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Periodicals Collection Management: Organizing, Creating, and Maintaining a System 1/06 final version

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With the assistance of Dayna Mancini, class of 2004.

This paper examines Providence College's experience in organizing, creating, and implementing the library's collection management system, including how and why we chose Microsoft Access®, involved non-periodicals library staff in each phase, worked with existing periodicals information to form the basis for the collection management system, decided which information/fields to include, and retrieved/compiled the necessary information about each title by comparing our existing records to what was physically on the shelf.

We also discuss how we used the collection management system to solicit input into collection management decisions such as cancellations and retention, create detailed reports with a variety of information, provide the information required for the periodicals integration project that combined the previously separate humanities and science collections into one collection as part of the library renovation project, manage the temporary division of the collection into three locations as part of the library renovation project, and assist academic departments in managing periodical titles in their respective areas.

The increasing complexities of maintaining and managing a modern periodicals collection require an accurate, up-to-date collection management system. The Phillips Memorial Library at Providence College identified the need for such a collection management system for its periodicals collection during the planning stages for the library's major renovations. Each phase of the project involved extensive discussion and collaboration with library staff outside of the periodicals department, especially with the reference librarians.

College Profile

Providence College is a well-known and respected four-year Catholic liberal arts college affiliated with the Dominican Friars (the Order of Preachers). It is primarily an undergraduate institution with an enrollment of nearly 3,700 students and 235 full-time faculty members in 63 academic disciplines. The Graduate Studies Program offers 11 degree programs and has an enrollment of over 900. The School of Continuing Education has approximately 650 students in 12 bachelor and 5 associate degree programs.

For the last eight years, the America's Best Colleges issue of *U.S. News and World Report* has ranked the college among the top two colleges in the north region. It also ranked the college second nationally in average graduation rate and fourth in average retention rate. Fifty percent of admitted students have SAT scores between 1100 and 1300.

Library Profile

The Phillips Memorial Library is the academic center on campus. Although some departments maintain collections of resources for their faculty and students, there are no branch libraries. The library primarily serves the information and research needs of the undergraduate students and supports the curricula of the institution. It also supports faculty research and serves as a resource for the local academic, religious, and civic communities. The library strives to reflect the Catholic character of the college and the Dominican tradition of teaching and scholarship.

The library maintains a collection of over 350,000 books and bound periodical volumes and approximately 1,650 current print periodical titles covering the wide variety of subjects taught at Providence College. The library is designated as a selective depository for United States government documents and has been receiving documents for the collection since 1970. It is also a full depository for Rhode Island state documents. There are 62 wireless computers, including desktop and laptop computers, which are available for student use in the library. There are also 18 desktop computer workstations in the electronic classroom which are available most evenings for student use.

The library belongs to the Higher Education Library Network (HELIN) consortium which consists of nine of Rhode Island's academic libraries. All the members share the Innovative Interfaces, Inc. (III) library system and, with the exception of one, share a common online catalog.

Literature Review

Farrington (1) and Nisonger (2) provide background information on the management of serials in general. Although Nisonger is more comprehensive and detailed, both books should be basic tools for any serials librarian. These two books were particularly helpful in covering the issues of collection management and evaluation, collection development and access, and periodical use.

DePalo (3) outlined the process we needed to follow and provided the basis for thinking out the issues and formulating the problem. She provided an approach to managing and manipulating data and

outputting the search results. However, this conference report did not provide any details about how to do that.

Reichardt (4) illustrated how the library and college faculty used her database to evaluate journal subscriptions and demonstrated how the database continues to evolve to support the management of the journal collection. Slaughter (5) offered guidance about what elements to include in the database. She pointed out the importance of including usage data as a variable in the database. Viescas's (6) manual for using the software gave us the practical information we needed to structure the database and design and build it for greatest functionality. It described in detail how to work with the data, create forms, and how to construct queries and reports.

Planning

The increasing complexities of maintaining and managing a modern periodicals collection require an accurate, up-to-date collection management system. During the recent renovations of the library it became evident that an automated collection management system was needed. Using Microsoft Access, we have created a system that allows us to accurately manage and update all pieces of information about the periodicals collection in a comprehensive database program.

Background

To help plan for the library renovations, the periodicals librarian was asked to prepare a comprehensive inventory of the periodicals collection that would include a wide array of information that had never before been compiled in one place. After weighing the options, it was decided that the inventory would be best managed by creating a database that would allow us to organize and extract data quickly and efficiently. The data that we gathered about our periodicals collection incorporated existing records with information derived from physically checking the shelves. We began with the information on our EBSCO (7) invoice, supplemented with information already in our HELIN serials module.

Purpose

The database would serve both to make administrative decisions about the collection and to provide librarians, staff, faculty, and administrators with information needed for specific managerial, reference, and daily operational purposes.

Strategy

We incorporated the opinions and help of several people when planning and creating the management system. To manage the overall project, we enlisted the services of one of our very bright and capable student assistants to serve as a consultant. She had an in-depth knowledge of database management and therefore had the expertise we needed. She was very enthusiastic about the periodicals department in general and about the database project in particular.

We also solicited input from the periodicals staff, who would be working daily with the system to maintain the collection. Their opinions and suggestions were helpful in structuring in particular the user friendly parts of the management system that they would be working with daily.

Since the reference librarians would also benefit from the use of the management system, we met with them to discuss which data they would like the system to include. They suggested that we include data such as:

1. Whether the title is available online in an archive, such as American Chemical Society (ACS) or Institute of Physics (IOP), in one of our aggregator databases, ABI/Inform Global, Academic Search Premier, or in one of the electronic serials services to which we subscribe (JSTOR or Project MUSE).
2. Whether the title is available in the two major consortia in Rhode Island: HELIN (Higher Education Library Information Network) or CRIARL (Consortium of Rhode Island Academic and Research Libraries), a consortium of 17 academic and research libraries in the state.

After meeting with the reference librarians and discussing the database with the staff of the periodicals department, we drafted a list of the types of information we would need to collect. These discussions resulted in extensive lists of data that were revised several times. The drafts included the type of information to collect, and how that information would be entered into the database. For example, the fields may have been designated unstructured free form input, selection from drop-down menus, or a simple yes/no check off.

In a project such as this, it is very important to determine all the data fields at the planning stage, since it is difficult to add or remove fields after the data is entered and the database is set up (figure 1). This became evident, for example, when we eliminated the “storage”

designation from the database when it became obsolete due to the library renovations. Since “storage” would no longer be a valid location, it had to be removed from the records. We had to check all the queries and reports and remove the designation from approximately 80% of them, which was time consuming. Although in this particular example, removing the field was beyond our control, it should still serve as an example of why good planning is necessary from the outset of the project.

| Title | Hqis | Price | Form | Controlled By | Membership | How | ISSN | How long you |
|------------------|------|-------|------|---------------|-------------------------------------|-----|---------|--------------|
| STUDENT COUNCIL | 1 | \$100 | = | | <input type="checkbox"/> | = | 0833070 | monthly |
| STUDENT JOURNAL | 2 | \$100 | = | | <input checked="" type="checkbox"/> | = | 0833070 | monthly |
| STUDENT YEARBOOK | 3 | \$200 | = | | <input type="checkbox"/> | = | 0833070 | monthly |
| STUDENT COUNCIL | 4 | \$100 | = | | <input type="checkbox"/> | = | 0833070 | monthly |
| STUDENT COUNCIL | 5 | \$100 | = | | <input checked="" type="checkbox"/> | = | 0833070 | monthly |
| STUDENT COUNCIL | 6 | \$100 | = | | <input checked="" type="checkbox"/> | = | 0833070 | monthly |
| STUDENT COUNCIL | 7 | \$100 | = | | <input type="checkbox"/> | = | 0833070 | monthly |
| STUDENT COUNCIL | 8 | \$100 | = | | <input checked="" type="checkbox"/> | = | 0833070 | monthly |
| STUDENT COUNCIL | 9 | \$100 | = | | <input type="checkbox"/> | = | 0833070 | monthly |

Figure 1. Periodicals Master Table (Partial View)

Software Selection

Once all the planning was done on paper and the necessary decisions were made, it was time to choose a way to build the actual database. We needed a program that could handle the large quantity of data with excellent organizational capabilities. While we used Microsoft Excel® to collect the information on paper and create data collection sheets to form the basis of our data, our student assistant recommended that we use Microsoft Access® to build the management system. Access was the best option because it would handle the large quantity of data we already had compiled and allow us to easily enter and modify information based on the physical inventory that we performed. We could also generate reports to present the information in a visually appealing manner as well as to generate statistics about the collection.

Data Collection

We started the data collection process with the EBSCO invoice which arrived in Excel® format. Using this spreadsheet, we created data collection sheets that were taken to the shelves to perform a physical spot-check and inventory of the entire collection. This spreadsheet included only current titles because the information came from our invoice of current titles only. Therefore, in the physical inventory, we had to physically add the titles on the shelf that were not part of the invoice, such as cancelled or closed holdings and titles that are not affiliated with EBSCO. The physical inventory involved verifying information about current titles, adding information about closed holdings and checking microfilm. In some cases, we added titles or other information to the spreadsheet based on what we found. Although this was an extremely time-consuming task, it was the most vital part of the project and was necessary in order to make the management control system as accurate and as reliable as possible.

Due to the accuracy gained through the physical inventory process, we were also able to improve the accuracy of the records within our Innovative Interfaces, Inc. Millennium Serials module, as we discovered and corrected discrepancies between what we found on the shelves and what the holdings statement of the serials record indicated.

The data collection sheets contained on paper every piece of information that would be included in the database. These sheets provided an easy way to do the research necessary to collect the additional information about the periodicals collection that we needed for the management system. Some of the sheets collected information that could not be found by simply checking the shelves. To collect this type of data we needed to consult other sources. We grouped the collection sheets and classified the information by type. Each group included the title of each periodical, reflecting an accurate physical inventory. These groups included:

Group A. Title, price, HEGIS code (8), and ISSN; most of which we already had from the EBSCO invoice.

Group B. Title, inclusion in Katz's *Magazines for Libraries*; CRIARL; HELIN.

Group C. Title, online availability which included our aggregator databases and/or Project MUSE, JSTOR, or ACS.

We assigned the data collection sheets to periodicals staff and student workers to complete. The staff and/or the project manager completed the more complex sheets, such as the HEGIS code assignment; and the student workers completed the more straightforward sheets, such as whether the item was included in Katz or in the CRIARL/HELIN holdings.

At the end of the data collection phase, we were left with many pages of hand written data collection sheets that needed to be entered into the new system. The results of the research were compiled giving us the information necessary to create the database.

Database Creation

At this point in the project, the planning had been completed and the data collection done with everything in hard copy. With these two vital phases complete, it was then time to create the actual database. The basic structure of the new periodicals management system was created by setting up the fields in one table within Access (figure 1). The information from the EBSCO invoice was merged with the updated title information from the physical inventory to create a comprehensive list of all the titles in our collection. We then set up the fields that were determined in the planning phase. This table would hold every title and every piece of information collected about that title. Everything involved in the management system is drawn from this table. To automate and ease the entering of the large amount of information we had collected, we created forms within Access for data entry.

The update form (figure 2) includes information that is vital to each record in the database such as the title, HEGIS code, price, ISSN, and other relevant information.

| Add New Title - Title Change - Close Holdings | | | |
|--|---------------------------------------|--------------|--------------------------------------|
| Title: | | | |
| Change to, if applicable: | | | |
| Hegis: | Category: Humanities Science Medicine | | |
| Price: | Price Code: _____ | | |
| ISSN: | | | |
| Cancelled By: | | | |
| Print Holdings: | | | |
| Access Database Info (NEW TITLE): | | | |
| Other Available: | <input type="checkbox"/> | Moving Wall: | Yes: <input type="checkbox"/> |
| JSTOR: | <input type="checkbox"/> | Holdings: | CHARLILLIN: <input type="checkbox"/> |
| Project Muse: | <input type="checkbox"/> | | |
| ACS: | <input type="checkbox"/> | | |
| Elsevier: | <input type="checkbox"/> | | |
| Otherwise Available: | <input type="checkbox"/> | Where: | _____ |

Figure 2. Update Form

The project manager and the periodicals staff used the forms set up to enter all of the information that was collected during the data collection phase. At the end of this phase, we had a comprehensive inventory of the entire periodicals collection, including all of the information that would be relevant in providing information for making decisions.

Reports were created to extract information about the collection in a variety of ways. These reports proved to be very helpful on a daily basis in providing information about the periodicals collection.

Maintaining the System

Once the database was complete and functional, we discussed the important issue of keeping it up-to-date. To prolong the accuracy of the system, we needed to create a procedure for updating it regularly for two main reasons:

1. Additions, deletions, and changes in serials subscriptions that happen in daily operations;
2. Discrepancies between other sources and the periodicals management system.

We determined that we would use a printed form, which the periodicals staff would manually fill out, when anything needed to be changed in the system (figure 2). The periodicals staff would use this form to update information in the database and keep the form for our records. One person was assigned to do the updating, to maintain accuracy and continuity.

Database Security

Database security has been a top priority from the beginning. We decided early in the planning phases that the database should be password-protected and that only certain members of the library staff would be able to use it. This included members of the periodicals and reference staff, library liaisons, the library director, his executive assistant, and the academic departments. The database resides on the campus network which is accessible by only library designated staff and is backed up by the Information Technology Department each night

There are three levels of security. First, each person has a user name, based on the standard naming of their first initial and last name and a randomly generated password. Second, everyone with access to the system is assigned a classification: administrator, reference librarian,

academic department, library liaison. Based on this classification, access to certain areas of the database is either granted or restricted. The grouping of classifications allows more flexibility over granting and limiting access to areas of the database and helps to streamline the administration of security features in the database. Third, the system keeps track of each person who logs in and out as well as of the last person who modified each record by recording the user name and the time.

Applications

There were several ways that we could foresee the database to be used. We anticipated that the periodicals department would use the inventory to maintain the collection. The reference librarians would use it to assist patrons, recommend changes in the collection, and to keep track of which titles are available electronically. The academic departments would use it to make decisions about which periodical titles they would like the library to subscribe to or cancel. And the library administration could use it for budgetary and collection management purposes. The structure of the database was designed to support all of these functions.

Reports

The Periodicals Collection Management System supports a wide variety of uses for the day to day operations of the periodicals department. We can easily generate reports on a wide variety of information that is useful on a daily basis. The database includes a list of several standard reports and allows for creating custom reports based on all of the information included in the database. Figure 3 illustrates a custom report for education journals. HEGIS codes 9, 10, and 25 are those assigned to education, education graduate and the Prince Foundation grant.

Since the completion of the Periodicals Collection Management System, it has served many different purposes. The database's customized reporting features have been valuable for many projects. For example, during the library renovations during the summer of 2003, we used the system to create a master list of periodical titles so we could integrate the humanities and science periodicals collections, which were shelved separately, into one alphabetical collection.

After the humanities and science designations had been eliminated from the periodicals collection and all of the periodicals titles were shelved together in alphabetical order by title, we used the Periodicals Collection Management System to organize the division of the periodicals collection into three locations when renovations found it necessary to split our periodicals into locations by year. For example, the first floor held current periodicals from 1997 forward, the second floor held periodicals from 1981 through 1996, and the basement held everything prior and up to 1980. This helped to better utilize the limited space available during the extensive renovations; and the reports generated in the system were vital in managing this division. In order to determine how to divide the existing collection into the three new locations, we used the periodicals management system to create a list of all periodical titles, including the amount of shelf space that each occupied. We analyzed the shelf space information from the management system and used that information, along with the measurements of how much space was available in each of the three new locations, to determine how many years of all of the titles could be located in each of the three new locations. The periodicals collection management system gave us easy access to the number of shelves occupied by each title, which facilitated determining how to divide the collection into the three locations.

In academic year 2002 - 2003, we provided lists to all of the academic departments and programs of the periodical titles to which the library subscribes to support their courses. The departments examined the lists and gave their recommendations for retention or cancellation.

We used the system in the Fall 2003 semester when we asked faculty for input about a decision regarding the display of current periodicals. Some of the library liaisons gave their departments the departmental lists from the system so that they could choose which titles should have their current issue displayed.

Statistics

One of the most powerful features of the management system is the ability to quickly generate statistics on a variety of information about the collection. Access can quickly generate counts of fields within the

database. For example, it's quick and easy to determine how many titles we own or how many titles fall within a certain HEGIS code. More detailed and thorough statistical reports require a query using SQL (Standard Query Language) statements. A SQL statement is a line of code that tells the database to relate certain pieces of data to each other. These queries produce statistics which ask for a relation between two or more data fields. For example, a SQL statement is necessary to generate the statistic of the total number of our current subscriptions which are recommended by Katz's *Magazines for Libraries*. The query requires a SQL statement because the database can correlate a relationship between current subscriptions and the "recommended by Katz" field (figure 4).

Statistics

| | | | | | |
|--------------------------|------|---|-----|---------------------------|---------|
| All Titles: | 2266 | High Usage: | 270 | Total Volumes: | 172 |
| Current Titles: | 130 | Medium Usage: | 339 | Total Shelves: | 2521.5 |
| Non Current Titles: | 394 | Low Usage: | 126 | Total Shelves Humanities: | 1871.25 |
| Newspapers: | 10 | CRIBELJIBLIN Inclusion: | 100 | Total Shelves Science: | 715.75 |
| Memberships: | 74 | Katz Inclusion: | 120 | Total Microfilm Boxes: | 1350 |
| Microfilm Only Titles: | 70 | Total Katz Recommended Titles, Current: | 570 | | |
| All Titles on Microfilm: | 142 | Total Katz Recommended Titles, Non Current: | 100 | | |

Figure 4. Sample Statistics Report

This statistics report is run by several complex SQL statements that produce statistical information about nearly everything in the database in one report. This report was useful for the administration when planning renovations concerning size and capacity, for advising

departments regarding the collection, and for providing information to the public about our collection.

Benefits

This paper discussed the need for and the development of a collection management system to help make decisions regarding the cancellation and retention of periodical titles. This collection management system provided the librarians with information required to integrate the periodicals collection. It allows the academic departments to manage the periodical titles in their respective areas and to make decisions about which periodical titles they would like the library to subscribe to or cancel. It allows the library to inventory the collection. The reference librarians use it to assist patrons, recommend changes in the collection, and to keep track of which titles are available electronically. The library administration uses it for budgetary and collection management purposes.

The database also allows the librarians to provide to the academic departments and programs lists of the periodical titles to which the library subscribes to support their courses. It also facilitates the decision about which current periodicals to display and generates statistics on a variety of information about the collection, such as how many titles fall within a certain HEGIS code.

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8. The Higher Education General Information Survey (HEGIS) was administered between 1966 and 1985 by the National Center for Education Statistics (NCES), the statistical branch of the Office of Educational Research and Improvement, a component of the U.S. Department of Education. The system comprised several surveys of approximately 3,400 institutions accredited at the college level. These surveys included institutional characteristics, enrollment, degrees conferred, salaries, employees, financial statistics, libraries, and other factors. In 1986, the HEGIS survey was replaced with the Integrated Postsecondary Education Data System (IPEDS) which surveys all postsecondary institutions, including universities and colleges, as well as institutions offering technical and vocational education beyond the high school level.

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