Information and Communication Technology (ICT) Skills among Library and Information Science Professionals of Higher Educational Institutions of Shimoga and Davanagere Districts of Karnataka

Nagaraja Shastry G M
Librarian
Government First Grade College
Nyamathi-577 223,
Davanagere (Dist.) Karnataka
e-mail: shastrygm@yahoo.com

Dr. B.R. Gadagin
IFLA/ALP Fellow
Selection Grade Librarian & Research Guide,
Veerashaiva College
Bellary -583104 Karnataka
e-mail: gadagin_raj@rediffmail.com

Abstract *- The study was conducted to investigate the awareness, skill and attitude towards Information and Communication Technologies (ICT) among library professionals in Higher Educational Institutions of Shimoga and Davanagere Districts of Karnataka. The study is based on a questionnaire survey of library professionals employed in the general education, technical and medical libraries of the Shimoga and Davanagere districts. The analyses revealed that the library professionals in the Shimoga and Davanagere district higher educational institute library system have relatively good level of skills in various ICTrelated tasks of the libraries. They are also well versed with the ICT based services and ICT based information storage and retrieval system in dissemination of information to the stakeholders in a systematic manner.*

Keywords: Information and Communication Technology, Higher Education, Computers, Library Science, Karnataka.

Introduction

A library in a higher education institution has a very significant role to play in the education process. Though library and information professionals have desires to fulfill liberal grants provided to the higher education institution by university grants commission for purchasing library documents, equipment for building construction and appointing library staff, but it is observed that the library facilities in the majority of the academic libraries are not satisfactory.

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. ICT may be any combination of tools and procedures that facilitate the generation, acquisition, storage, organisation, searching, retrieval, and transmission of information using electronic means. ICT fundamentally changes the access, storage and dissemination of information, and facilitates global interconnectivity, and accelerated information exchange. ICT literacy is the ability to use digital technology, communication tools, and/or networks appropriately to solve information problems including the ability to use technology as a tool to research, organize,

evaluate, and communicate information and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information. 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. They raised their level of knowledge of new information technologies through continuing education programmes, professional training, and through revisions in their library and information school curriculums. However, application of ICT is posing a particular challenge to library and information professionals in developing countries. Despite the high penetration rate of ICT and exponential growth of Internet, many library professionals in India lack the ICT literacy skills.

Objectives

1. To understand the ICT infrastructure available in Higher Educational Institutions of Shimoga and Davanagere districts.
2. To understand the attitude of library professional towards use of ICT skills in Higher Educational Institutions of Shimoga and Davanagere districts.
3. To know the level awareness of information and communication technology (ICT) skills among library professionals of Shimoga and Davanagere districts.

Methodology

The present study is based on fact finding survey method to find out proficiency of ICT skills among library professionals of Shimoga and Davanegere Districts of Karnataka. The questionnaire was used as tool for collection of primary data based on the variables. The questionnaires were distributed to the library professionals of various sectors of the higher education systems like general education, technical, medical and so on.

Review of Literature

Seena, S. T. and Sudhier Pillai, K. G. (2014) was conducted study to investigate the awareness, skill and attitude towards Information and Communication Technologies (ICT) among library professionals in Kerala University Library, Thiruvananthapuram. The analyses revealed that the library professionals in the Kerala University library system have relatively average level skills in various ICT related tasks in libraries. Libsys software was more used in libraries and a good number of professionals indicated that the main constraint in the application of ICT in libraries is inadequate training in ICT applications. All the professionals expressed a positive attitude towards the application of ICT in libraries.

Kattimani, Shivaputrappa Fakkirappa and Naik, Ramesh R. (2013) was evaluated the competences in librarianship and information communication and technology (ICT Skills) between different designations of library professionals (librarian, deputy librarian, assistant librarian and library assistants and others) working in the engineering college libraries affiliated with Visvesvaraya Technological University (VTU), Belgaum in Karnataka state, India. The study adopts a combined methodology of theory, fieldwork and the data gathering tools used which included questionnaire, observation and interaction with library and information professionals. The majority of the library professionals working in the engineering colleges in Karnataka state have chosen this profession by accident. The significant difference is observed between different designations towards competence on

operation of computers, creation of files and folders, radio frequency identification, library automation software modules, various operating systems, internet-related skills, web design/web editors, search engines and digitization of IR. Compared to all designations, librarians have more skills on web designs. The majority of the professionals are facing financial problems, overload of work and negative attitude of the higher authority in acquiring ICT skills.

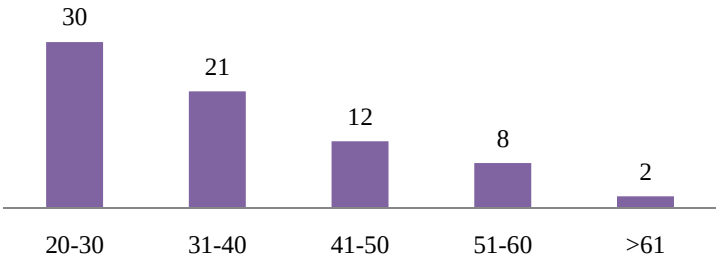
Sinha, Manoj Kumar, Bhattacharjee, Sucheta and Bhattacharjee, Sudip (2013) were undertaken the study to know the scenario of N-LIST Programme implementation and status of the ICT and Internet literacy skills amongst the College Library Users who have been mainly drawn from the ten selected college libraries of Barak Valley of South Assam to access E- Resources available under N-LIST Resources. The paper highlights the important survey findings in respect of demographic profiles of college library users, their library visit pattern, e-resources use pattern and expectations of college library users from the N-LIST Programme through which the scholarly contents are made available to the library users. Besides this, some suggestions and recommendations to solve the impediments for non-implementation of N-LIST Programme and under utilization of e-resources have also been enumerated in brief.

Murugan, B. O. Sathivel, Sornam, S. Ally and Manohar, A. Celestine Raj (2012) stated that the Medical college libraries house various resources such as textbooks, reference books, medical journals, online journals, databases, etc., and also provide various services including reprographic, audio-visual and computer based services to their staff and students. Use of Information and Communication Technology (ICT) is on the rise in medical college libraries. Tele-medicine, teleconferencing, e-databases, e-books, ejournals, etc., are being increasingly made available on the net. Present study examines the use of the traditional and digital resources by the undergraduate medical internees of a medical.

Results and Findings

The study is based on the fact finding and 125 questionnaires were distributed to the library professionals of higher education in Shimoga and Davanagere districts of Karnataka as a pilot study and 73 questionnaires were received, the results analysed and presented by using various statistical tools to test the accuracy of the results. Among the responses, 52 are male respondents and 21 are female respondents.

1. Age Group of Respondents



The figure 1 shows the age group of respondents, the major respondents are in the age group of 20-30 (41.09%), 31-40 (28.77%) and 41-50 (16.44%). The analysis shows that, the major respondents are in the middle age groups and they have less experience and they have good knowledge of ICT skills.

There is an adequate ICT infrastructure is available in most of the organizations and it is extended to the libraries also. Most of the library and information centers are equipped with the computers, scanners, barcoding with UPS facilities but very few college libraries are having the printers, photocopiers and RFID integration with the library softwares. The campuses and libraries are connected with campus networks by using Local Area Networks (35.61%) and Wi-Fi (58.90%) facilities. The Library and Information centers are the heart of the institutions to retrieve and disseminate the information to the stakeholders and most of the libraries (86.39%) are connected with the internet but it is hard to note that very few libraries (13.61%) are not connected with the internet.

Use of Information Technology for Information Storage and Retrieval

Table-1

Sl. No.	Variable	Rarely	Some Time	Frequently
1	Computer and its facilities	2 (2.73)	11 (15.06)	60 (82.19)
2	Telecommunication & its facilities	16 (21.91)	27 (36.98)	30 (41.09)
3	Photocopying	20 (27.39)	24 (32.87)	26 (35.61)
4	CD-ROM/Hard Discs	7 (9.58)	33 (42.20)	33 (42.20)
5	Internet /Intranet, etc.	3 (4.10)	9 (12.32)	62 (84.93)
6	Multimedia	27 (36.98)	33 (42.20)	13 (17.80)
7	Digital Libraries / Virtual Libraries	15 (20.54)	36 (49.31)	22 (30.13)
8	Video Conferencing/Video text/ Tele text	47 (64.38)	18 (24.65)	8 (10.95)

The above table-2 reveals the use of information technology for information storage and retrieval. The technology is an aid for storing, disseminating and retrieving information to user in organized form. In this process computer and telecommunication technologies play a vital role in bridging the way to deliver the information to the end user. The table clearly reveals that, 60 (82.19%) respondents are using computer and its facilities frequently in information storage and retrieval and 30 (41.09%) respondents uses telecommunication and its facilities frequently for information storage and retrieval. It is puzzling statement that photocopy facilities are used rarely (27.39%), some time (32.87%) and frequently (35.61%) and it shows there is a need to provide photocopy facilities to the users but some of the organization are not providing the photocopy machines to the library and information centers. The CD-ROMs and Hard discs are used frequently (42.20%) and some time (42.20%) for storing and retrieving information. The internet, intranet, networking technologies like LAN or WAN or Wi-Fi are the very frequently (84.93%) used technologies for retrieving information. The multimedia technologies are used some time (42.20%) only for storing and retrieving information. The very few respondents frequently (30.12%) using the digital libraries technologies for storing and retrieving information and even the world is speaking about digital but still it has take momentum in higher educational institutions. The video conferencing / video text / tele-text technologies are very rarely (64.38%) used technology for information storing and retrieving information.

It is inferred from above analysis is that, computers, telecommunication and internet technologies are frequently used in disseminating the information to the users.

ICT Based Services

Table-2

Sl. No.	Variable	Responses	Percentage
1	ICT Based Circulation system	43	58.90
2	Access to CDs/DVDs	23	31.50
3	Web based Current Awareness service	17	23.28
4	Access to Online databases	53	72.60
5	Subscriptions to Web-based electronic resources, e- books, electronic journals, databases, etc.	59	80.82
6	Access to free subject-based information gateways/portals on the Internet	23	31.50
7	Services through Barcodes, RFID, Webcamera, QR code etc.	46	63.10
8	Digital Library services	42	57.53

The above table-2 shows that, ICT based services provided to the users by the respondent college libraries. In modern days ICT plays an important role in providing services to the users in right time. 59 (80.82%) respondents uses services like subscriptions to Web-based electronic resources, e- books, electronic journals, databases, etc. to provide information to the users and 46 (63.10) respondents provide services through Barcodes, RFID, Webcamera, QR code etc. within short span. It is interesting to note that, reasonable respondents are providing services through ICT based circulation system (58.90%) and digital library services (57.53).

Level of Awareness of ICT Skills

Table-3

Sl. No.	Skills	Excellent	Very Good	Good	Average	Poor
1	Use of Computers	9 (12.32)	51 (69.86)	4 (5.47)	3 (4.10)	6 (8.21)
2	Computer Networking	2 (2.73)	13 (17.80)	23 (31.50)	18 (24.65)	17 (23.28)
3	Computer Hardware	1 (1.36)	9 (12.32)	17 (23.28)	18 (24.65)	28 (38.35)
4	Installation and customization of Hardware and softwares	5 (6.84)	7 (9.58)	19 (26.02)	24 (32.87)	18 (24.65)
5	Handling and Use of Machineries (Printers, Scanners, Photocopiers etc.)	15 (20.54)	19 (26.02)	15 (20.54)	14 (19.17)	10 (13.69)
6	Usage of Operating systems (Linux, Windows, Mac etc.)	7 (9.58)	13 (17.80)	18 (24.65)	21 (28.76)	14 (19.17)
7	Handling of Surveillance systems	9 (12.32)	11 (15.06)	21 (28.76)	19 (26.02)	13 (17.80)
8	Library Automation	14 (19.17)	40 (54.79)	13 (17.80)	05 (6.84)	01 (1.36)
9	Digital Library	8 (10.95)	13 (17.80)	24 (32.87)	22 (30.13)	06 (8.21)
10	Handling of E-Resources	5 (6.84)	15 (20.54)	25 (34.24)	26 (49.31)	2 (2.73)
11	Usage of Web tools (Facebook, wikis, Twitter etc.)	22 (30.13)	23 (31.50)	21 (28.76)	4 (5.47)	3 (4.10)
12	Usage of Web services (WebOPAC, IRs, Databases etc.)	5 (6.84)	12 (16.43)	36 (49.31)	16 (21.91)	4 (5.47)

The above table-3 reveals that, the awareness of respondents about the ICT skills to implement the ICT based services to the stakeholders. ICT enables systematic approach to provide services to the users in libraries and it aids as a tool for fast delivery of services. The librarian should well aware about the ICT technologies and he should have positive attitude in implementing the ICT based services in the particular organization and it enables his identity in the user community. 51 (69.86%) respondents said that they are very good in use of computers and 23 (31.50%) of the respondents said that they are good in computer networking. It is revealed that, 28 (38.35%) respondents are poor in awareness of computer hardware and 24 (32.87%) respondents are average awareness in installation and customization of Hardware and softwares. It is interesting to note that 15 (20.54%) respondents are excellent in handling and use of machineries (Printers, Scanners, Photocopiers etc.). The awareness of respondents technologies like library automation is 40 (54.79%) respondents are very good aware, digital library skill is 24 (32.87%) respondents are aware good, handling of e-resources is 26 (49.31%) respondents are average in awareness, usage of web tools (Facebook, wikis, Twitter etc.) is 23 (31.50%) respondents are very good in awareness and usage of web services (WebOPAC, IRs, Databases etc.) is 36 (49.31%) respondents are aware good.

Conclusion

Information and Communication Technology (ICT) paves way for smooth and easy access to the information at any time and at anywhere. The library and information center are no exception to implement and use the technology, after medical field libraries are the most used. The use of ICT in higher education system is progressive and most of the colleges are having adequate ICT infrastructure to deliver the services to the end users. It is interesting to note that all most all the libraries are having the internet connectivity and Wi-Fi (58.90%) is also connected. It is also reveled from the study is computers (82.19%), telecommunication (41.09%) and internet technologies (84.93%) are frequently used in disseminating the information to the users. The ICT based services like circulation (58.90%), access to e-resources (80.82%), access to databases (72.60%) and digital library services (57.53%) plays on important role in disseminating the information to the users. The overall analysis shows that, the awareness of ICT skills among the library professionals is upto mark and it has to reach the maximum extent and professionals should develop positive attitude towards ICT technologies and they have implement and use day to day activities.

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