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## **The Virtual Library : Changing Roles and Ethical Challenges for Librarians**

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### **Abstract**

*In this age of Information Technology, there have been so many opportunities for the Librarians for involvement in an information-based society including electronic and multimedia publishing, Internet based-information services, global networking, web based digital resources etc. The base of recorded information is growing at an accelerating rate, in increasing varieties of formats (texts, numeric, graphic, video, audio, image, electronic, etc.). Virtual Library can be defined as the Internet based Digital Library. The concept of "Virtual Library" is that any person who has a computer by which he can make connection to the library networks can access not only the resources of the library but also access variety of information that is available nationally and internationally through networks, like Internet, Intranet without being physically present in library. This article explains what is meant by a Virtual Library and to build a virtual library in what way the Librarians have to change their roles to face the challenges of modern Information Technologies in the changing environment. Also this article, discusses about the changing role of librarians, the skills needed to build a virtual library and how the virtual information should be collected, managed, preserved and disseminated to the millennium users.*

**Keywords :** Virtual Library; Collection Development; Archiving; Librarian's Role

### **0. Introduction**

In this age of Information Technology, there have been so many opportunities for the Librarians for involvement in an information-based society including electronic and multimedia publishing, Internet based-information services, global networking, web based digital resources etc. Librarians are charged with selecting, organizing, and instructing patrons on how to locate and use the resources, and preserving information regardless of format or technology. The information revolution and the pervasive thinking that everything is available on the Web have created new challenges to these traditional professional ethics. Acquiring and providing dependable access to electronic resources require librarians to learn and apply new skills such as negotiating license agreements and understanding evolving technologies and building a virtual library to provide quality on-line information service to the users in time.

### **1. The Changing Environment**

The role of information specialists is to facilitate the interactions between the potential information user community and the body of recorded information. The traditional information access and management roles played by the information professions are expanding, particularly in the design and development of new information products and services and of tools to support information seeking and selection, the analysis and synthesis of information content on behalf of users, and information of user instruction.

The major change that has had an impact on the way librarians work is the modern computer, and hence the technical push with the growth in the amount and production of technical and other documentation. Computers have been able to help in the processing, storage, and management of information, and their application is increasing even more dramatically at present.

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One of the major events that has had a significant effect on the way librarians function and perform was the evolution of semiconductor technology and the development of the microcomputer. In parallel, there was another major development, the evolution of telecommunications and computer networking, which evolved from dedicated fixed connections to circuit switching, and then more recently to packet switching. Circuit switching has actually been around for quite some time. In 1990, the concept of the national research and education network evolved, which links all the government agencies, government installations and research labs, and academic and educational institutions at present and we are now in the Global Information Network system.

The power of the Global Information technologies of increasingly more sophisticated and powerful computers at very reasonable prices, and the evolution of networks to include both wired and wireless networks, as remote mobile communications increases, offers opportunities that have never before been available. Some of the ideas and thoughts that librarians had in the 1960s and 1970s and even in the early 1980s that were not feasible for implementation in the technology of the day now become much more realistic in terms of today's technologies. The opportunities are there for us to take advantage of the technology.

## **2. The Challenges of Digital / Virtual Libraries**

Virtual Library can be simply defined as the Internet based Digital Library or a Library without walls. Timothy Green, Director of Business Research, defines Virtual Library as "a set of services that gives customers the knowledge they need to make the highest quality business decisions in the least amount of time"

The concept of Virtual Library is that any person who has a computer and connection to the Library networks can access not only the resources of that library but also variety of information available through National and International Networks like Internet and Intranet without being physically present in library.

The terms "digital library" and "virtual library" imply "a library that provides access to a collection of distributed information in electronic format through pointers provided locally or a collection of digital objects housed in the same place, virtual or physical".

The virtual or digital library will have many familiar library features, but there will be a change in the way in which the library acquires and provides access to collections and in the composition and roles of the library staff. Moving toward a digital or virtual library challenges not only the accessibility of the information but also the entire philosophy of what constitutes a document. Many librarians had heard that by the year 2000 all new resources would be digital. Although we have not quite reached that point, today most libraries are struggling to maintain a "transitional library" collecting and organizing both print and electronic resources. Walt Crawford says that "ongoing complexity and unpredictable currents of change will mark the future of libraries". Even the terminology describing information is changing.

Once we described information in a printed, permanent format as a "document"; now, information is described as a "resource". Once one user looked at one book or journal at a time. Now, electronic information can be stored and accessed by millions of users simultaneously from personal computers (PCs) with modems or through direct Internet connections from home, work, or practically anywhere. Patrons no longer have to physically visit the library to retrieve information. This ability to access full-text resources electronically from within the institution or from any PC, provides the user with convenient and immediate access to information. Expanded use of interlibrary loan and document delivery also offers the potential to provide access to all materials, rather than only to materials owned locally.

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### **3. Technology Challenges**

Technology provides challenges to access. The ALA's 1995 Code of Ethics and the Library Bill of Rights clearly state that everyone should have access to information. The recent explosion of information available on the Internet presents challenges to the traditional American Library Association (ALA) code of ethics that is taught in library school. Librarians make ethical decisions every day on the basis of the culture of their organizations. Some organizations limit access to particular levels of employees by requiring a username and password; others may institute behind-the-scenes Filtering software or restrictive policies for providing access to the entire Internet. Because these steps challenge the very essence of librarianship (providing access to all), the librarian must step up and voice concern for the patron's rights. Establishing well defined access policies will help to clarify who has access to the Internet, under what conditions, for what purposes, and with what restrictions. Policies should consider how to integrate the new technology and how its use reflects the objectives and values of the library. Many librarians argue that collection development and selection of materials are a form of filtering.

### **4. Why it is needed to change the role of Librarians**

One primary role of librarians is to provide leadership and expertise in the design, development, and ethical management of knowledge-based information systems in order to meet the information needs and obligations of the patron or institution. Electronic information provides librarians with challenges that are not necessarily new; however, as the nature of the librarians' roles changes, so do the challenges to long-standing professional codes of ethics. Marshall Keys writes that in the future, as now, "we can expect the virtual library to be the organization that identifies, selects, negotiates for, and provides access to an incredible range of information resources on our behalf".

A 1998 survey published by the Special Libraries Association (SLA) found that, although our roles are indeed changing, "librarians foresee their role evolving to that of consultant and planner, where they facilitate the delivery of end-user information through the corporate network. At the strategic level, they could play an important role in managing the knowledge resources of the organization". The same survey reports that "there has been no significant change in the amount of time spent on strategic activities. ... Special librarians still spend close to one third (30%) of their time conducting research or providing assistance to end-users. A large proportion (32%) of time is also dedicated to various administrative duties".

Keys writes that the evolution toward a digital library creates a change in the "locus of control". "The library's collection is moving outside the library itself. Digital collections can be stored off-site, and the individual library will have far less control than today over the actual availability of information to the end user". Electronic information creates challenges for the library community at its very foundation, moving it away from the traditional paper-and-print format to an ethereal world of circuits and connectivity. The library is no longer defined simply as a building or a physical repository that houses information. The analysis, synthesis, and packaging processes are going to increase dramatically. This has been the situation for a considerable period of time and these activities are going to continue to increase as the amount of information and the number of resources grow.

Finally, user education and training have become a very critical part of the environment. We will have to expand what we cover in user education and training. We tend, on the whole, to promote the technology we give users — competencies to use specific systems and resources. But we need also to give users understanding of the range of resources and systems available to them, of the limitations as well as the capabilities of those resources and systems, and, most importantly, of when users should help themselves and when they should seek help from information professionals.

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## 5. The Challenging and Changing Role of Librarians

The modern trend is for the role of the librarian to move from that of a passive Intermediary responsible for guiding patrons to appropriate information resources to that of a much more proactive professional whose role includes analyzing and repackaging information. Librarians have faced this challenge head on by becoming masters of the Web. Librarians create powerful Web sites such as the National Library of Medicine's PubMed database. Librarians see the Web as an easier way to share what they know with others. They gather electronic information and create electronic pathfinders and front-end search tools to help users. Librarians create online tutorials and instructional Web pages to help patrons perform the best searches. They gather links to web-sites on specific topics and lead patrons to these evaluated sites as a starting point.

According to Mary Ellen Bates, another role change technology brings is that the "library and information center managers are often asked to negotiate these electronic subscriptions. This requires a new set of skills and even an entirely new relationship with publishers".

The increasing cost of both print and electronic journals causes many libraries to cut subscriptions and to purchase data for a particular audience. It is the job of the librarian to choose what is to be cancelled and to decide who will suffer least from the lack of access to particular information. In the decision to cancel subscriptions, the librarian considers, among other things, the needs of the community the library serves and whether the information is also available within the organization. Price and timeliness in retrieving the information are also considered. When negotiating access with a publisher, the librarian must agree to certain restrictions on photocopying or distribution of electronic materials. Despite copyright notices and efforts to educate employees about intellectual property rights, electronic publications can be easily forwarded to people outside the licensed user group. The library is responsible for maintaining the awareness of all employees about copyright issues.

### 5.1 Changing Role of Librarians in the Internet Environment

The Internet has forced librarians to take on the role of arbitrary gatekeeper. Applying filters and abiding by policies may conflict with our duty to provide equal access to all of our users. We are often forced into the unpleasant role of the "Internet police" for the organization. Monitoring and reporting the use of the Internet violates the librarians' duty to protect the confidentiality of our users.

## 6. Challenges in Collecting Virtual Information

Making materials we collect available to all current and future users is another of the core values of librarianship. The challenge is for the librarian to contribute to establish realistic collection-development policies covering acquisition of and provision of access to electronic resources for users now and in the future. With the increase in electronic resources, librarians and libraries are no longer just collecting and caring for print materials. Unlike a print book or a journal, electronic resources cannot be considered a permanent addition to a collection. Payment for a product covered by a license is a payment to use the information product for a period of time that is usually specified in a contract. This payment is not for the outright purchase of the product or for ownership of all the rights to that product. A digitized collection means that libraries share the use of the collections with other institutions, not only locally, but also globally. It is the publisher who dictates how much access will be provided, which issues will be available, and how much access will cost. According to Keys, "access to these materials will be neither free nor certain as control of them passes out of the hands of the library".

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## **7. Archiving or Preserving the Virtual Information**

The question of archiving the virtual collections is very nebulous. Libraries, vendors, and publishers are all relying on someone else to archive and preserve information for the future. Some publishers may provide the archived information on a CD-ROM, usually at an additional cost, but many do not. Instead, they provide rolling-year access, so that each year the oldest content will not be available. Older articles can be found by a visit to a medical or university library. Although they may be on microfiche or microfilm rather than in paper form, they will be catalogued and accessible. "It is not likely that commercial publishers and database aggregators will archive and provide perpetual access to electronic resources as libraries now archive print materials" every library should continue to do its part to preserve information in all formats. Failure to do so will result in gaps in information for future research.

## **8. Challenges in Accessing Virtual Information**

'The preeminent value in librarianship is, of course, service". Librarians define themselves as service professionals. They create collections and provide resources to meet the needs of their patrons and their communities. The ease of retrieving information from the Internet leads to the thinking that the librarian, who is trained to search for information and to create front-end searching of databases, is now redundant and unnecessary. Herbert S. While describes the 'incessant propaganda with which the developers and sellers of computer systems, both hardware and software, constantly bombard us as: (1) using technology is easy, (2) using technology is fun, and, (3) using technology saves both time and money".

These messages lead patrons to believe that they no longer need any assistance in locating information, that all information is found on the Internet, and, even better, that it is all free. The graphical interface and point-and-click navigation of the Internet mean that the user no longer has to know complex commands. Navigating from one site to another can largely be accomplished by clicking a mouse, and when a good site is found, another click adds it to a "favorites" or "bookmarks" file. Because librarians are trained to perform searches electronically and to select appropriate resources, they know that the information the average patron retrieves is often of poor quality and that important resources can be missed. Patrons may retrieve so much information and so many "hits" that they are satisfied with the information from the first few sites browsed. "Eighty-five percent of Web users use search engines to find needed information, but nearly as high a percentage cite the inability to find desired information as one of their biggest frustrations".

The SLA survey predicts that: "As more and more end-users acquire desktop access to information in an intuitive, seamless search environment, the word 'librarian' itself will become a misnomer. Rather, this changing role implies a different skill set. The emphasis will shift from technical skills in the library to communication, facilitation, training and management skills.

## **9. Special skills needed for Librarians to face the challenges in Building a Virtual Library**

Although technology presents the librarian with ethical challenges, the librarian is ready for the role of information professional in the connected world. Information professionals have, out of necessity, acquired skills that can contribute to success in their new roles. Duberman describes four skills that information professionals already possess:

- they "know about changes, the problems, and the opportunities the
- new technologies and new content can provide;
- [they are] used to learning new things;
- [they have] negotiation skills;

and [they possess a] deep knowledge of information systems and databases [that] really enables them to turn questions inside out and look beyond the obvious”.

Libraries have frequently been early adopters of new technology, and librarians continue to be at the forefront in learning and teaching new technologies. Librarians see the Internet and electronic information as tools that are used to provide information. Crawford writes that the librarian must “recognize that technology offers tools, that those tools interact in complex ways, and that tools aren’t ends in themselves”. As librarians claim to be professionals, they must also claim the responsibilities that accompany professionalism, particularly with respect to trust. Librarians are accountable for the information they provide. If they are not now doing so, they should take every precaution to avoid the distribution of misinformation. The provision of false or misleading information through carelessness breaches the trust the patron puts in the librarian’s ethical duty to supply the highest level of service to library patrons, no matter the format of that information. In the end, librarians know that “a good library is defined by the principles of librarianship, the mission of the specific library, and the persons and services that make that mission a reality”. Technology will continue to change, and libraries and librarians will use the changing technology to provide the best access and service to their patrons.

## 10. Conclusion

The remarkable growth of Internet has made significant revolution in all the areas of science and technology. Rather than using it as a tool for searching and retrieving information, Internet has become the king of all media, by which we can access virtual information and can build a virtual library to provide timely, quality service to the users. Librarians of this Digital era, are in the position to change their role as Arbitrary information scientists/gatekeepers and to meet the challenges of the Internet, World Wide Web, On-line access and the concepts of virtual libraries. So they must enrich their knowledge with special skills of the latest IT developments, to browse, access and retrieve a particular information across the Global Networks and to organize and manage the information by building a virtual library by which they can provide quality digital information service to the users.

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