Chapter 12
Developing a User-Centered Article Discovery Environment

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ABSTRACT

This chapter discusses the user-focused research conducted at the University of Michigan Library to help make decisions about selecting and implementing a Web-scale article discovery service. A combination of methods—persona analysis, comparative evaluations, surveys, and guerrilla usability tests—were applied to bring a user-centered approach to the article discovery service decision-making process. After the selection of the Serials Solutions®[1] Summon™[2] service and developing a custom interface to this resource using the Summon™ API, a follow-up user survey was conducted and search log data were analyzed to gauge the impact of the Library's decisions on users' research habits and their perceptions of the library. Users reported a high rate of satisfaction with the new article discovery service and, as a result, reported being more likely to use library online resources again.

INTRODUCTION

The University of Michigan is a Carnegie "Research I" institution with almost 42,000 students in eighteen undergraduate and graduate schools. The University of Michigan University Library is one of the top ten in the world with approximately 8.5 million volumes in its collection. The University Library has long been a leader in digitization and preservation efforts, including being in the original group of partners for the Google Books™[3] scanning project and, later, creating the nucleus of the HathiTrust.

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Serving such a breadth of content to an extremely diverse group of scholars is one of the library's main challenges, one that was not being met by a loose confederation of departmental and library Web sites maintained by local operations of the University Library in individual schools. Before the redesign effort that culminated in a tightly integrated single Web site in 2009, the library had approximately two dozen largely independent Web sites representing physical library locations and departments across the campus. Where the previous sites had been focused at particular groups of users (from the medical campus, the undergraduate college, the school of music, etc.), the new site was intended to provide a universal starting point for research to all patrons, without them needing to know where to launch their research.

In addition to completely redesigning its Web site using the Drupal open source content management system, the library also implemented VuFind, an open source search engine developed at Villanova University, as the front end to its library catalog.[4] With so much discussion and work on issues of findability and discovery in library systems, it was inevitable that the library's article discovery environment would come under scrutiny. At the time, the library was using Ex Libris's™[5] MetaLib®[6] federated search software, locally branded as "Search Tools Quick Search," for article discovery. There was general dissatisfaction with the service, as expressed through user reports to public service librarians that patrons were turning to Google and Google Scholar™[7] instead. An initial internal discussion about replacing the MetaLib® federated search service with Google Scholar™ was refocused when commercial Web-scale discovery products first became available on the market in 2009.

The idea of "Web-scale discovery" has been a hot topic in libraries ever since Marshall Breeding (2005), reacting to the debut of the Google Scholar™ search engine in November 2004, suggested that libraries should pursue a "centralized search" approach "on the scale of the Web" (pp. 27-28) to develop new discovery tools for library-provided electronic resources—a single, comprehensive, large-scale index for all the journals, newspaper articles, and other content the library makes available online. Would such a tool meet the needs of users better than free Web search engines like Google Scholar™? Could one of these new products provide the desired article discovery capability? To answer these questions, library administration charged the Article Discovery Working Group (ADWG) with investigating the tools and services then available.

This group decided to bring a user-centered approach to the article discovery service decision-making process.[8] It conducted its research in three phases. During the investigation phase, the group set out to determine what students and faculty expected from an article discovery tool. Given these expectations, the group evaluated and sought feedback on a proposed selection. To do this, personas were developed to create archetypical users against whose hypothetical expectations real-world tools could be evaluated. Using these personas, the group conducted a comparative evaluation of discovery tools, a survey of the user community, and undertook a "guerrilla" usability evaluation of the leading tool. During the implementation phase, a satisfaction and usability survey accompanied the launch of the new tool based on the Summon™ service from Serials Solutions®. And finally, during the post-implementation phase, the library validated its decision by conducting a follow-up survey and usage statistic analysis to measure change in use and evaluate whether or not users' expectations were being met.

BACKGROUND

Potential library users do not often think of the library as the starting point for research. A 2010 survey by the OCLC Online Computer Library Center asked information consumers where they were