A study of ICT Skills and Competencies Essential for Corporate LIS Professionals

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ABSTRACT   *Application of ICT in the libraries and information centers leads to drastic change in the library profession. Library professionals are now more conscious in respect of their professional as well as personal competencies. The paper deals with ICT skills and competencies needed for corporate information professionals or librarianship. Corporate library is a kind of special library which is located in business and industrial organization. It provides specialized information resources on a particular subject, serves a specialized and limited clientele and delivers specialized services to that clientele. Technology has changed the traditional library beyond recognition. Advancement in information and communication technology and rapid growth of industrial information in electronic formats has altered the way of information services and usage. Corporate librarians may take on different roles like information enabler, information architect, knowledge engineer, knowledge creator, data base & network creator, web designer, online publisher, decision support specialist. These dynamic changes have impacted importantly on the skills and competencies requirements for LIS professionals*

Keywords: ICT, Skill, Competency, Special Library, Corporate Library, Information Centre, LIS Professional.

Introduction

ICT has experienced many transformations during last two decades. The concept of distance is demolished completely by advancement of Information technologies. This has turned the whole globe in to a small village. Libraries and information centers also have influenced by the rapid advances of information technology. Applications of Information and communication technology has made possible for the libraries and information centers to expand their sphere of activities. In the era of information explosion the print media dominated and electronic information sources appear in the libraries. How information can be accessed and processed electronically is also being reformed by information Technology. The librarians and information professionals of new age may add more values for their services and can make libraries truly useful and user friendly by acquiring ICT skills and competencies. Skill is a practical ability and facility in carrying out an action whereas competency is often defined as the underlying attribute and mental ability that governs how an individual interact with the world. Different information and communication technology skills and competencies are inevitable with LIS back ground and basic skills and competencies for today's libraries and information centers to manage the library resources as well as services properly. The users are in a position to visit various websites to access the information anywhere in the world. Several studies mentioned that the information technology impacted the information professionals' role and skills and knowledge requirements. Sreenivasulu (2000) mentioned that the role of librarian in digital environment is to act as liaison between users and information. According to him librarian or information professional should develop the ability to manage digital libraries and digital knowledge. Corporate Librarianship is the art of organizing knowledge sources in various forms. The information technology has changed the work of corporate librarians, creating new work and eliminating old work. Librarian and information professional should have skills and competencies to sustain and survive in the post digital era.

Objectives of the Study

1. The main objective of this study is to identify ICT skills and competencies essential for corporate library and information science professionals.
2. To study the skills and competencies of the Library & Information Science professionals required by job market.
3. To study the required ICT skills and competencies to work effectively and efficiently in major corporate sectors' libraries and information centres under the span of the study.

Literature Review

Wendy, C (1997) prepared a report on corporate libraries in USA in the thesis form after surveying the needs of users in corporate libraries of Ohio State in USA. In this, researcher clearly indicated that there are different types of corporate libraries bundled together under the term industrial libraries which include chemical, petrochemical, medicinal, manufacturing industries libraries also. The research has also tracked the history and origin of industrial or chemical industry libraries but could not trace except it is part of the special libraries. Researcher concluded his study indicating that any corporate or industrial library is tasked with the responsibility of helping their library users to survive in changes.

A comprehensive study in Malaysia was conducted by Rehman (1998) also to identify foundation competencies for entry level library and information professionals in the various work setting of academic, public and special libraries. The result revealed that knowledge and skills competencies related to information dynamics, information technology applications, management capabilities and understanding of organizational environment and mission were considered essential for future professionals.

According to Tennant (1999) librarian and information professional should know to create and manage a modern library collections and services. He/she have to have skills & competencies of imaging technologies, optical character recognition (OCR), hypertext mark-up languages, indexing, cataloguing & metadata, database technology, user interface design, programming, web technology and project management.

Kwatra (2006) opined that along with the professional degree today's market scenario necessitate acquiring a whole range of skills by potential employee. Librarian should have to have various information and communication technology skills such as network administration/co-ordination, network service, office automation, information system design, information technology planning, data security, analysis of internet resources, internet site architecture, online searching etc.

A survey of special librarians was conducted by Robati (2013) to find out competencies required by special librarians in Iran at three different level of education. In the survey knowledge and skill competencies were categorized under the heading of management, collection development, information organization, information service, information technology, research and communication and interpersonal skills. Questionnaire was designed on list of competency statement and distributed to 58 individuals via email. Out of 58 questionnaire 86% responses were received. The result of the study revealed that the main competencies expected from special librarians with any qualification are information technology competencies, especially basic competencies such as the ability to operate and familiarity with computer technology.

According to Schopflin (2014) today's corporate information professional have to expert in finding and procuring information sources, developing intranets and websites, managing internal information, creating taxonomies and indexing, training and carrying out both proactive and reactive research and analysis.

Oza (2016) opined that today's corporate information professionals should be expert in or familiar with mark-up languages, programming languages, SQL and relational database, installation, customization and upkeep of content management software, digital repository and indexing systems, Semantic web and linked data, web analytics and statistics and many more as he or she see the need for problem-solving.

Special Libraries Association (2003) describes professional competencies as the practitioner's knowledge of information resources, information access, information technology, and information management. Information professionals handle information organizations ranging in size from one employee to several hundred employees. Information professionals should have expertise in total management of information resources including: identifying, selecting, evaluating, securing and providing access to relevant information resources. He/she should have knowledge to develop and maintain portfolio of cost- effective, client-valued information services that are aligned with the strategic directions of the organization and client groups. An information professional should competent enough to assess, select and apply current and emerging information tools and create information access and delivery solutions. He/she should expert in databases, indexing, metadata, and information analysis and synthesis to improve information retrieval and use in the organization, maintain current awareness of emerging technologies that may not be currently relevant but may become relevant tools of future information resources, services or applications.

American Library Association (ALA) (2008) in core competencies of librarianship presented core competencies for librarians who are working in schools, academic, public, special and governmental libraries. ALA divided these core competencies into eight cluster i.e. foundations of the profession, information resources, organization of recorded knowledge and information, technological knowledge and

information, technological knowledge and skills, reference and user services, research, continuing education and lifelong learning and administration and management.

In short ICT skills and competencies are inevitable with LIS back ground and basic skills. Corporate librarian should have skills & competencies of computer & information technology to get job, keep sustain and perform his/her duty effectively. He or she should enough aware about computer operating systems, word processing, troubleshooting of technology related problems, knowledge about basic internet technology, knowledge to login internet, emailing, familiar with different search engines, information search strategies and electronic resources, content management, digitization and portal management.

Methodology

Methodology can be defined as a set of procedures to carry out any systematic investigation. It is the general research strategy that outlines the way in which research is to be undertaken. Descriptive survey method has been adopted for the study. The study is based on a questionnaire survey of library professionals employed in major manufacturing sectors in 6 districts of Gujarat. By telephonic inquiry and consulting directory of special libraries research has come to know that there are 22 major corporate libraries and information centres exist. Out of 22 major corporate sectors 16 sectors were selected for the study. Out of 16 questionnaire 75% responses were received. To keep the identity secret the names of major manufacturing industries are coded and not mentioned their detail names in the study. Researcher has used word corporate library and industry library inter changeably. Five point Likert scale is used to frame questionnaire. The collected data was analysed using latest version of Ms-Excel for statistical analysis.

Results of Analysis

In all 12 responses could be generated from the library professionals working in libraries and information centers of major manufacturing sectors of Gujarat. The responses generated are tabulated and in the excel sheet and computations like addition, multiplications, drawing percentage etc. are performed by using MS excel formulas. Percentage at all the places has been drawn up to one decimal place and has been rounded off to the 100 per cent figure.

Table 1. Sector wise distribution

Sector	Number	Percentage
Food	1	8.3
Textile	1	8.3
Pharma	3	25.0
Industrial Products	1	8.3
Chemicals	4	33.3
Oil & Gas	2	16.7
Total	12	100

There are several major manufacturing sectors in Gujarat such as food, textile, pharmaceuticals, industrial products, chemicals, oil & gas, automobile, power, electronics etc. Table 1 reveals that out of 12 manufacturing sectors highest respondent are form chemical sector representing about 33% of the total sample, followed by pharma industry with 25%. The third highest representation is from Oil & Gas industry consisting of 2 respondents presenting 17% of the sample. Lowest respondents are form food, textile and industrial products sectors presenting 8% of the total sample respectively.

Table 2. Distribution by Ownership and forms of Business

Types of Organization	Number	Percentage
Cooperative	2	16.7
Private Limited	1	8.3
Public Limited	7	58.3
Semi Government	1	8.3
Government	1	8.3
Total	12	100

Table 2 shows that public limited companies are in majority with 7 respondents working in these companies representing about 58% of the total sample. Respondents form cooperative societies are about 2 presenting 17% of the sample. Respondents form Private Limited Companies; Government and Semi Government organizations are lowest presenting 8% respectively.

Table 3. Growth level of Library/ Information Centre

Level of Growth	Number	Percentage
Traditional	0	0.0
Hybrid	11	91.7
Digital	1	8.3
Total	12	100

Table 3 reveals that out of 12 corporate libraries and information centers, 92% are hybrid by their growth level. Only one library and information Centre is digital.

Table 4. Users of Library & Information Centre

Users	Respondents	Percentage
Technically Qualified Persons	11	91.7
Non-Technical Persons	11	91.7
Researchers	9	75.0
Scientists	8	66.7
Lower Level Managers	9	75.0
Middle Level Managers	9	75.0
Top Level Managers	5	41.7
Persons in other Corporations	0	0.0

It is seen from Table 4 that technically qualified and non-technical persons are the major users of corporate libraries and information centers presenting 92%. Seventy five per cent users are researchers, lower level managers and middle level managers. Top level managers use corporate libraries and information centers very little. Persons of other corporations are not allowed to use the resource of these libraries and information centers.

Table 5. Types of Information required by users

Information	Respondents	Percentage
Products Information	10	83.3
Projects & Program	3	25.0
Procedures & Documentations	5	41.7
Human Resource Information	3	25.0
Health Care Information	5	41.7
Financial Information	3	25.0
Technology Trends	9	75.0
Market Trends	9	75.0
Customer Information	2	16.7
Tenders/Notices	0	0.0
Internal office Memos	0	0.0
Company News	9	75.0
Media Information	1	8.3

(Continued)

Information	Respondents	Percentage
Demographic Information	1	8.3
Socio-Cultural Information	2	16.7
Polices	4	33.3
Laws & Regulations	4	33.3
Political Information	0	0.0

Information requirement of different manufacturing sectors is totally different as their production is of different nature. From above Table 5 it may be seen that maximum information required by users of corporate libraries and information centers is product information presenting 83% followed by technology trends, market trends and company news presenting 75% respectively. Media and demographic information requirement is minimum presenting 8% respectively. Tenders/notices, internal office memos and political Information is not demanded by the users.

Table 6. Types of Collections of Library and Information Centre

Collection	Number	Percentage
Books	11	91.7
E-Books	9	75.0
Journals/Magazines	11	91.7
E-Journals/E-Magazines	12	100.0
Back Volumes	6	50.0
Audio-Visual Material	9	75.0
Trade Catalogues	6	50.0
Thesis/Dissertations	0	0.0
Abstracts, Indexes & Bibliographies	6	50.0
Databases	9	75.0
Directories	8	66.7
Translations	0	0.0
Research & Laboratory Notes	0	0.0
Technical Reports	8	66.7
Technical Drawings	6	50.0
Standards/Specification	7	58.3
Patents	4	33.3
Proceedings of Conferences	6	50.0
Conference papers	5	41.7
Statutory and Legislative Documents	0	0.0
Media Release	0	0.0
Annual Reports	8	66.7

Table 6 reveals that e-journals/e-magazines possessed by 100% corporate libraries and information centers followed by books and journals/magazines 92 %. 75 % libraries and information centers own e-books, audio visual materials and databases in their collection. Patents as collection are housed by 33% corporate libraries and information centers. Thesis and dissertations, translations, research and laboratory notes, statutory and legislative documents and media release are not housed as collection.

Table 7. Types of Services Provided by Library & Information Centre

Services	Number	Percentage
Circulation Service	11	91.7
Bibliographic Services	6	50.0
Literature Search Service	9	75.0
Document Delivery Service	11	91.7
Interlibrary Loan Service	5	41.7
News Clipping Service	4	33.3
CAS Service	8	66.7
SDI Service	6	50.0
Indexing/Abstracting Services	6	50.0
Translation Service	2	16.7
Reference Services	9	75.0
Reprographic Service	5	41.7
Access to Database	10	83.3
Internet Service	10	83.3

Table 7indicates that circulation service and document delivery service are provided by 92 % libraries and information centers followed by access to databases and internet service 83%. Literature search service and reference services are offered by 75 % libraries and information centers. The lowest service provided is translation service presenting 17%.

Table 8. Degree of Opinion for Essential ICT Skills and Competencies for Corporate Librarians and Information Professionals

ICT Skills & Competencies	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Per
Basics of Computer	0.0	0.0	0.0	0.0	100.0	100
Software Evaluation	0.0	0.0	16.7	16.7	66.7	100
Software Installation & Customization	0.0	8.3	25.0	16.7	50.0	100
Office Suit Applications	0.0	0.0	0.0	16.7	83.3	100
Computer Networking	0.0	16.7	33.3	0.0	50.0	100
Library Automation	0.0	8.3	0.0	8.3	83.3	100
Library Software Development	0.0	0.0	33.3	16.7	50.0	100
Retrospective Conversion	0.0	8.3	50.0	16.7	25.0	100
Digitization	0.0	0.0	0.0	16.7	83.3	100
Digital Archiving & Preservation	0.0	0.0	0.0	8.3	91.7	100
Internet Skills	0.0	0.0	0.0	0.0	100.0	100
E-Resource Evaluation	0.0	0.0	0.0	0.0	100.0	100
Content Management	0.0	0.0	0.0	8.3	91.7	100

(Continued)

ICT Skills & Competencies	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Per
Knowledge Management	0.0	0.0	16.7	8.3	75.0	100
Cloud Computing	0.0	0.0	16.7	41.7	41.7	100
Electronic Indexing	0.0	0.0	16.7	41.7	41.7	100
Database Construction & Management	0.0	0.0	8.3	33.3	58.3	100
Metadata Creation	0.0	0.0	8.3	33.3	58.3	100
Data Warehousing & Data Mining	0.0	0.0	0.0	33.3	66.7	100
Information Architecture	0.0	8.3	75.0	8.3	8.3	100
Profile Management	0.0	0.0	16.7	41.7	41.7	100
Information Search & Retrieval	0.0	0.0	0.0	0.0	100.0	100
Web Based Information Services	0.0	0.0	0.0	0.0	100.0	100
Mark-up Languages	0.0	0.0	8.3	50.0	41.7	100
Web Page Creation	0.0	0.0	8.3	41.7	50.0	100
Website Designing	0.0	0.0	66.7	8.3	25.0	100
E-Publishing	0.0	0.0	16.7	33.3	50.0	100
Digital Right Management	0.0	0.0	8.3	50.0	41.7	100
Backups & Security of Information	0.0	0.0	0.0	33.3	66.7	100
Network Security	0.0	8.3	41.7	33.3	16.7	100
Cyber/Web Security	0.0	8.3	66.7	8.3	16.7	100

Table 8 shows that 100 % respondents are strongly agree that ICT skills and competencies such as basics of computer, Internet surfing, e resource evaluation, information search and retrieval and web based information services are highly required to work efficiently and effectively in corporate libraries and information centers, followed by digital archiving and preservation and content management presenting 92%. Fifty percent respondents agree that mark-up languages and digital right management skills and competencies are highly essential for corporate job market. Only 8% respondents believe that software installation & customization, library automation, retrospective conversion, information architecture, network security and cyber/web security are not essential ICT skills and competencies for corporate libraries and information centers.

Conclusion

Libraries and information centers are connecting bridge of past, present and future. Corporate library professionals cannot neglect the changing face of the libraries and information centers and need to conform to the digital library environment. By remembering this important LIS professionals always try to keep themselves adjustable with changing ICT environment. They must be aware and skilled and enough competent in each and every part of information and communication technology which are useful to manage modern library and information centers and their services. Librarians and information professionals play an important role in providing access to information, organizing it and helping users to find the information they need. A librarian derives his/her joy by seeing the dawn of joy on the face of readers, helping him/her by giving right information at right time. To accomplish this goal, in present digital library era, it is essential that corporate library professionals possess required ITC skills and competencies in this regard.

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