and only about 19% using a computer monthly. Nearly 3% never use a computer, which is quite discouraging. Although the students consider computers are integral part of higher education and research, their overall use is infrequent.

Figure 3. Frequency of computer use



Use of Internet

100% of respondents use the Internet. The table summarizes the purpose and frequency.

Table 3. Purpose and frequency of Internet use

Purpose for using internet	Frequency	Percentage
Research purpose	119	90.83%
E-mail	97	74.04%
Download E -resources	112	85.49%
Online shopping	23	17.56%
Prepare Assignments	104	79.39%
Chatting	49	37.40%
Playing games	25	19.08%

Figure 4. Purpose and frequency of Internet use

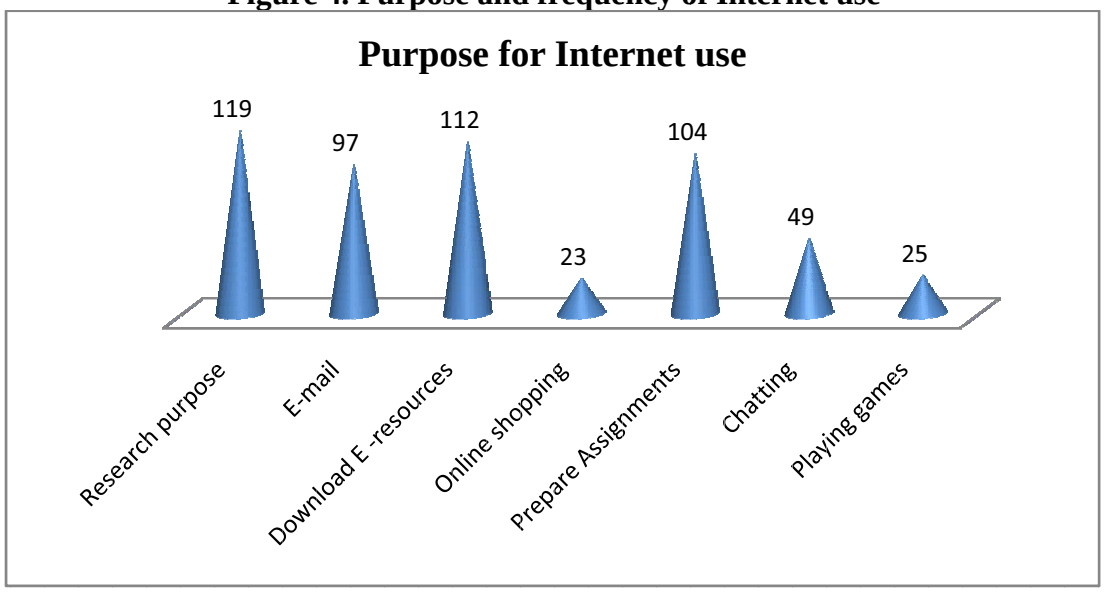


Table 3 and figure 4 represents an attempt was made to estimate the purpose of internet use by respondents. Majority of the research scholars described that they use internet for research purpose no=119 (90.83%) while 97 (74%) respondents use for email,112(85.49%) respondent for download the e-resources,23(17.56%) respondents for online shopping,104(79.39%) respondents for prepare assignments,49(37.40%) respondents for chatting,25 (19.08) respondent for online playing games.

ICT Literacy of Research Scholars

Of the 131 research scholars who responded to this survey, nearly all are somewhat confident about using the mouse and keyboard. Surprisingly, there are still 7(5.34%) research scholars who are not confident either in handling the scanner and printer. About one third of the students are not confident in using any excel and power point program. Nearly all are confident about internet and Email, and a majority are able and very confident to deal with mouse and keyboard.

Table 4. Research scholar's knowledge of ICT tools and applications

ICT tools and applications	Very confident	Confident	Quite confident	Not confident
Mouse & Key board	53(40.46%)	66(50.39%)	10(7.63%)	2(1.52%)
Scanner & Printer	32(24.42%)	57(43.52%)	35(26.71%)	7(5.35%)
Internet & Email	46(35.12%)	53(40.45%)	29(22.14%)	3(2.29%)
Fax & Xerox	33(25.16%)	42(32.07%)	37(28.25%)	19(14.52%)
Ms word & Note bad	32(24.42%)	37(28.24%)	42(32.06%)	20(15.27%)
Excel &PowerPoint	29(22.14%)	24(18.32%)	35(26.71%)	43(32.82%)

Preferred search engines

This study further attempted to know which search engine the respondents preferred most and data collected on this were tabulated in Table-5.

Table-5: Preferred search engine

Preferred Search engine	Frequency	Precentage
Google	131	100%
Yahoo	109	83.21%
MSN	81	61.83%
Alta Vista	67	51.14%
V9	42	32.06%
Scirus	71	54.19%
Excite	39	29.77%

Among various search engines used by the respondents, Google was the main search engine used by the research scholars as revealed by the analysis of data of Table-5 with a response rate of 100% each. The other search engines followed by yahoo, MSN, Scirus, Alta Vista , V9 and Excite.

Impact of ICT Tools and Techniques on Higher education and Research

This study attempted to know the impact of ICT tools and Techniques on higher education and research of the respondents and the data collected on this were tabulated in Table-6. It depicted that most of the respondents opined the impact as excellent (54.19%), followed by other opinions such as good (32.83%), average(12.98%), poor(0%).

Table-6: Impact of ICT tools and Techniques on higher education and research

Impact of ICT tools and Techniques on higher education and research	Frequency	Percentage
Excellent	71	54.19%
Good	43	32.83%
Average	17	12.98%
Poor	0	0%

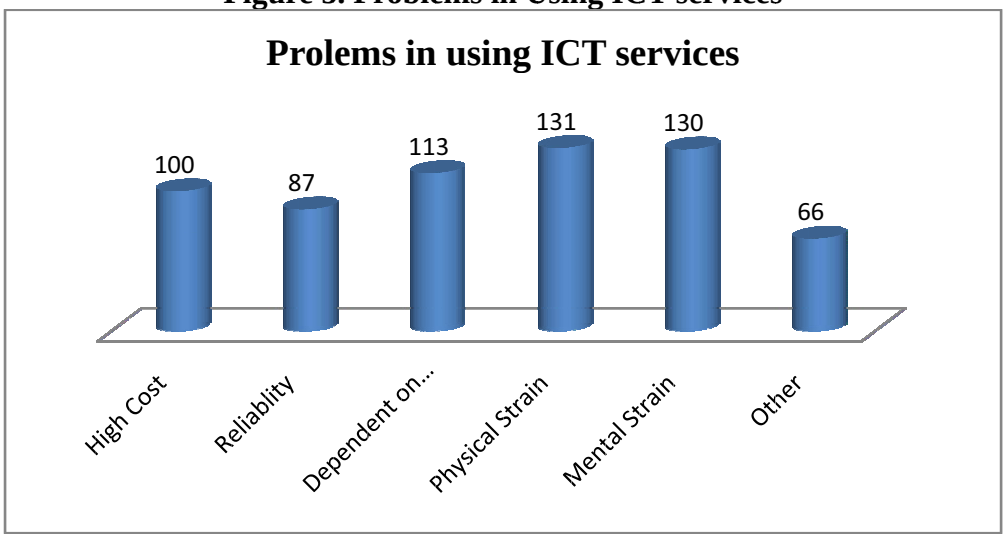
Constraints in Use of ICT

There are lot of problems in using in ICT. Realizing this ,data were collected one this to find out the various problems faced by the research scholars and had been tabulated in Table-7.

Table-7: Problems in using ICT services

Problems	Frequency	Percentage
High Cost	100	76.33%
Reliability	87	66.41%
Dependent on electricity	113	86.25%
Physical Strain	131	100%
Mental Strain	130	99.24%
Other	66	50.38%

Figure 5. Problems in Using ICT services



The analysis of data Table-7 and Figure-5 revealed that physical strain and mental strain were the main problem to use ICT service, followed by dependent on electricity, high cost, reliability and others with a response rate of 86.25%, 76.33%, 66.41%, and 50.38% respectively.

MAJOR FINDINGS

On the basis of analysis and interpretation of collected data of respondents, it is clear that most of the research scholar Alagappa University, karaikudi posses excellent knowledge on ICT.based services on daily basis which is a good sign for research environment. 84% of respondents strongly agree that higher education and research will not be effective unless ICT tools and techniques are used in the research process.78.62% of respondents recommended e-resource for remote access to library resources and services. 52% use a computer daily, with another quarter weekly and only about 19% using a computer monthly.

Regarding use of internert100% of respondents use the Internet Majority of the research scholars described that they use internet for research purpose no=119 (90.83%).Regarding ICT facility recommended by research scholar 103 out of 131respondents recommended e-resource for

remote access to library resources and services. More than 69 % recommend a library websites. Nearly all are confident about internet and Email, and a majority are able and very confident to deal with mouse and keyboard. Google was the main search engine used by the research scholars. Scholars are not confident in using any excel and power point program.

Regarding the impact of ICT tools and Techniques on higher education and research most of the respondents opined the impact as excellent (54.19%). Regarding problems in using ICT services Physical strain and mental strain were the main problem to use ICT service.

SUGGESTIONS AND CONCLUSION

ICT provides research scholars with a broad perspective. This important topic was selected as the focus of this study. The study found that ICT Can is a useful tool to address problems in higher education and research, but the lack of technology and resources is still a serious limitation. This study can be assessed that the use of ICT based services by the research scholars is almost satisfactory. However the university central library needs to take some more steps to maximize the use of ICT based library services such regular organization of orientation programs on use of automated library system, online databases, digital library, institutional repository etc. Also steps need to be taken by the University Central library to make library websites more user friendly with links to various ICT based library resources and Services, creation of digital library, institutional repository, library blogs etc. The university central library also need to take initiative involve users in developing new ICT based library services.

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