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## Information and Communication Technology Literacy among Library Professionals in the Universities of Tamilnadu

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### Abstract

*This study aims to ascertain the use of ICT based resources and services is high among the Librarians than the Assistant Librarians and Library Assistants. The Library professionals need training in library automation and use of commercial software.*

### Keywords

Literacy, information and communication technology, University Libraries.

### Electronic access

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## Introduction

Information is power. It is a well known fact that the information has been increasing rapidly, and the increasing information is available in variety of different formats like e-books, e-magazines, e-journals, CD-ROM, DVD, etc. Information and communication technology (ICT) is the biggest achievement in the evolution of mankind. ICT is any system designed to gather, process or distribute information or it is the science and skill of all aspects of computing, data storage, and communication. It may be any combination of tools and procedures that facilitate the generation, acquisition, storage, organization, searching, retrieval, and transmission of information using electronic means. It fundamentally changes the access, storage and dissemination of information, and facilitates global interconnectivity, and accelerated information exchange.

There is a growing concern over library professionals' insufficient level of ICT literacy. The ICT literacy skills, necessary for library professionals in the emerging knowledge driven society, are continuously changing. Library professionals in developed countries moved quickly to learn and adopt new information technologies. Despite the high penetration rate of ICT and exponential growth of Internet, many library professionals in India lack the ICT literacy skills. Thus, the library professionals in Tamilnadu Universities are not exceptional.

## Review of Literature

Varadharajan (2007)<sup>78</sup> stated in his study "Digital Libraries and Library Professional in the Changing Scanario" that a series of training courses on digital libraries could provide a good balance of topics covering the technological, technical, management and social issues. Haneefa K (2007)<sup>79</sup> presented the results of an investigation in the study "Use of ICT Based Resources and Services in Special Libraries in Kerala, India. The email service was used by the largest percentage of the users. WWW was being used by 60 per cent of the library users. A good no. of users were not satisfied with the application of ICT in the libraries and indicated 'inadequate ICT infrastructure' as their reason for dissatisfaction. Users proposed a variety of measures of formal orientation and training in ICT based resources and services. Rajput et al (2007)<sup>81</sup> surveyed the internet resources and services of the Institute of Engineering & Science, Indore (India) and the findings in the paper "Internet Resources and Services in Institute of

Engineering & Science, IPS Academy Indore: An Exploratory Study". A large number of users were dissatisfied with the infrastructure facilities available in IES, specifically in terms of hardware facilities.

### Objective of the Study

1. To assess the computer literacy skills among the library professionals of Tamilnadu Universities;
2. To enable the LIS professionals in Tamil Nadu Universities to acquire ICT skills;
3. To assess the current use of ICT-based resources and services by the library professionals of Tamilnadu Universities;
4. To assess the confidence of the library professionals in handling various ICT tools and

5. To identify the training or orientation needs of the library professionals in ICT-based resources, services and tools.

### Methodology

To meet the specific objectives and assess their ICT literacy skills, a quantitative research methodology was employed. The study population comprised library professionals working in the University Libraries of Tamilnadu. Structured questionnaires were prepared and distributed to these library professionals. The data collected through the questionnaires were converted into machine readable form. The data were analysed and inference were made based on standard statistical methods.

### Results and Discussions

**Table 1**Category-wise Distribution of Questionnaire and Response Rate

Category	Questionnaires Distributed	Questionnaires Received	Response Rate (%)
Librarian	9	9	100.00
Deputy Librarian	13	13	100.00
Assistant Librarian	56	53	94.64
Technical Officer	26	24	92.31
Technical Assistant	37	34	91.89
Library Assistant	43	40	93.02
<b>Total</b>	184	173	91.53

Table 1 shows the category wise distribution of questionnaire and response rate. The response of Librarians and Deputy Librarians comes to 100 percent .Assistant Librarians comes to 94.64 percent. With regard to the response of Technical officers 24 responses out of 26 questionnaires distributed were received back. The response of the Technical Officers comes to 92.31 percent. As far as the response of the Technical Assistants is concerned, a

total of 37 questionnaires were distributed. Out of which 34 responses that amount to 91.89 percent were received back. With regard to the response of Library Assistants, 40 responses out of 43 questionnaires distributed were received back. The response rate of the Library Assistants comes to 93.02 percent. The response rate of the total number of respondents comes to 91.53 percent

**Table 2 Distribution of Respondents Expertise Level in using Computers**

Using computers	Librarian	%	Deputy Librarian	%	Assistant Librarian	%	Technical Officer	%	Technical Assistant	%	Library Assistant	%	Total	%
Complete novice	0	0.00	0	0	7	13.21	3	12.50	6	17.65	9	22.50	25	14.45
To some Extent	2	22.22	4	30.77	10	18.87	7	29.17	12	35.24	21	52.50	56	32.37
Expert	7	77.78	9	69.23	36	67.92	14	58.33	16	47.06	10	25.00	92	53.18

Table 2 shows the designation wise distribution of respondent's expertise level in using Computers and reveals that, out of 9 Librarians, 13 Deputy librarians, 53 Assistant librarians, 24 Technical Officers, 34 Technical Assistants and 40 Library Assistants from University libraries in TamilNadu, 7(13.21%)Assistant Librarians, 3(12.50%)Technical officers, 6(17.65%)Technical Assistants and 9(22.50%)Library Assistants are

Complete novice, 2(22.22%)Librarians, 4(30.77%) Deputy Librarians, 10(18.87%) Assistant Librarians, 7(29.17%) Technical Officers, 12(35.24%) Technical Assistants and 21(52.50%) Library Assistants are expert to some extent, 7(77.78%) Librarians, 9(69.23%) Deputy Librarians, 36(67.92%) Assistant Librarians, 14(58.33%) Technical Officers, 16(47.06%), Technical Assistants and 10(25.00%) Library Assistants are experts in using Computers.

**Table 3 Distribution of Respondents Methods of Acquiring IT Skills**

Status	Trial & error method	%	Formal Training	%	Friends & Colleagues	%	Training at work	%	Attending seminars & conferences	%	Total
Librarian	2	22.22	3	33.33	1	11.11	2	22.22	1	11.11	9
Deputy Librarian	2	15.38	2	15.38	1	7.69	3	23.08	5	38.46	13
Assistant Librarian	10	18.87	9	16.98	5	9.43	15	28.30	14	26.42	53
Technical Officer	2	8.33	3	12.50	4	16.67	6	25.00	9	37.50	24
Technical Assistant	4	11.76	7	20.59	3	8.82	13	38.24	7	20.59	34
Library Assistant	8	20.00	6	15.00	9	22.50	10	25.00	7	17.50	40
<b>Total</b>	28	16.18	30	17.34	23	13.29	49	28.32	43	24.86	173

Table 3 shows the status wise distribution of respondents method adopted for acquiring IT skills. Out of 9 Librarians, 13 Deputy Librarians, 53 Assistant Librarians, 24 Technical Officers, 34 Technical Assistants and 40 Library Assistants from TamilNadu University Libraries, 2(22.22%)Librarians, 2(15.3%)Deputy Librarians, 10(18.87%)Assistant Librarians, 2(8.33%)Technical officers, 4(11.76%)Technical Assistants and 8(20.00%) Library Assistants adopted trial and error

method to acquire IT skills; 3(33.33%) Librarians, 2(15.38%) Deputy Librarians, 9(16.98%) Assistant Librarians, 3(12.50%) Technical officers, 7(20.59%) Technical Assistants and 6(15.00%) Library Assistants underwent formal training to acquire IT Skills; 1(11.11%) Librarian, 1(7.69%) Deputy Librarians, 5(9.43%) Assistant Librarians, 4(16.67%) Technical officers, 3(8.82%) Technical Assistants and 9(22.50%) Library Assistants acquired IT Skills from their friends and Colleagues; 2(22.22%)

Librarians, 3(23.08%) Deputy Librarians, 15(28.30%) Assistant Librarians, 6(25.00%) Technical officers, 13(38.27%) Technical Assistants and 10(25.00%) Library Assistants acquire IT Skills by undergoing training in their works places and

1(11.11%) Librarians, 5(38.46%) Deputy Librarians, 14(26.42%) Assistant Librarians, 9(37.50%) Technical officers, 7(20.59%) Technical Assistants and 7(17.50%) Library Assistants acquire IT Skills by attending Seminars and Workshops.

**Table 4 Use of ICT-based resources /services/tools/devices used by library professionals**

ICT Tools	Librarian	%	Deputy Librarian	%	nt Librarian	%	Technical Officer	%	al Assista	%	Library Assista	%	Total	%
CD-Rom	9	100.00	13	100.00	50	94.34	22	91.67	32	94.12	32	80.00	158	91.33
DVD	9	100.00	13	100.00	49	92.45	22	91.67	31	91.18	30	75.00	154	89.02
VCD	6	66.67	7	53.85	49	92.45	18	75.00	30	88.24	24	60.00	134	77.46
Printer	9	100.00	13	100.00	52	98.11	19	79.17	29	85.29	25	62.50	147	84.97
Scanner	6	66.67	8	61.59	49	92.45	17	70.83	25	73.53	20	50.00	125	72.27
Smart Card	3	33.33	7	53.85	41	77.36	15	62.50	22	64.71	15	37.50	103	57.54
Lap Top	8	88.89	12	92.31	45	84.91	17	70.83	30	88.24	22	55.00	134	77.46
CD-Net Server	7	77.78	8	61.54	38	71.70	13	54.17	27	79.41	14	35.00	107	61.88
Bibliographic Database	5	55.56	9	63.23	32	60.37	12	50.00	25	73.53	15	37.50	98	56.55
Full- text Data base	7	77.78	8	61.54	48	90.57	13	54.17	24	70.59	14	35.00	114	65.90
E-books	7	77.78	7	53.85	44	83.02	12	50.00	23	67.65	13	32.50	106	61.27
E-mail	8	88.89	11	84.62	51	96.23	17	70.83	28	82.35	15	37.50	130	75.14
Pen drive	9	100.00	12	92.31	49	92.45	18	75.00	27	79.41	17	42.50	132	76.30
Internet	9	100.00	13	100.00	43	81.13	19	79.17	31	92.18	32	80.00	147	84.97
FTP	5	52.56	7	53.85	32	60.38	15	62.50	25	73.53	18	45.00	102	58.95
Telnet	6	66.67	8	61.54	33	62.26	13	54.51	24	70.59	13	32.50	97	56.00
Orkut	3	33.33	6	46.15	21	39.62	10	41.67	15	44.11	10	25.00	65	37.57
Mailing List	7	77.78	8	61.54	25	47.17	11	45.83	18	52.94	11	27.50	80	46.24
Search Engine	8	88.89	10	76.92	41	77.36	16	66.67	30	88.24	19	47.50	124	71.68
E-Journals	6	66.67	12	92.31	45	84.91	18	75.00	31	91.18	20	50.00	132	76.30
Blog	2	22.22	6	46.15	36	67.92	10	41.67	22	64.71	14	35.00	90	52.02
Chat	3	33.33	7	53.85	30	56.60	9	37.50	21	61.76	13	32.50	83	47.98
Video Conferencing	1	11.11	6	46.15	25	47.17	8	33.33	18	52.94	8	20.00	66	38.15
OPAC	9	100.00	13	100.00	31	58.49	17	70.83	25	73.53	15	37.50	110	63.58
Web OPAC	5	55.56	10	76.12	30	56.60	15	62.50	23	67.65	14	35.00	97	56.07

Information and Communication Technology Literacy can enhanced effectively through relevant and contextual use of ICT technologies. Data presented in table 4 exhibits the use of ICT based resources / services / tools used by library professionals. It could be seen clearly from the above table that the use of ICT – based resources and services was higher among the

Librarians, Deputy Librarians and Assistant Librarians than the Technical Officers, Technical Assistants and Library Assistants. Also the Technical Officers, Technical Assistants, and Library Assistants need to improve the use of various ICT based resources, services and tools so that they can provide effective information services to their library users.

**Table 5 Distribution of Respondents Use of Library Automation Software**

Automation Software	Librarian	%	Deputy Librarian	%	Assistant Librarian	%	Technical Officer	%	Technical Assistant	%	Library Assistant	%	Total	%
LIBSYS	4	44.44	9	69.23	21	39.62	10	41.67	12	35.30	5	12.50	61	35.26
SOUL	3	33.33	6	46.15	14	26.41	9	37.50	10	29.41	4	10.00	46	26.59
KOHA	6	66.67	8	61.54	20	50.00	7	29.17	12	32.29	6	15.00	59	34.10
WINISIS	3	33.33	5	38.46	9	16.98	7	29.17	9	26.47	4	10.00	37	21.39
LIBASOFT	2	22.22	4	30.77	5	9.43	5	20.87	6	17.64	2	5.00	24	13.87
CDS/ISIS	3	33.33	10	76.92	12	22.64	10	41.67	13	38.23	5	12.50	53	30.64
OTHERS	2	22.22	1	7.69	2	3.77	0	0.00	0	0.00	0	0.00	5	2.89

Data presented in table 5 shows that the different types of Library Automation Software were used by the Library Professionals. There were 61(35.26%) library professionals have used LIBSYS, 46(26.59%) Library Professionals have used SOUL, 59(34.10%) Library professionals have used KOHA,

37(21.39%) library professionals have used WINISIS, 24(13.87%) library professionals have used LIBASOFT, 53(30.64%) library professionals have used CDS/ISIS and 5(2.89%) library professionals have used other soft wares

**Table 6 Distribution of Respondents Confidence in Handling High-Level ICT Tasks**

ICT Task	Can do independently	%	Can do with Assistance	%	Just Can't do it	%	Not aware	%
Use a data base	41	23.70	35	20.23	54	31.21	43	24.86
Create a presentation	45	26.01	57	32.95	42	24.28	29	16.76
Use a spreadsheet	43	24.86	46	26.59	58	33.53	26	15.03
Use a software and get rid of computer viruses	58	33.53	49	28.32	34	19.65	32	18.50
Create a multimedia presentation	28	16.18	44	25.43	48	27.75	53	30.64
Design a webpage	29	16.76	32	18.50	58	33.53	54	31.21
Write a computer program	30	17.34	27	15.61	85	49.13	31	18.00

Data presented in Table 6 reveals that confidence in handling high-level ICT tasks. 58(33.53%) library professionals can use a software and get rid of computer viruses and 45(26.01%) of them create a presentation very well by themselves. A good number of professionals can use a spreadsheet

(26.01%) and use a data base (23.70%) by themselves. 57(32.95%) library professionals can create a presentation and 49(28.32%) library professionals can use a software and get rid of computer viruses with the help of others

**Table 7 Training or Orientation needs of Library Professionals**

Training/ Orientation Needed	Librarian	%	Deputy Librarian	%	Assistant Librarian	%	Technical Officer	%	Technical Assistant	%	Library Assistant	%	Total	%
Use of Bibliographic Resources	7	77.78	8	61.54	28	52.83	15	62.50	29	85.29	18	45.00	105	60.70
Use of online catalogues	8	88.89	7	53.85	23	43.40	18	75.00	25	73.53	20	50.00	101	58.38
Use of E-journals, E-books, E-databases	8	88.89	8	61.54	24	45.28	19	79.17	24	70.54	24	60.00	107	61.85
Internet tools and techniques	7	77.78	7	53.85	23	43.40	14	58.33	18	52.94	17	42.50	86	49.71
Search techniques and strategies	6	66.67	6	46.15	18	33.96	12	22.64	12	35.29	13	32.50	67	38.73
Library Management software	5	55.56	6	46.15	15	28.30	10	41.67	22	64.71	12	30.00	70	40.46
Digital Library software	5	55.55	5	38.46	24	45.28	9	37.50	24	70.59	13	32.50	80	46.24
Evaluation of online information software	6	66.67	5	38.46	22	41.51	5	20.83	15	44.12	10	25.00	63	36.42

Table 7 shows that 105(60.70%) library professionals indicated the need for training in use of bibliographic resources, 101(58.38%) on use of on line catalogues, 107(61.85%) is use of E-journals, E-books and E-databases, 86(49.71%) professional in internet tools and techniques, 67(38.73%) professionals in search techniques and strategies, 70(40.46%) on Library management and software, 80(46.24%) in digital library software and 63(36.42%) in evaluation of online information resources. Majority of the Technical Assistants need training or orientation in Library Management software, Digital library and institutional software, Evaluation of online information resources, search techniques and strategies use of bibliographic resources.

**Findings and Conclusion**

The present study comes out the following remarkable observations:It is found that more than 53.18 percent of the library professional are expert in using computers. It is revealed that 28.32 percent of the library professionals acquired IT skills by undergoing training in their work places.Regarding the use of ICT based resources/services/tools used by library professionals reveals the fact that, Librarians, Deputy Librarians and Assistant Librarians leading the use of ICT based services when compared to the Technical Officers, Technical Assistants and Library Assistants.The 105(60.70%) professionals indicated the need for training in use of bibliographic resources, 101(58.38%) on use of on line catalogues and 107(61.85%) in use of E-Journals, E-books and E-data bases.It was found that majority of the library

professionals are not very much confident in handling high-level ICT tasks.

**Summary**

The library professionals are not in a position to cope up with changing demand of the users in the information society satisfactorily. Ultimately the library professionals need to be trained with the latest developments to keep them up-to-date and to enable them to provide better and improved services for their users as well.

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