

The Times, They Are Changing

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Article begins on next page

The Times, They Are Changing

Abstract: In 2015, Rutgers became only the second accredited law school in the United States to select the open-source ILS, Koha. The merger of two unique catalogs at Rutgers Law School has presented unique challenges with respect to migration mapping, data recall for large records, and relevancy ranking, all of which affect search results and usability of the OPAC. System migrations always result in some data being lost or incorrectly transferred. The hope is to minimize just how much data is compromised while fixing errors that might not have come to light but for the migration.

Keywords

Koha, ILS migration, next generation catalog, integrated library systems (ILS), data migration, shared integrated library systems, open source ILS

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The Times, They Are Changing

Over the course of the past year, every aspect of the technical services department at Rutgers Law Library has changed. Now the library has a new open source ILS, a newly merged catalog, new workflows, new colleagues that just happen to be at the other end of the state, and a new director.

It is said that history often repeats itself. Looking at the history of the Rutgers Law School, it is difficult to argue otherwise. The New Jersey Legislature officially merged the South Jersey Law School with Rutgers University in 1950, creating a second campus for the Rutgers School of Law in Camden. However, in 1967, the Rutgers School of Law split into two distinct schools: Rutgers School of Law Camden and Rutgers School of Law Newark. Just as the two law schools have operated independently since then, so too did each of their respective law libraries. Separated by 88 miles, the two schools each had their own administration, admission policies, and faculty. In 2015, however, the American Bar Association (ABA) approved the decision for Law Newark and Law Camden to merge into one larger school, Rutgers Law School, with two distinct locations.

Prior to the official merger of the law schools, the directors of each library were asked to merge their respective catalogs into one unified catalog. The merger of the libraries was intended to be seen as a symbolic first step toward the law school merger. However, as suggested by Moll (2010), "In mergers involving institutions it is seldom that the library is a key mover; rather as a result of the merger the libraries will have to find out how they fit into the new overall pattern"(p. 57). A year later, the library is still trying to figure out where it fits in the new pattern.

While the administration envisioned the financial benefits of a shared catalog, librarians saw both opportunity and potential problems. At the time, both libraries were using Innovative

Interfaces' Millennium, and neither institution had kept up with updating the ILS to maximize its potential. Nor had either library spent the money for additional training for the staff. Because it is a proprietary system, the costs to merge the two independent systems were simply higher than the library administration, and in turn the law school administration, were willing to spend. This was especially true considering that the cost did not include upgrading to the Sierra platform, Innovative Interfaces' next-generation catalog. Instead, the law libraries chose to switch to Koha, an open-source ILS.

Simply migrating to a new integrated library system, whether proprietary or open-source, is a challenge in and of itself. It is a time-consuming undertaking that can have unexpected complications, such as unforeseen costs or support issues that can arise regardless of the planning. When one factors in merging two distinct catalogs into the equation, there are bound to be even more impediments than usual. Some of these complications can only be realized after the migration is complete. In a perfect world, the merged catalog and system migration would have been two very separate events. Each event is in itself a time- and labor-intensive project. However, this is definitely not a perfect world, and the budget simply could not support separating the projects. The best option that the budget could support was a phased migration and merger, with each campus having its own "go-live" date.

Literature review

Rutgers Law Library is only the second American Bar Association (ABA) - accredited law school to migrate to Koha, so there is no literature in this specific area. However, Wale (2011) discusses the possibilities that law libraries can turn to open source as a means of saving money without falling behind in the ever-changing technology. In her master's thesis, Riewe (2008) conducted a survey comparing both the costs associated with using open-source ILS and the satisfaction of libraries that have made the transition. Her survey results showed that the mean and median satisfaction ratings were actually higher for the OPACs of the open-

source systems. Walls (2011) covers the experience of migrating a medical school library from Millennium to Koha. As to the problems the Rutgers Law libraries are facing after the migration, Singh (2014) points out that very little literature has been written about the technical support that libraries can expect after adopting open-source. Her article discusses the results of two surveys. The first survey was designed to gauge the expectations of librarians regarding the technical support of their ILS, both proprietary and open-source. The second survey documented the actual technical support librarians experienced and whether open-source vendors could provide libraries the necessary support. Rapp (2011) points out that with the economic shortfalls confronting libraries, many librarians are considering options such as open-source that they may not have considered in better economic times. Wale (2011) points out that this economic shortfall may very well provide the “necessary impetus for bold innovation in library automation and data storage,” thereby suggesting that now is an ideal time to explore open-source alternatives (p. 311). Müller (2011) analyzed 20 different ILS platforms that were available to the library community and found that only three of those -- Evergreen, Koha, and PMB -- met all of his criteria as viable selections for librarians. Breeding (2009) expanded on just what a next-generation catalog is and how it incorporates Web 2.0 concepts. Yang and Hofmann (2010) attempted to determine which of three systems, Evergreen, Koha, or Voyager, came closest to the concept of the next-generation library catalog and in offering the most in terms of service.

There is no question that migrating to a new ILS is a major undertaking for any library. Ahammad (2014) describes the benefits and migration process experienced by the Independent University Library in Bangladesh. Previously that library, like many others in developing countries, was using a combination of products rather than an actual ILS, so Koha was an opportunity to have a functional ILS with the potential to customize the code at a lower cost than a proprietary system would have allowed. Bissels (2008) and Bissels and Chandler (2010)

describe the reasoning behind their selection of Koha for the Royal London Homoeopathic Hospital. With the exception of Singh (2013), very little has actually been written on the migration process once a library has chosen the open-source platform. In many instances, this lack of literature increases the anxiety and fear that librarians have in making the switch away from the well-known proprietary systems and into the relatively unknown and unfamiliar world of open-source. For years, libraries have relied on proprietary systems that, despite some dissatisfaction, librarians were comfortable with because they were familiar. In short, the fear of the unknown is a powerful force. For some libraries, perhaps, the only way to overcome that fear is a case of economic necessity.

The “Rutgers” Experience

As part of the decision-making process, the Rutgers Law Library arranged for a series of virtual demonstrations of several different ILS platforms, including Evergreen, Sirsi, and Koha. Ultimately the library selected Koha, the first open-source library automation system (“Major Open-source ILS Products,” 2008). Koha was originally developed for a New Zealand library as a solution to their anticipated Y2K problems (Ransom, Cormack & Blake, 2009). Since its inception under the GNU General Public License, Koha has been installed in libraries worldwide and is gaining momentum among open-source options (Carlock, 2008; Macan, Stojanovski, & Fernández, 2013).

The decision to migrate to an open-source ILS was more about the cost savings than about the flexibility that open-source can provide. Not to say that the inherent flexibility of open-source and by extension, Koha, will not be utilized in the future, but there is no question that maintaining a proprietary ILS is extremely costly in the difficult budget situations most law libraries now face.

The fundamental tenet of open-source is the ability to modify the source code and improve on it for the good of the entire user community. Realistically, that is the core function of a library as well, so it makes sense that libraries would embrace the open-source movement. However, if the library does not have someone on staff who is capable of writing code, it is necessary to partner with a support company that will be able to create the code for any necessary developments. And that is where the cost of open-source is revealed. Detractors say open-source systems are “free like puppies; once you have the puppy you need to provide care, food, shots, etc.” (Carlock, 2008, p. 6). However, the developments made to the source code benefit the entire community of users. Unlike proprietary ILS vendors, developments are available to all users without any additional purchase once the development is approved by the community. Since this is only one of a handful of law libraries currently committed to Koha, the need to pay for developments unique to law collections is expected. In fact, the library paid for one development shortly after the “go-live” date but it has not yet been incorporated into the software a year later.

While customized developments can increase productivity in the library, and conversely the entire user community, they can also create complications. Unlike proprietary systems, there is no way to calculate just how much money is needed for various improvements. In fact, ByWater Solutions, a Koha support company, has established a crowdfunding site just for Koha developments that has the potential to allow libraries with smaller budgets to ask for help in funding a development. And once the cost has been established, the timeline for the implementation of the development is unknown. According to one respondent in the annual library-systems report, “In these financially challenging times, libraries would be prudent to acquire stable systems with known costs, rather than rolling the dice and hoping that ‘open-source’ will be a panacea for their automation needs” (Breeding & Yelton, 2011, p. 10). So while support companies such as ByWater Solutions suggest that features can easily be

developed, libraries still struggle with the uncertainty that comes with open-source (“Open-source Picks Up the Pace,” 2015).

Migration

As an open-source program, Koha can be installed into almost any library setting with very little financial cost. However, it does require software and infrastructure support. A common misconception many libraries have about selecting open-source is the idea that they need a dedicated systems specialist on staff (Breeding & Yelton, 2011). The cost to hire a dedicated IT specialist can very well exceed the cost of maintaining a proprietary system. However, if a library elects to partner with a support company, it can most likely get by with its existing staff. The continued success and growth of these support companies show that libraries are realizing that they do not need to have their own in-house staffing in order to choose open-source (Singh, 2014). At Rutgers, because there was no one currently on staff to handle these duties, the library selected ByWater Solutions as the Koha support provider. The contract with ByWater included installation, data migration, training and technical support. ByWater currently supports 919 installations of Koha in mid-sized and larger libraries and in 2015, 11 academic libraries switched to Koha with ByWater Solutions (Breeding, 2016). The Rutgers Law School IT department elected to host the server which was purchased based on ByWater’s recommended specifications.

Since the Rutgers Law Library chose to partner with ByWater, the technical side of the migration was primarily their responsibility. However, the library was solely responsible to provide ByWater with all of the necessary data from the legacy systems. While consideration was given to purchase the data from Innovative Interfaces, ultimately the librarians involved with the migration on both campuses were very familiar with Millennium, and were able to extract the library’s data, thereby saving an added expense. The data extraction team on each campus included both the technical services librarian and a public services librarian.

Most of the data extraction was done using the “create list” feature in Millennium and exporting the needed fields into csv files. These files could then be opened in Excel to assure the quality of the data and to make sure all of the necessary fields were included. The bibliographic records, however, needed to be exported in MARC format using “data exchange” in Millennium. Since the files that needed to be exported to ByWater were massive, a shared Dropbox folder was created between both campuses and ByWater. Throughout the migration process, ByWater frequently sent requests to both campuses for additional files or information based on the records we put into the Dropbox folder. This process made it even easier to compare notes between campuses on how data could be extracted.

The data that was extracted included bibliographic records, authority records, and patron records, including checkouts and item records. ByWater did not want to transfer any of the existing order records. Because this data has historical value, not to mention financial accounting value, the library is still trying to find the best way to preserve these records from the legacy systems. Newark chose to transfer its payment information into various 9XX fields. While these are less-accessible, at least the information can be found within the individual record. Unfortunately, because many of the MARC records now contain financial information, the library decided to disable the MARC display function on the OPAC.

In addition, because of the difficulty in establishing subscription records in Koha from existing data, the serial check-in information was not transferred. Instead, technical services staff simply started new subscription records for each title as new issues arrived in the mail. In fact, during training, the ByWater representative actually encouraged the library not to attempt to migrate subscription information. Establishing publication patterns in Koha is not as intuitive as it was in Millennium. As a result, this may be the only time staff can be thankful for the decreased reliance on print serials.

As mentioned, the catalogs ideally would have been merged using the legacy systems and then, once the records were sufficiently reconciled, the library catalogs could have migrated to Koha as a whole. Even though the values of individual fields were different in the respective Millennium catalogs, the fields would have at least been constant, making for a relatively smooth merger. However, in order to migrate to Koha, the Millennium codes had to be remapped to Koha fields. As pointed out by New York University's merger to Koha, the mapping is not always on a one-to-one basis (Walls, 2011).

The library budget situation did allow for a phased migration to Koha. Newark made the switch in January, while Camden migrated in May. This meant that Newark and Camden had separate deadlines for sending their data to ByWater. It provided Camden with an opportunity to learn from any issues that arose with Newark's data extraction or data migration. The intervening 5 months were spent doing last-minute clean-up projects and, most importantly, trying to match the Camden data as closely to Newark's as possible. While the two libraries had similar collections, each had its own set of location codes and item types. Additionally, since both libraries had been using the same system for more than 30 years, there were also records that still had item types and locations codes that were no longer active. Before the Camden catalog could be fully mapped to the new Koha fields, it was necessary to map the Camden collection to the Newark collection. Some of the mapping was completed ahead of the migration but the majority still needs to be addressed as the two libraries continue working together. For example, in Camden the item type for a single volume book was "monograph," while in Newark that same book was referred to as "treatises, 1 volume." The item type in the combined catalog now refers to the single treatise as "treatises, 1 volume." In this instance, it was only a matter of a difference in nomenclature that was easily remedied. In some cases, there are titles held by both libraries that are not necessarily classified with the same item type.

These differences in item types can pose a problem in respect to loan rules. However, the biggest impact of the differing item types is seen in the faceted searching.

Initially, ByWater assumed that during migration, Camden's bibliographic records would match on the existing bibliographic numbers from Millennium. However, since both Camden and Newark were running their own independent Millennium systems, there was a very distinct possibility that record numbers, both bibliographic and item, could overlap and potentially wipe out Newark records.

To further complicate the merger, not every record in either catalog had the unique identifiers that are now commonplace in MARC records, such as ISBNs, ISSNs or even LCCNs. In consultation with ByWater, Camden created a matching rule that resulted in fewer matches with the Newark catalog than actually existed rather than chance the loss of records that were incorrectly matched. As a result, there is a significant amount of clean-up, especially in the form of duplicate records, which both libraries are now tackling. For instance, if an LCCN had letters after the numbers, it did not register as a match. Or if one campus used "The" in front of a law review title and the other did not, it was not a match. Despite the match rule, there have been a few instances where two records that should have matched, yet did not. However, it still seems that it was prudent to err on the side of fewer matches rather than potentially lose valuable data. On at least a few occasions some records matched that, theoretically, should not have matched. In some cases, this can be traced back to records in which the print version of the record matched the electronic version. Thankfully, both libraries still have access to their legacy systems because a few item records can be traced only by their barcode to find out where they truly belong.

Training

Because there were two “go-live” dates, it was necessary to conduct two separate training sessions. ByWater conducted the first 3 day session in Newark approximately 1 month before the scheduled migration. The circulation librarian and the technical services librarian from Camden also attended these sessions. During this time, the entire library staff was trained on the intricacies of Koha from how to use the OPAC to how to use each module. The third day was devoted solely to administrative matters and was limited to department heads who were involved in operational decisions. This actually had the added benefit of not only setting up the administrative needs of our new system but of also suggesting a need to reconsider policies of both libraries. Additionally, the training session explained in depth the administrative module and its impact on the rest of the catalog. Even though some of the administrative functions are branch-specific rather than catalog specific, this portion of the training was not repeated in Camden.

At the conclusion of both training sessions, all of the trainees were encouraged to “play,” or experiment, with the new system to reinforce the lessons. However, in this author’s opinion, the training would have been more successful if trainers took a closer look at our existing workflow and modeled the training in the new system on our workflow. Instead, the trainer simply explained how the Koha system operated without taking into account what the library staff does on a daily basis. ByWater does not seem to be unique in its training approach. In fact, during a discussion of an Alma migration, Kiegel stated “that the training program did not meet expectations, as it often took the form of ‘demonstration’ rather than ‘instruction’; sandbox environments were provided for practice, but they differed from the configuration of Alliance members’ actual systems; and training involved ‘how to push buttons’ rather than ‘how to accomplish tasks,’ providing insufficient insight into Alma’s inner workings” (Lovins, 2016, p. 194). In addition, while library staff were encouraged to play in the sandbox, the sandbox was

not fully functional. With the test system only partially operational, it is impossible to know whether or not the malfunction is due to user error, or system error thereby limiting the value of learning by “play.”

Post-data Migration

Over the years, cataloging standards have changed. And, in Camden at least, bibliographic record clean-up and modernization that should have happened over the years was not always a top priority. Since many records did not merge, there is now an opportunity to bring old records up to current standards as they are individually merged as part of the after-migration clean-up. Catalog maintenance projects that previously were on the back burner are now a higher priority.

In some respects, the Camden transition has been more problematic because staff not only had to adjust to the new ILS, but also deal with issues relating to duplicate bibliographic entries. Using the “report” feature, it is possible to run an SQL query to determine just how many duplicate entries are in the catalog. At last check, this report yielded just over 7,300 entries.

Since the migration, staff members, as part of their daily routine, are on the lookout for duplicate titles. Using the list feature of Koha, every staff member can add potential duplicate entries into a shared merge file. As time permits, the entries in this file are confirmed as true matches. Once a match is confirmed, each element of the two bibliographic records appears with check boxes, allowing the user to select various aspects from each library to create a new record with the preferred elements. This tool in Koha is extremely helpful for performing the necessary merges.

This system allows staff at both campuses to contribute records to the merge file while they continue their everyday tasks. The bulk of the titles in the merge file are government

document records that both libraries received from Marcive that did not fit the established match rule. However, as these refer to electronic resources, there is no need to physically merge the records. Instead, one record is deleted while the other record is modified to reflect that it is available at both campuses. Using the list function gives a measure of control to the deletion of records.

Camden's "go live" date was significant because not only was it "day one" of Koha, but it was also "day one" of the new, merged catalog. Fortunately, this significant event was planned for the end of the semester and close to the end of the fiscal year. Financially speaking, the timing of this was perfect since it meant that budgetary reports for the University could be completed based on the legacy system since none of the previous financial information was migrated into Koha. The new fiscal year offered a fresh slate to begin keeping financial records in Koha, uncomplicated by legacy data. The slower pace of summer session also provided staff an opportunity to get many of the kinks worked out for the merged catalog.

Budget reductions in libraries have forced most technical services departments to reduce staffing. The technical services departments at Rutgers Law are no different. As a result, processing current material in a speedy manner took precedence over catalog maintenance projects. However, since the migration, priorities have drastically shifted. The bulk of work in the technical services department since the migration has centered primarily on cleaning up records. In most cases this involves manually merging records that did not merge or adding call numbers for records that were not barcoded previously. While it was expected the library would face catalog maintenance issues, it seems that these were amplified by the merger of two catalogs more so than the actual catalog migration. Issues that were easily overlooked in the legacy system now stand out dramatically. Even though the extent of the work seems daunting at times, this is valuable work that may never have been tackled without this project.

The migration to Koha has made it apparent that the system relies more heavily on item records than the legacy system ever did. In Millennium, the foundation of the ILS was the bibliographic record. Nothing could exist without having a bibliographic record, but a library could easily have a bibliographic record without item, check-in, or order records attached. While a “biblio” record is still essential in Koha, it seems as though the item record has much higher relative importance. The basis of this reasoning is that call numbers do not show up in the OPAC unless there is an item record. The majority of the law library’s collection is non-circulating; as such there has never been a wide-scale barcoding project. As a rule, all newly-received items, with the exception of government documents, are barcoded as a part of processing in technical services. This still leaves a very large portion of the collection, primarily older works and government document records, without barcodes and therefore without item records. For this reason, the Camden migration team asked ByWater to create dummy item records as place holders so that every record in the OPAC displayed a call number. In order to accommodate the large percentage of the collection that does not circulate, the dummy records were assigned an item type that was for a non-circulating volume. However, this plan did not work as intended. In truth, it created a new problem and therefore several new maintenance projects.

One reason that this plan did not work as expected is because, although the migration team told ByWater to pull the call number from the 090 field, there were actually multiple 090 fields in the existing bibliographic records. The technical services department routinely used the pull-down menus in Millennium when inserting fields into the bibliographic records. Millennium’s “library has” field corresponded with the 090 MARC tag. This meant that bibliographic records had multiple 090 fields since the call-number was also in a 090 MARC tag. As a result, many of the records that migrated into Koha had holdings information appear in the call-number field. In other cases, records ended up simply with the word CAMDEN in the call-number field. In

conjunction with Bywater, the migration team is attempting to correct many of these records in bulk, but it is an ongoing process. Initially there were over 73,000 records without call numbers; now fewer than 19,000 remain. Obviously, there is still work to be done on this project.

The majority of the remaining records without call-numbers are electronic resources such as digital government documents. Previously, electronic titles simply did not have item records. Item records were created only for physical items. Initially the migration team planned on removing the item records for electronic resources but they have since reconsidered because having them actually works well for the faceted searches. Of course, it would work better if the item type assigned to the dummy records accurately reflected the fact that they are indeed electronic resources. Newark chose a similar path in having dummy records added; however, they opted not to have any sort of item type assigned to their records. In other words, there is yet another maintenance project to find all of the electronic resource records and change their item type. Electronic records also need to be modified because the two campuses had different proxy URLs before the merger. Of course, projects such as this can be done in batches. Even though it is time-consuming to work on individual records, in some cases, by doing so, one can actually discover other problems and make the needed repairs. As tedious as the work is to make these changes, some staff appreciate the challenge and opportunity to create more accurate records. Batch modification, while highly effective as a time saving tool, cannot replace the eye of an experienced technical services staff member. Then again, when the number of records is so high, there really is no other choice.

Order information is based on item records too, which is problematic for serial-heavy collections such as those found in a law library. In theory, it makes sense to tie actual replacement value and item cost to the individual book, but that approach does not take into account replacement volumes that are issued in serial sets. Within 2 years, it is not at all unusual for a publisher to release a replacement of a particular volume within a set. In order to

enter an invoice into Koha, it is necessary to create an item record for that volume. Since it is a replacement volume, there is no need to maintain the item record for the previous volume. In Koha, however, the item record includes the acquisition details. It may be worthwhile to consider paying for a development in the future that would separate payment information from item records in the event that an item is superseded.

Ongoing Issues

Searching

Most library professionals would agree today's library users expect a single search box similar to Google. However, as it stands currently, the search results in Koha are nothing like what a user expects from Google. If in fact a user does a keyword search in the Rutgers Law Library's online catalog for the print holdings of the *Harvard Law Review* there are 627 results. The print record for the *Harvard Law Review* appears midway down on the second page of results. It is easy to appreciate that every field is searchable, but at the same time searching every field simply provides too large of a result list. A respondent in a recent library automation survey mentioned that, in Koha, the "Searching capability [is] less satisfactory than traditional ILS" (Library Automation Survey 2013: ILS System Report, 2013, para. 7). Moreover, "Searching by 'title as phrase' or keyword often produces less than desirable results especially on the part of patrons who often don't understand how to search" (Library Automation Survey 2013: ILS System Report, 2013, para. 7). Just last year EBSCO pledged monetary support for a strategic upgrade of Zebra to Elastic Search, thereby ensuring the long-term viability of Koha (Koha Receives Massive Support from EBSCO for Enhancements to Its Web-Based, Open-Source ILS, 2015). ByWater has assured libraries that Elastic is now in the testing phase. However, it remains unclear just when the search engine will be replaced.

In this respect, Koha's streamlined look may create unrealistic expectations for users. While there is a single search box, a simple search doesn't always net the results that most users would prefer and certainly not what they might expect from a Google search. For instance, a search by title for the *Harvard Law Review* requires users looking for our print holdings to scroll to page three of the result set. This indicates that the relevancy ranking needs correction. Theoretically, one would expect the results containing the search phrase at the beginning of the title to appear higher on the retrieved list than the phrase found in the middle or at the end of a title. For example, publications titled "selected essays in the *Harvard Law Review*" appear before the *Harvard Law Review*. But then so do items published by the *Harvard Law Review* Association. One would think that completing a title search would change the relevant results to titles including the phrase or beginning with the phrase *Harvard Law Review*. More importantly, why don't all formats of the same title cluster together? Most people would assume that the same title would have the same relevancy ranking. In this example, the microfiche version makes it to the first page of results. But one would expect all of the formats with the precise title to be among the first results.

Depending on the type of editing project that needs to be done, it is easy to appreciate that every field is searchable. However, for most occasions searching every field simply provides too unwieldy a result list. The only way around this is to use the advanced search option, which isn't necessarily the first choice among users.

Koha's Zebra indexing, while problematic, is in fact what allowed it to function in larger libraries (Carlock, 2008). While future Koha updates are expected to address the Zebra indexing problem, the law library has elected to integrate the Vu-Find discovery layer in an effort to remedy this deficiency. However, at this point, Vu-Find has not been fully integrated into the catalog and whatever visual appeal there was to the Koha OPAC is lost along with the functionality of the integrated ILS. In an effort to compensate for this loss of functionality, Vu-

find is relegated to a beta search option on the website. Even though it is not fully functional, at least searching for the Harvard Law review gets a user to the “Harvard Law Review” in the first page of results.

These searching problems are not simply indicative of the functionality of the OPAC. Staff face the same searching issues. Whenever possible, we prefer to search using numbers such as ISBN, ISSN, or even the biblio number to improve precision. In fact, when ByWater migrated the records from Millennium, they retained the bibliographic record number and mapped it to the 907 field. This means that we can do a search from the legacy system using that number. Of course that will be helpful only while we still have access to the legacy system.

The next-generation integrated library system tries to incorporate Web 2.0 concepts into the user experience. Koha is no different in this respect. However, perhaps like other systems, too much development has focused on the front end while the staff framework was neglected. Both libraries and vendors need to turn “some of their attention from rich end-user experiences to the back-office workflows that support them” (Pace, 2009, p. 649). Next-generation catalogs are known for simple keyword search boxes, enhanced browsing possibilities, spelling corrections, relevance ranking, faceted navigation, federated search, user contribution, and enriched content, including features such as images of book jackets. But while technically Koha is a next-generation catalog, the experience at Rutgers Law Library has not yet reached the next generation. As a Koha user, the library has the ability to include user contributions such as tagging and reviews. However, the library elected not to include those options. The same is true for enriching content by including book-jacket images; this feature is on the staff side but turned off on the public display. Because so few of the holdings in a law library have a distinctive cover image, the results page actually looked better without any book-jacket images at all. On the other hand, Koha offers users the ability to create lists, save searches, and

access their accounts online. An added benefit to the academic user is that Koha is compatible with reference-management software such as Zotero.

Critical Mass

Large serial sets are very common in law libraries. For instance, the National Reporter sets fill 999 volumes before starting a new series. Rutgers Law Library houses multiple copies of these sets on each campus! With a merged catalog in place, there are numerous sets that contain over 1,000 item records and others almost as large. Perhaps another ILS would also struggle with such large records, but it is a definite obstacle in Koha with the Zebra indexing system. Once a record reaches a size of 1MB or greater, Zebra will no longer index it, meaning it will no longer appear in the search results. This is true for both the staff interface and the public OPAC results.

Staff members who attempt a search by a known barcode in an affected set will result in, “The record you requested does not exist.” However, if for some unknown reason a staff member happens to know the bibliographic number it is possible to create a link that will take you directly to the record. This is little help since the odds of knowing a bibliographic number are extremely slim. To offset this problem, ByWater has written a SQL query that allows staff to find records given a known barcode. Sadly, though, this doesn’t offer any help to the public searching the catalog. So while technically Rutgers Law has a merged catalog, there are several titles that require separate bibliographic records so that records don’t disappear. Essentially, in the merged catalog, two bibliographic records representing each campus’s holdings of the same large set are needed.

Splitting a title into two records is definitely not an ideal situation in light of the way in which search results appear. It is difficult to know whether the same title will be grouped together in the results because of the problems with indexing and results ranking, discussed

previously. However, it is expected that when the Zebra search engine is replaced, this will no longer be a concern.

Another option was simply deleting all of the associated item records for these large sets, which are typically non-circulating. However, this means that it would no longer be possible to complete an internal count use on these volumes. It also means that if a volume was to be checked out to a faculty member, a common courtesy in academic law libraries, the circulation staff would have to create an item record on the fly. The creation of a few such records would serve only to cause confusion both in the OPAC and among staff as they consider whether these records represent the entire holdings. It would also have an impact on the faceted searching, since most of the facets are derived from item records.

Deleting all of these item records seemed like a step backward and reinforced the impression of Koha being weak when it comes to the handling of print serials, thereby making the case that perhaps the “convenience and stability these systems [proprietary integrated library systems] provide to libraries is still unparalleled” (Wale, 2011, p. 313). As mentioned previously, acquisition information is contained in the item records. In essence, deleting item records to correct the indexing problem would result in a loss of much of the functionality of an integrated library system.

While the library staff has created a plan to handle records that have “disappeared,” there is a bigger related concern. Currently there is no system in place to alert system users when a record has reached the indexing limit. There is no fixed limit as to how many item records may safely be attached because the limit is tied to the total size of the MARC record and not simply the number of items. So while a set may appear to be perfectly fine today, the next volume or even the next bibliographic note could make it disappear. And until one conducts a search for that record again, one won't know the record is missing. Ideally, a warning would alert staff that a record is approaching the size limit so corrective measures could

be taken, but some records that have 1,000 item records remain fully functional. Most likely they are close to the size limit, but without a warning system it is impossible to know just when a record will cross the line. In this case, the additional 9xx fields containing payment information from the legacy system could in fact be a contributing factor in the disappearance of some of the records.

Staff Impact

The user interface of the staff module is conducive to all of the post-migration editing that is required. At any given time, one can switch to another task without changing modules as was needed in the legacy system. Within individual records, many of the fields are hyperlinked, allowing staff to simply click through the record without having to redo the search in another module. The drawback, however, is that overall the system is slower to respond than the legacy system. Staff frequently complain about the speed, or lack thereof, for each action that they need to complete. To compensate for the slowness, one can simply keep multiple tabs open to continue working. However, the slowness is more than simply waiting for the server to load a page. For instance, the resulting changes of a deleted biblio are not reflected for several minutes; similarly, an imported authority record is not searchable immediately. The changes depend on re-indexing, the frequency of which is established by each individual library. By comparison, in the legacy system, any catalog change was immediately reflected.

Many staff members are frustrated not so much by the lack of functionality to which they were accustomed in Millennium but more so by the overall change. While change is always difficult to accept, it is so much more than simply a new ILS. Koha changed the entire workflow, which has led to anxiety and uncertainty which, on occasion, has also led to passive resistance to learning new procedures (Banerjee & Middleton, 2001). In an attempt to offset anxiety and build a better working relationship across the two campuses, multiple meetings were scheduled to try to compare how particular tasks are handled in each library. These meetings attempted to

foster relationships between the libraries that encourage staff members to reach out to their respective counterparts and to alleviate as much as possible the idea of “us versus them.” Institutional loyalty is a powerful force that can be eliminated or greatly lessened but must be factored into decisions and workflow changes from the outset (Kathman, 1983).

One of the distinct advantages of open-source is the community of users. Software developments are initiated by the users and the community for the benefit of all. But the community of users also has an impact on the day-to-day tasks that libraries need to complete. The Koha community wiki contains an SQL reports library, which lends itself well to those users who either do not have a full understanding of MySQL or those users who do not have a support company willing to assist with writing these reports. In either case, the reports library offers solutions to problems that some libraries hadn't even considered. These reports are all freely available and often need only slight modifications for customization.

Recommendations

It is inevitable that at some point every library will have to face a migration to a new integrated library system. Planning is absolutely critical if the migration is to succeed, but there will always be areas that are either overlooked or simply need more attention. In this library's case, more clean-up work done prior to the data extraction would have been beneficial. Perhaps that would have minimized some of the errors that occurred during the merger or ideally would have resulted in more bibliographic records matching between Newark and Camden. The entire process from selection to the second “go live” date was less than one year, limiting the amount of time for record maintenance.

If at all possible, migrations should be scheduled so that there is a substantial overlap with the previous system. Maintaining access to the legacy system is absolutely essential. No matter how much planning and preparation are completed before a migration, and regardless of

how successful that migration is, data will be lost. Fortunately, both Camden and Newark owned their legacy servers, which meant that all of the previous data was fully accessible. Regardless of whether your library owns the server or not, it is highly recommended that any library contemplating a switch, whether it is to another proprietary system or an open-source system, consider running both systems simultaneously. Much of the catalog maintenance work would not be possible without access to our former system. In fact, as mentioned previously, all of the Koha records include the Millennium bibliographic number within the MARC record which allows for ready reference. So even though it offers a static snapshot of the library's collection, it is an invaluable resource for all of the necessary clean-up projects.

Conclusion

This past year has indeed seen a tremendous amount of change at the new Rutgers Law Library. And while there are still lots of adjustments and changes that will be coming in the future, there is noticeable progress. In fact, to borrow a quote from Jed Moffitt of the King County Library System, who compared their migration to the Battle of Normandy: "I think it's safe to say that here at nine months out, we're well established in France, but we're still far from Berlin" (Rapp, 2011, p. 35). At this point, a final assessment on Koha as an ILS is impossible because there have been so many other changes that have occurred this year that the majority of time has been spent dealing with these changes and their impact on the daily workflow. In fact, so much of the current workflow hinges on the merger of the two library catalogs that there is little time to actually discover all of the features of Koha. The unexpected benefit of Koha merger and migration has been the impetus to change the entire focus of the technical services department. Catalog maintenance issues that should have been happening all along were forced to the forefront, creating an opportunity to review those records and make every possible effort to assure that our users have findable resources. Realistically, if it weren't for the poor searching capability, most of the library staff would agree Koha has the potential to give a much

better user experience than our patrons previously received. Of course that potential is only possible once all of the migration/mergers issues are settled. Ultimately, however, the switch to open-source allowed the library to spend more of our budget on books, databases, and resources rather than on a proprietary catalog.

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