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## Use of ICT for accessing e-resources by the students of university of agricultural sciences, Dharwad

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### Abstract

The main aim of this study focuses on the role of information Communication Technology for accessing e-resources by the students in University of Agricultural Sciences, Dharwad. Survey method has adopted for collecting data through well-structured questionnaires. The questions were randomly distributed among 250 users and 225 valid samples were collected. The analysis of collected data declares the role of internet and how e-resources are accessing by the effective use of information communication technology, how electronic e-resources are enlightening the research work, academic carriers of the faculty members and students and also what problems are being faced at the time of using the information communication technology.

**Keywords:** information communication technology, electronic resources, academic carriers, agricultural university

### Introduction

Information is a fundamental resource and also support for the continuous growth of any organization. Without proper information and knowledge infrastructure, no education system can stand and achieve its setup goals and objectives. For fulfilling the information needs of users ICT playing a very important role. Now-a-days information is spread all over the world through information communication technology. Due to multiple advantages of ICT it has now taken a dominant position in the information field. Librarians are trying to satisfy the user's needs by preparing a low budget and taking appropriate purchase decisions balancing both individual and institutional needs. The user's attitude towards information is progressively shifting from the printed documents to electronic resources. There are many reasons for this change. Due to its associated advantages, library users demand the resources in an electronic format. In the digital era, library staff is expert with ICT and is also happy with the functionalities of the software and hardware by fulfilling the library users needs. Publishers, vendors and agents have great responsibilities to develop the e-resource market and are eager to supply electronic resources/ services along with print based materials. Further, the World Wide Web (www) is an important resourceful platform for the supply of required information to the users and provides a basis for the shift from ownership of physical collections to access on demand. Web being a real time information delivery channel has made CD-ROM based delivery a reality. To fulfill the demands of users, libraries are shifting towards new media – like electronic resources for their collection development. A huge amount of money is spent on electronic resources for their collection development.

The University of Agricultural Sciences, Dharwad was established on October 1, 1986. The University has five colleges, thirty research stations, six extension education units, five krishi vigyan kendras and ATIC. The university has its jurisdictions over seven districts. The university focuses on education, research and extension activities.

### Background information

When exploring the history of library automation, it is possible to return to past centuries when visionaries, before the computer age, created device to assist with their book lending system. Even far back as 1588, the invention of French “Book Wheel” allows scholars to rotate between books by stepping on the pedal that turns a book table. Another interesting

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example was the book indicator developed by Albert Cotgreave in 1863 which housed miniature books to represent books in the library's collection. The miniature book was part of a design that made it possible if a book was in and out or overdue. These and many more examples of early ingenuity in library system exist. However, this paper will focus on the more recent computer automation beginning in the early century. Library automation development began in the 1930s when punch card equipment was implemented for use in library circulation and acquisition. During the 30s and 40s, progress on computer system was slow which is not surprising, given the depression and World War II 1945. Vanneval Bush envisioned an automated system that would store information; include books, personal records and articles. Bush (1945) wrote about hypothetical "memex" system which he described as a mechanical library that would allow a user to view and store information from several different accesses points and looks at several items simultaneously.

The library automation first appeared at MIT, in 1957, with the development of COMT managing linguistic computation, natural language and the ability to search for a particular string of information. Librarians then moved beyond a visions or idea for the use of computer. With the advent of technology they were able to make great advance in the use of computer for library system. This now led to the explosion of library automation in the 60s and 70s. The advancement of technology in 1960 and 1980 led to increase in the use of computer in libraries. The new potential for computer use guided one librarian to develop a new indexing technique. HP Luhn, in 1961, use a computer to produce the "key word in context" or KWIC index for article appearing in Chemical computer as it was discovered that librarian had the ability to put control language index term on the computer. By the mid 60s, computer was being used for the production of 'machine readable catalogue record by the library of congress between 19654 and 1968. LOC began the MARC I project, followed quickly by MARC II which was designed as a way of "tagging" bibliographic record using 3 digit numbers to identify field. For example, a tag may indicate International Standard Book Number (ISBN) while another tag indicates 'publication date' and yet another indicates 'library of congress subject headings' and so on.

In 1974, the MARC II format became the basis of standard incorporated in National Information Standard Organization (NISO). This was a significant development because the standard created meant that a bibliographic record could be read and transferred by the computer between different library systems. Bibliographic automation of Large Library Operation in the late 1970s was one of the first and later became the foundation for the Research Library Information Network (RLIN). BALLOTS was designed to integrate closely with the technical processing function of the library and contained for main files: (1) MARC record from LOC; (2) an in-process file containing information on item in the processing stage; (3) a catalogue data file containing an on-line record for each item; and (4) A reference file. It also contained a wide search retrieval capability with the ability to search on truncated words, keywords, and LC subject headings. For example OCLC, the on-line computer library centre which began in 1967 and chartered in the state of Ohio. This significant project facilitated technical processing in the library system when it started its first

cooperative cataloguing venture in 1970. It went on-line in 1971. Since that time, it has grown considerably, providing research and wider range of connectivity for library users.

### Literature review

Telecommunications refers to the electronic transmission of signals for communications, including such means as telephone, radio, and television. Telecommunications has the potential to create profound changes in business because it lessens the barriers of time and distance. According to Ronald Thompson and William Cats-Banil (2003) described telecommunication as the transmission of a message across a distance. They went further to assert that; telecommunication can be used to facilitate communications between organizational members, or between organizational members and external parties such as customers and suppliers.

Oketunji (2000) remarked that ICT is used in the libraries to automate technical services such as cataloguing information, classification process. This is to bring about efficient reference and information services. It is usually used to network operations, such as cataloguing, circulation activities and authority list. It is also used to control project. If the applications are properly annexed, ICT helps the growths and development of libraries in different directions. Number of sources has been consulted and the content was gone through to identify the related studies. Some of the studies relevant to the present survey are Natarajan, et.al conducted a survey of 117 faculty members and research scholars on the use and user perception of e-resources in Annamalai University. The study reveal that despite the availability of wide range of e-resources, the frequency of their use was low. The reasons identified for this were lack of time, lack of awareness, lack of subject coverage and slow downloading. Patil and Parameshwar in their paper explained about he e-resources and their use by the faculty members and research schoalers in ulbarga University. The paper revealed that the e-resources available in the University library were helpful in fulfilling their information needs. There was need to train the faculty members and research scholars in using the e-resources.

Fatoki (2004) also put it into perspective the significance of, and the necessity for ICT availability in the university libraries and the necessity to ICT skills for librarians when he said that in addition to the challenges they offer, they will ensure qualitative research work for the library users, with the concomitant production of highly skilled manpower for the labour market.

Kumar (2014) <sup>[4]</sup> describes the initiatives on electronic collection and development in engineering college libraries in the Rayalaseema region of Andra Pradesh. Author opines on librarians, on the most preferred electronic materials and on the various electronic resources acquainted with their library. The electronic library initiatives cover a variety of activities starting from electronic collection building, digitalization, digital collection, maintenance and digital preservation. 34.57% of libraries are in the process of building digital collections.

### Research Objectives

The present study has the following as its main objectives:

1. To find the purpose and utilization of e- resources.
2. To examine the users frequencies.
3. To know the preferred format for using e-resources.

4. To find out the problems in the use of e-resources.

### Scope and Limitations

The study covers only students of University of Agricultural Sciences, Dharwad, Karnataka. The questionnaire method was used for the present study to collect the necessary primary data. Keeping in objectives of the study. A total of 250 questionnaires were distributed among students. Out of 250 questionnaires, 225 valid questionnaires were collected. Then data was analyzed. The response rate was 90%.

### Results and Discussions

The results and discussion of the present study are given in the following paragraphs in a systematic manner.

#### Gender wise distributizon

The gender wise distribution of respondents under the study has been shown in Table 1. It may be seen from the table that majority of the respondents 135(60%) are male and the remaining 90(40%) are female respondents.

**Table 1:** Gender of the Users

Sl. No.	Gender	No. of Responses
1	Male	135 (60.00%)
2	Female	90 (40.00%)
Total		225 (100%)

#### Awareness about e-resources

Table 2 shows that the awareness of e-resources among the respondents available through the library. 46.67 % of the male users were aware about the e-resources and 30.22% of female respondents were aware about the availability of e-resources. It can be shown that male respondents are more aware about the availability of e-resources than female.

**Table 2:** Awareness about E-resources

Sl. No	Academic Status	No of Responses (%)
1	Male	105(46.67)
2	Female	68(30.22)
Total		173(76.89)

#### Preference level of using e-resources

Table 3 shows that majority (56.89%) of the respondents wanted to access information through electronic version only, 28.00% users wanted to access information through print version and 15.11% of the users wanted to use information on both electronic and print version.

**Table 3:** Preference of respondents about using E-resources

Sl. No.	Resources	No. of responses
1	Electronic	128 (56.89%)
2	Print	63 (28.00%)
3	Both	34 (15.11%)
Total		225 (100%)

#### Frequency of using e-resources

The frequency of using e-resources by the students of university of agricultural sciences library is given on Table 4. The table reveals that majority (89(39.56%)) of the respondents used e-resources weekly, nearly 58(25.78%) of the respondents used the e-resources daily, 43(19.11%) respondents replayed weekly twice and 35(15.55%) respondents used e-resources monthly.

**Table 4:** Frequency of Using E-Resources

Sl. No.	Frequency	No. of Responses
1	Daily	58 (25.78%)
2	Weekly Twice	43 (19.11%)
3	Weekly	89 (39.56%)
4	Monthly	35 (15.55%)
Total		225 (100%)

#### Purpose of using e-resources

The purpose of using e-resources by the users is presented in Table 5. The users used the e-resources for various purposes like for studying course work, to update their subject knowledge, for teaching, for seminar, for research work, project and writing papers. Majority of the respondents 68 (30.22%) used the e-resources for writing papers. Nearly 42(18.67) respondents used the e-resources for their research/project work, only 46(20.44%) used them for studying course work 30(13.33%) for teaching /seminars 28 (12.44%) to update their subject knowledge and the remaining 11 (4.89%) for other works i.e. exam etc.

**Table 5:** Purpose of using E-Resources

Sl. No.	Purposes	No. of Responses
1	For studying Course Work	46 (20.44%)
2	To update subject knowledge	28 (12.44%)
3	To teaching/Seminars	30 (13.33%)
4	For Research Work/ Project	42 (18.67%)
5	For Writing Papers	68 (30.22%)
6	Any other Work	11 (4.89%)
Total		225 (100%)

#### Methods of learning e-resources

Table 6 reveals that majority (109(48.44%)) of the respondents acquired their e-resources usage skill through training by the library staff, nearly 56 (24.89%) by self-study, only 42 (18.67%) by their friends and the remaining 18(8.00%) learned by external sources.

**Table 6:** Learning Methods of E-Resources

Sl. No.	Methods	No. of Responses
1	Training by the library staff	109 (48.44%)
2	Self-study/instruction	56 (24.89%)
3	From Friends	42 (18.67%)
4	External Sources	18 (8.00%)
Total		225 (100%)

#### Location for accessing e-resources

It is clear from Table 7 that majority of the respondents (128 (56.89%)) accessed e-resources from central library, 48(21.33%) from department library, 32(14.22%) from computer lab and remaining 17(7.56%) from other places.

**Table 7:** Location for Accessing E-Resources

Sl. No.	Location	No. of Responses
1	Central Library	128 (56.89%)
2	Department Library	48 (21.33%)
3	Computer Lab	32 (14.22%)
4	Other Places	17 (7.56%)
Total		225 (100%)

#### Linking pattern of e – resources

Table 8 shows how respondents searched e-resources available on various websites. Majority of the respondents i.e. 107 (47.56%) searched e-resources through linking facility available on the Library website, 61 (27.11%)

respondents searched e-resources through Websites, 32 (14.22%) searched through search engines and remaining 25 (11.11%) respondents through publishers website.

**Table 8:** Linking Pattern of E-resources

Sl. No.	Linking	No. of Responses
1	Links through library Website	107 (47.56%)
2	Links through Publisher's Website	25 (11.11%)
3	Links through Search Engine	32 (14.22%)
4	Links through E-resources Website	61 (27.11%)
Total		225 (100%)

#### Formats of e – resources

E-Resources are available in two major formats like PDF and HTML. It was observed from the analysis that 143 (63.55%) respondents preferred PDF format for using e-resources, whereas 56 (24.89%) respondents preferred HTML format and 26 (11.56%) had no preference.

**Table 9:** File Formats of E-Resources

Sl. No.	File Formats	No. of Responses
1	HTML	56 (24.89%)
2	PDF	143 (63.55%)
3	No Preference	26 (11.56%)
Total		225 (100%)

#### Satisfaction level of students regarding access of e-resources

The analysis of satisfaction level of accessing e-resources by the respondents is presented in Table 10. A question was asked to know the users satisfaction level by accessing e-resources. It was observed that majority of the respondents (124(55.11%)) were highly satisfied with the infrastructure provided by the library for accessing e-resources at different levels, nearly 53 (23.56%) respondents reported to be satisfied, 29 (12.89%) to be average and only 19 (8.44%) respondents were not satisfied with the same.

**Table 10:** Satisfaction Level of Respondents Regarding Access of E-Resources

Sl. No.	Satisfaction	No. of Responses
1	Highly Satisfied	124 (55.11%)
2	Satisfied	53 (23.56%)
3	Average	29 (12.89%)
4	Not Satisfied	19 (8.44%)
Total		225 (100%)

**Table 11:** Difficulties faced by the Respondents While Accessing E-Resources

Sl. No.	File Formats	No. of Responses
1	Not Many E-resources being available in my subject	99 (44.00%)
2	Coverage on E-resources not being suitable to my Research Area	58 (25.78%)
3	No assistance being provided by the information professionals	33 (14.67%)
4	Lack of Training	25 (11.11%)
5	Time Consuming	10 (4.44%)
Total		225 (100%)

#### Difficulties Faced By the Respondents While Accessing E-Resources

Though e-resources have become a common source among the academic and research groups, a majority of users indicated that they faced problems while using e-resources. The specific problems faced by the users are given in Table 11.

It clearly shows that the majority of respondents were not satisfied with quantity of available e-resources. The other problems faced were the content not being suited to their research area, the process being time consuming, no assistance being provided by the information professionals, and lack of training.

#### Conclusion

E-resource usage is one of the most important concepts in libraries now a days. Most of the libraries are using e-resources on a large scale for their progress. The traditional methods of research, storage, retrieval and communication of scholarly information have changed by the fast growth of information and communication technologies and particularly internet and electronic resources. For storage and retrieval of information, internet has emerged as the most powerful medium. In order to retrieve relevant information, users have to make use of different types of electronic and web resources. The study showed that the use of electronic resources has created a great impact upon users of University of Agricultural sciences, Dharwad, central library in their research and progress of works. The rapid progress in information & communication technology has facilitated the emergence of new electronic procedures and formats. Information has been embedded in a variety of ways and forms in various kinds of electronic resources. It is clear from the study that the younger generation generally prefers the usage of electronic resources. Many of the respondents are aware of e-resources but have not used online thesis/ dissertations, abstracts/ indices, OPAC, and online databases, which are very relevant for their study and research. So the library should take initiatives to organize orientation programs and user awareness programs in this area.

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