

## **\*PERFORMANCE REQUIRED OF FUTURE INFORMATION PROFESSIONALS**

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### **ABSTRACT**

*The digital revolution has brought with it unprecedented changes. These changes have affected all concerned in the value-added information chain including librarians and other information professionals. Areas of focus, on which the librarians should pay attention to, have been outlined. Future activities of information professionals, in keeping with computer-mediated communication environments have been projected. Some aspects of expected performance of information professionals have been indicated.*

**Keywords:** Information professionals; User needs; Management of information; Computer mediated communication environments; Upgrading of knowledge; Access to information

### **INTRODUCTION**

We are going through a period in history that is about to repeat itself and affect us in a different way with unpredictable results. This is brought about by the digital revolution using electronic media, which has been described as "the grandest revolution in the capture and dissemination of emerging academic and professional knowledge and information .... is now virtually on us" (Wills, 1996). The strategic combination of information, information management, information technology and communication technologies have made all this possible. One emerging effect is that the distinctions that separate various professions are beginning to fade. There will be great changes in the value-added information chain ranging from authors, publishers, printers,

distributing agents, booksellers, researchers, teachers and end users. Librarians and other information professionals will not be spared. The challenge is to effectively manage the changes by showing openness and readiness to adjust and adapt. The resilience of the profession, therefore, will depend on how it can jointly pool resources and its abilities to maintain control of the situation. The ways and means we use to lead the profession through collaboration and empowerment will be crucial if we are to successfully emerge as a surviving profession. (Daniels, 1996)

The success and survival of a profession is dependent on its performance and the impact and relevance of that performance

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to society at a point in time. The signs are clearly indicative that the library and information professionals need to adjust and fit into the new environment. This paper focuses on areas, which the profession should pay attention to, the activities which future information professionals would be involved in and the activities characterising the expected performance of these professionals.

### **AREAS OF FOCUS**

In determining performance required of information professionals, the areas, which need focus, are identified as follows.

#### **Knowing the User and His Needs**

Over the past two decades focal shifts in management including marketing, quality management, the implementation of ISO 9000, and reengineering of organisational processes have emphasised the need to know the user and his needs. There is a need to know in sufficient detail who is being served; how to monitor their constantly changing needs; how to determine the products and services that would satisfy those needs and how to regularly evaluate outcomes of organisational performance. Libraries and information centres would do well to examine the above issues.

#### **Recognising Potential Information and its Management**

Information should be viewed from a broader perspective rather than be limited to just published information. This broadens the scope to various sources of organisational information, raw data and other information that have potential use. The

availability of information sources in the print and non-print format, such as images, audio visual, electronic and digital further broadens the scope of the concept of information and the challenges that have to be faced in its management.

Conceptually, information management is realising the benefits of information as a valuable resource and subjecting it to management processes and controls. It is broader in scope than management information system or MIS. It goes beyond the collection, storage and dissemination of information. It addresses the use of information to attain the goals of the organisation. The private sector in particular, has used information management strategically and developed methodologies to stay competitive. Strategies used to highlight the importance and value of information to an organisation include:

- Developing an inventory of all information assets and resources
- Costing all existing information technologies and supporting resources
- Establishing the value of each asset based on established priority of corporate needs
- Establishing overlaps and gaps in information flows
- Maintaining records and files for integration in support of decision making and problem solving. (McGee and Prusak, 1993)

Librarians should capitalise on these developments by enhancing their understanding of the characteristics of information use and the factors that increase its value to users. Librarians have tradition-

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ally played the role of the information provider, but do not help the user to select and choose the information relevant to his needs. This has had a negative bearing on user satisfaction. In the context of changing environments and the ever growing mass of information, the user requires easier modes of access, using various channels, at any time he needs information. The user should be able to comprehend the organisation of information resources devised by librarians, know that information is available, the formats in which it is available, the nature of that information in relation to his needs and what needs to be done to acquire and/or use that information. It is within this context that the information providers should focus their attention.

#### **Responding to Computer Mediated Communication Environments**

Public and private organisations are responding to the new challenges posed by information and communication technologies. Organisation-wide electronic networks are becoming commonplace and organisations are increasingly using the Internet. The new technologies are also being used by institutions of higher learning for distance learning programmes. The use of Intranets and extranets is slowly gaining ground and it is in this networked environment that libraries are also changing their information processing and delivery options to meet new expectations of users. End users however still have problems in accessing information from networks and the Internet and user training in this area should be the focus of information providers. A study (BLRDD Report, no. 6123, 1993) of scientists in the United Kingdom indicates that

many users of the scientific, technical and medical fields “were unaware of the many tools and methods of information retrieval” and that in principle “users were willing to explore the use of novel services but in practice continued to use the familiar materials and methods.” The study observed that users welcomed the opportunity to attend formal courses in information searching and skills and recommended among others that:

- Researchers should be made aware of the nature and problems of scientific, technical and medical information systems
- Libraries in academic and research institutions should routinely provide training for users and information providers in information access.

In view of the above, there has been an increase in the development of formal courses of instruction using Computer Mediated Communication (CMC) technologies (Education for information, 1996). The challenge for information professionals is to train users both through formal training courses and in the online environment.

#### **Knowing the Relevance of Libraries**

Are libraries relevant and responding to the need of the times? This question has to be answered objectively viewing the situation at hand. There are opinions expressed that libraries are outdated; that they are not changing fast enough; that they stick to old values that are no longer relevant. These proponents feel that librarian’s resistance to change is psychological; that discarding or relearning new ways of doing things is not that easy and that their priorities are not in keeping with the times.

On the other hand, there are opposing views that libraries are changing as fast as they can, given the financial and other support available and libraries continue to be well-patronised by users and this is indicative of their relevance. It is felt that libraries have adapted to technology and the changing times by computerising the library processes, using the Internet and are offering training and retraining programmes to improve staff attitude, knowledge and skills. It is also felt that the introduction of TQM and ISO 9000 has become the catalyst for the transformation but drastic change is not possible because of limited resources available.

It must be realised that the huge financial investments in the new technologies have not really brought about returns on investment proportionate to the value of the investment. There is evidence to show that “shifting the focus to wrestling with information questions before turning to the technology can yield great benefits in understanding the strategic dimension of information” (McGee and Prusack, 1993, pg. 4-7). Libraries can draw strength from the strategies and use it as a forte for the future to maintain its position as a place where information is organised, sought after for use and to meet the charges from certain sectors of society that libraries have not kept up with societal needs. The information professionals should therefore focus on issues such as the direction it is heading and the aims and objectives of its organisation.

### **Identifying Required Competencies**

The developments in information technology have made it necessary to identify professional competencies that would be

relevant in the information age (Griffith and King, 1985). The concept of competency includes the knowledge, skills or attitude a person should have to effectively perform in a given situation. A study was conducted in Malaysia (Rehman et al., 1996) to determine the perceptions of library professionals on the required competencies needed to perform the various library operations. The study identified deficiencies of the library and information profession as perceived by librarians and proposed strategies for improving the education and training of librarians. The study has some limitations, firstly, only entry level competencies of librarians in the first five years of their practice were looked at and secondly, the behavioural components of competencies were excluded.

For a more holistic approach, there is a need to look not only at entry level qualities of information professionals but also at middle level professionals, those in executive positions as well as those in the top management levels. Relevant in this context is the *Competencies for special librarians of the 21<sup>st</sup> Century*, prepared for the Special Libraries Association Board of Directors by the Special Committee on Competencies For Special Librarians. The competencies identified are listed in the appendix.

Future changes might signal threats or opportunities to the profession. There is need for information professionals to collaborate actions to respond to these changes. Information professionals need to work together in groups, keeping in mind their own priorities, minimising disagreements and working together to achieve re-

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sults, by not just paying lip service but taking timely follow-up action.

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It is evident that for the next decade or so at least, information centres will still have to deal with both the traditional and electronic sources of information. Under such circumstances information professionals (IPs) should focus on reviewing the aims and objectives of the information centres and the information professionals. The following are some factors thought to be relevant to improve performance of the IPs.

##### **(a) Continuous Awareness of Current Developments**

IPs need to keep pace with the rapid development currently taking place and respond appropriately to the changes that affect their performance directly. This includes taking appropriate action to forestall possible negative effects or taking advantage of opportunities that will bring positive results. Professional naivety and apathy may have serious repercussions. IPs should constantly be aware of the environmental, political, economic, technological and social changes so as to have a clear idea of their role and spell out priorities that need to be set.

##### **(b) Upgrading of Knowledge**

Knowledge is a necessary prerequisite to subsequent understanding, assessment, decision-making and initiating of appropriate action. Information professionals should bear in mind the following:

- Supplement knowledge by keeping up with matters of professional interest to enhance competence.
- Increase knowledge in IT by keeping up with the rapid developments in this field.
- Outsource experts or work closely with those who know and who will help in advancing a cost effective use of appropriate technology.
- Acquire sufficient knowledge about the resources which abound. The challenge for all information professionals, then, now and in the future has always been to have adequate knowledge of information resources in order to exploit them for the benefit of users. This has to be a basic strength. This strength is continually being eroded by many factors. The onset of Internet is one such factor. Misinformation about the Internet and its potentials have already led some proponents to pronounce that libraries are not needed anymore. Such propagandist views are quickly caught on by the public who are fascinated by the technology and are unable to differentiate its drawbacks and possible long term ill effects. Mastering the Internet and making it known for what it can and cannot do should be the responsibility of information professionals.
- Know the user well and decide on how best they can be served. Knowledge of survey methodology, acquisitions, interview techniques, classification, organisation of information, database design, information storage and retrieval and information dissemination need to be combined and

applied to the knowledge about users. Pertinent information about users needs to be continually tapped, recorded and analysed. Only then can information providers keep track of changes, trends, wants, needs, expectations and strategize to respond appropriately with needed services and products.

- Be resourceful and undertake continuing professional education and training which will help enhance the acquisition of new skills. Learning how to learn will help the information professionals adjust well to changing situations.

#### **(c) Understanding the Concept of Access**

Libraries provide access to information in a variety of ways. Every function has implications on access. In the acquisition of materials, selection should reflect the needs of the clientele or else the collection does not get used thereby minimising access. The speed of acquiring materials determines how quickly the user gets to access the needed information. Speedy and detailed cataloguing and indexing of sources determine points of access to sources being processed. The storage and organisation of information facilitate access to the information easily and quickly. The dissemination of information increases the accessibility of information, which has potential for use. Making available information from outside sources through the inter-library loan service, document delivery service, online public access catalogues (OPACs) or through the Internet again makes information accessible to the user. IPs should therefore, clearly under-

stand the concept of access and the benefits of providing access to users.

#### **(d) The Need for Integration**

Traditional organisational structures allow libraries to function smoothly with the eventual aim of achieving library objectives. Such structures, however, divide human and other resources into groups with the purpose of dividing labour and managing work more effectively. Unfortunately such structures have also a tendency to create compartmentalised departments that may result in isolationist tendencies.

Operations, functions, systems and processes need to be integrated across departments if the library is to fulfil its objectives successfully. Automated libraries offer many functionalities, including the OPAC. These libraries also have separate systems that offer e-mail and Internet access. They often allow access to in-house CD-ROM databases and online database hosts. All these systems are separate systems. Technology makes it possible to integrate all the systems allowing access to any of the systems through any one terminal. Yet, many libraries fail to do this. The benefits of integration are many and can be applied in various situations.

#### **(e) Responding to User Information Needs**

A mix of methodologies exists today that can be applied to fulfil user information needs. Time spent by library professionals on mundane or non-priority tasks allows them little time to focus on more important activities. Business organisa-

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tions have ventured successfully into areas that were previously the preserve of libraries. Their success is mainly due to their ability to respond and satisfy user needs, and users' willingness to pay for their services. Libraries can play this role effectively at little or no cost and at the same time retain their usefulness. The emphasis, therefore, should be on the ability to respond adequately to satisfy user information needs in a variety of ways.

### **(f) Planning and Designing of Products and Services**

Professionals are needed in the planning and design of products and services that have the potential to satisfy users. A satisfied user is the best advertisement a library could have. User feedback, attention to detail, product life cycle studies, product differentiation, product development, pilot testing are important considerations to the library. Professional staff should give such matters greater priority.

### **(g) Flexibility and Ability to Adjust**

Rigid organisational structures do not allow for the flexibility to adapt to changing situations. Flat organisational structures and those based on the amoebic pattern of organisation may be best suited to meet such situations. Team based approaches using the concept of pooling organisational knowledge to make decisions, resolve problems and undertake projects will maximise staff potential. Resource allocation patterns may need to change to suit new and changing situations. Redeployment of staff at short notice to where they are required would

need to be incorporated. Investment in technological equipment should, wherever possible, adhere to industry standards to ensure compatibility and adaptability to advances in technology. In essence, the work culture in libraries needs to change. The new work culture can change the mindsets of library staff to accept and work comfortably in the new environment of tomorrow.

### **(h) Reaching and Interacting with the User**

Libraries, like all free things are often taken for granted even though it is one of the foremost institutions that preserve the intellectual heritage of mankind and an important source of information and knowledge. Unfortunately, for reasons quite well known, the library is not the first place users go to find information.

Libraries offer information services, maintain information resources of a wide variety and depth. They even go to lengths to get information from outside sources should they not possess what is sought. Unfortunately, they are not good at publicising what they have. There is a need to ensure that the services and resources offered are in keeping with the needs of the users. The isolationist tendency of libraries in not interacting with the user sufficiently is detrimental to the eventual greater use of the library by its users. There is a need to reach out to users, talk and mix with them, in order to understand their needs, and to make them aware of available information sources plus indicate how information can be used to their advantage.

**(i) Evaluate and Improve**

IPs seldom evaluate their services and resources and are often too caught up with daily routines to do so. IPs need to master methods of measurement and evaluation in order to know the extent of the use of a service or a resource. The bold step of discontinuing a service for good reason can be taken with full justification. Evaluation methodology is far from perfect, but it does provide some form of measure. Evaluation often leads to an improvement and change for the better and IPs need to increase their activity in the evaluation process.

**(j) Effective Use of Computer Mediated Communication Technologies**

The most effective use of computers and the network is to streamline our processes, to add to the efficiency of our operations and to apply them innovatively. Some uses of CMC technologies are as follows:

- The development of information kiosks or its equivalents to provide information about the library and its services.
- The use of electronic data interchange (EDI) for acquisition of information and material, monetary transactions and the conduct of commercial transactions.
- Selection of electronic sources of information particularly on the Internet. (York, 1996)
- Developing subject guides to Internet resources as individual libraries and as a group of co-operating libraries. (Piontek and Garlock, 1996; Morville and Wickhorst, 1996)
- Provide Internet access to the public within a locality or a region. (Burgin, 1996)
- Develop a national system of integrated links and pointers to material, electronic and Internet resources available in the libraries of the country. (Davis, 1996)
- Evolving management paradigms in the context of the CMC and the information highway. Extensive communications ability, the availability and accessibility of information and the ability to share information are three areas which will influence the management or organisation. (Lin, 1996)
- Communicate with users using the Internet. (Klobas, 1996)
- Transforming the document delivery system to a national electronic information delivery system. Potentially every library that has an Internet electronic mail account, a scanner using the new multi-purpose Internet mail extensions (MIME) can deliver documents containing text and graphics to another which also has an e-mail address. Audio and video clips can also be sent. (Smith and Delaney, 1996)
- Embark on projects either jointly or otherwise which involve electronic publishing. In the light of monopolistic publishing practices, soaring prices of journals and copyright restrictions in the electronic environment, it is time libraries cooperate with research institutions and institutions of higher learning to make available information to the end user directly. This is indeed possible as has been demonstrated by the University of Hawaii. (Webb, 1996)



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- Encourage reading via the Internet by providing reading guidance, book reviews, book talks, new books page, selected subject book lists, etc.
- Design efficient and attractive web pages. It may be of interest to note that the homepage of the International Federation of Library Associations (IFLA)\* won an international award as the best homepage. Libraries should be motivated to emulate IFLA.
- Offer user education courses, operate electronic classrooms, and similar activities with the purpose of instructing and bringing awareness to the user of the wide range of information sources available for use. Many innovative programmes already exist on the Internet. In addition to information literacy programmes suggestions have been made to incorporate network literacy (Hu, 1996) and multimedia literacy (Hofstetter, 1995)
- Publish the library newsletter on the net. Use this as a medium to promote activities, events and services.
- Offer reference services via the net. Virtual reference desks are available at many university libraries in US such as Purdue University Libraries and North Carolina State University Library.
- Offer access to special collections that have been digitised and made available on the net.
- Develop forms on library web sites for users to fill up to request for various services such as ILL and document delivery requests, submit

reference questions, literature search requests, acquisition recommendations and for user feedback.

This list can go on but is indicative of the activities that are possible in the electronic environment that libraries are going to be placed in.

### **EPILOGUE**

The influence that information technology bears upon us cannot be denied. Investors in the technology have billions of dollars at stake, using all means to impress upon every sector of society on the superiority of the computer and how it can be applied to almost every human activity. The danger here is not to go overboard. A 'balanced view of what computers can and cannot, should or should not do' is necessary to discriminate between the use and abuse of computers. (Roszak, 1994). Computers cannot think, humans can – this message must be put across clearly.

A danger that looms across the horizon is the attempt by powerful publishing houses and the information technology industry to influence governments and international bodies to institute new intellectual property laws supposedly designed to protect the interests of the intellectual property owners. In fact those pushing for such legal reforms have vested interests. The effect of such laws, if put in force, will be to the detriment of the libraries, IPs and most important of all the users. Use of information in the digital environment will have to be paid for compared to the present situation where the information in a book can be used many times by anybody and at any time.

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\* IFLANET – <http://www.nlc-bnc.ca/ifla>

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The role of the library as the “social memory” of human thought is in danger. Librarians and information professionals need to act individually and together to face the threats that the information age brings but at the same time seize on the boundless opportunities to improve information services and products using new technologies. A balanced perspective is called for to face future challenges. Serving our users better by offering what they need in excess of their expectations will be our best hope to overcome, to survive and to stand tall.

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### **APPENDIX**

#### **COMPETENCIES FOR SPECIAL LIBRARIES OF THE 21<sup>st</sup> CENTURY**

[Taken from "Competencies for special librarians of the 21 century", *Specialist: The newsletter of the Special Libraries Association*, Vol.19, no.11, Nov. 1996, pp.1,3,8,9 ]

Prepared for the SLA Board of Directors by the Special Committee on Competencies for Special librarians

Competencies have been divided into;

1. Professional competencies which relate to the special librarian's knowledge in various areas.
2. Personal competencies representing a set of skills, attitudes and values.

#### **1. Professional Competencies**

- 1.1 Has expert knowledge of the content of information resources, including the ability to critically evaluate and filter them.
- 1.2 Has specialised subject knowledge appropriate to the business of the organisation or client.
- 1.3 Develops and manages convenient, accessible, and cost effective information services that are aligned with the strategic directions of the organisation.
- 1.4 Provides excellent instruction and support for library and information service users.
- 1.5 Assesses information needs and designs and markets value-added information services and products to meet identified needs.
- 1.6 Uses appropriate information technology to acquire, organise, and disseminate information.
- 1.7 Uses appropriate business and management approaches in order to communicate the importance of information services to senior management.

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| 1.8  | Develops specialised information products for use inside or outside the organisation or by individual clients.              | 2.1.3  | Sees the big picture   |
| 1.9  | Evaluates the outcomes of information use and conducts research related to the solution of information management problems. | 2.1.4  | Looks for partnerships and alliances                           |
| 1.10 | Continually improves information services in response to changing needs.  | 2.1.5  | Creates an environment of mutual respect and trust             |
| 1.11 | Is an effective member of the senior management team and a consultant to the organisation on information issues.            | 2.1.6  | Has effective communication skills                             |
|      |   | 2.1.7  | Works well with others in a team                               |
|      |   | 2.1.8  | Provides leadership.   |
|      |   | 2.1.9  | Plans, priorities and focuses on what is critical.             |
|      |   | 2.1.10 | Is committed to lifelong learning and personal career planning |
|      |   | 2.1.11 | Has personal business skills and creates new opportunities     |
|      |   | 2.1.12 | Recognises the value of professional networking and solidarity |
|      |   | 2.1.13 | Is flexible and positive in time of continuing change          |
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|---------------------------------|--|
| <b>2. Personal Competencies</b> |  |
| 2.1.1                           | Is committed to service excellence   |
| 2.1.2                           | Seeks out challenges and sees new opportunities both inside and outside the library. |