Preface

The old saying, "the times they are a-changing" certainly applies to academic libraries, librarians, and the users they serve. Changes in technology and responses to technology, search engines, social networking, and new habits have made an impact on the ways users connect to information.

Despite the large, recent changes in technology, some of these attitudes and habits are not new. The need for library instruction in locating appropriate sources for information has been acknowledged for hundreds of years (Lorenzen, 2001), beginning in Germany in the 17th to 19th centuries. What is new, however, is the fact that users now have far more choice in sources of information. The results of the two recent OCLC studies of information resource use (DeRosa, et al., 2005; 2010) indicate that nearly all users begin their searches with commercial search engines.

Connaway, Dickey, & Radford (2011) enjoin librarians to create or purchase systems that work similarly to Web search engines, because they are perceived as being both easy to use and convenient. They note that,

In order to entice people to use libraries and to change their perceptions of libraries, the library experience needs to become more like that available on the Web (e.g., Google, Amazon.com, and iTunes) and to be embedded in individual workflows. The Web environment is familiar to users, therefore, they are comfortable and confident in making the choice to search for information there. (p. 187)

They go on to say that "information seekers will readily sacrifice content for convenience. Convenience is thus one of the primary criteria used for making choices during the information seeking process" (p. 188).

The recent ERIAL (Ethnographic Research in Illinois Academic Libraries) study, a 5 institution ethnographic research study of undergraduates' search behavior in five Illinois academic libraries, supports the importance of modeling the library search experience on familiar Web sources and provides additional data. Librarians at Illinois Wesleyan University studied the way their students did research. In their description of the results, they note that "Google's simplicity and single search box seems to have created the expectation among students of a specific search experience in the library" (Asher & Duke, 2012, p. 72). The authors continue, "in comparison with the ease of the Google search experience, the various and fragmented catalogs, databases, and interfaces contained on a typical academic library's Web site are extremely complex." Their research showed that search is "a significant weakness" (p. 73) leading to anxiety and confusion; students experienced difficulties in selecting databases and creating effective searches. These results were also found in studies conducted at other ERIAL participating libraries. Asher and Duke posit that students' lack of understanding about effective ways to do library

research "could possibly be viewed as a reasonable response to their successful experiences in utilizing the Internet to fulfill their information seeking needs, with little need to understand or investigate how search engines actually work" (p. 84).

As the authors in these chapters attest, resource discovery products, sometimes called Web-scale discovery, were developed to meet the needs of users for a simple search and the desires of librarians to present scholarly research in ways appropriate for today's user. There has always been a desire to identify good sources to be used by undergraduates, but focus groups of faculty and graduate students at Indiana University a few years ago stunned the librarians leading the discussions by the lack of knowledge exhibited, even by senior faculty members, of appropriate information resources in their fields. Resource discovery products have something for everyone.

RESOURCE DISCOVERY: WHAT IT IS NOW AND WHERE IT IS GOING?

Jason Vaughan has written widely about Web-scale resource discovery tools. He has defined resource discovery tools as having the following characteristics (Vaughan, 2011; 2012):

- Content harvested from locally hosted and remote repositories (including the library catalog) and added to a central index.
- Content from publishers and aggregators that is pre-indexed into the central index. This material includes journal articles, e-books, reports, and similar materials, both purchased and licensed.
- A Google-like search box providing a familiar search experience, along with advanced search tools.
- Fast and ranked (by relevancy, but also by other options) search results.
- The ability to use faceted navigation to narrow search results.

The Indiana University Bloomington Libraries have had experience with two resource discovery tools, WorldCat Local and EBSCO Discovery Services. We would expand Vaughan's brief mention of the topic of delivery to focus more specifically on ease of delivery. A Web-scale discovery service provides information on where to find print resources, direct links to freely available Web-based content, and immediate access to the full-text of subscription content available to library users, such as articles and e-books, through an Open URL link resolver.

Where do Next Generation Catalogs fit into this setting? In their general form, these catalogs do not fit into the definition of a resource discovery tool, because they only include the library catalog and, perhaps, locally created information sources. However, beginning in 2011 and continuing into 2012, new catalogs are being made available that combine an open source next generation catalog side-by-side with a resource discovery tool. This new development will be important to follow and will provide an alternative resource discovery experience. Three examples of such catalog/discovery tool combinations are:

- The VuFind catalog at Villanova University that has also incorporated Summon (https://library.villanova.edu/Find/Search/Home);
- The Blacklight catalog at the University of Virginia, combining the catalog and Primo Central. (http://search.lib.virginia.edu/)'

- The Columbia University information system (CLIO Beta) combining a Blacklight catalog with Summon (as of this writing, available at http://cliobeta.columbia.edu/).

In an article published in March 2012, Marshall Breeding challenges librarians and vendors to envision the future of discovery systems. His priorities include identifying ways to add content not yet available in discovery systems, continued work on relevancy algorithms, moving toward use of the discovery system as a Web site replacement for libraries, increasing social networking opportunities and, perhaps most intriguing, collection browsing (Breeding, 2012).

AN OVERVIEW OF THE CONTENT OF THIS BOOK

Planning and Implementing Resource Discovery Tools in Academic Libraries contains 7 sections, beginning with an overview of the issues and ending with a critique of the discovery tool.

Framework for Discovery sets the stage. It includes a literature review on information seeking among academic users, a review of the precursor to discovery tools, federated search, that reflects on the knowledge gained from that experience and the ways it informs selection of discovery tools, providing insights from the University of Florida, and an overview of the many issues surrounding planning, implementation, use, and maintenance of discovery tools.

In **Selecting a Discovery Tool**, the section begins with a description of a framework for evaluating discovery tools with a focus on involving library staff and other stakeholders used at the University of Nevada Las Vegas. Librarians from the University of South Florida describe the results of interviews with librarians from fifteen academic institutions who had selected a discovery service; librarians from Pennsylvania State University elucidate the Request for Proposal (RFP) process; and an article from Colorado State University, a medium-sized library, shares criteria for evaluation of discovery tools in a smaller setting. Librarians from the University of Chicago discuss the technical, functional, and usability layers that are important in evaluation of a tool.

Several libraries share their knowledge of user behavior in **The User Experience Part One: User Behavior and Expectations**. The section begins with a discussion of the role of serendipity in the research process and ways that discovery tools can support serendipity. Librarians from the University of Illinois discuss the results of their extensive transaction log analysis of the ways users search their Gateway. The University of Minnesota's research as part of a phased approach to discovery is explained, and its conclusions about discovery tools are presented. In a chapter about the methods used at the University of Michigan, the authors discuss persona analysis, surveys that included usability tests and guerilla usability. The last chapter in the section analyzes search results of actual user searches in both Google Scholar and Summon.

Researchers at the University of Baltimore begin the next section, **The User Experience Part Two: User Testing and User-Centered Design in Implementing Discovery Solutions**, discussing their tests of EBSCO Discovery Services, Primo from ExLibris, and Serials Solutions Summon in which they identified tasks that worked well for test participants and those that did not. Librarians at the University of Manitoba share the results of their user studies that showed Summon did make a difference in users' success. Librarians at Southern Illinois University Edwardsville talk about their work to make their Web site more effective through ongoing redesign and testing rather than purchase of a discovery tool. The

section concludes with a description of user testing at the University of Southern California showing that users were more successful in completing basic research tasks after implementation of a discovery tool.

A variety of implementation issues is discussed in the **Implementation** section, including resource selection and configuration of the public interface with examples from Drake University; the development of an in-house discovery tool at the University of New Mexico; and lessons learned from a situation in which selection and implementation of a discovery tool were accomplished within a short window of time at the North Carolina Agricultural and Technical State University. Authors representing several universities share their work in embedding the discovery tool within such environments as a learning management system and an enterprise portal. Two chapters provide insight into discovery in a consortial environment; one discusses selection and implementation of a discovery tool in a 5-library consortium, while a second group of authors discuss reasons for library staff resistance to discovery tools gleaned from their research. Librarians from James Madison University provide tips for supporting organizational buy-in of the discovery tool through addressing specific staff concerns, providing training, and monitoring and assessing the discovery product's performance. A case study in marketing a new discovery system at American University, a study showing the impact of a discovery tool on collection use at the University of Texas at San Antonio, and research about the impact of discovery tools on cataloging maintenance and authority control round out the section.

Discovery in the Wild allows librarians from the U. S. and Europe to share their experiences in selecting and implementing a discovery product. Products discussed include EBSCO Discovery Service, Encore Synergy, Primo and Primo Central, Summon, and WorldCat Local.

Concluding the book is a section that offers a **Critique of Resource Discovery**. Chapters address the problems of next generation search tools and the challenges and opportunities of the metadata environment in the context of discovery tools. The last chapter in this section evaluates discovery tools in light of the needs of researchers in music.

CONCLUSION

This book had several goals:

- Propose a working definition of "resource discovery" that can be used in professional discussions about resource discovery products.
- Identify user behaviors based on empirical research that lead to a need for "resource discovery."
- Identify best practices for selecting a discovery tool.
- Identify best practices for setting up a discovery tool and making it available to users. Locate and share usability test results for resource discovery and related tools and their implementation into library products and services.
- Present representative examples of the implementation of discovery tools (based on the working definition) in libraries, particularly in academic settings. Give readers information about how the decision to implement was made, key decision points in setting up the discovery tool, presentation to users, user reactions, and the creation of tools in which the resource discovery tool can be incorporated into the places where users learn and do their research.
- Identify areas of concern in use of a resource discovery tool and suggest future enhancements.
- Provide an overview of the literature of discovery tools.

We believe that our colleagues who wrote the various chapters in this work have succeeded well in meeting these goals. We hope that you find their ideas and experiences helpful.

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