CIOs and Academic Research Libraries

A Selected Review of the Literature

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This review of selected North American literature is intended for use primarily by library administrators and university library staff as they consider issues related to chief information officer (CIO) positions and the impact of the position on libraries. More recent materials judged to be useful are described, and a number of earlier references are excluded. Because of the usefulness of some more general information on information technology positions, and because of the limited information available that is focused on university libraries, other selected information also is included. This article is not intended to provide an independent evaluation of the impact of the CIO position, but to review references helpful to university libraries involved in library and campus discussions of this topic.

The literature related to this subject is located primarily in articles, books, and dissertations. Information is also available from EDUCAUSE studies and conference presentations. In my search of the Association of Research Libraries (ARL) Web site, I located a large number of documents with some reference to the position of the chief information officer. An example is a presentation at the October 1998 ARL membership meeting, in which Jerry Baker described, from his perspective as an executive search consultant, the issues of recruiting for CIOs to serve as library directors.[1] The literature reflects periods of significant interest by libraries in a CIO-type position as well as periods of less interest. In the EDUCAUSE CIO Archives, April 2003, it was reported that there has been a movement away from the library reporting to the CIO in public universities and private four-year colleges.[2] This conclusion about public university libraries was substantiated by statistics from The Campus Computing Project, which stated, "The Campus Computing Survey, now in its 15th year, is the largest continuing study of the role of computing and information technology in American higher education. The 2004 Campus Computing Survey was conducted during summer 2004. The survey results presented here summarize data from 516 two- and four-year public and private colleges and universities across the United States."[3] According to the survey, in 2004, 72.2 percent of libraries at public universities reported to the provost, and 6.9 percent of libraries reported to a CIO or chief technical officer (CTO). In 2003, the percent of libraries reporting to a CIO or CTO was 11.6; in 2002, 10 percent; in 2001, 15.9 percent; in 2000, 14.5 percent; in 1999, 16.4 percent; and in 1998, 18.6 percent. Therefore, the percentage of public university libraries reporting to CIOs declined from 1998 to 2004. At private universities, the percentage of libraries reporting to CIOs was 5.1 in 2004; 7.5 in 2003; 15.6 in 2002; 11.5 in 2001; 4.8 in 2000; 7.7 in 1999; and 8.7 in 1998. Data is not available prior to 1998; the question about units reporting to the CIO did not include the library. The study results also included an overall average for all campuses and percentages for other types of academic institutions, such as public and private two-year colleges.

Significant publications about university libraries and CIO positions began to appear in the mid-1980s. Between 1986 and 1987, Anne Wordsworth surveyed ARL members about the status of CIO positions and found thirty-two institutions with CIO positions.[5] She interviewed twenty-eight of these incumbents for her doctoral dissertation.[6]

In 1990, CAUSE published "The Chief Information Officer in Higher Education" by James I. Penrod, Michael G. Dolence, and Judith V. Douglas.[7] The authors noted, "The purpose of this paper is to provide an overview of the first ten years of the CIO movement in higher education and, where possible, to contrast higher education with business and health care. In order to provide the history and diversity of sector perspectives regarding the CIO, we have conducted a comprehensive survey of the literature, which we report in Chapter 2."[8] Because of the useful overview of CIO positions as well as the national importance of CAUSE (now combined with EDUCOM and named EDUCAUSE), this publication is included as background reading even though there is little information specific to libraries.

Edited by Gary M. Pitkin, the 1992 book *Information Management and Organizational Change in Higher Education: The Impact on Academic Libraries* is divided into three sections, including a basic introduction with definitions and perspectives.[9] In the introduction, Pitkin's historical perspective about the relationship between information management and the CIO is useful in understanding the development of the CIO position and the manner in which CIO position responsibilities came to be defined. He discussed the decentralized business environment in which significant funding was spent for systems that were often incompatible. The business sector responded by creating the CIO position, with responsibilities that included business management, policy development, and coordina-

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tion for information technology. Although higher education experienced similar issues related to decentralized computing, it also had its own special challenges, such as the traditional separation of administrative and academic computing and the need for student access to information. The complexity of the higher education information technology environment was compounded by the existence of such major, technology-based information service providers as the library, public broadcasting, and instructional design and development. The second section, "Information Management in Higher Education," is most relevant to the subject of the CIO. Background information is provided in a chapter by James I. Penrod about the role of the CIO in the transformation of information services. In their chapter, "Chief Information Officers, Academic Libraries, and the Information Job Family," Woodsworth and Maylone discuss "the emergence of CIO positions as a result of the integrating technologies, their influence on academic libraries, and the impact of diffusion of information technologies on jobs at levels below the CIO."[10]

The literature has included information about organizational models ranging from fully distributed to totally centralized. In 1998, Hirshon wrote, in the CAUSE Professional Paper Series, "One strategy that some institutions have used to advance the cause of greater collaboration between computing and libraries is the actual administrative integration of the two functions."[11] Other models may include integration of some support functions and management responsibilities. However, the CIO often is responsible for strategic planning for information technology even if other library-related functions do not report to that position.

Two dissertations and a master's thesis published in the 1990s are useful in studying the impact of the CIO position on libraries. In a 1993 dissertation about the CIO in higher education, Gary Pitkin stated that his research purposes were "to identify and analyze the role of the CIO in higher education, to analyze the perception of the CIO in higher education in terms of the role as identified for the business sector, to identify perceptions about the prevalence of the transformation process in higher education and the role of the CIO, to analyze the continuation of demographic characteristics and institutional practices previously identified, and to analyze differences in the CIOs role by type of higher education institution."[12] In a 1998 dissertation, "The Changing Role of the Chief Information Officer in Higher Education," Jon P. O'Donnell reported the results of a three-year study, from 1994 to 1996, of 131 institutions that focused on questions related to the CIO position's emergence. O'Donnell concluded, "The results of this study show that the prominence of CIO positions is rising, at least in private institutions. In addition, there was a positive relationship between an institution's commitment to strategic planning and CIO prominence."[13]

Steven J. Herro's 1998 master's thesis is especially useful because of its focus on user services.[14] In his study, he described the convergence of the academic library, computing services, and other information technology departments, the difficulties that arise, and the impact of this convergence on user services.

In a presentation at the 1999 EDUCAUSE conference in Long Beach, California, Tara Lynn Fulton reported on her research concerning the experience of the CIOs of seven mid-sized institutions in which the library and information technology division had merged between 1993 and 1997. The CIOs' prediction of the future level of integration was that "libraries and computing will remain fairly distinct for the foreseeable future. There are areas of intersection that should be focused on for integration. We will become a hybrid of the two current organizations, but areas of specialization will continue."[15] She also noted that in most cases library technical and public services as well as administrative computing and academic computing still remained separate. She found that the administrative reporting structure for media services was often an area of contention.

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Fulton's 2001 master's thesis, "Integrating Academic Libraries and Computer Centers: A Phenomenological Study of Leader Sense Making about Organizational Restructuring," focused on the experiences of seven CIOs from medium-sized institutions.[16] She described the study as identifying "key factors that lead to institution-specific choices of structure, four mechanisms used to embed vision in structure, and eight vectors of the choice process in the merger context. Key themes included evolution vs. revolution, respecting existing cultures, coming together around the work, natural areas of overlap, idealism vs. pragmatism, opportunism, and collaboration, communication, cooperation."[17] Her descriptions of the circumstances and approaches of each of these CIOs and each relevant library and organizational structure are well-written and should be useful in considering issues related to convergence of libraries and computing centers.

In 2000, ALA published *Books, Bytes, and Bridges: Libraries and Computer Institutions,* edited by Larry Hardesty.[18] In chapter 9, "Merged and Unmerged Services: Libraries and Computing in the University of Wisconsin System," Edward Meachen stated, "A wide variety of organizational structures and cultural differences are clearly apparent in the University of Wisconsin [UW] System. The two doctoral institutions, UW-Madison and UW-Milwaukee,

have never merged library and computing services. Typical of larger institutions, support services tend to be more decentralized and functionally aligned with individual schools and departments . . ."[19] Chapter 2 is a review of the "Readings on the Marriageability of Libraries and Computing Centers," starting with an article written in 1979. The entire book is useful reading about various types of relationships of libraries and computing centers.

The current EDUCAUSE CIO Constituent Group electronic discussion list (cio@listserv.educause.edu) includes discussions of a range of topics of interest to CIOs. In fall 2004, the subject of the "Profile of the CIO" was considered, and discussions included such topics as faculty librarians reporting to the CIO and the importance of the local university culture as a factor in determining the viability and role of a CIO position. It is a useful forum for an inquiry about specific issues related to CIOs and academic research libraries.

In conclusion, the quantity of literature related to the subject of CIOs and academic research libraries seems to reflect the level of interest in the topic during a particular period. From 2001 to the present, the number of academic research libraries reporting to CIOs has declined as compared to the 1990s, and the available literature has declined during the same period. However, the CIO position as related to academic research libraries is still a topic of interest, as evidenced by recent list discussions, the fairly recent ALA publication by Hardesty, the dissertation by Fuller, and discussions on some campuses.

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