

ICT Training for LIS Professionals Working in Engineering Institutions in Chennai: A Study

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Abstract

This paper examines the ICT training methods, level of training, and preferred time for the training. The study was carried out among LIS professionals in Engineering Institutions in and around Chennai. The questionnaire method was used to collect the data from LIS professionals working in the above educational institutions. It is found that majority of the respondents were interested to attend lectures series, tours to other institutions and web-based tutorials to develop knowledge and skills in Information and Communication Technologies (ICTs). The respondents were preferred to attend workshops, conference/seminars in updating their knowledge and skills on ICT. It further shows that majority of respondents were interested to attend ICT training programmes after working hours.

Keywords: *ICT, ICT training, LIS professionals, Anna University and Engineering Colleges*

1. Introduction

The 21st Century has clearly shown that information unforeseen opportunities that enable multifaceted growth and development. Nobody can deny that the deployment of information technologies have profoundly altered not only the way we live and work but also reading fundamentally altering and redefining outlook about information and its modes of dissemination. Information and Communication Technology (ICT) is an umbrella term that includes all technologies for the manipulation and communication of information. Further, ICT described as the use of computer-based technology and the internet to make information and communication services available to wide range of users.⁸

2. Information and Communication Technology (ICT)

Information and Communication Technology (ICT) refers to technology that transmits, stores, creates, displays, shares, or exchanges information by electronic means. The libraries and librarians must adopt ICT to be a successful part of the information environment.⁹

Information and Communication Technology (ICT) is a diverse of technological tools and resources used to communicate

and to create, disseminate, store and manage information.

Hamelink defines as ICTs are those technologies that enable the handling of information and facilitate different forms of communication. These include capturing technologies (e.g. camcoders), storage technologies (e.g. ROMs), processing technologies (e.g. application software), communication technologies (e.g. LAN), display technologies (e.g. computer monitors).¹⁰

3. Review of Literature

Dodd et al. (2002)¹ stated that all library staff should be attained training in the basic and application concepts of ICT for everyday library works. Ondari-Okemwa (2002), Garrod(2001) and McNicol (2002)²⁻⁴ all highlighted the need for library staff to have continued training in order to best serve users and fully integrate ICTs into the everyday routine of library works and also to use their new ICT skills for library services. Spacey (2003)⁵ stated that online training in the public library could continue to grow in popularity. Spacey et al.,(2003)⁶ highlighted that each individual staff may have different preferences for training methods and these preferences should be considered in the ICT training. Objemu and Ibegwan(2006)⁷ suggested that the library

staff should be encouraged to attend workshops/seminars to learn new trends in ICTs and use of their applications for library services.

Ramzan(2002)¹¹suggested that attainment of theoretical and practical IT knowledge should be a component of library education in Pakistan. Ameen(2006)¹² stated that there should be better communication and sharing of knowledge among LIS professionals by using ICTs to meet the challenge of developing competencies needed for the digital era.

4. Objectives of the Study

The main objectives of the study are

1. To identify the various types of ICT training.
2. To find out the level of ICT training.
3. To identify the preferred time for the ICT training.

5. Methodology

A survey method based on structured questionnaire was used to collect the data for this study. The questionnaire was divided into four sections namely Personal Information, ICT training methods, level of ICT training and Time for ICT training. The

questionnaires were administered directly to the LIS professionals working in Anna University and Engineering Colleges located in and around Chennai. A total of 97 questionnaires were distributed and 83 filled in questionnaires were received back. The data were collected from Librarians 47, (56.62%), Assistant Librarians 13 (15.67%), Library Assistants 23 (27.71%) for this study. The data collected through questionnaires were converted into machine –readable form and imported into the statistical analysis package, SPSS. The data were analyzed and inference made based on standard statistical methods. The respondents were asked to select multiple answers for ICT training, level of ICT training and Time for ICT training.

6. Data Analysis

Ten ICT training methods were identified for this study. These training methods were ascertained using nominal scales such as “YES” or “NO”. The weightage was assigned from least to highest e.g. “YES” = 1 and “NO”= 2. The rank was also given from least to highest and same is shown in table1.

Table 1
ICT TRAINING

S.No	Description	ICT TRAINING			
		Yes	No	Mean	Rank
1.	In-house course training	45 54.2%	38 45.8%	1.54	4
2.	Professional Associations/Institutions	40 48.2%	43 51.8%	1.48	3
3.	Workshops	26 31.3%	57 68.7%	1.31	1
4	Hands-on Training	48 57.8%	35 42.2%	1.58	4
5.	Tours of other Institutions	56 67.5%	27 32.5%	1.67	7
6.	Conferences/Seminars	27 32.5%	56 67.5%	1.33	2
7.	Lecture series method	66 79.5%	17 20.5%	1.80	9
8.	Web-based tutorials	55 67.1%	27 32.9%	1.67	7
9.	Tele/video conferencing method	55 66.3%	28 33.7%	1.66	6
10.	Self-study training	47 56.6%	35 42.2%	1.81	10

The respondents were asked to indicate the preferred method of ICT training. Table 1 reveals that 31.3 % mean 1.31 and rank 1 of respondents were preferred to attend workshops to develop their ICT skills. It is followed by 32.5%, mean 1.33 and rank 2 of respondents were preferred to attend the conferences/seminars to update their skills

in ICT. Further, it is also found that 48.2%, mean 1.48 and rank 3 of respondents were interested to attend the training programmes organized by the professional associations/institutions on ICT. The respondents 56.6%, mean 1.81 and rank 10 were preferred Self-study method.

ICT training method was also ascertained by designation. The respondents were further grouped as Librarians, Assistant Librarians

and Library Assistants and the same is shown in table 2.

Table 2
ICT TRAINING Vs DESIGNATION

S.NO	Description	Librarian n=47		Assistant Librarian n=13		Library Assistant n=23		Total
		YES	NO	YES	NO	YES	NO	
1.	In-house course training	30 63.8%	17 36.2%	7 53.8%	6 46.2%	8 34.8%	15 65.2%	83 100%
2	Professional Associations/Institutions	20 42.6%	27 57.4%	7 53.8%	6 46.2%	13 56.5%	10 43.5%	83 100%
3	Workshops	13 27.7%	34 72.3%	6 46.2%	7 53.8%	7 30.4%	16 69.6%	83 100%
4.	Hands-on Training	26 55.3%	21 44.7%	9 69.2%	4 30.8%	13 56.5%	10 43.5%	83 100%
5.	Tours of other Institutions	29 61.7%	18 38.3%	8 61.5%	5 38.5%	19 82.6%	4 17.4%	83 100%
6.	Conferences/Seminars	12 25.5%	35 74.5%	4 30.8%	9 69.2%	11 47.8%	12 52.2%	83 100%
7.	Lecture series method	34 72.3%	13 27.7%	12 92.3%	1 7.7%	20 87.0%	3 13.0%	83 100%
8.	Web-based tutorials	28 59.6%	19 40.4%	11 84.6%	2 15.4%	16 72.7%	6 27.3%	83 100%
9.	Tele/video conferencing	25 53.2%	22 46.8%	12 92.3%	1 7.7%	18 78.3%	5 21.7%	83 100%
10.	Self-study training	23 48.9%	23 48.9%	8 61.5%	5 38.5%	16 69.6%	7 30.4%	83 100%

The respondents were asked to indicate the preferred method of training. Table 2 reveals that 63.8% of Librarians were interested to

attend in-house training programme organized by the institutions. It is also found that the majority of Assistant Librarians

(92.3%) and Library Assistant (87%) were preferred to attend lecture series method to develop their ICT skills.

ICT training method was also ascertained based on the institutions. The institutions

were grouped into two categories namely Anna University and Engineering Colleges and the same is shown in table 3.

Table 3
ICT TRAINING METHODS Vs INSTITUTIONS

S.NO	Description	Anna University n=35		Engineering Colleges n=48		Total
		Yes	No	Yes	No	
1.	In-house course training	9 25.7%	26 74.3%	36 75.0%	12 25.0%	83 100%
2	Professional associations/Institutions	15 42.9%	20 57.1%	25 52.1%	23 47.9%	83 100%
3	Workshops	8 22.9%	27 77.1%	18 37.5%	30 62.5%	83 100%
4.	Hands-on Training	13 37.1%	22 62.9%	35 72.9%	13 27.1%	83 100%
5.	Tours of other Institutions	23 65.7%	12 34.3%	33 68.8%	15 31.3%	83 100%
6.	Conferences/Seminars	10 28.6%	25 71.4%	17 35.4%	31 64.6%	83 100%
7.	Lecture series method	27 77.1%	8 22.9%	39 81.3%	9 18.8%	83 100%
8.	Web-based tutorials	21 61.8%	13 38.2%	34 70.8%	14 29.2%	83 100%
9.	Tele/video conferencing	24 68.6%	11 31.4%	31 64.6%	17 35.4%	83 100%
10.	Self-study training	19 54.3%	16 45.7%	28 58.3%	19 39.6%	83 100%

The respondents were asked indicate the preferred method of ICT training. Table 3 reveals that respondents (77.1%) and (68.6%) working in Anna University were preferred lecture series and Tele/video conferencing methods for ICT training respectively. It is followed by 54.3% of respondents were interested in Self-study training to improve their ICT skills. The respondents (81.3%) and (75%) working in Engineering Colleges were preferred Lecture series and in –house training methods respectively to update their skills in

ICT. A very few respondents (35.4%) were interested to attend conferences/seminars in engineering colleges.

The study was also ascertained the level of ICT training to develop their skills. To ascertain the levels of ICT training, three point's scales such as "Awareness", "Application" and "Proficiency" were used in this study. The weightage was assigned from least to highest such as "Awareness =1", "Application=2" and "Proficiency"=3 .The rank was also given from least to highest and the same is shown in table 4.

Table 4
LEVEL OF ICT TRAINING

S.No	Description	LEVELS OF ICT TRAINING				
		AW	APP	PRO	Mean	Rank
1.	In-house course training	49 59.0%	24 28.9%	10 12.0%	1.53	5
2	Professional Associations/Institutions	41 49.4%	36 43.4%	6 7.2%	1.58	3
3	Workshops	37 44.6%	29 34.9%	17 20.5%	1.76	1
4.	Hands-on Training	47 56.6%	20 24.1%	16 19.3%	1.63	2
5.	Tours of other Institutions	52 62.7%	23 27.7%	8 9.6%	1.47	8
6.	Conference/Seminars	49 59.0%	25 30.1%	9 10.8%	1.52	6
7.	Lecture series	53 63.9%	21 25.3%	9 10.8%	1.47	9
8.	Web-based tutorials	50	23	10	1.52	6

		60.2%	27.7%	12.0%		
9.	Tele/video conferencing	56 67.5%	16 19.3%	11 13.3%	1.46	10
10.	Self-study training	50 60.2%	21 25.3%	12 14.5%	1.54	4

(Aw=Awareness, App=Applications, PRO=Proficiency)

The respondents were asked to indicate the level of ICT training. Table 4 reveals that 20.5%, mean 1.76 and rank 1 of respondents were preferred to attend workshops at proficiency level. It is followed by 19.3%, mean 1.63 and rank 2 of respondents were preferred to attend hands-on training at proficiency level. A very few respondents

13.3%, 1.46 and rank 10) were interested to attend Tele/video based training at proficiency level.

The level of ICT training was further ascertained on the designations such as Librarians, Assistant Librarians and Library Assistants and the same is shown in table 5.

Table 5
LEVELS OF ICT TRAINING Vs DESIGNATION

S.No	Description	Librarian n=47			Assistant Librarian n=13			Library Assistant n=23			Total
		AW	APP	PRO	AW	APP	PRO	AW	APP	PRO	
1.	In-house course training	30 63.8%	10 21.3%	7 14.9%	8 61.5%	3 23.1%	2 15.4%	11 47.8%	11 47.8%	1 4.3%	83 100%
2	Professional Associations/Institutions	18 38.3%	25 53.2%	4 8.5%	7 53.8%	4 30.8%	2 15.4%	16 69.6%	7 30.4%	0 .0%	83 100%
3	Workshops/Courses	19 40.4%	15 31.9%	13 27.7%	6 46.2%	5 38.5%	2 15.4%	12 52.2%	9 39.1%	2 8.7%	83 100%
4.	Hands-on Training	25 53.2%	9 19.1%	13 27.7%	8 61.5%	3 23.1%	2 15.4%	14 60.9%	8 34.8%	1 4.3%	83 100%
5.	Tours of other Institutions	24 51.1%	17 36.2%	6 12.8%	8 61.5%	3 23.1%	2 15.4%	20 87.0%	3 13.0%	0 .0%	83 100%
6.	Conferences/Seminars	26	15	6	7	4	2	16	6	1	83

		55.3%	31.9%	12.8%	53.8%	30.8%	15.4%	69.6%	26.1%	4.3%	100%
7.	Lecture series	29 61.7%	13 27.7%	5 10.6%	6 46.2%	5 38.5%	2 15.4%	18 78.3%	3 13.0%	2 8.7%	83 100%
8.	Web-based tutorials	26 55.3%	15 31.9%	6 12.8%	7 53.8%	3 23.1%	3 23.1%	17 73.9%	5 21.7%	1 4.3%	83 100%
9.	Tele/video conferencing	29 61.7%	10 21.3%	8 17.0%	8 61.5%	3 23.1%	2 15.4%	19 82.6%	3 13.0%	1 4.3%	83 100%
10.	Self-study training	26 55.3%	12 25.5%	9 19.1%	7 53.8%	4 30.8%	2 15.4%	17 73.9%	5 21.7%	1 4.3%	83 100%

(Aw=Awareness, App=Applications, PRO=Proficiency)

The respondents were asked to indicate the level of ICT training. Table 5 reveals that 27.7% of Librarians were interested to attend both workshops and hands- on training at proficiency level to improve skills and knowledge on ICT. A very few respondents (8.5%) were preferred to attend training programmes organized by the professional associations/institutions at proficiency level. It is also found that 23.1%

of Assistant Librarians were preferred to attend web-based training to improve ICT skills at proficiency level. A few Library Assistants (8.7%) were interested to attend both workshops as well as lecture series method at proficiency level to improve their skills in ICT.

The level of ICT training was further ascertained based on the institutions and the same is shown in table 6.

Table 6
LEVEL OF ICT TRAINING Vs INSTITUTIONS

S.No	Description	Anna University n=35			Engineering Colleges n=48			Total
		AW	APP	PRO	AW	APP	PRO	
1.	In-house course training	13 37.1%	17 48.6%	5 14.3%	36 75.0%	7 14.6%	5 10.4%	83 100%
2	Professional Associations/Institutions	19 54.3%	15 42.9%	1 2.9%	22 45.8%	21 43.8%	5 10.4%	83 100%
3	Workshops/Courses	13 37.1%	18 51.4%	4 11.4%	24 50.0%	11 22.9%	13 27.1%	83 100%

4.	Hands-on Training	16 45.7%	13 37.1%	6 17.1%	31 64.6%	7 14.6%	10 20.8%	83 100%
5.	Tours of other Institutions	23 65.7%	10 28.6%	2 5.7%	29 60.4%	13 27.1%	6 12.5%	83 100%
6.	Conferences/Seminars	19 54.3%	12 34.3%	4 11.4%	30 62.5%	13 27.1%	5 10.4%	83 100%
7.	Lecture series	22 62.9%	10 28.6%	3 8.6%	31 64.6%	11 22.9%	6 12.5%	83 100%
8.	Web-based tutorials	22 62.9%	9 25.7%	4 11.4%	28 58.3%	14 29.2%	6 12.5%	83 100%
9.	Tele/video conferencing	22 62.9%	8 22.9%	5 14.3%	34 70.8%	8 16.7%	6 12.5%	83 100%
10.	Self-study training	20 57.1%	9 25.7%	6 17.1%	30 62.5%	12 25.0%	6 12.5%	83 100%

The respondents were asked to indicate the level of ICT training to improve their skills in ICT .Table 6 reveals that majority of respondents(65.7%) working in Anna University were interested to visit other libraries in order to aware of ICT. It is also found that 51.4% of them were preferred to attend the workshops to apply ICT in the libraries. A very few respondents (17.1%) were interested to develop ICT skills at proficiency level by hands on training. The respondents (75%) working in Engineering college were interested to attend ICT

training organized by the professionals associations/institutions at awareness level, it is followed by 27.1% of respondents were preferred to attend workshops at proficiency level on ICT.

The study was also ascertained the preferred time for ICT training. Seven different timings were identified for this study .The weightage was also assigned from least to highest e.g. “YES” = 1 and “NO” =2 .The rank was also given from least to highest and the same is shown in table 7.

Table 7
ICT TRAINING TIME

S.No	Description	ICT TRAINING TIME			
		Yes	No	Mean	Rank
1.	After working hours	44 53.0%	39 47.0%	1.53	1
2	Evening time	60 72.3%	23 27.7%	1.72	7
3	Long term training Programmes (more than one day)	57 68.7%	26 31.3%	1.69	6
4.	Summer/other vocational programmes	48 57.8%	35 42.2%	1.58	3
5.	Short term training programme	55 66.3%	28 33.7%	1.66	5
6.	Week days	51 61.4%	32 38.6%	1.61	4
7.	Daily (limited periods)	47 56.6%	36 43.4%	1.57	2

The respondents were asked to indicate the preferred time for ICT training. Table 7 reveals that 53%, mean 1.53 and rank 1 of respondents were preferred to attend ICT training after working hours, followed by 56.6%, mean 1.57 and rank 2 of respondents were preferred daily(limited periods). It is also found that 57.8%, mean 1.58 and rank 3

were preferred to attend summer/other vocational programmes to update their ICT skills.

ICT training time was further evaluated based on designations such as Librarians, Assistant Librarians, Library Assistants and the same is shown in table 8.

Table 8
ICT TRAINING TIME Vs DESIGNATION

S.NO	Description	Librarian n=47		Assistant Librarian n=13		Library Assistant n=23		Total
		YES	NO	YES	NO	YES	NO	
1.	After working hours	19 40.4%	28 59.6%	11 84.6%	2 15.4%	14 60.9%	9 39.1%	83 100%
2	Evening time	28 59.6%	19 40.4%	12 92.3%	1 7.7%	20 87.0%	3 13.0%	83 100%
3	Long term training Programmes (more than one day)	33 70.2%	14 29.8%	10 76.9%	3 23.1%	14 60.9%	9 39.1%	83 100%
4.	Summer/other vocational programmes	26 55.3%	21 44.7%	9 69.2%	4 30.8%	13 56.5%	10 43.5%	83 100%
5.	Short term training programme	33 70.2%	14 29.8%	9 69.2%	4 30.8%	13 56.5%	10 43.5%	83 100%
6.	Week days	29 61.7%	18 38.3%	9 69.2%	4 30.8%	13 56.5%	10 43.5%	83 100%
7.	Daily (limited periods)	29 61.7%	18 38.3%	7 53.8%	6 46.2%	11 47.8%	12 52.2%	83 100%

The respondents were asked to indicate the preferred time for ICT training. Table 8 reveals that 70.2% of Librarians were preferred to attend both long term and short term training programmes (more than one day) to equip ICT skills, followed by 92.3% of Assistant Librarians were interested to

attend training during evening time. Further, it is also found that 60.9% of Library Assistants were preferred to attend long term training programs after working hours and ICT training time was also evaluated based on institutions and the same is shown in table 9.

Table 9
ICT TRAINING TIME Vs INSTITUTIONS

S.NO		Anna University n=35		Engineering Colleges n=48		Total
		Yes	No	Yes	No	
1.	After working hours	23 65.7%	12 34.3%	21 43.8%	27 56.3%	83 100%
2	Evening time	28 80.0%	7 20.0%	32 66.7%	16 33.3%	83 100%
3	Long term training Programmes (more than one day)	21 60.0%	14 40.0%	36 75.0%	12 25.0%	83 100%
4.	Summer/other vocational programmes	19 54.3%	16 45.7%	29 60.4%	19 39.6%	83 100%
5.	Short term training programme	19 54.3%	16 45.7%	36 75.0%	12 25.0%	83 100%
6.	Week days	15 42.9%	20 57.1%	36 75.0%	12 25.0%	83 100%
7.	Daily (limited periods)	20 57.1%	15 42.9%	27 56.3%	21 43.8%	83 100%

The respondents working in Anna University and Engineering College were asked to indicate the preferred time for ICT training. Table 9 reveals that majority of respondents (80%) working in Anna University were preferred to attend the training during evening time and the respondents (75%) working in colleges were interested to attend both long term(more than one day), short term training

during week days to develop their skills in ICT.

7. Conclusion and Recommendations

The libraries especially in academic are implementing more ICT infrastructure facilities in libraries in order to provide web based services to their users. The success of new service is based on the skills and knowledge possessed by the library staff. Another factor is that the library staff should be trained in such a way to implement,

manage and utilize the technologies to provide services to the users. In this study, the majority of respondents were interested to develop their skills in Information and Communication Technologies (ICTs). It is also found that the respondents were preferred lecture and conferences/seminars methods of training to update their skills. It is not enough simply to make aware of such technologies, but also it is necessary to have practical exposure in application, implementation and maintenance of ICTs in the libraries. Therefore, the training methods such as Web based tutorial, Workshops and Hands on training methods should be attended by LIS to develop and update their skills in ICTs. The Universities and Colleges are organizing a good number of workshops and hands on training programmes on ICTs for LIS professionals. It also provides a greater exposure to learn and implement the technologies. The study recommends that the LIS professionals have to upgrade their practical skills to implement the ICT in the libraries. It is an important to note that practical exposure is most important than theoretical exposure in the area of Information and Communication Technologies (ICTs).

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