Case Studies

Abstract

The case studies in this chapter illustrate what pushed each library to implement an NGC, the steps involved, and the outcomes of the solution. Interviews are with Lynn Sutton, Library Dean, and Erik Mitchell, Assistant Director for Technology Services from Wake Forest University; Anne Prestamo, Associate Dean for Collection and Technology Services, from Oklahoma State University; Greg Raschke, Associate Director for Collections and Scholarly Communication from North Carolina State University; Allison Sharp Bolorizadeh, Assistant Professor and Instructional Services Librarian from University of Tennessee Knoxville; and Joseph Lucia, University Librarian and Library Director from Villanova University.

Wake Forest University

- **Interviewees:** Library Dean Lynn Sutton and Assistant Director for Technology Services Erik Mitchell
- **Product:** VuFind
- **Launch Date:** July 2009

During the summer of 2009, Wake Forest University (WFU), a university of over 7,000 enrolled students, launched an NGC at the Z. Smith Reynolds Library. I spoke with Library Dean Lynn Sutton and Assistant Director for Technology Services Erik Mitchell about their implementation of VuFind to learn more about why they chose the product and what impact it has had on the library.

Prior to the implementation, the staff at WFU had a general dissatisfaction with the OPAC that was in place. They wanted to be able to provide an experience to their users that the users would be familiar with as well as free themselves from "vendor lock-in." In addition, they had a lack of confidence in the ability of the vendor that they had been working with to provide a solution that would meet both their needs and their patrons' needs. There were a few institutions that were beginning to make some noise around the discoverability of collections in the library industry. North Carolina State University (NCSU) launched a homegrown catalog built on top of a commercial search engine, Endeca. This platform allowed the developers at NCSU Libraries to build a web application that brought together the intuitiveness of a Google search, the power of faceted searching, and the highly customized look and feel that libraries have been wanting in one tool. Shortly thereafter, Villanova University launched VuFind as an open source solution. Sutton had known Joseph Lucia, University Librarian at Villanova University, and began to have conversations with him. After briefly evaluating the few commercial products that had recently come to market, they mutually agreed that the open source products available provided more attractive cost and features than the commercial products. This, mixed with a general lack of trust in the vendors, made it a clear path forward. It was then that Mitchell and Sutton decided to move forward with an implementation of VuFind as a new platform for their patrons.

As with all product evaluations, the open source solutions were not all peaches and cream. Sutton did have some hesitations. "I was worried about the days of Notus and VTLS when ILS systems were developed at a library and then became commercial products," said Sutton, talking about the concern of relying on an open source solution that was developed by a library. She went on to say that after a conversation with Lucia, he comforted her by saying that they were in a whole new ballgame.

VuFind at WFU quickly became a success for the technology team at the library. They were able to prove that an open source solution could perform at the levels that their librarians and users demand. VuFind became a "quick win" and opened the doors for more open source solutions. One of the most beneficial traits

of open source software is the ability of the team to quickly deploy new copies of the software, both for testing newer versions and for upgrading infrastructure. WFU has migrated all of its locally hosted applications in the library to a cloud-based platform, and its open source products have made that migration very easy.

The implementation of VuFind was spread out over a period of six months that they called "in beta." The team consisted of one developer—Mitchell—and one user interface specialist. Between the two, they installed and set up VuFind with the library's catalog records very quickly. They then customized the tool in ways that open source software would allow. By making customizations to the user interface, they were able to control the usability and performance of the application to meet the needs of their institution. Altering the underlying code was also a project that they undertook. They tweaked the index schema to better match their cataloging models as well as analyzing the tool for performance enhancements. During the six-month beta period, they provided their staff with a bug-tracking tool to report issues and request feature enhancements. They relied on the VuFind community quite heavily for support during this period, which worked out very well for them. The VuFind community was quite active during this time, and they were able to get the support that they needed in a very timely manner.

The early adoption by their public services staff was very slow to start. They received an overwhelming amount of feedback, much of which was negative. The staff had a hard time understanding the new approaches to the subject term facets as well as the lack of name authority controls. But it was this early period of discomfort that lead to the success of the project. Without this approach to force the use of the product, Sutton and Mitchell felt that the project would have been stuck in perpetual beta and eventually failed.

Oklahoma State University

- **Interviewee:** Associate Dean for Collection and Technology Services Anne Prestamo
- **Product:** AquaBrowser from Serials Solutions
- **Launch Date:** August 2007

The impetus for the NGC at Oklahoma State University (OSU) was in 2006, when Roy Tennant began speaking in a public forum about how libraries are stuck in a position where we are putting "lipstick on a pig." This notion made Anne Prestamo, Associate Dean for Collection and Technology Services at OSU, begin thinking about the need for a solution that is not built out of the ILS system. When North Carolina State University launched its Endeca-based catalog in 2006, the staff at the OSU libraries were ready for a change. When they began to canvass the market for options, they found a few products in their infancy, but they also found a
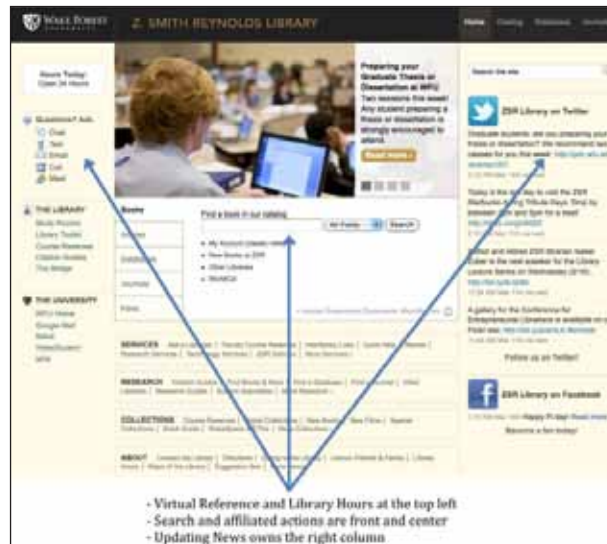

Figure 19
Design of library homepage after NGC deployment

solution from the Netherlands that was beginning to make some headway in the industry—AquaBrowser. Its innovative user interface and price point made this solution highly attractive. Additionally, with its adoption, OSU won the prestige of being one of the first academic libraries to adopt the solution and the first library using Ex Libris's Voyager ILS.

The goals for deploying AquaBrowser to the academic community were simple—to "get users better results," said Prestamo. OSU wanted a solution that would not require the end user to learn how to search the "librarian way." This goal was very important to the administrators at the library; they wanted to be able to provide their staff with the ability to focus on performing librarian duties rather than on helping frustrated students navigate through a cryptic search tool. Because they bought into the notion that "If they have to be taught how to use it, they won't use it," a self-guided solution was key.

The implementation of the product was a bit more hands-on than simply purchasing a vended product, setting it up, and deploying it. Since AquaBrowser was new to the academic market and to the Voyager ILS, some joint development was necessary between the librarians and the development team at the then MediaLab Solutions BV. While bringing up the product took a short amount of time, development continued throughout the year to continue to optimize the interaction with the Voyager ILS server. The second year continued with new developments such as integration with the federated search platform, Serials Solutions' 360 Search, and expansion throughout the five campuses within the OSU system.

When BOSS (Big Orange Search System) went live to the campus, reactions were very positive. Students

loved it and began using it right away. There were mixed reactions to the word-cloud feature that sets AquaBrowser apart from the rest of the products available. The word cloud was a very innovative technology at the time; it allowed users to easily disambiguate their search by navigating the cloud of related terms. A user could then click on a term to narrow the results. The cloud has associated terms, translated terms, spelling variations, and terms from a thesaurus as well as the original search term. This level of visualization helps educate the user about other search options and strategies.

This model aligns very well with the research work from Professor Marti Hearst at UC Berkeley (as mentioned in chapter 3), who studied the impact of visual tools in relationship to faceted navigation. Although innovative for its time, the word cloud received mixed reactions from the patrons of the OSU libraries. One nice story from Prestamo was about a soon-to-retire faculty member who was a big user of the library. This faculty member was not known for giving praise, but was not shy about letting the library administration know if he was unhappy about something. One day, shortly after the launch, the professor rang the library. This was a surprising occasion, as he was calling to sing its praises. He shared his excitement about the new discovery system and wondered why the library had to wait until his impending retirement to roll out such a wonderful tool.

North Carolina State University

- **Interviewee:** Associate Director for Collections and Scholarly Communication Greg Raschke
- **Product:** ProFind from Endeca
- **Launch Date:** November 2006

With a library system that is seen by many as an innovator, North Carolina State University (NCSU), a sciences- and engineering-focused institution, has had the leadership required to keep the services its libraries offer in line with the expectations of their patrons. In 2005, the main library at NCSU began a project to redesign its website. The website redesign project was led by a team of developers and librarians who were focused on the user experience of their patrons in the online environment. During this project, they spent time studying their users through usability studies, learning how their patrons use resources and perform research activities. These studies made it very clear that the interface for searching the library's collections simply did not meet the expectations of the users. For example, the OPAC returned search results in a LIFO (last in, first out) order—meaning the most recently cataloged items would show up on the top of the results list—rather than presenting a list of items in order of relevance to the search input. This clearly left users with a lack of understanding of the search process and

a lack of desire to use the library's current platform, leaving them with an easy alternative—Google!

The focus of the website redesign team was to provide an experience that met users' expectations and would increase usage of the library's resources. The team began to evaluate solutions external to the library marketplace, commercial websites that strongly emphasized search and user experience—Epicurious.com, Walmart.com, and Target.com. These sites inspired the team at NCSU to choose a platform that could provide high-quality search results and could be tailored to their collections. A meeting with a company called Endeca, which is known for its search engine software (which powers sites such as Walmart.com, Homedepot.com, and Target.com), led to NCSU's decision to develop its own catalog solution with the Endeca search engine software. The team felt very confident that they could get an easy win by integrating the Endeca software into their new website platform to create an intuitive and seamless website experience for their users. This confidence won over the library dean and led to a revolution in the OPAC, sparking a new way of thinking in the library world about user experience and introducing the NGC as a way to optimize that experience.

The project started in the fall semester of 2005, and a solution was ready for user testing by November 2005. This testing went on until the end of that semester in December. By the start of the following fall semester, library patrons found themselves with a completely new experience on the NCSU libraries' website. Users started their research from a single search box, which the undergraduates instantly loved. During that initial semester, the "classic OPAC" was still available, allowing staff and diehards to perform the wonderful complex searches that they had done for years. But just a few months later, by August 2006, the classic OPAC was turned off and no longer used. Library staff members were not as enthusiastic as the undergrads, but by the time the Endeca solution was the only available solution, staff members were singing its praises.

Now, more than five years later, Greg Raschke, Associate Director for Collections and Scholarly Communication, says that project was a big success. Not only did it put NCSU libraries on the map and win the prestigious Endeca Navigator Award for building a highly successful solution, but it also provided a boost for the library. Circulation statistics show an increase after the launch, and the eBook filter, a feature that was not available from the classic OPAC, is one of the most popular filter options in the search results. Additionally, the TRLN (Triangle Research Libraries Network), a consortium of four academic libraries in the Triangle Research area—Duke University, North Carolina Central University, North Carolina State University, and the University of North Carolina at Chapel Hill—adopted Endeca as the source for its union catalog. This was another nice win for the team at NCSU as they were

now able to share some of the burden of software development and maintenance with a larger team, increasing the ability to further evolve the front end application.

Raschke is now thinking with his digital library team about how to further the user experience. They are thinking about the best ways to integrate and interweave web-scale solutions, such as their subscription to the Serials Solutions' Summon service, into their highly tuned web environment. They are interested in how to combine such diverse yet essential resources into a single experience in a way that is coherent to the end user. For example, they have integrated into their website their local collections, their regional network collections, their statewide collections, and the more global academic collections available to them from Summon. The team plans to further explore how these collections collaborate as they move to a web-scale environment and how to make that a part of their "big success."

University of Tennessee at Knoxville

- **Interviewee:** Assistant Professor and Instructional Services Librarian Allison Sharp Bolorizadeh
- **Product:** Primo from Ex Libris
- **Launch Date:** August 2009

The University of Tennessee, an institution of over twenty-seven thousand students nestled in Eastern Tennessee near the Smoky Mountains, began an evaluation of its library's online environment in early 2009. The library leadership realized that the library could provide a better user experience, and they saw patrons going to Google as a starting point for research. As a result, the University of Tennessee, Knoxville began seeking a solution that provided an experience that matched that of Google—a tool that did not require an expert to teach users how to navigate the vast collections in the library. Seeing students fumble in the library website and turn to easy-to-use resources like Google had led to increased frustration. The library had put a large effort into making the tone of its physical space inviting and easily accessible; now the goal was to develop the online environment in a similar fashion.

In 2009, the committee responsible for the library's website led a redesign project. Choosing a new platform to deliver a high-quality search experience was core to this charge. At the time, the NGC market included options from vendors in the library industry, from the technology sector, and from the open source community.

When evaluating some of the options, the team looked for something that integrated well with the existing ILS system, Ex Libris's Aleph, and the federated search platform, MetaLib. While the library staff appreciated open source tools, that option was off the table because the team felt they needed vendor support and a full turn-key solution. Ex Libris was able to provide such a platform with Primo.

During the summer of 2009, the new library website and catalog were being prepared for launch. By August 2009, they were up and running for the staff and the downsized population on campus to test and provide feedback. By the start of the fall semester of 2009, the Primo catalog was deployed as the 0main access point to the library's collections. Adoption by undergraduates that semester was quick: they began using the new tool immediately and without concern. Allison Sharp Bolorizadeh, assistant professor and Instructional Services Librarian, noted that it was as if the students didn't even notice the change since the interface was familiar to them. On the other hand, faculty members were a bit skeptical at the outset. Library staff members were also a bit skeptical; however, because they needed to learn to use the new tool so that they could support instruction, staff adoption was not a problem for long. As a result of negotiations between the Primo implementation team and rest of the library staff, access to the "classic OPAC" was retained so that some specific advanced types of searching would remain available.

The deployment of Primo happened in conjunction with the website redesign during the summer of 2009. Two groups were involved with that summer's work—the Primo implementation team, which consisted mainly of staff from the systems department and members of the administration team, and the virtual library steering committee, a much larger group made up of staff from within and outside of the library. These teams were focused on more than just the deployment of the Primo product; they produced materials for marketing the new website and the new search solution along with video tutorials on how to use it.

Looking back, the new library environment has resulted in many successes. The most important was a paradigm shift in the thinking of the library staff, bringing the discovery of library resources to the forefront and making it a high priority. Moreover, other resources witnessed an increase due to the redesign work; for example, the library witnessed an increase in usage of its federated search platform due to the integration with Primo, which is now front and center on the library homepage.

Villanova University

- **Interviewee:** University Librarian Joseph Lucia

In late 2006, the library at Villanova University set out to achieve what the North Carolina State University libraries had achieved: complete control over the primary discovery interface to offer a fully customized environment for their patrons. By the summer of 2007, the library had pioneered one of the early products on the market, VuFind, an open source NGC. According to University Librarian Joseph Lucia,

at the time that they began development on VuFind, traditional OPACs were inadequate to meet the users' expectations. This disconnect was making a significant impact on the usage of the library's resources as more and more users were gravitating to tools such as Google and Amazon for finding relevant materials. Because another institution had made a big splash with its homegrown catalog, Villanova had confidence that it could achieve the same. NCSU's Endeca-based homegrown catalog proved to many libraries that a better solution was possible, and it didn't have to come from an ILS vendor. Having a custom-made solution allowed Villanova to embed such a search tool in the library's web environment. This allowed complete control over the look and feel, as well as the wording and functionality, to meet the demands of the new generation of users. Moreover, Lucia saw building a solution mutually with other libraries as core to the mission and goals of libraries. He sees this type of cooperation as fundamental.

The NGC Value to Libraries

Lucia argued that "libraries traditionally viewed content myopically." He pointed out that the common college student grew up with the Internet and viewed collections differently in a very broad way. The rise of instant communication technologies made possible by the Internet and mobile networks, such as e-mail, texting, and IM, and new media used through websites like YouTube and social networking sites like Facebook, and Twitter may explain the Millennials' reputation for being somewhat peer-oriented.[1] These users are highly independent and don't commonly ask for help. More and more libraries are pushing alternatives to the traditional reference desk. Rather than supporting one-on-one sessions, librarians are focusing more on group sessions. Many libraries offer chat and texting to communicate with librarians. Supporting an NGC in a library allowed the library to present its collections in a different way to meet the needs of this new generation. Resources and collections could be "recommended, sliced, and presented differently," explained Lucia. He said that "the NGC was the first generation answer to this need and we are now facing enhancements and revisions to that model."

Open Source Solutions

When Villanova University was looking to provide these new models of access for its patrons, it became apparent that the open source model melded well with the library's mission and was a clear path forward. Of course, these solutions have their challenges, such as how to support them and how to solve complex problems in a timely manner. However, Lucia continues to argue that open source is a perfect fit in libraries, saying that "libraries exist to remove the barriers around intellectual property for our communities so that creativity and inquiry are facilitated." He said further, "Open source as a model practice for the sharing of knowledge and creative enterprise in a collective community environment is really emblematic of the entire mission of libraries." Discussing how VuFind has made an impact on the library community, Lucia continued, "You can make a really compelling and effective open source project with a relatively constrained cohort of developers. The active developers on VuFind are probably between ten or fifteen, but the level of continuous enhancement in the community is really substantial. The broader engagement has made it possible for libraries to really shape the tools that communicate who and what we are to our constituents. This gives libraries a much deeper stake in what we build and how we build it and opens the door to new kinds of collaborations across libraries." He concluded, "We are at the very, very front end of a process that is going to take place in the next decade that is going to be very transformational."

The Outcome at Villanova

Students' adoption of the NGC solution at Villanova has been very similar to the experiences of other libraries with a solution in place. Adoption has been almost seamless. Lucia commented that it has been a "friendly, familiar, comfortable interface that students like and use with a great deal of facility. It is much less intimidating and confusing than traditional library catalogs." Lucia also suggested that the hypothesis set forth in chapter 5 is correct—that seeing no significant change in circulation statistics shows that the NGC is successful because we would expect circulation to decrease as libraries devote less focus and spending to their physical materials. However, Villanova had not performed a thorough evaluation of usage of its ILS OPAC, so it does not have a proper basis for comparison.

Note

1. Sandra Davie, "Gen Y @ Work," *The Straits Times,* May 12, 2008, www.asiaone.com/Business/Office/Learn/Story/A1Story20080511-64480.html (accessed May 23, 2010).