

## **Awareness of Information and Communication Technology (ICT) Tools Among Library Professionals in Tamil Nadu**

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### **Abstract**

The world is undergoing a transition from a paper economy to a digital economy. The need of the hour is a highly proactive role from the Third World countries either singly or jointly, that would take into account the changing scenarios in the information and communication technologies and their non-linear interactions and convergence. Developing countries are being encouraged to invest in their national information infrastructure so that they can participate in knowledge based development. Advances have brought many changes in libraries. An attempt has been made in this study to identify usage of Information Communication Tool among the library professionals in Tamil Nadu. Nearly 175 questionnaires were distributed among the library professionals in Tamil Nadu. Nearly 170 responses (97%) were received. It is found that all the respondents are using in one-way or the other various types of ICT Media tools.

*Keywords: Information and communication technology;  
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### **Introduction**

The application of modern communications technology in the academic libraries are made more near to the library

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professionals as it gives the user some new services. Due to improved communications and networking facilities, the academic library users are much aware of online database and other information services. Information and communication technology are providing the library professional with new opportunities to improve their sources and services. ICT are a diverse set of technological tools and used to communicate, and create, disseminate, store, and manage information. A computer network consists of set of communication channels interconnecting a set of computing devices or nodes that can communicate with each other. The nodes may be computer terminals, a communication unit for various kinds distributed over different places. Telecommunications help to provide infrastructure for free flow of information with existing telephone network or with the satellite interface.

### **Information Communication Technology**

ICT are a diverse set of technological tools and used to communicate, and create, disseminate, store, and manage information. A computer network consists of set of communication channels interconnecting a set of computing devices or nodes that can communicate with each other. The nodes may be computer terminals, a communication unit for various kinds distributed over different places. Telecommunications help to provide infrastructure for free flow of information with existing telephone network or with the satellite interface.

### **Literature Survey**

A huge amount of literature is available on the use of ICT in developed and developing countries. Following is a brief overview of the most relevant studies on the subject.

Nicholas et. al. (2003) conducted a study in the UK to examine the web use for health information and advice. More than 1300 people were surveyed. The study showed that 66% of the respondents accessed the Internet from home, 28% from work place and the remainder (6%) used a combination of both work

place and home. Natarajan (2003) found that developments in information technology have facilitated the emergence of new electronic devices media and formats. The library and information scenario is changing and there is a paradigm shift from printed publications to formless data, from ownership of documents to access to information, intermediary to end user model of services, location specific libraries to virtual libraries. Azeer (2003) explained about digital library and how it is designed and implemented. It also explains design issues like hardware, software, and storage of search engines, accessibility and security. Ali (2004) assessed that out of the seven libraries in Delhi included in the study, four were using locally designed packages whereas the others three used branded software. Gulati (2004) discussed the status of information and communication technologies usage in Indian libraries with special reference to special libraries and the efforts made by various institutions to propagate e-information products and services. The Author also highlighted consortia efforts in India like JCCC Consortium, INDEST Consortium, CSIR E-Journals Consortia, and UGC infonet. Gulati further discussed digitization efforts in India at NISCAIR, New Delhi, IIITM, Kerala, C-DAC Pune, and the Digital Library of India. In addition the author incorporated the details on major information systems in India and major library networks in India (such as INFLIBNET, DELNET, CALIBNET etc.).

Kiondo (2004) discussed emerging issues in selection and acquisition of electronic information resources in academic libraries of developing countries paying particular attention to the situation at the University of Dares Salaam Library. He identified that emerging and challenging issues were related to selection and acquisition of electronic information resources. The emerging issues include the information technology skills of staff and users, technology infrastructure, financial resources and collection development and management policy. Parida (2004) emphasized the significance of digital libraries in present information era. Becker (2004) conducted a study on the Internet use by 2250 teachers from public and private schools in the USA. The study revealed that 90% of the teachers had Internet access. More than half of the teachers (59%) had Internet access at home. A majority

of the teachers (68%) used Internet to find information resources for preparing their lessons.

Bilawar (2004) mainly focused on the nature of communication technology and highlighted various modes of mass communication through computer and the internet, thereby having impact on libraries and communication services. Wijayasundara (2005) identified, in priority order, the barriers in the application of ICT in libraries are technological, managerial, infrastructure, human, political and social, and suggestions to overcome these barriers were given. Igun (2005) identified the challenges faced by the libraries and information centres in Africa in the establishment of electronic publishing. Apart from the information source that can be obtained through the internet and downloaded online, the actual acquisition of electronic books is still not possible. Krishnamurthy (2005) discussed the experience of the design of digital library in relation to digitizing of database.. Ani, O. E. et. al (2005) have investigated the extent of adoption of information and communication technology (ICT) in university libraries in Nigeria. The major obstacles that influence effective adoption of ICT in university libraries are inadequate funds and the poor state of electricity in Nigeria.

The review of literature establishes that application of ICT demands studying its impacts on different community groups.

### **Methodology**

An attempt has been made in this study to identify the awareness of Information Communication Tools among the library professionals in Tamil Nadu. The relevant data is collected from the librarians of the concerned institutions by employing mailed questionnaire method. Nearly 175 questionnaires were distributed among the library professionals in Tamil Nadu. The respondents have properly answered the queries posed by the researcher. After completion of answering, they returned the questionnaires to the researcher. The data collection was carried out from January 2007 to May 2007. Nearly 170 responses (97%) were received.

## **Brief Overview of Tamil Nadu**

Tamil Nadu State is situated at the south eastern extremity of the Indian Peninsula. The State can be divided broadly into two natural divisions (a) the coastal plains of south India and (b) the hilly western area. Parallel to the coast and gradually rising from it is the broad strip of plain country the state has an uninterrupted coastline of 922 Kms. The Tamil Nadu consists of thirty districts. It is the 11th State in India in area forming 4.11 percent of the Union areas. There has been a rapid growth in the number of institutions imparting education at the college level. Today, there are 32 universities, in addition, there are 4 Anna University constituent colleges, 6 government engineering colleges, 1 Central government Institutions(engineering), 3government aided engineering colleges, 224 self-finance engineering colleges, 135 polytechnics, 526 industrial institutes, 244 arts and science colleges, 27 Colleges of education , 15 oriental colleges, 5 physical education colleges and 2 schools of social work.

## **Objectives of the Study**

- To study the ICT Media choice among the library professionals in Tamil Nadu
- To find and examine the use pattern of Information and Communication Tools by the respondents' in the professionals process
- To analyse respondents' perception towards the appropriateness of the different CT Media
- To investigate the effects of respondents on their evaluation of a spectrum of media that are concurrently available, and
- To offer suggestions for the effective management of emerging tools in the professional's process.

Table 1. Characteristics of study population

Characteristics	Frequency	Percent
<b>Sex:</b>		
Male	95	56
Female	75	44
<b>Qualification:</b>		
M.L.I.S	48	28
M.Phil	110	65
Ph.D	12	7
<b>Domicile:</b>		
Rural	45	26
Urban	125	74
<b>Age:</b>		
Less than 40	92	54
Above 40	78	46
<b>Knowledge of computer:</b>		
Yes	165	97
No	5	3

### **Characteristics of Study Population**

Table 1 shows the study population comprised of male and female library professionals in the Engineering colleges in Tamil Nadu. Among the study population (N=170) 56 per cent of the respondents are male and 44 per cent female. About 28 per cent of the respondents are having M.L.I.S degree qualification, 65 per cent of the librarians are Post Graduate degree with M.Phil Degree and 7 per cent of the respondents are having Ph.D in Library Science. A majority of the respondents (74%) belong to urban area. In the categories of age, most of the respondents (54%) are below 40, and also the majority of the respondents (97%) have computer knowledge with IT training.

### Use of ICT Media

In order to identify the utility of ICT Media such as E-group, E-Mail, Fax, Internet, Intranet, Mobile Phone, Video Conferencing and Voice mail has been ascertained and the same is shown in Table 2.

Table 2. Use of ICT media

S.No	ICT Media	Frequency	Percent
1	E-Group	50	29
2	E-Mail	160	94
3	Fax	24	14
4	Internet	154	91
5	Intranet	26	15
6	Mobile Phone	157	92
7	Video Conferencing	20	12
8	Voice Mail	40	24

Table 2 shows that maximum members of the sample (94%) are using e-mail, followed by mobile phones (92%) and Internet (91%). From this it is clear that the e-mail and mobile phones have been cutting across the communication barriers at global level and very significantly influencing the community. Further, the use of mobile phone is highly significant due to the reason that is an instant and easy way to communicate with people without any other communication facility except a cell phone. The use of different communication tools have been analysed by gender wise, and status of users and the same have been presented in Tables 3 and Table 4 respectively. The table 3 shows the male professionals are using mobile phone other than media. The mobile phone was by the way communicating short message service. And also the female respondents are using the fewer amounts of video conferencing media.

Table 3 indicates the cross tabulation of information communication tools Vs sex. It shows the gender wise classification of ICT media tools. And it is also found that the use

of Communication tools by the male respondents is comparatively higher than female respondents with respect to E-group (15%), Mobile phone (51%), Internet (50%), and Voice mail (12%)

Table 3: Use of ICT media vs sex (n = 170)

S.No.	ICT Media	Male	Female	Total
1	E-Group	26 (15%)	24 (14%)	50 (29%)
2	E-Mail	85 (50%)	75 (44%)	160 (94%)
3	Fax	12 (7%)	12 (7%)	24 (14%)
4	Internet	85 (5)	69 (41%)	154 (91%)
5	Intranet	12 (7%)	14 (8%)	26 (15%)
6	Mobile Phone	87 (51%)	70 (41%)	157 (92%)
7	Video Conferencing	11 (6%)	9 (5%)	20 (12%)
8	Voice Mail	21 (12%)	19 (11%)	40 (24%)

The use of ICT Media by different age groups of users is shown in Table 4. It is found that below forty age limit is using all most all the ICT Media for their professional which emphasize on e-mail (51%) followed by Internet (48%), mobile (47%).The below forty ages is comparatively higher than the above forty age using information communication technology tools.



Table 4. Use of ICT media tools vs Age ( $n = 170$ )

S.No.	ICT Media	Age below 40	Age above 40	Total
1	E-Group	28 (16%)	22 (13%)	50 (29%)
2	E-Mail	87 (51%)	73 (43%)	160 (94%)
3	Fax	18 (11%)	6 (4%)	24 (14%)
4	Internet	82 (48%)	72 (42%)	154 (91%)
5	Intranet	16 (94%)	10 (6%)	26 (15%)
6	Mobile Phone	80 (47%)	77 (45%)	157 (92%)
7	Video Conferencing	8 (5%)	12 (7%)	20 (12%)
8	Voice Mail	17 (10%)	23 (14%)	40 (24%)

#### **Utility of Various ICT Media in their Work**

A list of 10 variable associated with the utility of various ICT Media was identified. The utility of these variables with various ICT Media in day to today work have been examined and responses were analysed on a five points Scale such as “Strongly Agree”, “Agree”, “Uncertain”, “Disagree”, and “Strongly Disagree”. The analysis is presented in Table 5.

Table 5 expresses that the maximum number of respondents use ICT to help update their knowledge as the highest value was received by the variable “Help to update the knowledge”. The utility of these 10 variables was evaluated against the sex. The results are shown in Table-6

Table 5: Utility of ICT media

S.No	ICT Media Help	1	2	3	4	5
1	Provides a platform for discussing the professional issues	102 (60%)	56 (33%)	12 (7%)	0	0
2	Help to improve the professional developments	108 (54%)	62 (36%)	0	0	0
3	Help to update the knowledge	148 (87%)	13 (8%)	5 (3%)	4 (2%)	0
4	It is an opportunity to interact with friends and experts	142 (84%)	15 (9%)	6 (4%)	7 (4%)	0
5	Resolve disagreements	24 (14%)	70 (41%)	30 (18%)	38 (22%)	8 (5%)
6	Facilitates to make important decision	27 (16%)	64 (38%)	32 (19%)	38 (22%)	9 (5%)
7	Get to know someone	25 (15%)	83 (49%)	52 (31%)	8 (5%)	2 (1%)
8	Exchange of confidential or sensitive information	27 (16%)	45 (32%)	27 (16%)	49 (29%)	22 (13%)
9	To keep in touch with old friends	106 (62%)	54 (32%)	8 (5%)	0	2 (1%)
10	Time saving	101 (59%)	67 (39%)	0	2 (1%)	0

Table 6. Utility of ICT media vs sex

Sl. No	ICT Media Help	MALE					FEMALE				
		1	2	3	4	5	1	2	3	4	5
1	Provides a platform for discussing the professional issues	60 (67%)	28 (31%)	2 (3%)	0	0	42 (53%)	28 (35%)	10 (13%)	0	0
2	Help to improve the professional developments	63 (70%)	27 (30%)	0	0	0	45 (56%)	35 (44%)	0	0	0
3	Help to update the knowledge	82 (91%)	4 (4%)	2 (2%)	2 (2%)	0	66 (83%)	9 (11%)	3 (4%)	2 (3%)	0
4	It is an opportunity to interact with friends	82 (91%)	5 (6%)	1 (1%)	2 (2%)	0	60 (75%)	10 (13%)	5 (6%)	5 (6%)	0
5	Resolve disagreements	20 (22%)	34 (38%)	14 (16%)	18 (20%)	4 (4%)	4 (5%)	36 (45%)	16 (20%)	20 (25%)	4 (5%)
6	Facilitates to make important decision	20 (22%)	30 (33%)	14 (16%)	24 (27%)	2 (2%)	7 (9%)	34 (43%)	18 (23%)	14 (18%)	7 (9%)
7	Get to know someone	19 (21%)	40 (44%)	27 (30%)	4 (4%)	0	6 (8%)	43 (54%)	25 (31%)	4 (5%)	2 (3%)
8	Exchange confidential information	21 (23%)	20 (22%)	16 (18%)	21 (23%)	12 (13%)	6 (8%)	25 (31%)	11 (14%)	28 (35%)	10 (13%)
9	To keep in touch with old friends	62 (69%)	24 (27%)	4 (4%)	0	0	44 (55%)	30 (38%)	4 (5%)	0	2 (3%)
10	Time saving	60 (67%)	30 (33%)	0	0	0	41 (51%)	37 (46%)	0	2 (3%)	0

Furthermore, the utility of these 10 variables was evaluated with the status of the respondent as shown in Table 7.

Table 7. Utility of ICT media vs. age

#	Communication Media Help	Age below 40					Age above 40				
		1	2	3	4	5	1	2	3	4	5
1	Provides a platform for discussing the professional issues	60 (63%)	30 (32%)	5 (5%)	0	0	42 (56%)	26 (35%)	7 (9%)	0	0
2	Help to improve the professional developments	62 (65%)	33 (35%)	0	0	0	45 (60%)	30 (40%)	0	0	0
3	Help to update the knowledge	82 (86%)	7 (7%)	3 (3%)	3 (3%)	0	66 (88%)	6 (8%)	2 (3%)	1 (1%)	0
4	It is an opportunity to interact with friends	80 (34%)	9 (9%)	3 (3%)	3 (3%)	0	62 (83%)	6 (8%)	3 (4%)	4 (5%)	0
5	Resolve disagreements	18 (19%)	40 (42%)	10 (11%)	23 (24%)	4 (4%)	6 (8%)	30 (40%)	20 (27%)	15 (20%)	4 (20%)
6	Facilitates to make important decision	21 (22%)	33 (35%)	15 (16%)	23 (24%)	3 (3%)	6 (8%)	31 (41%)	17 (23%)	15 (20%)	6 (8%)
7	Get to know someone	18 (19%)	46 (48%)	26 (27%)	3 (3%)	2 (2%)	7 (9%)	37 (49%)	26 (35%)	5 (7%)	0
8	Exchange confidential information	22 (23%)	25 (6%)	14 (15%)	24 (25%)	10 (11%)	5 (7%)	20 (27%)	13 (17%)	25 (33%)	12 (16%)
9	To keep in touch with old friends	70 (74%)	20 (21%)	3 (3%)	0	2 (2%)	36 (48%)	34 (45%)	5 (7%)	0	0

10	Time saving	61 (64%)	33 (35%)	0	1 (1%)	0	40 (53%)	34 (45%)	0	1 (1%)	0
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### Conclusions

It is found that all the respondents are using in one way or the other various types of ICT Media tools including Internet and mobile which are significantly influencing the users community. The use of Communication tools by the female respondents is comparatively higher than the male respondents. There exists no significant relationship between the variables concerning the use of e-mail and Internet vs. Sex. However, there exist the similarities between the variables associated with the respondents' opinion on utility of various ICT Media for their day to day work. With regard to the utility of ICT media variable, a majority of the respondents have expressed their view that ICT is the most helpful media for professionals. The age below 40 and age above 40 surveyed firmly believe themselves that communication tools have a significant role to play in supporting and enhancing their professional and research activities. Their comments also suggest that they see the use of ICT as potentially going well beyond the use of the Internet to search for resources and the use of email to stay in touch with friends, professional and experts. This is evidenced by the overwhelming majority responding 'strongly agree' to the variable 'Provides a platform for discussing academic issues'.

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