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## IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON INFORMATION SEEKING BEHAVIOUR OF USERS IN STATE AGRICULTURAL UNIVERSITY LIBRARIES IN KARNATAKA: A STUDY



**ShivaKrishna S. D.<sup>1</sup> and AdithyaKumari H.<sup>2</sup>**

<sup>1</sup>Research Scholar, Department of Library and Information Science,  
University of Mysore, Mysore.

<sup>2</sup>Associate Professor, Department of Library and Information Science,  
Yuvaraj's College, University of Mysore, Mysore.

### ABSTRACT:

This study examines the impact of information communication technology on information seeking behaviors of users in state Agricultural University libraries in Karnataka. For the present study a well structured questionnaire has been formulated and distributed among the students, research scholars and faculty members of Agricultural Universities in Karnataka in order to ascertain the impact of information communication technology on information seeking behaviors of users i.e. library visit, time spent on ISB activities, problems faced while seeking information, purposes of seeking information, rating of factors necessitating to seek information regularly, access to e-resources available in Digital Libraries, opinion about necessity of training for using electronic (ICT) resources and preference of use of information resources. The findings of the study would put light on

the important data and insight into the current state of practices of students, research scholars and faculty members towards impact of ICT on ISB. The outcome and suggestions of the study would be beneficial for them to take appropriate measures to improve their information seeking pattern.

**KEYWORDS:** Information and Communication Technology, Information Seeking Behaviour, Agricultural University Libraries.

## 1. INTRODUCTION:

The information seeking behaviour of users especially in developing countries has been a significant and eventful issue from last few decades, libraries have become increasingly aware of the revolutionary impact of developments in information and communication technology on their key functions. The application of ICT facilitates easy and instantaneous access to information. It provides opportunities for libraries and information centres to widen the scope of their resources and services and to increase their significance within the organization they serve. This study investigates the impact of information and communication technology on information seeking behaviour of agricultural scientists, teaching faculty, research scholars and students, for their course-work and research activities, the extent to which they use the library (both physically and remotely), the types of activities they are likely to use the library for, their awareness and use of the electronic library (e-library) and any assistance they have received in using the ICT based library services and its resources. This reveals that the majority of users are finding difference in their Information Seeking Behaviour due to ICT

The Indian Council of Agricultural Research (ICAR), the controlling agency for agricultural universities in India, has implemented a special project with the assistance of the World Bank to modernize the Library and Information Systems of all agricultural universities and the ICAR Institutes in the country. The project included special funding, technical assistance and training for the library staff, teachers and students. Substantial improvement in the operations and performance has been achieved with this project. The university libraries have automated most of their operations and many of them could develop digital libraries of theses and dissertations. To accomplish ICAR mission, the National Agricultural Innovation Project (NAIP) Division (ETD) of ICAR assumes the major responsibility of executing the related mandate i.e. "To develop human resources in the field of science communication, library, documentation and information science, and S&T information management systems and services". The users of agricultural university libraries are to gather information from various means and methods, a better understanding is required to know the needs, kinds of resources and ICT based services that could make education and research work more effective and efficient. The overwhelming ICT preferences are to ask the questions and seek the information by e-mail, telephone/mobile phone, i-pod, online chat, discussion forum, messenger, open archive, Web-blogs, Wiki, Television, Radio, computer-mediated conferencing and video-conferencing and other collaborative working tools-particularly social networks on the Internet greatly facilitate information transfer and sharing from one-to-one as well as one-to-many. Day by day physical visit of users are decreasing, however online access has increased drastically, making the newly emerged ICT environment capable of providing best platform for developing information resources and human resources using in an effective manner. The present study covers students, research scholars and faculty members of five Agricultural Sciences Universities in Karnataka i.e. University of Agricultural Sciences, Bengaluru, University of Agricultural Sciences, Dharwad, University of Agricultural Sciences, Raichur, University of Agricultural & Horticultural Sciences, Shivamogga and University of Horticultural Sciences, Bagalkot.

## 2. Review of Literature

In any field of study, the existing literature constitutes a base on which all further research is carried out. This helps the researcher to highlight the studies and their findings related to the problem undertaken for research. The researcher feels that there is a need for review of literature, which has some relation to the relevant area and considers the most important prerequisite to actual planning and conducting the study. Therefore, the researcher made an elaborate review of the research material available on the study. There were many studies related to the different issues concerning Impact of Information and Communication Technology on Information Seeking Behaviour of Users. This concept appeared in the literature since 1990s onwards, there are too many developments in ICT infrastructure and ISB patterns. Literature published in related topic was scanned and selected reviews of articles are presented.

**Sridhar M S<sup>1</sup> (2010)** assessed that the most of information and communication technology (ICT) tools like chat, discussion forum, e-mail, messenger, open archive, Wiki and other collaborative working tools and particularly social networks on the Internet greatly facilitate information transfer and sharing from one-to-one as well as one-to-many. However, it is human variables that make more difference in seeking, sharing or withholding information than technological variables. And the information seeking behaviour, technologists from a high organization were asked whether they freely share work-related technical information with other colleagues in the organization the most basic condition for effective sharing of information is mutual trust. Further, confidence, rapport, motivation, team spirit and group discussions increase the chances of sharing, whereas professional jealousy, potential threat arising out of competition, compartmentalized organizational structure and the status consciousness come in the way of sharing information.

**Hemant Kumar Sahu and Surya Nath Singh<sup>2</sup> (2010)** on Impact of ICT on information seeking behaviour of users in astronomy and astrophysics centres of India was designed to determine the information seeking behaviour (ISB) of astronomy and astrophysics users in India. The main objective of study was to determine to the sources consulted and the general pattern of information gathering system by users and impact of information and communication technology (ICT) on Astronomy and Astrophysics (AA) user's information seeking behaviour. The study examined what information resources they prefer and their methods of access, as well as publishing habits. It shows that AA users have developed a unique information seeking behaviour to carry out their education and research, etc. Majority of respondents reported that more information is available in different resources. Consequently they were able to devote time to find out relevant information in the current ICT scenarios. The study also revealed that in spite of preferred electronic source AA users are still using printed materials.

**Gary Marchionini<sup>3</sup>(1995)** has emphasized that the framework for information seeking is human centred in that the information seeker defines the task, controls the interaction with the search system, examines and extracts relevant information, assesses the progress, and determines when the information-seeking process is complete. Each information seekers possesses unique mental models, experiences, abilities, and preferences. Experience with particular settings, domains, and systems generally allow more comprehensive and accurate mental models and thus more facility with these models. The information-seeker's personal information infrastructure affects overall performance while solving information problems and executing task and continues to develop as information seekers accurate experience and knowledge. For every information problem, information seekers

reinforce and extend their mental models for the various factors and sub processes associated with information seeking.

**Sridhar M S<sup>4</sup> (1990)** has emphasized that the correlation of user- characteristics with information seeking behaviour is mainly concerned with demographic-characteristics, personality- characteristics, organizational & professional characteristics and individual as the unit of analysis and also deals with the Motivation & Purposes of Seeking Information and it can be concluded that the Information Seeking Behaviour of the Indian Space Technologists varies significantly with status, qualifications, nature of work, specialization and professional activities and achievements.

### **3. Objectives of the Study**

The present study is an attempt to find out the Impact of Information and Communication Technology on Information Seeking Behaviour of Users in State Agricultural University Libraries in Karnataka. The study was conducted with the following objectives:

- i. To find out the various characteristics of library users of agricultural universities in Karnataka as variables of their information seeking behaviour and relate selected characteristics of their information seeking behaviour in ICT environment.
- ii. To examine at what extent information seeking behaviour of library users of agricultural universities in Karnataka has changed in the changing digital era.
- iii. To identify types and range of electronic information resources currently used by academics/researchers in field of agricultural sciences and allied subjects and also to determine the level and spread of their use and awareness for seeking information.
- iv. To study the purpose of information seeking by agricultural university library users in Karnataka.
- v. To find out the possible factors and problems faced by agricultural university library users in Karnataka.
- vi. To know the extent of access to e-resources available in Digital Libraries and preference of use of various formats of information resources.

### **4. Methodology**

The investigator started the study by searching literature available through primary and secondary information resources. The questionnaire method was used for the present study to collect the necessary data, keeping in view the objectives of the study. Total of 2544 questionnaire were distributed among the students, research scholars and faculty of Agricultural Sciences Universities in Karnataka, of which 1961 filled-up questionnaire were received back consisting of 77.08% responses. The highest numbers of questionnaire have been received from University of Agricultural Sciences, Bengaluru with 547 (79.97%) responses, followed by University of Agricultural Sciences, Dharwad with 512 (77.81%) responses, University of Agricultural Sciences, Raichur with 368 (74.04%) responses, University of Agricultural & Horticultural Sciences, Shivamogga with 286 (75.26%) responses and University of Horticultural Sciences, Bagalkot with 248 (76.30%) responses. In addition to questionnaire method, interview schedule and observation method were also used to collect required information as a supplement to the questionnaire method to bring more clarity to the data which are essential and use for analysis and interpretation of data.

### **5. Analysis and Interpretation of Data**

The data was collected by different methods were analyzed and interpreted and same

presented in the following tables.

### 5.1. Gender Wise Distribution

The gender wise distribution of respondents under the study has been shown in Table-1. The Table-1 shows that out of the 1961 total respondents, 1354 (69.04%) are 'Male' and the remaining 607 (30.95%) are 'Female'.

**Table-1: Gender Wise Distribution**

Gender	Students (N=1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)
Male	678 (65.00)	294 (76.96)	382 (71.26)	1354 (69.04)
Female	365 (34.99)	88 (23.03)	154 (28.73)	607 (30.95)

The Table-1 also depicts that out of 1043 students, 678 (65.00%) are 'Male' and remaining 365 (34.99%) are 'Female'. Among the 382 research scholars, 294 (76.96%) are 'Male' and remaining 88 (23.03%) are 'Female'. Out of 536 faculty members, 382 (71.26%) are 'Male' and remaining 154 (28.73%) are 'Female'.

### 5.2. Designation Wise Distribution

The designations have been categorized as Student, Research Scholar and Faculty. The faculty members have been further categorized as Assistant Professors, Associate Professors and Professors. The Table-2 shows the designation-wise distribution of respondents in Agricultural Universities in Karnataka. About 1043 (53.18%) of respondents are Students, followed by 382 (19.47%) are Research Scholars, 198 (10.09%) are Professors, 182 (09.28%) are Associate Professors and 156 (07.95%) are Assistant Professors. The Table-2 also shows that the large number of respondents in University of Agricultural Sciences are students compared to other categories.

**Table-2: Designation Wise Distribution**

Name of the University	Designation					Total (N=1961)
	UAS, Bengaluru (N=547)	UAS, Dharwad (N=512)	UAS, Raichur (N=368)	UAS, Shivamogga (N=286)	UHS, Bagalkot (N=248)	
<b>Student</b>	264 (48.26)	325 (63.48)	195 (52.99)	140 (48.95)	119 (47.98)	1043 (53.18)
<b>Research Scholar</b>	110 (20.11)	92 (17.97)	86 (23.37)	62 (21.68)	32 (12.90)	382 (19.47)
<b>Assistant Professor</b>	36 (06.58)	31 (06.05)	26 (07.07)	29 (10.14)	34 (13.71)	156 (07.95)
<b>Associate Professor</b>	59 (10.79)	37 (07.23)	32 (08.70)	23 (08.04)	31 (12.50)	182 (09.28)
<b>Professor</b>	78 (14.26)	27 (05.27)	29 (07.88)	32 (11.19)	32 (12.90)	198 (10.09)

### 5.3. University Library Membership

The Table-3 shows the library membership registration by the students, research scholars and faculty members. The Table-3 depicts that 1840 (93.82%) of respondents have the university library

membership and 121 (06.17%) of respondents do not have University Library Membership.

**Table-3: University Library Membership**

Opinion	Students (N= 1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)
Yes	1043 (100.00)	318 (83.24)	479 (89.36)	1840 (93.82)
No	00 (00.00)	64 (16.75)	57 (10.63)	121 (06.17)

The Table-3 also depicts that 1043 (100.00%) of students, 318 (83.24%) of research scholars and 479 (89.36%) of faculty members opine as ‘Yes’ i.e. having the university library membership and 64 (16.75%) of research scholars and 57 (10.63%) of faculty members opine as ‘No’ i.e. do not have the university library membership.

#### 5.4. Frequency of Library Visits

Agricultural college students, research scholars and faculty members like any other college staff also would like to visit their main library for using e-resources. Although, the advent of Internet has reduced the frequency of the faculty members’ visit to their main library, it is assumed that still most of them prefer to go to the library at different intervals. The Table-4 shows the frequency of visit to the library among the respondents.

The Table-4 depicts that 594 (30.29%) of respondents visit the library ‘Everyday’ with mean value of 1.430976 and SD 0.6410232, followed by 494 (25.19%) of respondents visit the library ‘As and when need arise’ with mean value of 2.034413 and SD 0.9146264, about 389 (19.84%) of respondents visit the library ‘Alternate days’ with mean value of 1.491003 and SD 0.7307998, 158 (08.06%) of respondents visit the library ‘Once a week’ with mean value of 1.981013 and SD 0.9062523, 132 (06.73%) of respondents visit the library ‘Once a month’ with mean value of 2.189394 and SD 0.9501513, 107 (05.46%) of respondents visit the library ‘Twice a week’ with mean value of 1.682243 and SD 0.8643694, and 87 (04.44%) of respondents visit the library ‘Rarely’ with mean value of 2.275862 and SD 0.9237141.

**Table-4: Frequency of Library Visits**

Frequency of Library Visit	Students (N= 1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)	Mean	SD
Every day.	387 (37.10)	158 (41.36)	49 (09.14)	594 (30.29)	1.430976	0.6410232
Alternate day.	253 (24.26)	81 (21.20)	55 (10.26)	389 (19.84)	1.491003	0.7307998
Once a week.	66 (06.33)	29 (07.59)	63 (11.75)	158 (08.06)	1.981013	0.9062523
Twice a week.	62 (05.94)	17 (04.45)	28 (05.22)	107 (05.46)	1.682243	0.8643694
Once a month.	49 (04.70)	09 (02.36)	74 (13.81)	132 (06.73)	2.189394	0.9501513
Rarely.	28 (02.68)	07 (01.83)	52 (09.70)	87 (04.44)	2.275862	0.9237141
As and when need arise.	198 (18.98)	81 (21.20)	215 (40.11)	494 (25.19)	2.034413	0.9146264

The Table-4 also depicts that 387 (37.10%) of students visit the library ‘Everyday’, followed by 158 (41.36%) of research scholars visit the library ‘Everyday’ and 215 (40.11%) of faculty members visit the library ‘As and when need arise’.

**5.5. Time Spent for ISB activities in the Library**

The time spent per week for ISB activities in the library has been summarized in Table-5. The Table-5 depicts that 571(29.12%) of respondents spent ‘5-6 Hours’ in a week for ISB activities in the library with mean value of 1.535902 and SD .7677879, followed by 543 (27.69%) of respondents spent ‘3-4 Hours’ in a week with mean value of 1.738490 and SD .9059719, 381 (19.43%) of respondents spent ‘7-8 Hours’ in a week with mean value of 1.611549 and SD .6892200, 376 (19.17%) of respondents spent ‘1-2 Hours’ in a week with mean value of 2.276596 and SD .9021959 and 90 (04.59%) of respondents spent ‘Above 9 Hours’ in a week for ISB activities in the library with mean value of 1.377778 and SD .7677879.

**Table-5: Time Spent for ISB activities in the Library**

Time Spent (in hours per week)	Students (N= 1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)	Mean	SD
1-2	115 (11.03)	42 (10.99)	219 (40.86)	376 (19.17)	2.276596	.9021959
3-4	312 (29.91)	61 (15.97)	170 (31.72)	543 (27.69)	1.738490	.9059719
5-6	362 (34.71)	112 (29.32)	97 (18.10)	571 (29.12)	1.535902	.7677879
7-8	193 (18.50)	143 (37.43)	45 (08.40)	381 (19.43)	1.611549	.6892200
Above 9	61 (05.85)	24 (06.28)	05 (00.93)	90 (04.59)	1.377778	.5916607

The Table-5 also depicts that 362 (34.71%) of students spent ‘5-6 Hours’ in a week for ISB activities in the library, 143 (37.43%) of research scholars spent ‘7-8 Hours’ in a week for ISB activities in the library and 219 (40.86%) of faculty members spent ‘1-2 Hours’ in a week for ISB activities in the library.

**5.6. Problems Faced while Seeking Information**

The problem faced while seeking information by the respondents has been summarized in Table-6. The Table-6 depicts that 723(36.86%) of respondents face problem because of information scattered in too many sources, followed by 648(33.04%) face problem due to delay and time consuming to search printed information resources in the library, 583(29.72%) information is too vast, 565 (28.81%) don't know the sources available in the library, 436(22.23%) do not know how to use the information retrieval tools, 297(15.14%) information materials are old and 145(7.39%) of respondents face problem because of library staff are unwilling to provide services.

**Table-6: Problems Faced while Seeking Information**

Problems	Students (N= 1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)
Materials are not available.	279(26.74)	117(30.62)	148(27.61)	544(27.74)
Don't know the sources available in the library	413(39.59)	105(27.48)	47(8.76)	565(28.81)
Delay and time consuming to search printed information resources in the library.	327(31.35)	140(36.64)	181(33.76)	648(33.04)
Information is too vast.	438(41.99)	91(23.82)	54(10.07)	583(29.72)
Information materials are old.	93(8.91)	69(18.06)	135(25.18)	297(15.14)
Do not know how to use the information retrieval tools.	365(34.99)	58(15.18)	13(2.42)	436(22.23)
Information scattered in too many sources.	475(45.54)	89(23.29)	159(29.66)	723(36.86)
Library staff are unwilling to provide services.	118(11.31)	22(5.59)	05(00.93)	145(07.39)
Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%.				

The Table-6 also depicts that 475(45.54%) of students face problem because of information scattered in too many sources, 140(36.64%) of research scholars face problem because of delay and time consuming to search printed information resources in the library and 181(33.76%) of faculty members face problem because of delay and time consuming to search printed information resources in the library.

### 5.7. Purposes of Seeking Information

The purpose of seeking information by the respondents has been summarized in Table-7. The Table-7 depicts that 962(49.05%) of respondents seek information for the purpose of examination, followed by 941(47.98%) of respondents seek information for research work, 751(38.29%) for teaching, 733(37.37%) to acquire and update knowledge in the field, 678(34.57%) for general awareness, 623(31.76%) to prepare project proposal, 578(29.47%) for self improvement, 348(17.74%) for continuing education and 306 (15.60%) of respondents seek information to maintain professional competence.



**Table-7: Purposes of Seeking Information**

Purpose	Students (N= 1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)
For teaching.	208(19.94)	160(41.88)	383(71.45)	751(38.29)
For research work.	411(39.40)	252(65.96)	278(51.86)	941(47.98)
To prepare project proposal.	135(12.94)	189(49.47)	299(55.78)	623(31.76)
For self improvement.	368(35.28)	133(34.81)	77(14.36)	578(29.47)
To acquire and update knowledge in the field.	364(34.89)	147(38.48)	222(41.41)	733(37.37)
For exam purpose.	789(75.64)	139(36.38)	34(6.34)	962(49.05)
For general awareness.	396(37.96)	191(50.00)	91(16.97)	678(34.57)
For continuing education.	130(12.46)	84(21.98)	134(25.00)	348(17.74)
To maintain professional competence.	43(4.12)	76(19.89)	187(34.88)	306(15.60)
Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage exceeded to more than 100%.				

The Table-7 depicts that 789(75.64%) of students seek information for the purpose of examination, followed by 252(65.96%) of research scholars seek information for the purpose of research work and 383(71.45%) of faculty members seek information for the purpose of research work.

### 5.8. Rating of Factors Necessitating to Seek Information Regularly.

The rating of factors necessitating to seek information regularly has been summarized in Table-8. The Table-8 depicts that 764 (38.95%) respondents opine the factor of research thrust in your own field as 'Not Necessitate', followed by 489 (24.93%) as 'Rarely Necessitates', 373 (19.02%) as 'Highly Necessitate', 204 (10.40%) as 'Occasionally Necessitates' and 131 (06.68%) of respondents opine as 'Frequently Necessitates'.

About 725 (36.97%) respondents opine the factor of Self satisfaction/self improvement as 'Highly Necessitate', followed by 549 (27.99%) as 'Frequently Necessitates', 439 (22.38%) as 'Occasionally Necessitate', 180 (09.17%) as 'Rarely Necessitates' and 68 (03.46%) of respondents opine as 'Not Necessitates'.

About 511 (26.08%) respondents opine the factor of need to qualify for further promotion as 'Not Necessitate', followed by 216 (11.04%) as 'Rarely Necessitates', 187 (09.53%) as 'Occasionally Necessitate', 58 (02.95%) as 'Frequently Necessitates' and 40 (02.03%) of respondents opine as 'Highly Necessitates'.

**Table-8: Rating of Factors Necessitating to Seek Information Regularly.**

Factors	Total (N=1961 )				
	1	2	3	4	5
Research thrust in your own field.	764 (38.95)	489 (24.93)	204 (10.40)	131 (06.68)	373 (19.02)
Self satisfaction/self improvement.	68 (3.46)	180 (9.17)	439 (22.38)	549 (27.99)	725 (36.97)
Need to qualify for further promotion.	511 (26.05)	216 (11.04)	187 (9.53)	58 (2.95)	40 (2.03)
Desire to gain recognition in the field.	187 (9.53)	533 (27.18)	647 (32.99)	396 (20.19)	198 (10.09)
Guiding researchers.	556 (28.35)	340 (17.33)	692 (35.28)	214 (10.91)	159 (8.10)
Preparation for class lectures.	692 (35.28)	177 (9.02)	350 (17.84)	461 (23.50)	281 (14.32)
Writing research paper.	171 (8.72)	451 (22.99)	666 (33.96)	375 (19.12)	298 (15.19)
For preparation for competitive exam.	135 (6.88)	198 (10.09)	354 (18.05)	299 (15.24)	975 (49.71)
<b>Note: 1-Does not necessitate, 2-Rarely necessitates, 3-Occasionally necessitates, 4-Frequently necessitates, 5-Highly necessitates</b>					

About 647 (32.99%) respondents opine the factor of desire to gain recognition in the field as ‘Occasionally Necessitate’, followed by 533 (27.18%) as ‘Rarely Necessitates’, 396 (20.19%) as ‘Frequently Necessitate’, 198 (10.09%) as ‘Highly Necessitates’ and 187 (09.53%) of respondents opine as ‘Not Necessitates’.

About 692 (35.28%) respondents opine the factor of guiding researchers as ‘Occasionally Necessitate’, followed by 556 (28.35%) as ‘Not Necessitates’, 340 (17.33%) as ‘Rarely Necessitate’, 214 (10.91%) as ‘Frequently Necessitates’ and 159 (08.10%) of respondents opine as ‘Highly Necessitates’.

About 692 (35.28%) respondents opine the factor of preparation for class lectures as ‘Not Necessitate’, followed by 461 (23.50%) as ‘Frequently Necessitates’, 350 (17.84%) as ‘Occasionally Necessitate’, 281 (14.32%) as ‘Highly Necessitates’ and 177 (08.72%) of respondents opine as ‘Rarely Necessitates’.

About 666 (33.96%) respondents opine the factor of writing research papers as ‘Occasionally Necessitate’, followed by 451 (22.99%) as ‘Rarely Necessitates’, 375 (19.12%) as ‘Frequently Necessitate’, 298 (15.19%) as ‘Highly Necessitates’ and 171 (08.72%) of respondents opine as ‘Not Necessitates’.

About 975 (49.71%) respondents opine the factor of preparation for competitive exams as ‘Highly Necessitate’, followed by 354 (18.05%) as ‘Occasionally Necessitates’, 299 (15.24%) as ‘Frequently Necessitate’, 198 (10.09%) as ‘Rarely Necessitates’ and 135 (06.88%) of respondents opine as ‘Not Necessitates’.

### 5.9. Access to E-Resources Available in Digital Libraries

The access to e-resources available in Digital Libraries by the respondents has been summarized in Table-9. The Table-9 depicts that 978 (49.87%) of respondents opine as ‘No’ i.e. they do not access to e-resources available in Digital Libraries, followed by 853 (43.49%) of respondents opine as ‘Yes’ i.e. they access to e-resources available in Digital Libraries and 218 (11.11%) of respondents opine as ‘Don’t

Know' whether they access e-resources available in Digital Libraries or not.

**Table-9: Access to E-Resources Available in Digital Libraries**

Opinion	Students (N=1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)
Yes	327 (31.35)	210 (54.97)	316 (58.95)	853 (43.49)
No	542 (51.96)	185 (48.42)	251 (46.82)	978 (49.87)
Don't Know	174 (16.68)	13 (03.40)	31 (05.78)	218 (11.11)

The Table-9 also depicts that 327 (31.35%) of students, 210 (54.97%) of research scholars and 316 (58.95%) of faculty members opine as 'Yes' i.e. they access to e-resources available in Digital Libraries, followed by 542 (51.96%) of students, 185 (48.42%) of research scholars and 251 (46.82%) of faculty members opine as 'No' i.e. they do not access to e-resources available in Digital Libraries and 174 (16.68%) of students, 13 (03.40%) of research scholars and 31 (05.78%) of faculty members opine as 'Don't Know' whether they access e-resources available in Digital Libraries or not.

**5.10. Opinion about Necessity of Training for Using Electronic (ICT) Resources**

The opinion about necessity of training for using electronic (ICT) resources by the respondents has been summarized in Table-10. The Table-10 depicts that 766 (39.06%) of respondents opine necessity of training for using electronic (ICT) resources as 'Very Important' with mean value 1.498695 and SD 0.7966422, followed by 695 (35.44%) of respondents opine necessity of training for using electronic (ICT) resources as 'Important' with mean value 1.517986 and SD 0.7976236 and 500 (25.49%) of respondents opine necessity of training for using electronic (ICT) resources as 'Not Required' with mean value 2.424000 and SD 0.6458004.

**Table-10: Opinion about Necessity of Training for Using Electronic (ICT) Resources**

Opinion	Students (N=1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)	Mean	SD
Very Important	531 (50.91)	88 (23.03)	147 (27.42)	766 (39.06)	1.498695	.7966422
Important	469 (44.96)	92 (24.08)	134 (25.00)	695 (35.44)	1.517986	.7976236
Not Required	43 (4.12)	202 (52.87)	255 (47.57)	500 (25.49)	2.424000	.6458004

The Table-10 also depicts that 531 (50.91%) of students opine necessity of training for using electronic (ICT) resources as 'Very Important', followed by 202 (52.87%) of research scholars opine necessity of training for using electronic (ICT) resources as 'Not Required' and 255(47.57%) of faculty members opine necessity of training for using electronic (ICT) resources as 'Not Required'.

**5.11. Preference of Use of Information Resources**

The preference of use of information resources by the respondents has been summarized in

Table-11. The Table-11 depicts that 813 (41.45%) of respondents prefer 'Print' information resources with mean value 1.635916 and SD 0.8711518, followed by 763(38.90%) of respondents prefer 'Electronic' information resources with mean value 1.804718 and SD .8571936 and 385 (19.63%) of resources prefer 'Both' i.e. print and electronic form of information resources with mean value 1.838961 and SD 0.8165214.

**Table-11: Preference of Use of Information Resources**

Opinion	Students (N=1043)	Research Scholars (N=382)	Faculty Members (N=536)	Total (N=1961)	Mean	SD
Print	510 (48.89)	89 (23.29)	214 (39.92)	813 (41.45)	1.635916	.8711518
Electronic	369 (35.37)	174 (45.54)	220 (41.04)	763 (38.90)	1.804718	.8571936
Both	164 (15.72)	119 (31.15)	102 (19.02)	385 (19.63)	1.838961	.8165214

The Table-11 also depicts that 510 (48.89%) of students prefer 'Print' information resources, followed by 174 (45.54%) of research scholars prefer 'Electronic' information resources and 220 (39.92%) of faculty members prefer 'Electronic' information resources.

### 6. Recommendations

- The Authorities of State Agricultural Universities should conduct training programme for Information Communication Technology (ICT application) / Internet awareness, access of E-resources, E-Books, E-journals for the users of State Agricultural University Libraries and they should be encouraged to take part in these activities.
- The study indicates the need of orientation/workshop of e-resources for faculty members, research scholars and students also.
- State Agricultural Universities should send library professionals periodically to attend conference and seminars, so as to keep themselves updated with recent technologies.
- The controlling authorities like Indian Council Agricultural Research (ICAR) and Department of Agricultural Research and Education (DARE) should develop the infrastructural facilities to their constituent institutes like CAUs /SAUs, so that the proper and effective Internet/ Web Resources service to the users.
- The State Agricultural Universities (SAUs) in Karnataka should be provided requisite financial benefits for rendering highly technical and modern library services to the users as they demand.
- Creation of awareness among students about the different ICT resources.
- The State Agricultural Universities of Karnataka need to change their curricula focusing more on ICT and changing library environment.

### 7. CONCLUSION

The survey provided useful insights into the impact of ICT on information-seeking behaviour of users in state agricultural university libraries in Karnataka. Electronic resources have changed the information seeking and retrieval method of the respondents. Internet and telecommunication are most important and useful medium for retrieval of information from the vast information available in the world. It is also found from the study that training programme offered by the institution are much

utilized by the students, research scholars and faculty members of the universities. The use of Internet recorded in this study probably related to its expansion, the growing familiarity with e-resources. It can be summarized that maximum users use e-resources for their research and educational needs. Due to ICT and availability of all e-resources on user's desktop, their library's visit is affected to some extent, But the users visit their parent library for books/monographs and communicate with library staff through e-mails/Instant Messaging and asking help and giving suggestions as and when is required. There are more challenges to library professionals for exciting new initiatives to be discovered unfamiliar places about more opportunities are also coming up due to ICT.

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**ShivaKrishna S. D.**

Research Scholar, Department of Library and Information Science,  
University of Mysore, Mysore.



**AdithyaKumari H.**

Associate Professor, Department of Library and Information Science,  
Yuvaraj's College, University of Mysore, Mysore.