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# A Reprise, Or Round Three: Using a Database Management Program as a Decision-Support System for the Cancellation of Serials

Judith M. Nixon

*Purdue University*, [jnixon@purdue.edu](mailto:jnixon@purdue.edu)

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**A Reprise, Or Round Three:  
Using a Database Management Program as a Decision-Support System for the  
Cancellation of Serials**

by  
Judith M. Nixon

**Abstract:**

Annual journal inflation rates of eight percent or higher have compelled libraries to cancel journals. Since 1992 Purdue Libraries have had three major cancellation projects. This article reviews how the Humanities, Social Science and Education Library approached this task in 2009 and developed a database management program to identify titles based on two criteria: low use and the availability of the title in full text in one of three aggregator databases. The education and humanities departments reached the cancellation goal, but several social science departments had to transfer funds from the book budget to accommodate their journal subscription costs. This indicates the importance of the journal to research in these areas.

**Keywords:** Journals, serials, cancellations, low use, aggregator databases, Purdue University

Judith M. Nixon, B.S. in Education from Valparaiso University and M.L.S. from the University of Iowa, is currently the Education Librarian at Purdue University. At the time of this project she was the Head of the Humanities, Social Science and Education Library at Purdue University, 504 W. State Street, West Lafayette, IN 47907-2058. E-mail: [jnixon@purdue.edu](mailto:jnixon@purdue.edu).

## **A Reprise, Or Round Three:**

### **Using a Database Management Program as a Decision Support System for the Cancellation of Serials**

It happened again. Journal inflation rates of 8% or higher compelled us to cancel journals in 2009. Purdue University Libraries was not alone; our colleagues at other libraries of all sizes reported similar cancellation projects for the same reasons – tight budgets and high serial inflation rates. This was my third round of campus-wide journal cancellations at Purdue. Such projects are certainly unpopular on college campuses; announcing one to the faculty is a bit like announcing a war. In fact, I feel like a veteran of cancellation projects, and like many veterans, I have some stories to tell and some insights to share. The purpose of this article is to review how the Humanities, Social Science and Education Library at Purdue University made these decisions in 2009, and how the decision-making process has grown and developed over the past seventeen years.

Purdue University is a major research institution with ten schools or colleges all offering degrees from the B.A. or B.S. to Ph.D. Enrollment in the fall of 2008 was 40,090, and the faculty totaled 2,743. Purdue has twelve subject-oriented libraries and an undergraduate library. The Humanities, Social Science and Education (HSSE) Library is the largest library on campus with a book collection of 500,000 volumes and approximately 3,000 serial subscriptions. The **Purdue Libraries** budget for books, databases and serials is over ten million dollars.

#### **Learning from the Past**

**Round One, 1992:** My first cancellation project at Purdue was when I was head of the Consumer & Family Sciences Library. We subscribed to a few hundred titles that had been carefully reviewed by the Consumer & Family Sciences faculty so a few new journals could be added during the previous year. The faculty was very interested in the project; our first decision was to

cancel several titles that were duplicated in another library on campus. This helped but did not free up sufficient funds, so we had to cancel additional titles, a very difficult task. The major thing I learned from the 1992 project was that the faculty members, who could readily identify the most important journals in their area, had little ability to identify the least important titles. When directed to select titles to cancel, faculty from all four departments just wanted to cancel the most expensive title with the idea that "that would do it." They wanted the unpleasant task over as fast as possible and thought the solution was to live without one expensive title. However, this led to arguments between faculty members and put me, the librarian, in a difficult position. I could have just taken responsibility for the project and selected titles to cancel, but the project was too critical to the research in the school to take that approach, which would only have led to a more helpless feeling among the faculty. In 1992, we had little data about the journals except current prices. We were using the "dust" test to determine usage. If the bound volumes showed little wear and were dusty, we concluded that they were not being used. All decisions in 1992 were made based upon the perception of usage. This made me very aware that we needed to gather some usage data. We began a rudimentary method of studying use by placing sticky dots on the spines of journals as they were reshelfed so we could go to the shelves to get a visual idea of the most-used journals. We were in fact beginning the process of gathering data that could be used for decisions in the future.

**Round Two, 1997:** Twelve years ago, in 1997, I supervised the periodical cancellation project at the Management & Economics Library, a review of nearly 900 journals in a subject area where research depended heavily upon them. As in 1992, I involved the faculty in the decisions, but this time they asked for information about the journals so logical decisions could be made. One faculty member in the School of Management said, "You manage the library; this is your responsibility; tell us what to cancel." Hearing this from a management professor made me realize our responsibility and our ability to do this. They needed the data that we could easily compile from our library system. During the semester prior to the cancellation project we started scanning barcodes of bound volumes before they were shelved so we could provide reliable,

current usage data. We were also able to extract three years of pricing data from our library system and from that calculate inflation rates and cost-per-use data. I was able to recommend to faculty the journals that were the major cause of the high inflation and journals that could be cancelled with the least impact on the needs of both students and researchers. Partnering with the faculty (instead of being at war with them), we were able to make logical, fair and effective cancellations decisions rather quickly. (A detailed discussion of the methods used and the results of that project was published in the *Journal of Business & Finance Librarianship*.)

### **The 2009 Project**

**Round Three, 2009.** This year, as Head of the Humanities, Social Science & Education Library, I relied on the past two experiences to develop a methodology to review nearly 3,000 journals that was fair and yet easy for seven librarians to explain to the fifteen departments in the College of Liberal Arts and the College of Education, both served by the HSSE Library. So this is the third time I have engaged in the process, each time in a different library, with the size and scope of the project growing, and each time with more data about the journal collection. By 2009 we were able to create from our library system or from vendor information a database that had titles, prices, inflation rates over the past four years, usage of printed volumes over the past ten years, and usage of e-journals subscriptions during the past year. In addition we merged in information on each journal's availability in full text in the aggregator databases from our SFX system; this included the dates of coverage in each database. Institute for Scientific Information (ISI) impact factors and other ISI data were also merged into to the database. We had a great deal of data that could be used to make informed decisions. Instead of a lack of data we were in the opposite situation; we could easily have overwhelmed faculty members with data. Before we began the project we needed to identify the criteria that would be used during this cancellation project and develop a methodology that seven librarians could consistently apply. We approached this as a crisis rather than a battle situation, a crisis that we shared with the faculty. Certainly many faculty members would consider cancellation of journals as a crisis for their research. The steps we followed were:

1. Assess the situation.
2. Establish rapport with the faculty and give them full information.
3. Explain the factors contributing to the crisis.
4. Explore solutions.
5. Implement a plan of action.
6. Involve the faculty in decision making by setting up meetings with librarians to review titles department by department.
7. Generate final lists of titles to be cancelled; allow faculty to review these lists.

### *Assessing the situation*

Librarians, including Purdue librarians, have spent much time and energy analyzing the broader situation of serial costs and the scholarly communication process. The library literature since the 1980s is full of articles about the issues surrounding scholarly communication and possible solutions to this bigger problem. Purdue Libraries sponsored a day-long symposium on the future of scholarly communication in May 2008, and other campuses have also had similar symposia. We are encouraging faculty members to deposit their articles in the university repository, to protect or retain their author's rights, and to use alternative methods of publishing. However, the change in scholarly communication is evolving very slowly. The long dependence on peer-reviewed journals for the promotion process is deeply ingrained in our culture. The solution of changing how scholars publish their research findings was not going to come in time to help our budget shortfall. The assessment of the immediate situation was that serial or periodical inflation rates were forcing us to reduce our serial expenditures by approximately 10%.

### *Establishing rapport with the faculty and giving them full information on the cause of the problem*

We knew that we needed to inform the faculty of the situation and give them information on the cause of the problem so they would be willing to work with their departmental librarian. Several avenues of communication were taken. James Mullins, Dean of the Purdue Libraries, communicated with the deans of each college and then to the whole Purdue faculty via the

*Library Update*, an online newsletter sent to all faculty members' email boxes. This newsletter explained the libraries' financial situation and the need for the serial cancellation project. As head of the HSSE Library, I then met with a group of all the department and program heads from the College of Liberal Arts and the department heads of the College of Education to review the project, gather their ideas, answer questions, and start the project.

#### *Examining and explaining the factors contributing to the crisis*

Like twelve years ago, the cause of the problem was simple and easily stated: an annual periodical inflation rate of about 8%. The graph of serial inflation rates from the ARL (Association of Research Libraries) Statistics of 2005-06 clearly showed the situation. The inflation rate for periodicals has been an ongoing problem for libraries for years. From 1984 to 2007, serial subscriptions have increased 340% in cost, while the consumer price index increased only 90% during that time. **The Purdue** materials budget in 2008/09 was \$10,461,217; over 90% of this was for serials and databases. The extent of the budget shortfall for 2009/2010 was projected to be \$1.2 million, or about 10%. **The Purdue Libraries therefore** needed to find over a million dollars by cancelling journals and other serial resources. The HSSE Library's cancellation goal for liberal arts periodicals was \$90,000.00.

#### *Exploring solutions*

Although the cause of the situation was the same as it was in 1997, an important difference between 1997 and 2008/09 was a significant increase in online access to full-text journal articles. This difference influenced the solution. During previous cancellation projects the 'e-journal' was just a future hope. Over the past twelve years we have negotiated with many publishers to obtain electronic access and in many cases cancelled the print and switched to electronic access only. However, another related but more important change was the significant increase in the number of full-text journals in the large aggregator databases. In 1997 we had electronic access to a full array of indexing and abstracting databases, primarily through a CD-ROM tower, but we did not

have full-text journals in any of the databases. At that time we did not even have access to Lexis Nexis. Researchers and students were still using the printed journals in the library stacks.

The librarians at the HSSE Library decided that the cancellations should be based on two criteria: usage, and availability of the title in one of the three major aggregator databases—EBSCO's *Academic Search Premier*, the *ProQuest Research Library*, or *Wilson OmniFile Full Text, Mega Edition*. This plan was fairly easy to communicate to the faculty and targeted the least-needed titles. During this project we were not trying to evaluate the prestige or importance of a journal in the field; rather, we were identifying titles to which we already had access or that showed such low use that we felt that Interlibrary Loan could fill the occasional need. These criteria were different than that used in 1997, when we emphasized cancellation of the high inflators. And it was different than the cancellation project in 1992, when we concentrated on decreasing the number of duplicate subscriptions. The 2009 cancellation project had the stated goal of cancelling the least-needed titles.

There certainly was some concern among the librarians and the faculty about cancelling journals that were available in the aggregator databases. Some of these journals were major titles; it is difficult to see the title of the most important journal in your subject area on a cancellation list. In addition, journals in aggregator databases are subject to contract changes between the publisher and the database producer, and therefore it is possible for a title to be dropped from an aggregator database. To provide some response to this very real concern, the HSSE librarians decided to convert as many titles as possible to electronic access and use the savings to create a separate fund specifically to replace any titles that were dropped by an aggregator. Cancelling the print format when we also have an online subscription saved us about 5% of the subscription cost, but this sum was sufficient to create the new fund. To accomplish this we had EBSCO, our subscription agent, prepare a list of journal titles that we received in both print and electronic format and our print-only titles that were available in electronic format. The HSSE subject



librarians reviewed the list and selected titles to convert to electronic format. The savings from this conversion of 170 titles to electronic access was \$8,214.91.

### *Implementing a plan of action*

The outline of the procedure for the liberal arts and education departments was as follows:

- For each department, we compiled two lists of potential cancellation titles for faculty review:
  - Journals with less than ten uses in the last ten years.
  - Journals available in full text in one or more of the three aforementioned aggregators. We specifically targeted journals in two databases instead of just one to avoid some of the problems of journals being dropped from the aggregators' lists. Embargo data were included in the report.

Two groups of titles were excluded from consideration:

- JSTOR titles were excluded from the list because of the long embargoes of three to five years.
  - Project Muse titles were also excluded as we had already cancelled the print format unless the titles had a long embargo. .
- Each subject librarian gathered faculty input. Departments could determine whether they would use a subcommittee or full department reactions.
  - Departmental faculties identified titles that were too important to cancel.
  - The full list of HSSE Library cancellations was sent to all College of Liberal Arts and College of Education faculty for final review. Faculty members again could 'nominate titles to be saved.' This was how the interdisciplinary areas had input into the process.

To create the decision support database we started with the records in our e-journal database, an SFX database. Our technology staff extracted these records. Each record included the ISSN, journal title, database name, dates covered by the database, and publisher. (Other libraries have used Ulrich's Serials Analysis System to compile these data.) Then from our Voyager system,

our technology staff extracted the title, fund name (corresponding to academic department), 2008 price, 2009 price, price increase between 2006 and 2009, and usage statistics (number of times the journal was browsed or checked out during the last ten years). These two databases were merged together. Then we merged in online usage data obtained from the journal publishers. From this database we created the two lists for each department. These were the journals we suggested as good candidates for cancellations, given their low usage and/or their availability in the databases. We specifically decided to create two separate lists instead of one merged list, because this would make it easier for the faculty to understand the reason a journal was recommended for cancellation. Most of the titles on the low use list were obscure or less important titles in terms of faculty research. Figure 1 is an example of a title on the Philosophy Department's low-use list; Figure 2 is an example of a title on the Music Department's aggregator list.

**(Insert Figures 1-2 here, please.)**

*Involve the faculty in decision making by setting up meetings with librarians to review titles department by department*

Each of the HSSE subject librarians then met with their departments to review the lists. These meetings involved explaining what an aggregator database was and how access to the full-text articles via these databases was different than access via the publisher's website. Most faculty confused database access with electronic subscriptions. Some faculty members feared that cancelling the subscription would automatically lead to the removal of the title from the aggregator databases. When they understood the situation, we often heard comments such as "So we are

paying for it twice." In some cases faculty questioned cancelling low-use titles, arguing that low use was not an indicator of low quality. We agreed but said we could fill article requests from such a seldom-used journal through interlibrary loan. The final cancellation lists for each subject area were chosen by the departmental faculty during discussions with the subject librarian. Each department was directed to cancel 9.2% of its total expenditure.

*Generating final lists of titles to be cancelled; allow faculty to review these lists*

A week before the list of HSSE Library's cancellations was due, a merged list of all the departmental lists was sent to all faculty members; they were encouraged to review the list and to express any concerns they might have. Every response was investigated by the subject librarian; in most cases the title was removed from the cancellation list. In the end we cancelled 450 journals for a total of approximately \$130,000,000. We had more than reached the 9.2% goal, which was \$90,000.00.

Although faculty could recommend the cancellation of titles not on one of the two lists, 90% of cancellations were either in aggregator databases or were very low-use titles (less than four reshelvings in ten years). Less than 1% of the titles (eight titles) were not in aggregator databases and had greater than ten reshelvings. In some cases faculty welcomed the opportunity to hone their subscription lists and used this review to cancel beyond their goal so they had funds to purchase new titles or to increase their book budget. Departments that did this included both humanities and social science departments: Anthropology, History, Philosophy, and Political Science. Philosophy in particular was interested in changing the emphasis of their collection and asked for more frequent serial reviews in the future. History canceled more journals so they had funds to transfer to the book budget, feeling that books were more critical than journals. The Foreign Language and Literature Department used this opportunity to change their subscriptions to be more in line with their current curricular needs and cancelled French and Russian titles so they could order some new East Asian titles. Other departments came in under goal; these included Audiology & Speech Sciences, Communications, Health & Kinesiology,

Psychology, and Sociology. Overall, the humanities and education departments had little trouble reaching the goal, whereas the social sciences struggled. In some cases the social science departments had reserve serial funds which they could use, but some departments had to take funds from their monograph allocation. The specific departments that reduced their book budgets to keep journals were Psychology, Sociology, and Audiology & Speech Sciences—all social science areas. This is an indication that journals are valued more than books by these areas, the opposite of the case in the History Department. Table 1 shows the breakdown between the humanities, social sciences, and reference. Because of electronic access to many new reference databases, the Cooperative Reference fund was able to cancel many print titles, which took us quite a bit beyond our goal of 9.2% cancellations.

**(Insert Table 1 here, please.)**

### **If We Could Do It Again**

At the end of any undertaking as important as a journal cancellation project, there are always some things learned and some ideas for change. If I could do this over, I would use the same criteria and identify both titles in the aggregator databases and low-use titles. However, I would not prepare lists for each department. Rather, I would prepare one list with all subject areas and send this list out to all faculty members for their reactions. This would lead to a more balanced collection overall and would allow for more input from the interdisciplinary programs. When we specified that each department should cancel 9.2% of its expenditure, we did not allow for any change in allocations among the departments. We missed this opportunity to balance the allocation based on need and availability. Some departments had little trouble identifying titles either because their subjects had strong coverage in the aggregator databases or because we subscribed to journals in their areas that were not used. Other departments had exactly the

opposite problem; it was difficult to find enough journals on the low-use and the aggregator lists to meet their goals.

## **Conclusion**

Reviewing journals with the goal of cancelling titles because of budget shortages is always a difficult process, one that librarians would like to avoid. However, the subscription inflation rates for journals have made this a responsibility that must be undertaken. Involving faculty in the process is essential; they are the end-users and the major stakeholders. As our former Dean of Libraries, Emily Mobley, said in 1998,

"As librarians we don't publish in these journals, read them, edit them, use them in our research, nor do we sit on the editorial boards of these journals. We act as facilitators to connect users with the journals which serve their needs. The faculty have a unique role in that they are both creators and consumers of the products. What a powerful position."<sup>iii</sup>

While faculty need to have input into the cancellation decisions, they may not have the ability or all the data required to make effective decisions. Librarians can be the facilitators and provide the data needed so that effective decisions can be made. At Purdue's Humanities, Social Science and Education Library we created a decision-support database and used low use and availability in aggregator databases as the criteria for cancellations. By keeping the process relatively straightforward, we were able to obtain faculty input and reach decisions equitably and quickly.

## Endnotes

- <sup>i</sup> Nixon, Judith M., "Using a Database Management Program as a Decision Support System for the Cancellation of Business Periodicals and Serials," *Journal of Business & Finance Librarianship* 5, no. 4 (2000): 3-21.
- <sup>ii</sup> Mobley, Emily R., "Ruminations on the Sci-Tech Serials Crisis," *Issues in Science and Technology Librarianship* 20 (fall 1998), <http://www.istl.org/98-fall/article4.html> (accessed July 1, 2009).

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