

AN EXAMINATION OF THE ROLE OF THE UNIVERSITY LIBRARIES AND LIBRARIANS IN THE DIGITAL AGE

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Abstract - University libraries are shifting from custodial to an access role in a rapidly evolving networked society. Within the campus, it is the library which seeks open access to all types of information and encourages free intellectual inquiry. If the library is to make its claim as the "heart of the university" a reality, it is critical for librarians to obtain the needed skills in the provision and promotion of information services to meet the research, teaching and learning needs of the university. The paper will examine a number of ways in which the rapid growth of the Internet, as well as the emergence of new information technologies, impact the university library's mission statement and goals. The paper concludes that the new environment requires a new technical set of competencies for librarians which were not previously required.

Keywords - University Libraries, Librarians, Academic Librarians, Digital Age, Internet.

INTRODUCTION

In 1876, the President of Harvard University, Charles William Eliot first coined the phrase "The library is the center of the University." [4] The idea of the library being the "Heart of the university" was readily adopted by the academic library community and it soon became one of the major tenets of library mythology. In recent years, however, the notion of the academic library's central position in university life has been seriously challenged. A major factor affecting the library's loss of confidence to see itself as the very "heart of the university," is the overall emergence of new information technologies and the Internet, in particular. The new environment has complicated the mission of the academic library as well. The academic library is now forced to ask questions of its own. Where, exactly, does the library fit on the campus? Can the library reclaim its symbolic central position in the university and provide needed information for its users? Can the library make a difference in the scientific life of researchers, lecturers and students? Despite these challenges, there are many opportunities for the resourceful academic library to gradually change the face of the university and its community.

In order to acquire an understanding of the role of libraries and librarians in the digital era, it is worthwhile to examine the role they have filled in the past. In ancient times, there was little if any distinction between an archive and a library. For many centuries book collecting was an opportunity either to display one's wealth, or the result of scholarship.

In the past, the library was often seen as little more than a warehouse for books. Within campus, many students believe that the main purpose of the library is to provide a quiet place for study. Despite these unfortunate misunderstandings, librarians must improve their courage and begin believing in, and promoting, a new vision for the library. The library which seeks to be the heart of the university should provide access to an integrated collection of print, electronic and multimedia resources delivered seamlessly and transparently to users regardless either of their physical location or the location and ownership of the information. Librarians who see themselves at the heart of the educational enterprise believe that the library of the future is much more than it has ever been before. The academic library is a storehouse of knowledge, a technological information center, a setting for research and education and a place where ideas can be freely exchanged and debated so that new truth can emerge. It is becoming increasingly clear that academic libraries must continue to embrace new technologies if they are to be the heart of the university in the future. Technological innovation and changing information economics threaten radical changes in the scholarly communication process, the conduct of research, and the nature of teaching and learning. Academic computing centers and other information providers will threaten the library's standing if it does not take steps to be a major player in the technological revolution currently underway. Computer technology is advancing at such a torrid pace that university administrators may decide that the traditional library is not even needed anymore. Moreover, academic libraries are facing a great deal of competition as other information providers are meeting the needs of the university community. These days, many faculty members, particularly in the sciences, hardly use the campus library at all since the Internet, on-line databases, electronic journals and personal or departmental subscriptions adequately meet their needs. In this environment, librarians are not only responsible for selecting, acquiring, organizing and providing access to relevant information. These tasks have become more complex as the volume and range of the available information has increased. [3] Not only that, but new tasks and roles have emerged. This paper will examine traditional roles and the newly emerging ones in order to discover the future role of the librarian in the digital era.

BIBLIOGRAPHIC, PHYSICAL, ELECTRONIC, AND INTELLECTUAL ACCESS TO INFORMATION

The university library seeks to provide faculty and students with information needed to prepare students to make positive contributions to the common good of society and to extend knowledge through research. The library within the university provides bibliographic, physical, electronic, and intellectual access to information, enabling each academic unit to be recognized for its excellence in teaching and for its scholarship and achievement. Providing access to information is a role librarians have filled for a long time. Traditionally, librarians have done this via print-based resources. During the second half of the past century the range of available resources expanded to include microform, video and audio formats. The last few decades witnessed a further explosion in formats, and libraries can now offer information in the form of print, audio, video, microforms, numeric, computer

programs, or multimedia composites of each. For librarians, one of the most important issues is to provide the information in whatever form it is packaged. As McMillan [13] observed, librarians do not attempt to meet the information needs of users with just one format. In the digital era, the choice of format is not the most crucial issue. It is being able to provide information resources to users, regardless of format. Librarians and users will no longer be restricted to “a single entity where everything is stored,” but rather librarians will be able to offer “a range of services and collections, linked together or made accessible through electronic networks.” [10] Librarians can promote learning in the university community by providing expert and innovative access to global information and knowledge. In this environment, academic libraries are central to all members of the university community. Libraries are the gateway to regional, national and global resources. Librarians can provide innovative, friendly, and responsive services both on and off-campus. They can be partners in the learning environment. Librarians can take a leadership role in the university and professional communities through the teaching of knowledge management skills and by facilitating access to the best information resources. In the digital era, access to information does not always imply ownership, what is important is that the library has negotiated the means by which users gain access to resources and information. This has created a paradigm shift “from ownership to access.” This in turn has created a new role for librarians, that of negotiating access rights through contracts and licenses.

EVALUATION OF THE QUALITY AND THE USEFULNESS OF INFORMATION RESOURCES

Locating information, whether in traditional print format or in electronic format, is only the first step in finding resources. The next step is to evaluate the quality and the usefulness of what is found. In the digital era there is an increasing diversity of information resources from which to choose the most appropriate ones. Librarians must widen their selection processes in order to decide on the right medium for each situation. One of the main objectives of a university library in this context is “to develop information systems providing access to a coherent collection of material, more and more of which will be in digital form as time goes on.” [11] Electronic sources of information are excellent for data which must be timely and is subject to frequent changes. It is also valuable for the ease in which information such as full-text articles from newspapers and journals can be delivered. Printed resources may continue for a long time to be the most efficient form of delivering ideas and theories. In evaluating electronic sources of information there is also a distinction to be made between those sources of information which have been digitized for the speed and ease of transportation, and information which is of limited usefulness, volatile and fluid in nature. Mason [12] likens the use of the Internet in delivering documents such as journal articles to a “very large omnipotent copying machine” where the value of the item is not inherent in its format but in the ease of its delivery to the user. There are numerous free resources available on the web, to say nothing of the full-text journals now available. Whether or not to include these in the university library catalogue is a challenge facing academic librarians in the digital era. The Internet and electronic information generally

provide environments which are prime targets for fraud and misrepresentation. The university library can play an important role in the authentication of electronic information and in sharing and extending this ability through cooperation with other members of the university community.

ORGANIZATION AND REPRESENTATION OF KNOWLEDGE AND INFORMATION

The representation and organization of information resources has been a primary focus of the librarians. The organization and structure of information within the academic library is critical to ensure the easiest path for the university community to access and use resources. Organizational structures such as classification schemes, indexes, bibliographies and catalogs have been devised to provide access not only to the physical document, but to its intellectual content - the knowledge or information recorded in the document. The recent explosive growth in both the number and the variety of information resources serves to underscore the continuing need for application of effective methods of representation and organization. The retrieval of information relevant to a user's enquiry has been facilitated by standardized methods of describing resources, such as MARC. It is ironic that organizing vast quantities of information is becoming a demanding issue for those involved in the development of the Internet. Mason [12] noted that "the more there is on the web, the harder it becomes to find..." Many Information producers on the web and others are now developing indexing systems, the structure of which is closely aligned to the Dewey Decimal Classification scheme or the Library of Congress Classification scheme. Many of the challenges facing those attempting to organize and structure information in the digital environment are its nature. Ward and Wood [15] note that one significant management problem in the networked environment compared to traditional library management issues, is coping with the nature of the "information space." They describe the information space as large and rapidly growing, highly distributed, of varying quality, and dynamic. Working with such information resources requires an understanding of traditional library management issues, but also the ability to adapt these to the new environment, and even to go beyond these skills and develop new ways to organize and structure information. Garrod and Sidgreaves [5] observed that professional boundaries between computing professionals and librarians are overlapping and becoming more blurred. Increasingly, academic libraries are providing access to web-based resources, either those freely available or for which the library has paid a subscription. It is highly desirable that users can access all of these through a single interface, usually the library's catalogue. This provides what Lynch and Garcia-Molina [11] describe as a "superficial uniformity" for ease of navigation and access. New organizational tools are being developed to accommodate these issues: some of the most significant related to metadata. Cathro [2] states, "Integrated access to diverse materials is usually accomplished through services which allow the relevant metadata for all materials to be searched simultaneously." The development of metadata was inevitable, given the enormous scale of information available through the web, and the need to be able to search and retrieve relevant material. Metadata has been defined by Iannella [7] as structured data about data and is a format for describing an Internet or digital information

resource. Librarians have been at the forefront of metadata scheme developments. They have also contributed to the development and adoption of standards such as Z39.50. This requires a sophisticated level of understanding of the technical issues involved and is a further demonstration of Garrod's and Sidgreave's [5] assertion concerning the blurring of distinctions between librarians and IT professionals.

ENSURING ADEQUATE PROTECTION AND PRESERVATION OF INFORMATION

Preserving the intellectual and cultural heritage is the unarguable responsibility of librarians and information professionals. Preservation of information aims to ensure adequate protection of information with continuing value for present and future generations. Librarians have a fundamental concern in the preservation of information resources in order to ensure access. They are committed to the preservation of information resources in all formats, and to providing enduring access to information. Academic librarians support new applications of technology and new technology which offer opportunities and tools for meeting the preservation obligation. The preservation of electronic and digital information resources creates new dilemmas for librarians and archivists. As Klemperer and Chapman [9] observe, digital media have not been around long enough for fail-safe archiving and preservation procedures to be developed. One of the significant issues affecting preservation of digital information resources is the very technology which creates them. These technologies have an increasingly rapid obsolescence and the preservation of digital information is dependent on ensuring that the software and the mediating technology is also preserved. Cathro [2] states: The ability to access and read digital information in the future will depend on strategies such as migration (in which the data is migrated to new operating systems and data structures) or emulation (in which modern computers emulate the operating systems and data structures of previous eras). One of the main issues regarding preservation of digital information resources is the issue of preserving digital resources available on the Internet. Berthon and Webb [1] describe preservation developments with web-based resources so that they remain findable. "URLs serve to identify resources and describe their location on the World Wide Web, [but] they are notoriously unreliable as they must change whenever a digital resource moves to a new location." Librarians can play a significant role in exploring the methods of providing persistent and comprehensive resource discovery on the Internet.

ACQUIRING COMPETENCIES TO OFFER VALUABLE AND VALUED SERVICE

Librarians' professional competencies represent a set of skills, attitudes and values which enable them to provide valuable and valued service, communicate well, survive in the new world of information, and focus on continued learning throughout their careers. These skills, attitudes and values can be acquired through education and experience. Librarians with professional skills and knowledge, have the ability to navigate information resources successfully and assist library users in their intellectual queries and pursuits. Information retrieval is the most obvious skill a librarian demonstrates to the university community.

Without professional guidance of a reference librarian many researchers, particularly novice Internet-users, do not exploit the full potential of the increasing sophisticated search engines and consequently do not retrieve all the relevant information available to them. Pollock and Hockley [14] examined the use of the Internet by Internet-naïve but PC-literate users and concluded that to execute successful searches, Internet users need at least a basic understanding of Internet searching concepts, and also very high levels of support from a librarian or other experienced Internet searcher. McMillan [13] noted that librarians “teach information discrimination through personalized research assistance, guidance, and instruction.” Librarians working in academic libraries are discovering an increasing demand for their professional skills. McMillan observes that the librarian “makes a significant contribution, often defining the search, honoring the researcher's goals, and helping the researchers to understand their needs.” She believes the values of human expertise, judgment and empathy are integral to the development of the electronic library environment. Wood and Walther [16] also noted that rather than rendering the librarian obsolete, “the digital revolution has made librarians all the more essential.” Hawkins [6] observed that as the information explosion continues, everyone will need more help finding, sorting and filtering the available material. The future academic library environment provides both an opportunity and a requirement for librarians to develop greater familiarity with IT-type skills. Garrod and Sidgreaves [5] conducted research in the United Kingdom on the impact IT is having on the skills required of librarians working in the electronic and networked information resources environment. They concluded that staff working in different areas of university libraries required different skills. Paraprofessional staff required practical “hands on” experience and training. Librarians are moving into database development, courseware, open learning and academic staff development and need a combination of knowledge, skills, aptitudes, and personal qualities in order to fill their multi-faceted roles.

CONCLUSIONS

The academic library can definitely reclaim its importance as the “heart of the university.” The difference is that this time it will mean something quite different than it did in the past century. The university library of the future will have to be innovative, creative, technologically enhanced and must cooperate with many entities in order to be successful. It will have to continue to cherish and emphasize the values which gave it “heart” in the first place. It must always be an institution which is committed to free intellectual inquiry, a storehouse of competing worldviews and an institution which encourages discourse, reflection and new understanding. As technology continues to transform the classroom and campus environment, librarians must be trained to deal with new problems and questions. Growing databases, the increased digitization of information, the emergence of Internet sophisticated search engines and the growing capabilities of networked systems means that librarians must be able to competently manipulate information and present it through various media while teaching others to do likewise. The educational contributions which the library can make are enormous. Although technology threatens the library on

some levels, it can also be one of the means by which the library can gain greater prestige. The library can become the "center" of the campus information network and teach students how to effectively utilize new technologies. The primary mission of academic librarians should be to support academic activities and priorities through whatever media, means and services available. To accomplish this mission librarians must be an integral part of university planning and decision making. As Johnson [8] correctly mentions: "In order to change institutional perception and to again give validity to the idea that the library is at the heart of the university, the library must consciously increase its visibility, connect the library and its staff more completely with the teaching, research, and governance structure, and raise the library's standing in the university's academic priorities."

The library is the center of the university's intellectual life. With all its diversity and disciplines, it is the heart that makes the university a single institution. Finally, the library must strive to be the heart of the university or it may not have any significant role at all.

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