

# **Information Communication Technology Skills and Competencies of Library Professionals in Engineering College Libraries in Karnataka State**

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## **ABSTRACT**

Recent development in IT have revolutionized the whole world and in particular the education systems. ICTs and its tools have always been helpful in extending information services. This study speaks about the ICT core competencies among the LIS professionals. A study was conducted to map the ICT skill levels of the LIS professionals working under where are the part of VTU college libraries of Karnataka. Total 305 questionnaires have been distributed among Library Professional, but received only 258 questioners from staff who are working college libraries. The study revealed that a majority of them need training in ICTs for rendering better information services. Further, designation-wise, experience-wise and institution-wise comparisons are made with related variables to assess the ICT skill levels of the LIS professionals in depth.

**KEYWORDS:** ICT Skills, Core Competencies, Engineering College Libraries, LIS Professionals.

## **INTRODUCTION**

ICTs have brought about a new age of globalization of knowledge and expertise. The LIS professionals in engineering colleges are required to develop ICT skills in order to meet the requirement of the modern users and perform various tasks coping up with the changes in technological environment. It is very important to ensure that the staff are able to have time away from their format duties for both formal and informal ICT training.

**The ICT skills of the LIS Professionals refers to :**

- Subscriptions and access to online journals.
- Access and retrieval of web based information resources.
- CD-ROM browsing and search services.
- Access to digital libraries and online databases.

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- Use of library automation software packages to discharge the library functions (OPAC).
- Web designing, creation and maintenance of library website and library blogs.
- Creation and maintenance of databases using RDBMS software.
- Skills pertaining to hardware and networking.
- Knowledge and skills pertaining to operating systems, programming languages and other library application software.

**Table 1.** Field of Study and Distribution of Sample

<b>Total no. of questionnaires distributed</b>	<b>Total no. of responses received</b>	<b>Percentage</b>
305	258	81.6 %

A customized online questionnaire was designed and sent via email to measure the ICT skill levels with rating, to the LIS professionals of VTU Engineering college libraries. Out of 305 LIS professionals 258 ( 81.6 %) of them responded with filled in questionnaires related to their ICT Skill levels. Hence in all case the total number of respondents will be 258.

**Table 2.** Demographic Features of LIS Professionals

<b>INDEPENDENT VARIABLES</b>	<b>NUMBER</b>	<b>PERCENTAGE</b>
<b>GENDER</b>		
Male	170	65.90
Female	88	34.10
<b>AGE</b>		
Below 30 years	110	38.75
31 – 40 years	70	27.13
41 – 50 years	50	19.13
51 and above	28	10.85
<b>QUALIFICATION</b>		
Graduates	50	19.37
Post – Graduate	45	17.44
M . Phil holders	103	39.92
Ph.D holders	60	23.25
<b>DESIGNATION</b>		
Librarians	90	34.88
Assistant Librarians	73	28.29
Library Assistants	95	36.82
<b>EXPERIENCE</b>		

Below 7 years	145	56.20
8 – 15 years	60	23.25
16 -25 years	35	13.56
25 years and above	18	6.97
<b>TYPE OF ENGINEERING COLLEGE</b>		
Government	19	7.36
Aided College	11	4.26
Private College	228	88.37
<b>Total</b>	<b>258</b>	<b>100</b>

Tables 2 depicts the Category-wise respondents who have expressed their opinion regarding the ICT Skills. Among 258 ( 84.59 %) respondents out of 305, 170 ( 65.90 %) are males and remaining 88 (34.10) are females.

Age-wise , 110 (38.75 %) of the respondents are below the age of 30 years, followed by 70 (27.13 %) of the respondents in the age group of 31-40 years, 50 (19.37 %) are between 41-50 years and 28 ( 10.85 %) above 51 years.

Qualification-wise 50 (19.37 %) of them are graduates, 45 (17.44 %) of them are Post-Graduates, 103 (39.92 %) of them hold M.Phil degree and 60 (23.25 %) of the respondents possess Ph.D

Designation-wise 90 ( 34.88 %) are working as Chief Librarians, 73 ( 28.29 %) are Assistant Librarians and a large group representing 95 ( 36.82 %) are working as Library Assistants.

Further , with reference to the duration of experience , majority of the respondents, 145 ( 56.20 %) are with less than 7 years of experience. 60 ( 23.25 %) respondents have 8-15 years of experience, 35 ( 13.56 %) of them possess 16-25 years and above. In total, we find that a large segment of the LIS professionals belonged to the category of below 7 years of experience.

With regard to the type of colleges that LIS Professionals belonged to 19 ( 7.36 %) of them belonged to Government Colleges, 11 (4.26 %) of them belonged to Aided Colleges and 228 ( 88.37 %) of them belonged to Private Colleges. Largely respondents belonged to Private Colleges.

**Table 3.** Table showing the ICT based duties and responsibilities rendered by the LIS professionals ( Designation – wise )

Responses		Librarians	Assistant Librarians	Library Assistants	Total	Test Statistics
YES	F	78	60	85	223	CC=0.106 P=0.078
	%	84.78	88.23	83.33	85.11	
NO	F	14	08	17	39	
	%	15.21	11.76	16.66	14.88	
Total	F	92	68	102	262	
	%	100	100	100	100	

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In the above table we find that a majority of 223( 85.11 %) of the LIS Professional from all institutions completely agree that they are assigned ICT based duties and responsibilities at their respective positions. Only a small segment comprising of 39 ( 14.88 % ) of them opine specific ICT based duties and responsibilities are assigned to them.

Therefore it is inferred that when a majority of the LIS professionals have been assigned ICT based duties and responsibilities, its obvious, for them to undergo ICT based trainings to keep updated and again expertise in such services. Further, when statistically verified, the contingent coefficient test revealed a non-significant association between designation and the number of experience ( CC=0.106; P=0.078)

**Table 4.** LIS professional's expertise in handling of ICT based library services (experience-wise)

Areas	Ratings		Below 7 years	8-15 years	16-25 years	25 years & above	Total	Test Statistics
Handling of various ICT based library services	Excellent	F	25	17	12	7	61	CC=0.277; P=0.000
		%	16.89	28.33	34.28	46.66	23.64	
	Good	F	78	26	18	5	127	
		%	52.70	43.33	51.42	33.33	49.22	
	Moderate	F	35	12	3	2	52	
		%	23.64	20	8.57	13.33	20.15	
	Poor	F	10	5	2	1	18	
		%	6.75	8.33	5.71	6.66	6.97	
	Total		148	60	35	15	258	

The above table depicts the expertise in handling of ICT based library services. When the expertise of LIS professionals in handling of ICT based library services, was verified according to their number of years of experiences, a majority of 127 ( 49.22 %) of the LIS professionals rate themselves as good in handling of ICT based library services. This includes a majority of 18 ( 51.42 %) of LIS professionals having a work experience of 16-25 years, rating themselves as good in handling ICT based library services. However, 61 ( 23.64 % ) are excellent and confident in their day to day activities of their libraries. 52 (20.15 %) of them are moderate and only 18 ( 6.97 %) of them are poor in handling ICT based library services.

From this it is inferred that not all LIS professionals are confident or well trained in handling the ICT based library services. On the whole, though, a majority of 75 percent of them opine that they are excellent and good in handling ICT based library services, still 25 percent of them agree that their ICT skills are moderate and poor in rendering the ICT based library services. Which is very essential skill. Hence training to all the LIS professionals in this area is necessary. Further , when statistically verified, the contingency coefficient test revealed a significant association between designation and the number of experience ( CC=0.277; P=0.000).

**Table 5.** LIS Professional’s willingness to attend training programs ( Institution-wise )

Training period	Response		Govt.	Aided	Private	Total	Test Statistics
Long duration	YES	F	7	7	130	144	CC=.122 P=.034
		%	36.84	63.63	57.01	55.81	
	NO	F	12	4	98	114	
		%	63.15	36.36	42.98	44.18	
Short duration	YES	F	13	8	140	161	CC=.118 P=.178
		%	68.42	72.72	61.40	62.40	
	NO	F	6	3	88	97	
		%	31.57	27.27	38.59	37.59	
	Total		19	11	228	258	

The above table depicts the extent of training need to discharge their duties especially with regard to the ICT based functions and services. It is clear from this table that a majority of 144 ( 55.81 %) of the LIS Professionals are willing to attend training programs to enhance their skills on a long duration. However, remaining 114 ( 44.18 %) of them feel that they are not willing to attend training programs on long durations. Further, Institution-wise , we find that a majority of 12 ( 63.15 %) of the LIS professionals working in Aided, 130 ( 57.01 %) from private and 7 (36.84 %) of them from government engineering colleges are willing to attend training programs on long duration. Further, when statically verified, the contingent coefficient test revealed a significant association between type of institution and the extent of training ( CC=0.122; P=0.034 ).

Regarding the short duration training needs to discharge their duties especially with regard to the ICT based functions and services, it is clearly evident that a majority of 161 ( 62.40 % ) of the LIS professionals are willing to attend training programs to enhance their skills on a short duration. However, remaining 97 (37.59 %) of them feel that they are not willing to attend training programs on short durations. Further, Institution-wise , we find that a majority of 8 ( 72.72 %) of the LIS professionals working in Aided, 140 ( 61.40 %) from Private and 13 ( 68.42 %) of them from government engineering colleges are willing to attend training programs on short duration. Further , when statically verified, the contingent coefficient test revealed a non-significant association between type of institution and the duration of training ( CC=0.118;P=0.178).

Thus, it is inferred that LIS professionals at large need trainings both on long and short durations expect a few who have expressed negative response, which could be due to various constraints in attending on job / off job trainings.

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**Table 6.** LIS Professional's limitations / constraints in attending training programs ( Designation-wise )

Areas of constraints		Librarians	Assistant Librarians	Library Assistant	Total	Test Statistics
No reply	F	0	0	4	4	CC=0.285; P=0.000
	%	-	-	4.21	1.55	
Family	F	20	15	18	53	
	%	20	23.80	18.94	2.54	
Financial	F	13	13	27	53	
	%	13	20.63	28.42	2.54	
Disinterested	F	7	2	4	13	
	%	7	3.17	4.21	5.03	
Health	F	5	3	2	10	
	%	7	3.17	4.21	5.03	
Lack of encouragement	F	55	30	40	125	
	%	55	47.61	42.10	48.44	
Total	F	100	63	95	258	
	%	100	100	100	100	

The above table projects the Designation-wise various constraints expressed by LIS professionals in undergoing training programs to enhance their ICT skills. A majority of 125 ( 48.44 %) of them opine that they lag behind in attending training opportunities. Due to lack of encouragement, 53 ( 2.54 %) of them opine it is due to finance, 53 ( 2.54 %) of them state it is due to family issues. A small group of 10 ( 3.87 %) of them project ill health as a reason, 13 ( 5.03 %) of them due to disinterestedness and 4 ( 1.55 %) of them never responded on this . therefore it is inferred that to a large extent there is lack of encouragement and motivation for training and up-dating ICT skills of LIS professionals in newly established colleges are appointed on temporary basis for a meager amount of salary. They are asked to perform routine functions of the library and hence are not deputed to learn latest technology based library services. Further, when statistically verified, the contingent coefficient test revealed a non-significant association between the type of institution and the constraints in attending the trainings. ( CC=0.285;P=0.000).

### **CONCLUSION**

The present investigation reveals that the engineering college libraries of Karnataka state have accorded priority for the development of I C T resources and services in order to serve the community of users on modern lines. As regards the existing position of ICT resources and services the data revealed that these institutions have acquired considerable IT infrastructure facilities over a period of time. The study also demonstrates that the LIS skills but also enhance the same from time to time to cater to the academic needs of the users of the present times. The study

further emphasizes that the present information environment demands new roles for LIS professionals from custodian of printed material to knowledge / information manager on the basis of acquiring sufficient knowledge of technological skills. The present study aptly indicates that the LIS professionals working in engineering colleges of Karnataka though have acquired considerable basis ICT skills to manage the libraries, lack core ICT skills and competencies to a great extent. Engineering college LIS professionals have to be encouraged and motivated to enhance and update their technological skills in order to reach out to various users of electronic resources and services effectively.

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