Abstract

In recent years technology has made tremendous impact on every profession including Librarianship. This spurt of technology has brought dramatic changes in every sphere of library activity. The library professionals, as intermediaries, have to be cope with the "knowledge explosion" which is a result of the information technology and high expectations of the users. New skills and knowledge will have to be acquired and the existing skills will have to be enhanced to survive and face the challenges in this dynamic information society. This paper focuses on some of the skills, personal traits and attitudes and knowledge that are necessary for the Library professionals of this millennium.

1. Introduction:

Human knowledge has been increasing in leaps and bounds over the years, especially in the recent years, due to merging technologies. This has lead to "knowledge explosion". This phenomenon combined with the rapid technological changes has effected all professions and at all levels, including information professionals: librarians, information scientists, archivists and publishers.

Father of library science, Dr.Ranganathan's, five universal laws of library science (1) seem to embody the values and goals of this profession even today in the 21st century. Michael Gorman has re-fashioned these laws into more current statements (2) as follows:

- Books are for use
  Every book its reader  Libraries save humanity  Respect all forms by which knowledge is communicated
- Every reader his book  Use technology to enhance service  Protect free access to knowledge
- Save the time of the reader  The library is a growing organism  Honor the past and create the future

Be it Ranganathan's five laws or Gorman's statements, the fact remains that the librarians today have to re-define their roles as new information technology products and services enter their arena. Computerization, electronics, and telecommunications
have resulted in the alteration of almost every function performed in the libraries today. There are challenges that librarians need to face to provide quality and efficient library and information services. To meet the changing needs of library clientele, librarians are expected to continuously enhance their knowledge and skills in the use of technologies in order to improve productivity, efficiency and competitiveness(3).

2. Changes in traditional librarianship:

Library professionals are facing two complementary pressures. First, the technology is vastly extending the scope of information work. It is now possible to gain access to and process much greater quantities of information than was possible a decade ago. Second, library users' expectations are rising constantly, creating a demand for more sophisticated and high quality information services.

Librarians are moving into dramatically different roles even though the traditional services of acquiring, organizing, retrieving and disseminating information remains the same. The existence of information in various media has in one way or the other affected all these services.

a) Acquisition librarians now select and purchase not only traditional material like books and journals, but they also have to deal with "access without ownership" issues involving leased electronic databases, full-text journal article access and other services that are acquired only virtually. Here the librarian has the additional responsibility to see that electronic product license agreements are appropriate for local circumstances. The librarian will have to work in tandem with the computer technologist to decide on the software and hardware requirements of such products.

Library professionals should be aware of the intricacies and implications of the copyright laws which is much more complex for electronic media.

b) Catalogers have to deal with users who need more and better information than just the title, author or subject. The user will probably need the contents page and maybe even chapter headings or maybe even links to information existing in different media. Catalogers now process not only books, but also CD-ROMs, computer disks and also Internet resources. Catalogers must make informed decisions on matters such as linking electronic journals and "holding" books to various databases. They have to create records that allow multiple access to particular source. OPAC is expected to include not only the print holdings, but also microforms and links to electronic versions as well.
c) Classifiers have to seek for new classifying devices for classifying digital library holdings like CD-ROMs, DVDs, floppy diskettes, tapes, and Internet resources, besides the traditional print material.

d) Reference librarians have not only to serve patrons of a library from service points in the library, but they also have to cater to a growing clientele through remote access. Reference librarians have to answer questions submitted via e-mail and linked web pages. Such virtual reference transactions can be more complex and time consuming than traditional in-library service(4).

e) User education is a traditional service rendered mostly by the reference librarians. This is essential if the end users are to make the most effective and productive use of networked and electronic information services. No doubt, computer literacy is required; but users must be able to analyze and define requirements, search effectively their sources and even modify their searches. Library professionals should be actively involved in planning user education programmes. For computer professionals who are in the forefront in this task, the emphasis would be more on the technical skills than on the in-depth understanding of the information content including structure and skills of information retrieval. It is therefore essential that library professionals are involved in this education process along with the computer professionals.

f) Librarians are expected to provide value-added services by carrying out searches across range of information resources, download the results, analyze and repackage to suit the users' needs.

g) The traditional role of librarians as the custodians of their physical holdings is changing into one being responsible for the security of their electronic information as well along with the system administrators.

3. Skills & knowledge required to combat the changes:

The dynamic changes brought about by technology have forced librarians to assess of their skills. This does not call for sacrificing the past years of learning of librarians to technology, but enhancing the old skills and acquiring new ones. The electronic medium is continually in a state of change and librarians must keep pace in developing their own skills. The need to develop expertise to effectively and efficiently utilize as well as to manage knowledge and information is important.

The skills, a librarian as an information provider should acquire, are as follows:

a) expert knowledge of information resources

b) understanding the information intricacies of the process of information transfer and a special understanding of information barriers

c) evaluation of information resources
d) developing cost effective information services
e) understanding the needs of users and converting them into effective search strategies
f) analyzing and re-packaging information to suit the needs of the users
g) knowledge of technologies to enhance organization and dissemination of information
h) ability to provide excellent user instructions to facilitate the utility of the great wealth of information available
i) Provide information that directly answers queries rather than providing document that answers it.
j) Data organization, structuring and presentation of the contents in a form so as to enable easy retrieval (content development)
k) Ability to retrieve valuable information from huge sea of open, multicultural, multilingual, almost uncontrolled and ever growing repository of information (data mining)
l) Understanding the implications of knowledge management relating to creation of knowledge repositories; the improvement of knowledge acquisition; the enhancement of the knowledge management; and the management of knowledge as an asset.
m) Effective management of staff resources to meet the growing number of technology-driven challenges
n) Management skills such as decision making, leadership, planning, and entrepreneurship which are essential for exploiting limited resources to the fullest. Information leadership is necessary to put knowledge to work for the benefit of decision-makers in the government, professions and society as a whole.
o) Technological skills are required by the librarians to appreciate the influx of new technologies into the arena. This does not mean, the librarians need to become computer specialists overnight. Nonetheless, it is essential that they have the basic working knowledge of these technologies.

Clear perception of the different storage media and the accessibility

Reasonable general level of computer literacy in order to have informed discussion with a supplier regarding the acquisition of such material.

Practical skills, like installing a software, or simple trouble-shooting problems will help the smooth functioning of the service without wasting time waiting for the appropriate (computer) professional to attend to it.

Librarians must have a sound knowledge of the Web and the various search engines of the net and be able to evaluate websites.
4. Acquiring the requisite skills and knowledge:

There are many avenues open to the library professionals to develop their skills and their knowledge, which is essential to survive and compete in this electronic information age. Some of these options may be within the formal systems of education and training and some outside these formal systems.

Library science schools should revamp their curriculum making it more application oriented rather than theory oriented so that it will enable their products to function effectively in their organizations. They should produce graduates with the right skills for a rapidly changing information environment. Library and information science programmes should be more proactive so that the profession does not stagnate. The curricula should include the applications of technology to traditional courses in acquisition, classification, cataloguing, indexing and abstracting etc. Table 1 indicates some of the topics that should be included in the curricula.

Table 1: Suggestive topics to be included in the Library & Information Science Courses

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<th>Library Automation</th>
<th>In-house operations</th>
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<td>SDI &amp; CAS</td>
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<td>Resource sharing</td>
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<td>Computer based courses</td>
<td>E-mail, ftp</td>
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<td></td>
<td>Barcode technology, Scanners</td>
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<td></td>
<td>Electronic publishing and editing, web designing</td>
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<td>Information retrieval from on-line, CD-ROMs, Internet</td>
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<td>Networking</td>
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<td>Evaluation of search engines</td>
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<td>Fundamentals of E-commerce</td>
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<td>Evaluation of library softwares and the applications of other softwares (MS-Office, Foxpro, Operating Systems, etc.)</td>
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<td>Management training programmes</td>
<td>Resource mobilization management</td>
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<td>Human relations management</td>
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<td>Total quality management</td>
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Professional institutions, associations, along with the formal education schools need to take the responsibility of conducting programmes for practicing professionals to develop their existing skills and teach new skills to face new challenges in their profession. Continuing education programmes need to keep pace with the ever-changing technology scenario. They should incorporate new specialisations and new professional practices into the curriculum (5-7).

They should support research pertinent to the changing needs of the profession in areas like:
- user studies
- evaluation of databases
- evaluation of search engines
- information retrieval
- search strategies
- marketing of information

The library professionals should read literature in their field. Besides professional literature, they should also read computer technology magazines. This would help them to go a long way in understanding the gadgets they have to handle.

Visits to information technology fairs and vendor demonstrations helps to get first-hand information about the products and also meet professionals in from different fields whose guidance may be needed later.

Attending library-related conferences, workshops and seminars

Study tours to other libraries helps interaction with other professionals

Continuous training schedules at the workplace

Internet has opened new vistas for library professional in this direction:
- discussion groups
- listservs
- email
- tutorials
- alert services

Along with these professional skills the following personal attitudes will certainly alleviate an effective information service:

i. Commitment to service excellence

ii. Creating an environment of mutual respect and trust

iii. Effective communication and negotiation skills
iv. Marketing and public relations skills

v. Presentation skills

Apart from these qualities some personal traits and attributes are certainly required to serve the users. Librarians need to be flexible, versatile and ready to the changes in the organization as well as in their profession. Creativeness and imaginative powers will help them to cope with these changes and bring about innovation in their work place. Tenacity, sense of humor, and patience will help them to face the frustrations and failures in unexpected situations.

5. Conclusion:

Library professionals need to publicize their image as global, collaborative and proactive information experts. The future of information world belongs to information professionals as long as they don’t remain mere spectators in the game. If they have to play a key role, they need to polish their existing skills and add new skills. Their knowledge base should not be confined just to their field, but allied fields too. However sophisticated the tools may be, they can never be a substitute for humans. In other words, even though the technology has replaced many of the day-to-day routines, finally it is the judgement of the librarians which will make a difference to the services. Librarians who are "information experts" and have the skills, training and knowledge to organize knowledge into systems and structures than enhance the use of information and knowledge resources and computer technologists who have specialized expertise to design the organization’s information infrastructure by building the networks, ensure its speed, reliability and accuracy should come together and provide an environment conducive for users. As long as the library professionals realize that they should make technology work for them and not work for the technology, they will continue to play an important role in this dynamic information environment.

References
