

LIBRARY INFORMATION SERVICES IN THE DIGITAL AGE

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Abstract

Library information services are a key element in libraries since the ancient times. Their vital role is increasingly becoming a measure of the library's contribution to the transformation and development of a society and the nation at large. The use of Information Communication Technologies (ICTs) has caused a transformation in the users' perception from what is being hosted in the library to how and when services are rendered to fulfill their requests. Consequently, libraries are becoming less important for the material they collect or house. Instead, their importance is being measured in respect to the fulfillment of the users' requests. The movement of material from publishers and hosting them for "just in case" some users will need them is being replaced by delivering materials from publishers "just in time" to answer the user's needs. However, this transformation has brought a challenge in the field of library information services of dealing with the ever-increasing complexity of information, differentiating useful information from mis-information, and upholding the rising needs expectations of the users. This paper will discuss the available technological opportunities that can be used by the library information services in addressing such challenges.

Keywords: library, library services, ICT, digital age, library transformation

1. INTRODUCTION

The literature on library and information science/services indicates that Libraries started off as store houses, where books were more preserved than utilized and librarians acted like some form of custodians and their interaction with users were minimal, for example only in locating books and serving users, then there was a shift as a result of information communication technology. Librarians were supposed to be custodians who did not encourage the use of books. The users were expected to use the library on their own. At most, if a user asked for a book, then the service that would be offered by the so called librarian was to pass on the book and leave the user alone. From the ancient times to present we note that this trend in services has tremendously changed to due information technology.

Libraries play different roles for different people. To some, a library is a place to read books; be furnished with the current news from up-to-date newspapers; to do research; a place to access or share information in response to a particular need; etc. Now days, libraries and librarians play an important role in providing access to information, organizing it, and helping users to find the information they need. Consequently, information services have become a key element for libraries. The present user's interest is to get the information in need within a given timeframe. The timeframe varies with the user's mission or task. For example the timeframe for a surgeon preparing for an operation before entering a theater is much shorter and critical than that of a teacher preparing for the next lecture. Though the present users can get access to the vast amount

of information on the Internet and online databases, the role of library information services has nowhere reduced. The amount and diversity of the ever-increasing information on the Internet and in online databases is one of the major attributes to the increased role of library information service units. The lack of information organization on the web; the demands of users who want quicker and clear answers in response to their information needs; technological skill deficiency among some information seekers to efficiently and effectively search for the right information; are among the few causes that have raised the need for information services more than before in libraries.

In this paper I discuss the available technological opportunities that can be used by the library information services in addressing the challenges brought about by the ever-increasing complexity of information needs in the digital age.

The changing role of Libraries

Libraries are organized collection of monographs, periodicals and other sources of recorded information. They commonly include catalogues, directories that provide factual information and indexes which help users to find information in other sources for the last few years, libraries started providing access to information in electronic formats such as CD-ROMs, World Wide Web and online databases.

The traditional role of libraries has always been as an intermediary between the information producer (and publisher) and the user. For the information producers, libraries acted as a clearing house of products. Information producers would normally provide the library with their products, thus reducing administrative problems and costs of providing the products directly to users. For the user, libraries are efficient instruments to make available making of limited set of relevant information source out of the entire universe of publications. Libraries act as selective filter and quality instruments, making available to users only those publications that are relevant and sufficient to end-users. Since publications are acquired through library funds, information is usually made available to end users either free of charge or at a minimum cost.

The traditional roles of libraries can be summarized as below.

Selection: Choosing and acquiring information resources available in the market place, based on user needs and quality standards.

Storage: Maintaining the availability of publications though short-term as well as long-term storage and presentation.

Services: Making information resources available through facilities and procedures for onsite use, circulation, and loan from other libraries.

Support: Providing guidance and assistance to users, including the development of support systems such as catalogues user education and information services.

To day, there has been a shift in the role of libraries, from the clearing house of products and a service center for printed publications towards becoming an intermediary for traditional materials and for networked service based on digital information resources. Information resources come in various format- printed, audio, video multimedia and electronic. These resources may or may not be owned by the library. Some of these resources may be free and available to users directly, others are available only through libraries that have acquired them.

Libraries are expected to “add value” to the products and services. Adding value to information is part of the core and expertise of libraries. Value is added to information by facilitating access through indexing and bibliographic description, and through the creation of systems, which make information more logically organized and easier to find. Libraries themselves add value to the collection (both traditional and networked) by helping users navigate the universe of information through content development, instructions, search services, and reference assistance.

Information services Generally speaking library user services can be divided into two categories: library public user services and library technical user services. Library public user services refer to circulation, bibliographic instructions, distance learning, government documentation, reference and special collection. Library information user services focuses on procedures and operations of maintaining, developing and supporting library collection and services behind the scene such as acquisition, cataloguing, classification, inter library loan, document delivery and serial systems.

In the 1990s, the Internet became the primary platform for libraries to build and deliver information resources, services and instructions. Lately library user information services, also called library user public service became evolving into two sections: traditional library user information services and electronic library user information services.

In the digital age, the most common library user information services starts from the personal oral or written communications between librarians and library users: Traditional library user information services have the following major features:

Face to face, this face-to-face personal communication includes eye contact, facial expression, oral communication, and written communication.

Onsite, this includes, campus out reach coordination and collaboration, library tour, ready reference, user technical support and virtual reference

Electronic library user services include the Internet and the worldwide web, computerized library catalogs, digital libraries, distance learning services, e-databases, government, instant message services, interlibrary loan and virtual references

Technology trends change in library services

Since the 1980 each new step in library automation has changed library services. In hindsight we can see a number of trends, among them: access from multiple locations, making more resources available; making information available in raw forms and diminishment in the role of intermediaries. All these trends have been enabled by technological developments in the area of networking, file storage, and more graphic user interface) they have also been enabled by agreements on standards and protocols (such as Z39.50) that permit the linking together of resources from disparate sources.

The digital age

We are in the digital age; the primary role of information in this age is in many digital cases. The primary means of sharing information is the digital network. With the digital technology, information in various formats- text, audio, video and electronic can be created, stored, organized, accessed and transmitted with relative ease, and in forms that we could not have thought of earlier.

The digital age has brought about many changes to libraries, some of these changes having been taking place before the introduction of the Internet in the mid 1990^s. The 1980^s and early 1990 saw much discussion in libraries on issues such as print versus electronic; "access versus ownership", "mediated versus unlimited online searching" and professional concerns not gradually widened to include electronic licensing and consortia collection development. To day the digital age has brought many aspects of library services. The card catalog has been replaced with OPAC in many libraries, users now search for information from their desktop; users down load e-books on to their PDAs, full text retrieval of information sources is becoming common place and services are increasingly becoming personalized and pay as use.

Access from multiple resources: The key result of automation efforts was to make access more convenient to library users. In the days of card catalogues; library systems often forced users to travel to a central catalogue or multiple branches just to discover holdings. To day users can consult all holdings from workstations throughout the system (and often from home). This notion of access from multiple locations has also affected the use of indexing and abstracting services. In 1970^s unless a user willing to incur a significant pay-per-user fee from a private online service s/he had to travel to the site in his/her library system that had the published volume containing the sought after index.

In the 1980s the users had to go to location that had the CD-ROM of a particular index mounted. To day those indexing and abstracting services are mounted online as databases or on CD-ROM servers, and are usually accessible throughout the system. Divorcing library services from physical location provides a profound difference in what a library is to day. Making more resources available; for many years library automation systems were thought of as merely ways of delivering only bibliographic records (essentially on line catalogs). But over time, these systems have been augmented with more services. Many automation systems are currently delivering indexing and abstracting services. There are number of other non-library information services (such as

phone listings, course descriptions class schedules, pre-enrollment capabilities) are being delivered through the same system that delivers library automation.

Making information available in raw forms: The types of information available to users in digital form have continued to grow. If we consider a bibliographic record to be a “representation” of an original book or article, then over the past decade we have been providing users with progressively truer representations (i.e. representations that are closer and close to original raw material).

Indexing and abstracting, services have moved from providing searchable index terms or descriptors, to searchable abstracts to (more recently) full text articles and books. In online library catalogues, have moved from bibliographic records, to full text and page images. This movement to wards rawer information or more detailed representations is often called “enhanced record” and has been a key element for those studying information retrieval. But if one considers that cataloguers and indexers have always been in business of “abstracting” from original materials to create searchable records, another way to look at these “enhanced record, is the abstract which is little closer to the materials that they are abstracted from.

Diminishing roles for intermediaries: The success of library automation has meant that users increasingly interact with online systems, and have less reliance upon library staff. To day many library systems allow users to check circulation information without even contacting the circulation unit and always users are making user requests with out interacting with a library staff member.

Implications of technological changes/advances on the library environment We are already seeing a transformation in the world of libraries, libraries are becoming less important for the materials they collect or house, and more important for the kind of materials they can obtain in response to user requests. This movement from collecting materials “just in case” some one’s will need it, to delivering materials from else where “just in time” to answer a user’s needs, is a profound shift for the library as an institution. This shift is direct result of the recent proliferation of digital networking in an environment where standards for description were already well established. This is currently evident in major research libraries where librarians spend much of their time creating (World Wide Web based electronic pointers to resources on the internet). Efforts like this are likely to greatly increase in the fore seeable future. These trends imply less in person mediation by library staff (as patron access information directly, but more of behind the scenes mediator role in selection and creating annotated/evaluation guides to external resources). This means a greater role for library staff as instructors, troubleshooters and guides.

Divorcing libraries and their form of physical collections raises serious issues. Libraries need to provide access to materials that they don’t themselves own and control should worry about assurances that they will be able to access those materials far into the future and this problem is particularly acute with the World Wide Web resources.

At this point in time libraries need to be careful about becoming too dependent upon the world wide web resources. Web resources often change location, and until location independent naming schemes replaces URLs, updating a library's link to external resources is likely to be a serious problem. Few information providers have the kind of commitment to long term information maintenance that libraries have; libraries need to be concerned that the creators of the key resources they link to day may soon tire of up out dated resources. Finally, libraries need to avoid relying too heavily upon external information resources, which are free to day but may become expensive some time in future; some information providers have learned the same information providers have learned the same business principles as drug dealers giving out free services until the user is hooked to the business.

Libraries that shift their focus from acquisition to access needs to realize its implication for other parts of their operation this often requires a significant investment in equipment and training. It requires the development of an infrastructure to support document delivery. The process of selection can become even more time-consuming for a library that is pointing users to remote materials than for a library that is buying its own material (this is particularly true on the world wide web where pointers have to be constantly maintained, and where there are fewer clues as to the reliability of information resources).

The key challenging areas for libraries in an online age

A number of societal trends have the potential to severely affect libraries, particularly as these move into the online information delivery environment. Key elements among these trends is the movement from flat fee pay to pay – per – use model, best – seller phenomenon, the consolidation of electronic information distributors, erosion of provably, and issues of access and cultural diversity.

Flat fee Vs pay – per – use: The movement towards pay – per – use model is likely to severely affect user habits, particularly as this begins to penetrate web based delivery systems. Pay –per- use models tends to discourage exploration and encourage viewers /readers to examine items that others have already deemed popular (favoring best sellers over more esoteric works). Libraries 1980^s experience with pay per – use online indexing and abstracting services led by many librarians to embrace newer flat– fee model that arose such as CD - ROMS

Best seller phenomenon: Economies of scale make mass distributed information cheap and available, and can lead to an environment where smaller audience information is more expensive and harder to find (Basser 1995ed) over time this may well lead to the favoring of electronic delivery of entertainment over delivery of information (Besser 1994)

Consolidation of electronic information distributors

As corporate mergers, buy – outs, and consolidations leave us with fewer and fewer independent information providers, this will change the information people get. Will large conglomerates with interests in many different types of industries begin to treat their information distribution divisions the same way they treat all their other commodity distribution divisions?

Privacy: As people begin to pay for the information they receive electronically, what kind of privacy issues does this raise? Will reading and buying habits be traced and sold as demographic data? Can libraries continue to take their strong traditional privacy stand when providing pay – per – view information?

Access: who will guarantee access in an era when some one must pay for each byte of information that is accessed? Can libraries contrive to provide free (or flat - fee) access to all their constituents in a pay – per – view era? Will the best – seller phenomenon take hold and make available only least common – denominator information (as in broadcast television) will the information needs of the less affluent be met in the way that they can afford.

Cultural and electronic diversity

Will the world of online digital information lead more or less diversity in that information? Will the best seller phenomenon take hold and make available only of the less affluent be met in the ways they can afford?

Conclusion

Libraries are an integral part of the society that surrounds it. Librarians need to recognize the changes that have already taken place in libraries, and to be aware of the ways in which broader societal change are affecting Libraries. Many library functions are migrating to other environments (and because libraries are affected by the society around them) Librarians must resist the type of changes that threatens basic principles such as equal access to information and fair use. They need to realize the advantages of the mass delivery of library information services in the digital age. And they need to be concerned about issues such as pay per – use, privacy cultural diversity and the consolidation of electronic content owners and distribution.

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