Impact of Internet on Libraries: An Observation

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ABSTRACT

A library's collection development is a continuous process and responds to the needs and goals of its users. It includes not just the policy of collection development itself but also the procedures of selection, acquisition and evaluation. With the use of the Internet and the advent of the virtual library, the new direction in collection development has become a number one issue. This article considers future directions for collection development from four standpoints: changes under the virtual library environment; the means of acquisition; related problems; and future directions.

Keywords: Internet, Libraries, Acquisition, Electronic Resources etc.

1 INTRODUCTION

With the advance of technology and the use of the Internet, the so-called "virtual library" has been created. In light of this, one priority is to discuss the effects on collection development in libraries; the change itself, the problems and the solutions. This article will consider future directions for collection development taking into account the virtual library environment - the means of acquisition; related problems; and future directions

2 CHANGES UNDER THE VIRTUAL LIBRARY ENVIRONMENT

The virtual library is a virtual reality phenomenon. What are the major differences between the virtual library and the traditional library? They are set out below:

2.1 Local vs. Global

The Internet has one special feature: the conquest of geographical restriction. With the network's connections and the ability to retrieve its resources one fact is clear - the library's scope is both in collection and service and is no longer local but global. The users that the library serves are also from all over the world through network connection and access, as is their information gathering.

2.2 Just-in-case vs. Just-in-time

Usually collection development is a continuous process of achieving the library's specific goals. Sometimes a library will not be able to instantly fulfill a customer's request if it does not have the requisite materials. In other words, the direction of collection development is toward to a "just-in-case" orientation. It emphasizes how to achieve a collection already planned by the library. But with the ability to retrieve remote resources on the Internet at any time, the future direction of collection development will divert to the "just-in-time" orientation. This puts emphasis on immediately satisfying the customer's on demand requests. Although the "just-in-case" and the "just-in-time" are equally important, the library still has to decide the balance between them to develop the best collection for users.

2.3 Ownership vs. Access

It may seem that access is much more important than ownership in fulfilling the on-demand request instantly, but in fact this is not the case. Ownership and access are dependent on each other. If the library only cares about how to get maximum access and neglects how to acquire ownership, it will become a mere network or gateway node. Resources will then be monopolized by publishers and ultimately, the library descends into a "ghost" building with out-dated materials.

2.4 Separation vs. Coordination

With the virtual library, the customer need not make a visit in order to gather information: the library delivers rather than just lends out. In addition to collecting data, the library also transforms itself by arranging networked resources to offer the user direct or indirect access. Moreover, the means of deposit are also different from the traditional, because all resources are digitalized and saved, accessible at any site. Certainly libraries have to organize and provide these resources virtually by network connections. This means that, for instance, cataloguing and document delivery services are much closer to collection development than ever before. Thus, the distinction between the technical

and reader service departments will decline and eventually they may even be integrated.

2.5 Accelerating Information Flow

On networks, everyone is both author and publisher. Information can be delivered instantaneously all over the world - information creation and flow is much faster than ever before. The flow of information is so quick that it becomes a great challenge for the library to plan a strategy of collection development on the Internet.

3 THE MEANS OF ACQUISITION

In light of the above discussion, the library faces new challenges with "virtual" technology. Let us first consider the methods of acquisition in the following terms: type of media; method of ordering; deposit; possession; use of information; role of the collection development; management of collection space; and direction of task.

3.1 Type of Media: from single media to hypermedia

The main responsibility of the library is to gather books, serials, technical reports, microfilms and CD-ROMs, etc., particularly in print or AV format. With the digital library, many resources are in digitalized formats. Moreover, with the advent of the World-Wide Web, networked resources are arranged and displayed by hyperlinks, hyper-media and motion pictures. Access is interactive and very dissimilar to print access. Therefore, library holdings are transformed from containing printed, single media to containing hypermedia as main sources.

3.2 Method of Ordering: from manual offline to online or automatic

When a library process the acquisition of materials, processes include typing, sending, checking in and claiming materials ordered to include the materials as part of the library's holdings. These work procedures are usually both manual and offline. With the ability to retrieve information from distant sites and distribute it

immediately on the network, the library can make an order online and allow vendors to offer data online immediately. Compared to the traditional method, it saves on many costly, time-consuming labor-intensive jobs and shortens the time of receiving the data. One example of this is the BNA's Bridges to Blackwell System.

Furthermore, the partial contents, abstracts or reviews can be browsed electronically before ordering. The library can take greater control on current status. As an example, you can point your World Wide Web browser to the O'Reilly Associate Inc.(URL:http://gnn.com/gnn/bus.ora/catalog/index.html). If we take another look at Internet tools, we also find they offer an automatic gathering ability to collect Internet resources, for example, Archie's Mirror and World-Wide Web's Robots or Spiders. From the above illustrative examples, we can conclude that the method of ordering is changing from manual to online or automatic.

3.3 Deposit: from physical deposit to virtual and direct or indirect gateway

The planning and management of space is vital in collection development.

There are three major differences to the traditional way. First, the media are different. Traditionally, the library collected print as its main holding but now there are electronic or digital formats. Moreover, the collection's scope has changed from local to global, with a virtual technology and network connection. In addition to the call number, the shelf can be arranged randomly or by category, for instance, the Archie, Gopher and World-Wide Web.

3.4 Possession: from real ownership to virtual access

Traditionally, the library housed the materials physically. Now the information is electronic. The library service has become one of delivery rather than loan. In the physical environment, the reader checks materials out. Now the information is transformed into be electronic carriers and can be stored on network servers at any location. Gradually the library holdings are tending to be

bi-directional, housing both the physical and virtual materials at the same time. Therefore, the patrons can access the holdings seamlessly by a networked connection.

3.5 Information: from fee to free

As before, libraries cover the cost of holdings. Now so many resources exist on the network and users have free access. Generally, most information offered by libraries on the network has become free. The one problem to the networked resources is its quality, because this information is almost excluded from the scholarly process of peer-review and publisher's or editor's review. This means that many scholars question it for its quality and accuracy.

3.6 Role of the Library: from ordering data to making information

The digital library is distinguished from the traditional in that the information is displayed, arranged, stored and accessed in a digitalized format. The use of digitalized data, for instance in data-base establishment, gives the library a creative role rather than just an ordering one.

As well, many university and academic libraries are equipped with many special features to be a publisher. Within such campuses, there exists university or academic presses to edit, review and publish scholarly output. So these libraries can play a

Publisher role to take over the scholarly materials from publish to distribute, to be part of library holdings when the patron needs them, instead of buying them back from publishers.

3.7 Management of Collection Space: from physical to virtual

Under the digital library, we may conclude that the management of physical space is being gradually replaced by that of untouchable file and hard disk. In addition to the formats, their resolutions are different in identity, even though separate versions of the same format have another solution. Moreover, if a file is compressed, the size also changes in mega-byte units. Therefore,

the file size is crucial for the management of the file carriers and has multitudinous effects.

3.8 Direction of Task: from technical management to coordination with reader services

A customer can gain access to global digital resources through the network.

Many libraries have recently integrated their library automated system with the World-Wide Web to be their OPAC's interface - for example, the University of Toronto Library (URL: http://www.library.utoronto.ca:8002).

Hence, users can retrieve and access local and distant resources at the same time. The tendency to organize remotely accessible resources and digitalize printed data has become the main responsibility of the collection development department. Therefore, collection development does not belong to the technical area any more, but is more related to and interactive with reader service. The coordination with or interaction of technical and reader services will be a growing trend in libraries.

4 RELATED PROBLEMS IN MANAGING ELECTRONIC RESOURCES ON INTERNET

Libraries encounter different situations and their means of acquisition differ accordingly. As a library plans its collection development, seven key points must be considered to find a reasonable solution when managing and offering these networked resources.

4.1 Difficulty in Copy Control

We can often find a document on the network that is archived and accessed from more than one site. Moreover, a document can be mixed with others by hyperlinks. Consequently, distinguishing one document from another becomes a problem. As a library organizes these networked documents and includes them in a collection, we must devise a reasonable and cost-effective ways to outline various versions of documents. It is also a problem when judging whether electronic documents are the same in context and content between printings and electronic files.

4.2 Design of World-Wide Web Home Page

There is a tendency to apply the World-Wide Web as a library's OPAC, for example, the University of Texas at Austin Library(URL: http://www.utexas.edu/search); or to integrate networked resources and printings together to be their OPACs, for instance, the University of Toronto Library. The design of the World-Wide Web's Home Page is radically different from the OPAC in term of the arrangement of layout, font, color, length/size, hyperlink and hypermedia. These are new areas without existing rules or standards to follow. Further research is needed before a friendly and useful Home Page can be designed.

4.3 Restrictions on Intellectual Property and Privacy

Sometimes the networked resources that a library offers are linked copies or saved by library's hosts or servers. The library must then delicately judge when to make a gateway linkage or copy/mirror to prevent the laws of intellectual property and personal privacy being violated. If a library offers a document publicly without the author's permission, an illegal act is almost always committed. When offering networked resources, the library must pay more attention to legal restrictions and its rules.

4.4 Interactive Balance between Quality Control and Censorship

The popular trend on networks is to publish any electronic publication at any time. As mentioned earlier, many network users, especially scholars, question the quality of this information. One solution might be modeled on the moderators of Listserv will sieve incoming messages carefully to give a certain level of quality control. In other words, the moderators act as a filter of information to ensure quality.

Now we take another look at networked resources that a library organizes and presents. Following from its collection development policy and the

professional expertise of its staff, a library can only offer a limited service with existing resources. The process of sifting and careful examination of networked documents involves not only selection but also censorship. Selection as quality control could easily mislead users into thinking that other resources did not exist on the network. Careful decisions have to be made in the process of selection to avoid charges of censorship.

4.5 Difficulty in Updating the Accuracy of Data

The speed in the flow of information is obviously greater than ever before. It is a case of "here one minute, gone the next". With these rapid changes, the library faces a huge problem - how to keep information and its pointers continually accurate. We must cooperate together with the computer technical staff to solve this problem.

4.6 Information Explosion and Loss

The library faces not only the problem of information explosion, but the problem of information loss as well. Why is there sudden and silent information loss? The reasons are: bad bibliographic control; missing storage or archive; and inappropriate conversions among different file formats. For example, when using a Lynx browser to navigate the World-Wide-Web world, one cannot review the graphic images. As for the policy and principle of collection development, we must not only consider how to manage the information explosion, but also the loss. Otherwise the library would not be able to organize and store information effectively and the public will find that some information disappears forever, quietly and without notice.

4.7 Accuracy of Publication Time

The time of printings is judged by the publication or copyright date, but this becomes more complicated on the network. Some documents are never labeled with a publication date, and some are stored at physical sites or mirrored by indirect connections, such that network users can think wrongly that the storage time is the publishing time. Therefore, the library has the obligation to ensure the accuracy of the time of documents

when offering or presenting them on the network. It will benefit the user who will be able to control and cite the documents with greater ease.

5 FUTURE DIRECTIONS

The trend to virtual and digital libraries is irresistible. For future collection development planning, I present some new key directions:

5.1 Reorganization among Library Departments

With networked resources, the distinction between the technical department and reader services becomes blurred. Libraries must reorganize accordingly. When the information is accessed and distributed so quickly, the tendency of library service is to be of a real-time orientation.

5.2 Importance of Bibliographic Control

The first requirement of offering an excellent service and appropriate resources to users is to organize the materials effectively. However, regardless of whether we use the World-Wide Web or computerized catalogues as our OPAC, the library must be alert to bibliographic control over networked services and resources. Otherwise, the problem of information explosion and loss will become even worse.

5.3 Orientation to Establish the Feature Collection

No matter how the data is formatted or surroundings change, the goal, to offer the right information to the right user at the right time, is still our ultimate objective. We must note that the size of the library's holdings is not the only indicator to judge the collection. Future collection development will still be orientated towards user-friendliness. With the virtual library, data specificity, effective organisation and convenient access will have to be our goals if we want to fulfill user's needs directly or indirectly.

5.4 Optimal Availability is our Final Goal

As mentioned above, ownership is as important as access in determining information availability. When is ownership different from access ? When accessing to data from local shelves, hosts, servers, or from other remote sites. The orientation of collection development is to make information available. Hence, how to allocate the budget to get maximum availability is the question that the library has to pursue and consider seriously in the future.

6 CONCLUSIONS

With the application of the Internet and related technological products, the trend to the virtual or digital library is inevitable. The library and its organisation and operation is also affected. The top priority and probably the biggest challenge ever faced for libraries is how to design and put into practice the virtual or digital library. .

We have to escape from existing models in order to plan the future. As for collection development, we must consider the information availability in all directions in terms of the strategy of planning, collecting, organizing, delivering and using the information.

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