MANPOWER DEVELOPMENT IN LIBRARY AND INFORMATION SCIENCE - PRESENT AND FUTURE NEEDS IN THE CONTEXT OF EMERGING TECHNOLOGIES

Attempts to identify the role and impact of information technology on Library and Information Science (LIS) activities. Depicts the changing scenario in the profession of Library and Information Science due to the impact of emerging information technology. Further, identifies the knowledge and skill requirements in LIS personnel to interact with the changing environment and suggests the measures for development of the same to meet the present and future challenges in the profession in the context of emerging technologies.

INTRODUCTION

Information is the most important resource handled by LIS personnel. Information dissemination, transfer and communication take place in a variety of environments, between diversified people and through diversified media. Organised generation, processing, transfer and use of information is helpful in various fields of activities. The library and information centres play a major role in information processing, i.e., generation, collection, storage, dissemination, etc.

INFORMATION TECHNOLOGY - IMPACT ON LIS ACTIVITIES

It has been observed during the last several years that a constant change is taking place in different sectors of life under the impact of scientific and technological developments. The profession of Library and Information Science is no exception to this. Until recently the library and information professionals provided information services by using conventional methods. But the advent of the latest technologies in information science necessitated a reorientation of the library and information science environment. The computer-based Information Technology (IT) has affected the library and information functions in a spectacular way. The libraries and information centres in India are also influenced by the modern technology used in information handling. Computer-communication based information technology (IT) has a pervading influence on information handling, thus affecting the entire field of library and Information Science which includes following activities.

- Selection and acquisition
- Processing
- Storage and maintenance
- Physical access
- Dissemination of information
- Development of information products
- Utilization of information etc.

Due to a rapid application of the new technologies in the above said areas a significant change has been observed in the working environment of library and information centres.

CHANGING SCENARIO OF LIBRARY AND INFORMATION WORK

An attempt is made in the following table to identify the changes in the activities of library and information centres.

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<table>
<thead>
<tr>
<th>FUNCTIONS</th>
<th>OLD PRACTICE</th>
<th>NEW PRACTICE</th>
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<tbody>
<tr>
<td><strong>ACQUISITION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Book Selection</em></td>
<td>Publisher's catalogues; Book seller's of catalogue etc; Periodical reviews; pre-publication aids;</td>
<td>Machine readable databases of catalogues Turnkey system (Book line)</td>
</tr>
<tr>
<td><strong>PROCESSING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Text Input (Primary format)</em></td>
<td>Oral presentation writing, typing</td>
<td>Word processing; Optical scanning with the help of computer</td>
</tr>
<tr>
<td><em>Cataloguing (Bibliographic descriptions)</em></td>
<td>Typed catalogue, Printed catalogue etc.</td>
<td>Machine readable catalogues; on-line processing of catalogues Master card entry with generated indexes</td>
</tr>
<tr>
<td><strong>STORAGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Material</em></td>
<td>Cards; microform; printed material</td>
<td>Magnetic tapes, discs, drum, winchester, etc.; optical storage media; holographic storage media; etc.</td>
</tr>
<tr>
<td><em>Storage media</em></td>
<td>Card cabinets; Book shelves; cabinets; Microform storage device etc.,</td>
<td>Storage cabinets for Magnetic storage media: Tapes, Discs, Drum, wire, Winchester, etc.: Optical storage, Holographic Memories etc.</td>
</tr>
<tr>
<td><strong>INFORMATION RETRIEVAL &amp; BROWSING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Mechanisms to manipulate, scan and search</em></td>
<td>Browsing - single shelf browsing, catalogue browsing</td>
<td>Multiple browsing On-line browsing of computerised databases</td>
</tr>
<tr>
<td></td>
<td>Document retrieval; Information on documents;</td>
<td>Data retrieval; Fact retrieval; Knowledge retrieval; Information retrieval;</td>
</tr>
<tr>
<td><em>SDI</em></td>
<td>In-house (manually)</td>
<td>On-line</td>
</tr>
</tbody>
</table>
TRANSLATION Manual

ACCESS Machine

Limited Access (Local/regional); Limited source;

Wider access (global access); Teleaccess: electronic access;

INFORMATION PRODUCTS MACHINE

Local documentation lists; Union catalogues; Printed bibliographies;

International documentation lists;

DEVELOPMENT MACHINE

MULTIPLICATION MACHINE

Typed Printed Near Printing

Instant - Multiplication Fascimile Production

COMMUNICATION MACHINE

Personal Travel; Oral (man to man); Letters; Mail; Telephone

Man to machine; Telex, Teletax, CATV; Electronic Mail; Teleconferencing; Satellite communications; computer network, etc.

KNOWLEDGE AND SKILL REQUIREMENTS

New technology oriented library and information functions call for a new technology oriented and skilled LIS personnel. Therefore, more stress is to be given on the development of appropriate manpower in LIS field. The following are some of the identified areas which may be added in the teaching curricula for LIS personnel.

1. Computer Awareness: Knowledge of computer hardware and software;

2. Programming Abilities: Ability to use and develop software;

3. Exploitation of databases through the knowledge of:
   a) Indexing policies and procedures
   b) Vocabularies used in database
   c) Data structuring
   d) Query language
   e) Searching techniques and strategies
   f) Methods for optimizing interaction with potential users;

4. Creation of databases;

5. Indexing language;

6. Development of profiles i.e., user, document etc.;

7. Track user needs and behaviour;

8. Design and development of user friendly systems;

9. Telecommunication Technology;

10. Design and development of expert systems;

11. Computer teaching and research; etc.

The above requirements for LIS personnel make it essential to restructure the LIS curriculum by giving greater emphasis on new information technology utilization.

DEVELOPMENT OF FACULTY AND TEACHING METHODS

It is evident that the scope of a curriculum for manpower development in the LIS field is very vast. An unprecedented speed of changes occurring in LIS activities, make it imperative to modify/supplement the training of faculty and the existing facilities in the library and information science training programmes. The following proposals for improving the faculty and facilities in training programmes will help to a great extent to achieve the goals of manpower development process:

a). Recruitment of expertise in communication and computer technology.

b) Establishment of communication and computer technology laboratories.

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c) Establishment of audio visual laboratories

d) Availability of on-line facilities.

e) Use of audio-visual and other modern aids in teaching.

f) Exposure to information technology oriented libraries and information centres.

g) Development of multi-disciplinary faculty.

h) Development of an R&D education programme in LIS.

REFERENCES

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3. GOPINATH, M A: Information systems and expert systems : A symbiosis of knowledge and skills in information, profession. DRTC Silver Jubilee Seminar. 1987 Paper BM


CONCLUSION

There appears to be a continuously growing number of innovations in the field of computer communications (information technology) which can be applied to the library and information work, for speedy, accurate and exhaustive information processing and its retrieval. It is therefore, imperative that LIS personnel should be well conversant with the new technologies and their application in information science. The LIS training curriculum, therefore, needs to re-define its objectives and improve the methods to achieve them subsequently.