

Use of ICT by the Faculty Members of Colleges Affiliated to Kuvempu University, Karnataka- A study

Maruthi G.

Research Scholar
Dept. of Library & Information Science
Kuvempu University
Shankaraghatta, Shivamogga Dist.,
Karnataka, INDIA

Dr. B. S. Biradar

Professor
Dept. of Library & Information Science
Kuvempu University
Shankaraghatta, Shivamogga Dist.,
Karnataka, INDIA

***Abstract** - This study is to examine the level of skill in the use of ICT tools, frequency of use of e-resources and requirement of training to use e-resources by the faculty members of colleges affiliated to Kuvempu University, Karnataka. Data has been collected randomly from a selected sample of 194 faculty members of colleges affiliated to Kuvempu University. Data analysis was conducted using appropriate statistical techniques. Study found that 61.54% male are in need training in the use of e-resources.*

Keywords: *Information, E-resources, ICT, User studies, Information Communication Technologies, Kuvempu University*

Introduction

ICT have become extremely important because they allow everybody to participate at the Information Society, in spite of under-privileged personal or social situation. It is believed that information and knowledge are distinguishing features of this modern society and the main driver of this change is the growing use of information and communication technologies (ICT).

The change in traditional document delivery services, from print to electronic, has come about very quickly, and libraries and information services have undergone significant transformation in order to effectively deliver electronic resources to the academic community (Appleton, 2006). Today the information is very important. There is not possible to acquire knowledge without information. Moreover, a common person needs information. Students need information to make study according to the syllabus and curriculum. The teachers are in need of information to teach, scientists and researchers need to get the information for their research and new invention continuously. Thus in all field the need of information is inevitable. ICT is played a crucial role in dissemination of information.

Objectives of the study

- To know the level of skill in the use of ICT tools among respondents.
- To compare the frequency of use of e-resources among male and female respondents.

- To elucidate the opinion of respondents with different designations about the adequacy of e-resources in the colleges.
- To identify the opinion of respondents about requirement of training to use e-resources.

Review of Literature

Our society is undergoing a process of rapid change, moving toward what is called the information society, the knowledge society, the network society or the informational mode of development (Castells, 1996)

The greatest expectations concerning ICT can often be found in area of teaching and learning (Bates 2000). Here it is of importance to make a distinction between the use of ICT in traditional teaching environments for traditional student groups, and new uses of ICT for non-traditional student groups. The increased internationalisation and commercialisation of higher education, and the growth in part-time, interactive and distance-learning schemes, are developments made possible thanks to the growing use of new information and communication technology.

Faculty's beliefs and skills are also important for ICT to be adopted within a curricular and instructional context (Saade et al. 2007). Specifically, faculty need to see the perceived ease of use and the perceived usefulness of ICT tools in their teaching practices (Choudrie and Dwivedi 2005).

Dagada (2005) however argues that often times, an individual's decision to adopt a particular innovation (technology) for a given function is not made on objective or rational grounds. Individuals are influenced by others' opinions and by past behavior (Sherry and Gibson 2002).

Ellis and Moore (2006) defining a process used to embed ICT in subjects and using this as a focus of the benchmarking, a relational and prospective approach to quality assurance for ICT can be clarified, one which promotes coherence amongst the benchmarks that can be used for the purposes of improvement.

The study of Stensaker et.al.(2007) discloses that Norwegian higher education institutions often have adequate economic resources and a rather well developed technical infrastructure and support structure related to the use of ICT. However, attempts to link ICT initiatives to organisational development issues and to human resource management have not been very successful. In the conclusion it is argued that pedagogical issues and organisational and human development aspects must be better linked if ICT is to play a more effective role in teaching and learning in Norwegian higher education.

The results of this study indicate that even though a majority of respondents use ICT in teaching activities. The descriptive results indicated that teachers had high level of knowledge and skill in applying ICT. In addition, computer and internet are available to majority of respondents. It appeared from the findings of this research that technologies are used at the high level. Providing more availability of ICT to teachers as the most producers of the information and knowledge will be essential (Allahawiahand Tarawneh,2015).

Results of the study indicate that the usage, collections and services of law libraries were rated by the respondents as somewhat “satisfactory”. The usage of HEC digital library and electronic resources among the law faculty members is very low. The reason behind this is that access to HEC digital library and online electronic resources is only available to the constituent Law College of the University of Peshawar via the University Internet Protocols, while the rest have no such facility(Khan and Bhatti, 2015).

Findings and Discussion

Table-1: Distribution of respondents’ gender cross-tabulated educational qualification

Educational qualification	Gender				Total (N=194)	Percentage
	Male (N=104)	Percentage	Female (N=90)	Percentage		
Master Degree	47	45.19	37	41.11	84	43.30
M.Phil	53	50.96	51	56.67	104	53.61
Doctorate	4	3.85	2	2.22	6	3.09
Total	104	100.00	90	100.00	194	100

Table 1 above shows the qualifications of all the respondents. Maximum number of respondents had the M.Phil. degree (53.61%), followed by respondents having Master degree (43.30%) and then Ph.D (3.09%).

Table-2: Distribution of respondents’ gender cross-tabulated user category

Category	Gender				Total (N=194)	Percentage
	Male (N=104)	Percentage	Female (N=90)	Percentage		
Associate Professor	15	14.42	6	6.67	21	10.82
Asst. Professor	48	46.15	25	27.78	73	37.63
Lecturer	41	39.42	59	65.56	100	51.55
Total	104	100.00	90	100.00	194	100

From the responses shown in table 2 above, it is clear that there were no one Professors, 21 Associate Professors, 73 Assistant Professors and 100 lecturers who participated in this study. This is due to the fact that there are more number of Lecturers in each college under study as compared to the other designations.

Table-3: Level of skill in using ICT tools: by respondents’ gender

ICT tools	Mean value		F	p value
	Male	Female		
CD/DVD	3.11	3.07	.049	.825
Memory Devices	3.33	3.48	.845	.359
Digital Camera/ Webcam	2.86	2.87	.004	.949
Multimedia	3.12	3.36	1.786	.183
Smart Phones/Tablet PC	2.97	3.18	1.213	.272
Laser Printer	3.88	4.03	1.160	.283
LCD Projector	4.06	4.25	.129	.720
OPAC	1.75	1.66	0.221	.754
Keyboard/Mouse	2.27	2.19	.398	.529
Scanner	4.00	4.24	2.653	.105
E-book reader (Kindle, iPad etc.)	3.10	2.90	0.955	.412

5=Excellent, 4=Good, 3=Above average, 2= Average, 1=Poor

Table-3 shows the level of skills in the use of ICT by the respondents' gender. The skills in using LCD projectors is good among female (mean=4.25), and male (mean=4.06) respondents. It is followed by the skills of using scanner is more than good among female (mean=4.24) and male (mean=4.00) respondents. It is followed by the use of Laser printer is good among female (mean=4.03) and male (mean=3.88) respondents.

Further analysis of the above table shows that the level of skill in the use of other ICT tools above average and average for male and female respondents.

The ANOVA test was used to know the difference in the skills among male and female respondents. The table-3 projects the fact that the *p value* is greater than 0.05 for all the ICT tools listed. Hence, it is clear that there no difference among male and female respondents in having skill of using different ICT tools.

Table-4: Level of skill in using ICT tools: by respondents' category

ICT tools	Mean value			F	p value
	Associate Professor	Asst Professor	Lecturer		
CD/DVD	3.19	2.96	3.16	.654	.521
Memory Devices	3.10	3.40	3.46	.889	.413
Digital Camera/ Webcam	3.10	2.90	2.78	.710	.493
Multimedia	3.33	3.25	3.19	.127	.880
Smart Phones/Tablet PC	3.00	2.85	3.24	1.944	.146
Laser Printer	3.90	3.99	3.93	.085	.919
LCD Projector	4.05	4.11	4.07	.044	.957
OPAC	1.78	1.50	1.11	.994	.887
Keyboard/Mouse	2.43	2.21	2.21	.581	.560
Scanner	4.43	4.08	4.07	1.071	.345
E-book reader (Kindle, iPad etc.)	3.10	2.90	3.05	.078	.784

5=Excellent, 4=Good, 3=Above average, 2= Average, 1=Poor

Table-4 indicates the level of skills in the use of ICT by the respondents' category. The comparison of skills in using Scanner is more than *good* among Associate professors (mean=4.43), Asst. Professors (mean=4.08), and lecturers (mean=4.07). It is followed by the skill of use of LCD projector is more than *good* among Asst. Professors (mean=4.11), lecturers (mean=4.07), and Associate. Professors (mean=4.05). The skill of using Laser printer and Multimedia are above average among the three categories of the respondents. The skills with regard to the use of other ICT tools are above average and average for all three categories of respondents.

The ANOVA test was used to know the difference in the skills among three categories of respondents. The table-4 clearly shows that the significance value – *p* is greater than 0.05 for all the ICT tools. Hence, it is arguable that there no difference among Associate professors, Assistant professors, and lecturers in having skill of using different ICT tools.

Table-5: Frequency of use of e-resources: by gender

E-resources	Mean value		F	p value
	Male	Female		
Online databases	3.22	3.13	.478	.490
E-journals	3.29	3.47	2.060	.153
E-books	2.35	2.83	.661	.417
E-theses	3.28	3.45	.414	.285
E- reports	1.83	1.83	.114	.388
Digital archives	1.88	1.22	.135	.754
OPAC	1.83	1.11	.146	.783
Video conferencing	1.93	4.53	.685	.709
Discussion forums	1.79	1.65	.215	.251

5= Most frequently, 4= Frequently, 3= Less Frequently, 2= Occasionally, 1=Never

Table-5 shows the frequency of use of e-resources by male and female respondents. E-journal is the most frequently used e-resources by both male and female respondents. The e-resources such as,online databases and e-theses are used frequently by both male and female respondents. While, other forms of e-resources are used either occasionally or never. The attempt to know the difference between male and female respondents in the use of e-resources indicates that there no significant difference male and female in the frequency of use of any e-resources ($p = >0.05$).

Table-6: Frequency of use of e-resources: by user category

E-resources	Mean value			F	p value
	Associate Professor	Asst Professor	Lecturer		
Databases	2.90	3.32	3.14	.940	.392
E-journals	3.38	3.44	3.32	1.306	.273
E-books	2.42	2.81	2.20	.971	.401
E-theses	2.44	2.41	2.01	.713	.483
E- reports	1.81	1.74	1.77	.663	.994
Digital archives	1.01	1.74	1.65	.135	.754
OPAC	1.83	1.41	1.64	.146	.783
Video conferencing	1.86	1.47	1.49	.155	.766
Discussion forums	2.11	1.12	1.43	.218	.266

5= Most frequently, 4= Frequently, 3= Less Frequently, 2= Occasionally, 1=Never

Table-6 depicts the frequency of use of e-resources by respondents with different designations. The use of e-resources among Associate professors, Asst. Professors, and lecturers is found to be frequent for the e-resources such as e-journals and databases. Interestingly, the use of e-books and e-theses is less frequent among the respondents. The other forms of e-resources are very less used by the respondents. Further analysis shows that the ANOVA test indicates there no difference among Associate professors, Assistant professors, and lecturers in the frequency of use of any e-resources ($p = >0.05$).

Table-7: Opinion about the adequacy of e-resources: by gender

E-resources	Mean value		F	p value
	Male	Female		
Online databases	2.11	1.99	.015	.904
E-journals	3.61	3.40	8.394	.004
E-books	2.89	2.86	.375	.625
E-theses	3.88	3.90	8.678	.004
E- reports	2.11	2.14	.260	.549
Digital archives	1.99	1.87	.877	.372
OPAC	1.11	1.05	.140	.908
Video conferencing	1.63	1.74	.172	.752
Discussion forums	2.89	2.07	.549	.361

5= Highly adequate, 4=Adequate, 3= Fairly adequate, 2=Less adequate, 1=Not at all adequate

Table-7 is an attempt to know the comparison of opinions about the adequacy of e-resources in the college. The above table shows that e-theses facility is available at high adequacy for both male (mean=3.88) and female (mean=3.90) respondents. It is followed by e-theses, e-books are also available at fairly adequate level. The table-7 clearly indicates that there is a significant difference between male and female respondents in giving opinion about the adequacy of e-journals ($p=.004$), and e-theses facility ($p=.004$) and the difference is statistically significant. This indicates that the male and female respondents have dissimilar opinion about the adequacy of e-journals and e-theses.

Table-8: Opinion about the adequacy of e-resources: by user category

ICT tools	Mean value			F	p value
	Associate Professor	Asst Professor	Lecturer		
Online databases	2.14	2.18	1.94	.248	.781
E-journals	3.57	3.64	3.40	1.062	.348
E-books	2.86	1.92	1.85	.649	.545
E-theses	2.64	3.19	2.87	.267	.728
E- reports	1.81	1.79	2.30	.229	.772
Digital archives	2.33	1.52	1.36	.326	.754
OPAC	1.62	1.63	1.61	.224	.996
Video conferencing	1.43	1.56	1.83	.280	.965
Discussion forums	2.86	2.10	2.91	.431	.342

5= Highly adequate, 4=Adequate, 3= Fairly adequate, 2=Less adequate, 1=Not at all adequate

Table-8 shows the opinions about the adequacy of e-resources by the different category of respondents. The above table shows that video conferencing facility is adequately available for all categories of respondents followed by databases and e-journals. Meanwhile, other e-resources such as e-books, e-theses are available at fairly adequate numbers. The other e-resources are less adequately available in the library. It is also clear from the table-8 that there is no statistically significant difference among the Associate professors, Asst. Professors, and lecturers, in providing opinion about the adequacy of e-resources in the colleges.

Table-9: Training requirement in the use of e-resources: by user category

Training	Gender				Total (N=194)	%
	Male	Percentage	Female	Percentage		
Required	64	61.54	53	58.9	117	60.31
Not required	40	38.46	37	41.1	77	39.69
Total	104	100.00	90	100.0	194	100

In the above table 9 shows that 61.54% male faculty and 58.9% female faculty have responded that they need training for using e-resources. Only 38.46% male faculty and 41.1% female faculty have admitted the non- requirement of training regardless of their teaching or professional requirements.

Table-10: Training requirement in the use of e-resources: by user category

Training	User category					
	Associate Professor (N=21)	%	Asst. Professor (N=73)	%	Lecturer (N=100)	%
Required	11	52.38	44	60.27	62	62.00
Not required	10	47.62	29	39.73	38	38.00
Total	21	100.00	73	100.00	100	100

In the above table 10 shows that 62% lecturer, 60.27% Assistant professors and 52.28% Associate professors have responded that they need training for using e-resources.

Conclusion

The study shows that the level of skill in the use of other ICT tools above average and average for male and female respondents. The skills with regard to the use of other ICT tools are above average and average for all three categories of respondents. The attempt to know the difference between male and female respondents in the use of e-resources indicates that there no significant difference male and female in the frequency of use of any e-resources ($p > 0.05$). It is also clear that there is no statistically significant difference among the Associate professors, Asst. Professors, and lecturers, in providing opinion about the adequacy of e-resources in the colleges.

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