S.B. Journal of Library and Information Science
Vol.1, No.1, January-June 2025: P.35-45
Original Article
Available online at www.bpaspublications.com

ICT Awareness and Skills among Library Professionals in South Tamil Nadu's Higher Educational Institutions

Dr. S. Meena*

Author's Affiliation:
Librarian, Pachaiyappa's College, Chennai, Tamil Nadu 600030, India.
E-mail: meenakicha@gmail.com

***Corresponding Author: Dr. S. Meena,** Librarian, Pachaiyappa's College, Chennai, Tamil Nadu 600030, India.
E-mail: meenakicha@gmail.com

How to cite this article: Meena S. (2025). ICT Awareness and Skills among Library Professionals in South Tamil Nadu's Higher Educational Institutions. *S.B. Journal of Library and Information Science,* 1(1), 35-45.

ABSTRACT
This paper is duchesses about the Awareness/ Skill for the Use of ICT Applications in Academic Libraries among the Library Professionals in higher educational institutions on Tamil Nadu. The relevant data collected from 600 questionnaires were distributed among the library professionals in the higher educational institutions in Southern Tamil Nadu which covers ten districts like Dindigul, Kanyakumari, Madurai, Ramanathapuram, Sivagangai, Tenkasi, Theni, Tutucorin, Tirunelvaeli and Virudhunagar Totally 109 'Engineering & Technology' and 243 'Arts & Science' institutions. The 600 questionnaires were distributed among the library professionals are working all the higher educational institutions in Tamil Nadu. . Among the 600, 92.67% were responded which consists of 35.00% in 'Engineering & Technology' and 57.67% in 'Arts & Science' institutions. the respondents preferred 'Effective search of online/electronic resources' as the first priority to Extent of Formal Library Education Has Assisted to Obtaining the Skills. 'Familiarity with automated acquisition and serial control' and 'Installation of software, antivirus tools and hardware troubleshooting' are the second and third preferences

KEYWORDS: *Awareness; Skills; Use of ICT; Academic Libraries; Tamil Nadu*

1. INFORMATION TECHNOLOGY IN LIBRARIES

The technology revolution has brought many changes to the way librarians and library staff manages their day and provide information to the users. Up until ten years ago, libraries were book focused institutions. They had just printed card catalogs; online databases had barely become tools in the librarian's arsenal to answer questions. In the early 1990s Public access terminals and new online public access catalogue became ubiquitous in libraries to share information regarding library holdings and management of library acquisition. Development in the present century is the globalization of the educational system which depends to a large extent on virtual knowledge. The challenge before information professional is to build virtual library suitable to meet the information requirements of the different segments of the academic community in the knowledge based society. Modern libraries are able to provide information services to their patrons more efficiently with application of ICT in their environment, which satisfy the currency of information. It becomes clear that information service needs to be efficiently integrated with ICT to ensure to meet the demand for high-tech information system.

Received on 13.08.2024/ Revised on 24.10.2024/ Accepted on 15.12.2024
Online First Published on Jan 10, 2025 at https://bpaspublications.com/

The network is the centre piece that links servers and end users. Without the network there is no library today. The computer world is changing daily as companies appear and disappear and new products are introduced. The networking world becomes very complex, evolving rapidly. The application of modern communications technology in the academic libraries is made more near to the library professionals as it gives the user some new services. Due to improved communication and networking facilities, the academic library users are much aware of online database and other information services. Information and communication technology provide the library professional with new opportunities to improve their sources and services. The recent developments are made available to them precisely and currently in the academic libraries. Academic library and information centers with the intensive use of electronic systems and networks have traditional libraries to become modern libraries which aim to facilitate access to information just in time to the critical want of the users. The impacts of ICT on library activities change the types of services and resources available in libraries.The application of computer and telecommunication technology has greatly influenced the teaching and research community to get access to information irrespective of space and cost factors. The networking of libraries has dramatically changed the old concept of libraries in new information storage and retrieval mechanism has now become very faster, easier and specifically the computer to manual card system.

2. REVIEW OF LITERATURE

Adekoya and Inyang (2022) In their study, "Academic Library Leadership in Nigeria and ICT Adoption," Adekoya and Inyang (2022) investigate the leadership role of academic library professionals in adopting and implementing ICT within Nigerian academic libraries. The authors emphasize the challenges of integrating ICT due to limited resources, inadequate training, and resistance to change among staff. They highlight the importance of leadership in guiding ICT adoption and ensuring that library professionals are equipped with the necessary ICT skills for enhancing service delivery. This study is relevant to understanding the broader context of ICT adoption in academic libraries, especially in resource-constrained environments.

Saunders (2020) discusses "Core knowledge and specialized skills in academic libraries," focusing on the evolving competencies that library professionals need to possess in the digital age. The study emphasizes the need for a combination of core competencies (e.g., information literacy, cataloging) and specialized ICT skills (e.g., digital preservation, data management). Saunders identifies that while many library professionals have strong core knowledge, there is a need for continuous professional development to keep up with rapidly changing technologies. This aligns with the notion that ICT competence is not just a matter of basic knowledge but also requires specialized training in emerging technologies.

Bansode and Viswe (2017) study on "ICT literacy among library professionals working in university libraries in Maharashtra, India" reveals a significant gap in ICT literacy among library professionals in India. Despite the increasing reliance on digital technologies, many library staff members were found to be insufficiently skilled in ICT applications such as digital cataloging, electronic resource management, and online information retrieval. The study calls for targeted ICT training programs to bridge the gap in skills and enhance library services. This finding is relevant to understanding the barriers to ICT adoption in academic libraries and the need for institutional support in developing ICT proficiency.

Shastri and Chudasma (2022) explore "The perception of ICT skills and challenges of usage of technologies among library professionals of Gujarat State during the COVID-19 pandemic." Their study highlights the increased dependence on ICT during the pandemic, which forced library professionals to adopt remote working tools and digital library platforms. However, the authors note several challenges, including inadequate infrastructure, lack of formal ICT training, and the rapid pace of technological change. The study underscores the importance of providing ongoing professional development in ICT skills, especially in crisis situations where the reliance on digital technologies becomes more pronounced.

Abbas and Siddique (2020) investigate "ICT competencies among university library professionals of Punjab, Pakistan." Their study reveals that while most library professionals are familiar with basic ICT tools, there is a gap in advanced ICT skills such as data analytics, digital archiving, and content management. The study highlights the need for a strategic approach to ICT training and recommends that university libraries adopt a more comprehensive ICT competency framework. The findings of this study are significant as they highlight the need for formalized ICT training to equip library professionals with the necessary skills to manage the evolving demands of modern libraries.

3. OBJECTIVES OF THE STUDY

The following objectives are framed;

1. To identify demographic details of library professionals of higher educational institutions in South Tamil Nadu
2. To know how the Formal Library Education Assisted to Obtaining the Skills
3. To identify the level of awareness of ICT skills among the LIS professionals.

4. METHODOLOGY

This study is to analyses the Awareness on Information Communication Technology (ICT) among library Professionals in Higher Educational Institutions in South Tamil Nadu. The vital role of Higher Educational Institutions in the educational development is quite important. The findings of this study based on the information provided by library professionals of Higher Educational Institutions libraries of South Tamil Nadu which includes Engineering & Technology and Arts & Science Colleges and they do not represent other institutions. 600 library professionals working in 556 Higher Educational Institutions situated in South Tamil Nadu in Tamil Nadu, alone taken up for the study. This study is mainly based on Awareness on Information Communication Technology (ICT) among library Professionals in Higher Educational Institutions in Tamil Nadu. Hence, this study is undertaken with certain degree of caution.
The study covered only library professionals working in Higher Educational Institutions in South Tamil Nadu, Tamil Nadu which covers institutions only on 'Engineering & Technology' and Arts & Science'. This study not covered the other higher educational institutions like Universities, Deemed to be Universities, Polytechnic Colleges, Nursing Colleges, and Education Colleges etc.,. due to the time constraints, cost and others.

5. DATA ANALYSIS

The researcher has collected relevant data from the library professionals of the Higher Educational Institutions situated in South Tamil Nadu. Totally 600 questionnaires were distributed among the library professionals in the higher educational institutions in Southern Tamil Nadu which covers ten districts like Dindigul, Kanyakumari, Madurai, Ramanathapuram, Sivagangai, Tenkasi, Theni, Tutucorin, Tirunelvaeli and Virudhunagar Totally 109 'Engineering & Technology' and 243 'Arts & Science' institutions. The 600 questionnaires were distributed among the library professionals are working all the higher educational institutions which consists of 235(39.17%) in 'Engineering & Technology' and 365(60.83%) in 'Arts & Science' institutions. Among the 600, 556(92.67%) were responded which consists of 210(35.00%) in 'Engineering & Technology' and 346(57.67%) in 'Arts & Science' institutions.. The response rate is 92.67%. The data thus collected over a period from October 2020 to July 2021 from has been analyzed using SPSS. To test the hypothesis, chi-square test, Correlations, Mean and Standard Deviation are applied besides percentile analysis. The diagrammatic and graphical representations of the data are also presented for visualizing the data.

5.1. Sample Size

The Questionnaires were distributed to 600 library professionals in the higher educational institutions in Tamil Nadu and the response received from them given in Table 1.

Table 1: Distribution of Questionnaires

		Distributed			Received		
Sl. No.	**District**	**Engg. & Tech.**	**Arts & Science**	**Total**	**Engg. & Tech.**	**Arts & Science**	**Total**
1	Dindigul	17(2.83)	44(7.33)	61(10.17)	17(2.83)	39(6.5)	56(9.33)
2	Kanyakumari	42(7)	37(6.17)	79(13.17)	39(6.5)	41(6.83)	80(13.33)
3	Madurai	29(4.83)	58(9.67)	87(14.5)	27(4.5)	70(11.67)	97(16.17)
4	Ramanathapuram	11(1.83)	32(5.33)	43(7.17)	7(1.17)	29(4.83)	36(6)
5	Sivagangai	18(3)	39(6.5)	57(9.5)	17(2.83)	27(4.5)	44(7.33)
6	Tenkasi	12(2)	27(4.5)	39(6.5)	11(1.83)	19(3.17)	30(5)
7	Theni	10(1.67)	19(3.17)	29(4.83)	9(1.5)	14(2.33)	23(3.83)
8	Tirunelvaeli	30(5)	29(4.83)	59(9.83)	28(4.67)	23(3.83)	51(8.5)
9	Tutucorin	30(5)	35(5.83)	65(10.83)	27(4.5)	35(5.83)	62(10.33)
10	Virudhunagar	36(6)	45(7.5)	81(13.5)	28(4.67)	49(8.17)	77(12.83)
	Total	**235(39.17)**	**365(60.83)**	**600(100)**	**210(35)**	**346(57.67)**	**556(92.67)**

(Figures in Parentheses denote percentage)

The table 1 shows the distribution of questionnaires among the library professionals in the higher educational institutions in Southern Tamil Nadu which covers ten districts like Dindigul, Kanyakumari, Madurai, Ramanathapuram, Sivagangai, Tenkasi, Theni, Tutucorin, Tirunelvaeli and Virudhunagar Totally 109 'Engineering & Technology' and 243 'Arts & Science' institutions. The 600 questionnaires were distributed among the library professionals are working all the higher educational institutions which consists of 235(39.17%) in 'Engineering & Technology' and 365(60.83%) in 'Arts & Science' institutions. Among the 600, 556(92.67%) were responded which consists of 210(35.00%) in 'Engineering & Technology' and 346(57.67%) in 'Arts & Science' institutions. It is observed from the table , majority of the respondent from 'Arts & Science institutions.

5.2. Demographic Details

The demographic details of the library professionals working higher educational institutions in Southern Tamil Nadu based on the responses in Table 2.

Table 2. 4.2. Demographic Details

Description	**Engg. & Tech**	**Arts & Science**	**Total**
Gender			
Male	154(27.7)	241(43.35)	395(71.04)
Female	56(10.07)	105(18.88)	161(28.96)
Designation			
Librarian	109(19.6)	285(51.26)	394(70.86)
Assistant Librarian	59(10.61)	31(5.58)	90(16.19)
Library Asst.	42(7.55)	30(5.4)	72(12.95)
Qualification			
Ph.D	68(12.23)	127(22.84)	195(35.07)

NET	6(1.08)	6(1.08)	12(2.16)
SLET/SET	27(4.86)	21(3.78)	48(8.63)
Others	109(19.6)	192(34.53)	301(54.14)
Age			
Below 30	17(3.06)	22(3.96)	39(7.01)
31-40 years	74(13.31)	146(26.26)	220(39.57)
41-50 years	77(13.85)	121(21.76)	198(35.61)
Above 50 years	42(7.55)	57(10.25)	9(1.62)
Experience			
Up to 5 Years	33(5.94)	51(9.17)	84(15.11)
6 to 10 Years	73(13.13)	131(23.56)	204(36.69)
11-15 Years	55(9.89)	77(13.85)	132(23.74)
More than 15 years	49(8.81)	87(15.65)	136(24.46)
Total	**210(37.77)**	**346(62.23)**	**556(100)**

(Figures in the parenthesis denote percentage)

Table 2 shows the demographic details of the library professionals who are working in the higher educational institutions libraries in Southern Tamil Nadu which consists of Kanyakumari, Tirunelvaeli, Tenkasi, Tutucorin, Virdhunagar, Maurai, Ramanathapuram, Sivagangai, Theni and Dindigul. Among the 556, 240(70.24%) professionals are from Engineering & Technology institutions which consist of 154(27.7%) Male and 56(10.07%) of them are Female. Similarly 346(62.23%) library professionals are working in Arts and Science Colleges which consist of 241(43.35) Male and 105(18.88) of them are Female. In the designation wise analysis, 394(70.86) of them are 'Librarian' which consist of 109(19.6%) professionals from 'Engineering & Technology' and 285(51.26%) professionals from 'Arts & Science'. Followed by 90(16.19%) of them working as 'Assistant Librarian' 59(10.61%) professionals from 'Engineering & Technology' and 31(5.58%) professionals from 'Arts & Science'. And 72(12.95%) professionals are working as 'Library Assistant' 42(7.55%) professionals from 'Engineering & Technology' and 30(5.4%) professionals from 'Arts & Science'. In the qualification wise analysis, 240(70.24%) professionals are from Engineering & Technology institutions which consist of 68(12.23%) of them qualified 'Ph.D', 6(1.08%) 'NET', 27(4.86%) of them qualified 'SLET/SET' and others (109(19.6%) has professionals degree only. Followed by 346(62.23%) professionals are from 'Arts & Science' which consist of 127(22.84%) of them qualified 'Ph.D', 6(1.08%) 'NET', 21(3.78%) of them qualified 'SLET/SET' and others 192(34.53%) has professionals degree only. Age wise analysis, 240(70.24%) professionals are from Engineering & Technology institutions which consist of 17(3.06%) of them in 'Below 30', 74(13.31) are in '31-40years', 77(13.85%) of them '41-50 years' and 42(7.55%) has professionals are in the category of 'Above 50 years'. Followed by 346(62.23%) professionals are from 'Arts & Science' which consist of 22(3.96%) of them in 'Below 30', 146(26.26%) are in '31-40years', 121(21.76%) of them '41-50 years' and 57(10.25%) has professionals are in the category of 'Above 50 years'.

Library professionals year of experiences wise analysis, 240(70.24%) professionals are from Engineering & Technology institutions which consist of 33(5.94%) of them in 'Up to 5 years', 73(13.13%) are in '6-10 years', 55(9.89%) of them '11-15 years' and 49(8.81%) has professionals are in the category of 'More than 15 years'. Followed by 346(62.23%) professionals are from 'Arts & Science' which consist of 51(9.17%) of them in 'Up to 5 years', 131(23.56%) are in '6-10 years', 77(13.85%) of them '11-15 years' and 87(15.65%).

5.3. Formal Library Education Has Assisted To Obtaining the Skills

The formal library education has assisted to obtaining the skills of Library professional's has been analysed based on the responses and it is shown in the table.3.

Table 3: Formal Library Education Has Assisted to Obtaining the Skills

S. No	Skills	SD	D	NO	A	SA	WAM	Std.Dev.	Rank
1.	Using current methods of cataloging for print & E-resources	121(21.76)	46(8.27)	36(6.47)	68(12.23)	285(51.26)	3.63	1.654	12
2.	Familiarity with automated acquisition and serial control	50(8.99)	47(8.45)	84(15.11)	54(9.71)	321(57.73)	3.99	1.371	2
3.	Conducting User education program	73(13.13)	42(7.55)	55(9.89)	68(12.23)	318(57.19)	3.93	1.467	5
4.	Evaluating library automated systems	67(12.05)	48(8.63)	32(5.76)	91(16.37)	318(57.19)	3.98	1.436	4
5.	Knowledge of Research methodologies	86(15.47)	41(7.37)	40(7.19)	47(8.45)	342(61.51)	3.93	1.541	6
6.	Preparing budget and fiscal management & Personnel management	62(11.15)	58(10.43)	53(9.53)	85(15.29)	298(53.6)	3.90	1.430	7
7.	Understanding different marketing techniques	84(15.11)	50(8.99)	73(13.13)	52(9.35)	297(53.42)	3.77	1.528	11
8.	Knowledge of network management	72(12.95)	64(11.51)	60(10.79)	60(10.79)	300(53.96)	3.81	1.497	10
9.	Webpage designing	90(16.19)	33(5.94)	52(9.35)	68(12.23)	313(56.29)	3.87	1.529	8
10.	Effective search of online/electronic resources	31(5.58)	38(6.83)	45(8.09)	71(12.77)	371(66.73)	4.28	1.203	1
11.	Installation of software, antivirus tools and hardware troubleshooting	59(10.61)	57(10.25)	48(8.63)	63(11.33)	329(59.17)	3.98	1.431	3
12.	Presentation skills	92(16.55)	42(7.55)	37(6.65)	59(10.61)	326(58.63)	3.87	1.560	9

(SD- Strongly Disagree, D-Disagree, NO- No Opinion, A-Agree, SA- Strongly Agree) *(Figures in the parentheses denote percentage)*

It is observed from Table 4.17 that the respondents preferred 'Effective search of online/electronic resources' as the first priority to Extent of Formal Library Education Has Assisted to Obtaining the Skills. 'Familiarity with automated acquisition and serial control' and 'Installation of software, antivirus tools and hardware troubleshooting' are the second and third preferences indicated by the library professionals. The least preference was given for 'Using current methods of cataloguing for print & E-resources'. The WAM value of all the variables ranges between 3.63 and 4.28. It can be inferred that all the five variables lies between 'Agree' and 'Strongly Agree'. The deviation of opinion ranges between 1.203 and 1.654.

5.4. Formal Library Education Has Assisted to Obtaining the Skills Vs Type of Institutions

The extent of formal library education has assisted to obtaining the skills of Library professional's Vs type of Institutions Wise has been analysed based on the responses and it is shown in the table 4.

Table 4: Formal Library Education has assisted to Obtaining the Skills Vs Type of Institutions

Sl. No.	Skills	Engg.& Tech			Arts & Science			Sig.
		M	SD	R	M	SD	R	
1	Using current methods of cataloging for print & E-resources	3.60	1.706	11	3.65	1.623	12	0.401
2	Familiarity with automated acquisition and serial control	4.08	1.284	3	3.93	1.420	3	0.275
3	Conducting User education program	4.03	1.395	5	3.86	1.508	8	0.179
4	Evaluating library automated systems	4.07	1.396	4	3.93	1.460	5	0.482
5	Knowledge of Research methodologies	3.96	1.516	7	3.92	1.557	6	0.381
6	Preparing budget and fiscal management & Personnel management	4.13	1.312	2	3.76	1.482	11	0.057
7	Understanding different marketing techniques	3.51	1.623	12	3.93	1.448	4	0.016
8	Knowledge of network management	3.75	1.505	10	3.85	1.493	9	0.316
9	Webpage designing	3.99	1.462	6	3.79	1.565	10	0.533
10	Effective search of online/electronic resources	4.26	1.269	1	4.29	1.162	1	0.136
11	Installation of software, antivirus tools and hardware troubleshooting	3.81	1.544	9	4.09	1.349	2	0.123
12	Presentation skills	3.85	1.557	8	3.88	1.564	7	0.117

(M-Mean, SD-Standard Deviation, R-Rank)Degrees of Freedom:4, Table Value:9.488

It can be seen from Table 4 that the library professionals from Engineering & Technology has given 'Effective search of online/electronic resources' as the first priority. 'Preparing budget and fiscal management & Personnel management' and 'Familiarity with automated acquisition and serial control' second and third preferences indicated by the Engineering & Technology library professionals. The least preference was given by them for 'Understanding different marketing techniques'. The mean value of all the variables ranges between 3.51 and 4.26. The deviation of opinion ranges between 1.269 and1.505.

In the case of library professionals from 'Arts & Science College' has given 'Effective search of online/electronic resources' has been indicated as the first priority 'Installation of software, antivirus tools and hardware troubleshooting' and 'Familiarity with automated acquisition and serial control' are the second and third preferences indicated by library professionals. The least preference was given by them to 'Using current methods of cataloguing for print & E-resources'. The mean value of all the variables ranges between 3.65 and 4.29. The deviation of opinion ranges between 1.162 and1.565. Further, Chi square test has been administered to identify the significance. Table value is 9.488 for 5% level of significance the calculated value for all the values were less than the table value which indicated the

variables are insignificant except 'Understanding different marketing techniques' in difference opinion between library professionals towards electronic information resources usually used to get information.

5.5. Level of Awareness/ Skill for the Use of ICT in Academic Libraries

The Level of Awareness/ Skill for the Use of ICT application in Academic Libraries among the library professionals has been analysed based on the responses and it is shown in the table 5.

Table 5: Level of Awareness/ Skill for the Use of ICT in Academic Libraries

Sl. No.	Items	No Idea	Aware	Learning	Fair	Expert	WAM	Std. Dev	Rank
1	Computer Networking	109(19.6)	52(9.35)	65(11.69)	80(14.39)	250(44.96)	3.56	1.585	11
2	Assistive Technology	64(11.51)	72(12.95)	37(6.65)	78(14.03)	305(54.86)	3.88	1.469	6
3	Scanning and printings	84(15.11)	53(9.53)	46(8.27)	60(10.79)	313(56.29)	3.84	1.538	8
4	Biometric attendance	65(11.69)	40(7.19)	34(6.12)	85(15.29)	332(59.71)	4.04	1.414	3
5	LCD/ Multimedia projector	84(15.11)	53(9.53)	43(7.73)	69(12.41)	307(55.22)	3.83	1.532	9
6	RFID Technology	35(6.29)	32(5.76)	55(9.89)	72(12.95)	362(65.11)	4.25	1.220	1
7	Kiosk	79(14.21)	46(8.27)	51(9.17)	56(10.07)	324(58.27)	3.90	1.509	5
8	Plagiarism tool	43(7.73)	53(9.53)	53(9.53)	28(5.04)	379(68.17)	4.16	1.353	2
9	Barcode scanner	103(18.53)	73(13.13)	46(8.27)	83(14.93)	251(45.14)	3.55	1.590	12
10	Image scanner	49(8.81)	37(6.65)	67(12.05)	103(18.53)	300(53.96)	4.02	1.312	4
11	e- book reader	75(13.49)	60(10.79)	54(9.71)	58(10.43)	309(55.58)	3.84	1.509	7
12	Internet/WiFi	97(17.45)	70(12.59)	50(8.99)	44(7.91)	295(53.06)	3.67	1.608	10

(Figures in the parentheses denote percentage)

It is observed from Table 5 that the respondents preferred 'Internet (leased line, Dial up, Broadband)' as the first priority towards the Level of Awareness/ Skill for the Use of Information technologies. 'Plagiarism tool' and 'Biometric attendance' s the second and third preferences indicated by the library professionals. The least preference was given for 'Barcode scanner'. The WAM value of all the variables ranges between 3.55 and 4.25. It can be inferred that all the five variables lies between 'Learning' and 'Expert'. The deviation of opinion ranges between 1.220 and 1.590.

5.6. Level of Awareness/ Skill for the Use of ICT in Academic Libraries Vs Type of Institutions

The study has been further extended to Type of Institutions Wise. The mean, Standard Deviation and their rank for type of Institutions has been calculated and shown in Table 6.

Table 6: Level of Awareness/ Skill for the Use of ICT in Academic Libraries Vs Type of Institutions

Sl. No.	Items	Engg & Tech			Arts & Science			Sig.
		M	SD	R	M	SD	R	
1	Computer Networking	3.52	1.629	11	3.58	1.561	11	0.702
2	Assistive Technology	3.78	1.532	8	3.94	1.428	4	0.364
3	Scanning and printings	3.75	1.568	9	3.89	1.519	7	0.001
4	Biometric attendance	4.23	1.248	2	3.92	1.496	5	0.081
5	LCD/ Multimedia projector	3.95	1.476	5	3.76	1.562	9	0.614
6	RFID Technology	4.24	1.226	1	4.25	1.218	1	0.301
7	Kiosk	3.92	1.521	6	3.89	1.504	8	0.731
8	Plagiarism tool	4.20	1.326	3	4.14	1.371	2	0.407
9	Barcode scanner	3.46	1.634	12	3.60	1.563	10	0.087
10	Image scanner	4.03	1.292	4	4.01	1.326	3	0.594
11	e- book reader	3.72	1.554	10	3.91	1.479	6	0.627
12	Internet/WiFi	3.82	1.545	7	3.57	1.641	12	0.324

(M-Mean, SD-Standard Deviation, R-Rank)Degrees of Freedom:4, Table Value:9.488

It can be seen from Table 6 that the respondents from Engineering & Technology institutions has given 'RFID Technology' as the first priority towards Level of Awareness/ Skill for the Use of Technologies. 'Biometric Attendance' and 'Plagiarism' are other second and third preferences indicated. The least preference was given by them for 'Barcode Scanner'. The mean value of all the variables ranges between 3.46 and 4.24. The deviation of opinion ranges between 1.226 and1.634. In the case of respondents from Arts & Science institutions has given 'RFID Technology' as the first priority towards Level of Awareness/ Skill for the Use of Technologies. 'Plagiarism' and 'Image Scanner' are other second and third preferences indicated. The least preference was given by them for 'Internet WiFI'. The mean value of all the variables ranges between 3.57 and 4.25. The deviation of opinion ranges between 1.218 and1.641.Further, Chi square test has been administered to identify the significance. Table value is 9.488 for 5% level of significance the calculated value for all the values except variable "Scanning and printings" were less than the table value which indicated the variables are insignificant towards the Level of Awareness/ Skill for the Use of Following Technologies versus Institutions Wise.

5.7.Level of Awareness/ Skill for the ICT Applications/ Services

Rating the level of awareness/ skill for the ICT applications/ services of Library professional's has been analysed based on the responses and it is shown in the table.4.27.

Table 7: Level of awareness/ skill for the ICT applications/ services

Sl. No	Application/ Services	No Idea	Aware	Learning	Fair	Expert	WAM	Std. Dev.	Rank
1	Operating system Windows	54(9.71)	23(4.14)	67(12.05)	70(12.59)	342(61.51)	4.12	1.328	4
2	Operating system Linux	63(11.33)	63(11.33)	57(10.25)	51(9.17)	322(57.91)	3.91	1.466	7
3	Manage electronic resources	15(2.7)	71(12.77)	56(10.07)	50(8.99)	364(65.47)	4.22	1.210	2
4	Web page design	87(15.65)	33(5.94)	50(8.99)	73(13.13)	313(56.29)	3.88	1.513	8
5	Create	53(9.53)	43(7.73)	46(8.27)	86(15.47)	328(58.99)	4.07	1.356	5

	metadata/ tag/HTML/XML document								
6	Installation and customization of software	27(4.86)	22(3.96)	43(7.73)	82(14.75)	382(68.71)	4.38	1.102	1
7	System Administration & Maintenance.	68(12.23)	52(9.35)	31(5.58)	67(12.05)	338(60.79)	4.00	1.464	6
8	Development of institutional repository	49(8.81)	40(7.19)	64(11.51)	35(6.29)	368(66.19)	4.14	1.357	3

(Figures in the parentheses denote percentage)

It is observed from Table 7 towards Level of awareness and skill for the ICT applications & services that the respondents preferred 'Installation and customization of software' as the first priority. 'Manage Electronic resources'. 'Development of institutional repository'are the second and third preferences indicated by the library professionals. The least preference was given to 'Web page design'. The WAM value of all the variables ranges between 3.88 and 4.38. It can be inferred that all the variables lies between 'Fair and 'Expert. The deviation of opinion ranges between 1.102 and 1.513.

5.8. Level of Awareness/ skill for the ICT Applications/ Services Vs Type of Institutions

Rating the level of awareness/ skill for the following applications/ services of Library professional's Vs type of Institutions Wise has been analysed based on the responses and it is shown in the table 8.

Table 8: Level of Awareness/ skill for the ICT Applications/ Services Vs Type of Institutions

Sl. No.	Application/ Services	Engg. & Tech			Arts Science			Sig.
		M	SD	R	M	SD	R	
1	Operating system Windows	3.98	1.479	7	4.21	1.222	2	0.018
2	Operating system Linux	4.10	1.394	3	3.80	1.500	8	0.003
3	Manage electronic resources	4.33	1.090	2	4.15	1.274	4	0.156
4	Web page design	3.75	1.548	8	3.97	1.488	7	0.293
5	Create metadata/ tag/HTML/XML document	4.06	1.394	4	4.07	1.334	5	0.762
6	Installation and customization of software	4.45	1.026	1	4.35	1.145	1	0.680
7	System Administration & Maintenance.	4.00	1.451	6	4.00	1.473	6	0.263
8	Development of institutional repository	4.06	1.408	4	4.18	1.326	3	0.264

(M-Mean, SD-Standard Deviation, R-Rank)Degree of Freedom:4. Table Value: 9.488

It can be seen from Table 4.28 that the library professionals from 'Engineering & Technology' has given 'Installation and customization of software' as the first priority towards the level of awareness/ skill for the following applications/ services. 'Manage electronic resources' and 'Operating system Linux, are other second and third preferences indicated by the Engineering & Technology' library professionals. The least preference was given by them for 'Web page design'. The mean value of all the variables ranges between 4.06 and 4.45. The deviation of opinion ranges between 1.026 and1.394. In the case of 'Arts &

Science' Institutions library professionals has given 'Installation and customization of software' as the first priority towards the level of awareness/ skill for the following applications/ services. 'Operating system Windows' and 'Development of institutional repository, are other second and third preferences indicated by the 'Arts & Science' Institutions library professionals. The least preference was given by them for 'Operating system Linux'. The mean value of all the variables ranges between 3.80 and 4.35. The deviation of opinion ranges between 1.145 and1.500. Further, Chi square test has been administered to identify the significance. The calculated value has been shown in Table 4.28. Table value is 9.488 for 5% level of significance the calculated value for all the values were less than the table value which indicated the variables are insignificant except 'Operating system Linux' in the Level of awareness/ skill for the ICT applications/ services Vs type of Institutions Wise.

6. CONCLUSION

Information and Communication Technology enable libraries to locate store, retrieve and disseminate information. ICT tools such as CD-ROM, e-mail are used in libraries for dissemination of information. In addition, digitization of information resources which involves converting print resources to electronic form is also carried out, using ICT. The the application of ICT to library operations greatly helps in the provision of efficient reference and information services, the utilization of network operations such as cataloguing, authority control, inter library loans and co-operation and in the participation of other libraries .

REFERENCES

Dahiru, G., Oladokun, O., Grand, B., & Mutshewa, A. (2019). Exploring the Application of Information and Communication Technologies in the Acquisition of Information Resources in Three Academic Libraries in North-West Nigeria: Preliminary Findings. *Collection Management*, *45*(3), 252–272. https://doi.org/10.1080/01462679.2019.1666766

Adekoya, C. O., & Inyang, E. O. (2022). Academic Library Leadership in Nigeria and ICT Adoption. *The International Information & Library Review*, *55*(3), 220–232. https://doi.org/10.1080/10572317.2022.2119352

Saunders, L. (2020). Core knowledge and specialized skills in academic libraries. *College & Research Libraries*, *81*(2), 288.

Bansode, S. Y., & Viswe, R. R. (2017). ICT literacy among library professionals working in the university libraries in Maharashtra, India: A study. *DESIDOC Journal of Library & Information Technology*, *37*(5), 353.

Shastri, D. K., & Chudasma, P. (2022). The perception of ICT skills and challenges of usage of technologies among the library professionals of the Gujarat State during the COVID 19: a comprehensive study. *Quality & Quantity*, *56*(3), 1093-1120.

Abbas, M. A., & Siddique, N. (2020). A study of ICT competencies among university library professionals of Punjab, Pakistan. *Library Philosophy and Practice (e-journal)*, *4000*.

Rahoo, L. A. (2021). Impact of ICT Skills for Knowledge Sharing among Library Professional of Higher Education Institutions of Pakistan. *Library Philosophy and Practice (ejournal)*, *6521*.

Ahmed, S., & Sheikh, A. (2021). Information and communication technology skills among library and information science professionals: A predictor of enhanced library services. *Journal of Librarianship and Information Science*, *53*(3), 444-453.

Oyovwe-Tinuoye, G. O., Omeluzor, S. U., & Patrick, I. O. (2021). Influence of ICT skills on job performance of librarians in university libraries of South-South, Nigeria. *Information Development*, *37*(3), 345-358.

****