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Chapter IX

Geographic Information and Library Education

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Introduction

"I invite all of you to become geographers, if not by vocation then by avocation. GIS is about thinking geographically. Beyond being an essential component of GIS, geography also opens new avenues of examining and analyzing the world around us. More importantly, it provides us with totally new appreciation of everyday life and the environment in which we live it" (DeMers, 1997, p. 199). This quote sets the tenor for this chapter, in which we examine the educational requirements for librarians in the provision of GIS services. Implementing GIS services in academic libraries and facilitating associated digital geospatial data collections can be a daunting task for the librarian assigned these duties. The technical knowledge and computer skill-sets alone involved in understanding how GIS software operates are accompanied with a high learning curve. The research literature emphasizes collaboration with academic departments with the expertise in using GIS software. This chapter will cover the types of services that GIS users need for a prototypical GIS literacy project and basic geographic literacy for librarians. It will examine

competencies in academic librarianship and geographic information literacy and offer a sample curriculum that meets the needs of geolibraries, librarians, and their patrons. A brief discussion of preservice and in-service issues, such as mentoring and communities of practice, follows. The conclusion discusses implications for library science in the preparation of new librarians and the professional development of practicing librarians.

Preparing Librarians for a Paradigm Shift

The new spatial paradigm is clear: "maps are data - numbers first and pictures later. They tell us where it is (inventory), and they provide insight into how it could be (analysis). In this context map analysis has become as an emerging discipline, recognizing fundamental map analysis operations independent of specific applications" (Parihar, 2002, ¶3). This paradigm shift has implications for skill-sets for practicing librarians as well as future graduates of library and information science programs. Since the bulk of GIS materials and resources to access GIS materials are electronic, or digital, in nature, a review of digital libraries seems appropriate. Choi and Rasmussen (2006) suggest that aligning digital library applications with traditional library collections and services requires "staff with new expertise that adds another dimension to library practice" (¶3). In their study of digital librarians[a] at ARL Libraries, the most frequently mentioned responsibilities were Web site-related tasks (35% of participants), policies and procedures (28%), collaboration (28%), supervision (26%), overall responsibility for digital projects/initiatives (26%), monitoring of technical standards and practices (21.7%), and writing and administrating grants (21.7%) (Choi & Rasmussen, 2006). Other researchers have also dealt with the role of the digital librarian, with core competencies and skills, depending upon the range of duties required (Arms, 2001; Chowdhury, 2002; Chowdhury & Chowdhury, 2003). Now, in addition to their traditional library skills and knowledge, professional librarians are expected to possess additional knowledge and skills required for work within the digital information world.

Basic Skills for Librarians

Librarians must have a variety of skills, ranging from the ability to engage in critical reflection to knowledge of different learning styles and teaching methods, including coaching and facilitation. Conceptual shifts must also occur, as librarians in academic