

7-16-1999

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Nixon, Judith M., "Canceling High Inflation and Low Usage Periodicals in a Serial Cancellation Project" (1999). *Libraries Research Publications*. Paper 101.

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Canceling High Inflation and Low Usage Periodicals In a Serial Cancellation Project

Abstract: Describes an easy method to identify serials for cancellation based on usage data and inflation rates, both which can be extracted from online library management systems such as NOTIS. Data can be imported in to a Microsoft Access database and after simple calculations are, the database can be searched for high inflation/low use titles. These titles serve as the preliminary cancellation list.

During the summer of 1996 the Libraries of Purdue were faced with the second serial cancellation project in five years caused by several years of double-digit inflation of serial prices. Despite substantial budget increases from the university administration, which had funded the library at a rate higher than inflation to help met the rising cost of periodicals, it was clear that the price increases in serials far exceeded the university's ability to fund them. The serial bill was near \$4,000,000.00. During the three years between 1993 and 1996 the serial budget had increased almost \$800,000.00, a 27% increase. Projections for the 1997 fiscal year suggested double-digit increases again. This anticipated increase of 11.5% would increase the serial budget to 42% of the 1993 budget. (See TABLE 1--"Cumulative Increase in Serial Expenditures at Purdue University" and TABLE 2 Annual Percent Increase of Serials at Purdue University.")

[TABLE 1]

[TABLE 2]

Purdue University is a land-grant college with large schools in engineering, science, technology, and agriculture. The science and technology journals were seen as the major villains as their prices had escalated phenomenally. "The U.S. Periodical Prices" report, which appears every year in the May issue of *American Libraries*, documented the inflation rates of periodicals over the past fifteen years. The average price of chemistry and physics journals from 1984 to 1996 went from \$228.90 to \$867.00; a price index of 378.8. Yearly inflation rates for chemistry and physics journals during this time were all above 10% per year. Engineering and mathematics titles had similar price increases. Since Purdue is a science and technology school we were hit heavy with these price increases.

However, the blame for running in the red could not be totally placed on the science and technology journals. Journals in all areas had heavier inflation rates than the Consumer Price Index (CPI). Between 1984 and 1996 while the CPI went from 100 TO 151, the U.S. Periodical Price Index went from 100 to 301.3.¹

Comparing national average figures with actual inflation rates at Purdue indicated that the national averages were correct. Serial prices at Purdue between 1993 and 1996 for engineering titles increased 30.65%. Mathematics titles increased 30.76%, and chemistry titles 27.62%. Even subject areas such as management and economics, with an inflation rate of 20.25%, were increasing at a rate that we could not afford.

Clearly we were in a crisis state. We needed to reduce the serial expenditure by planning a cancellation project. In 1992, we had had a similar problem and had cancelled \$500,000.00 in subscription costs. Following the procedure established in 1992, the dean of the Purdue Libraries, Emily Mobley, asked each academic dean to

appoint two faculty members to an Ad Hoc Committee on Serials whose charge was to *recommend a methodology and target amount for a serials cost containment project* which would take effect with subscription beginning in calendar year 1998. Seeking faculty input at this point was very critical. Periodical subscriptions are extremely important to faculty. As Mobley has frequently said, the serial crisis is not just a library problem; it is a university problem. "Librarians do not 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 has unique role in that they are both creators and consumers of the products. What a powerful position."² We needed to partner with them to reach the goal of canceling \$600,000.00 from the serial budget. After discussion of financial reports, the committee developed a method or formula that considered **inflation rate and duplication rate**. The formula based the target amount for serial reductions in each library on the rate of inflation of their journals that was above 12.49% (or above 4% annually for the last three years) and their proportionate cost of duplicate titles. For detailed explanation of how the inflation and duplication rates were calculated see Appendix A.

This was a very interesting methodology; in part it was very innovative and progressive, and in part it was very traditional and conservative. Basing the formula for cancellation on inflation rates was a new approach. In the multitude of articles I have read on journal cancellation projects, I have not come across another library that has looked closely at the specific journals that are inflating at above normal rates. We were attacking the problem at its base, targeting the high inflaters. On the other hand the

methodology placed much emphasis on canceling duplicate journals. This was "beating a dead horse." Since the 1970's when we first needed to control the serial budget, we had been canceling duplicate titles. Canceling duplicate titles is the first thought of every librarian needing to control the serial budget. This article will concentrate on the innovative idea of targeting high inflating serials for cancellation and show how to combine inflation rate data with usage data to create a preliminary list of titles to cancel.

The formulas were applied to each library's budget. The library system is composed of fourteen research libraries and an Undergraduate Library. Each head librarian was to accomplish this reduction by working with faculty as the primary users. No specific instructions were given, however, the use of inflation and duplication in the formula clearly suggested that high inflaters and duplicates be targeted in the cancellations. The Committee also highly recommended that the libraries gather usage data and **base decisions in patron usage.**

Usage Study

There are several ways to do a usage study, but they all center on some method of measuring what material is **currently** being used in the library, with the assumption that current use predicts future use. The goal of this method is to identify the titles that account for little or no use so they can be cancelled. Although not infallible, records of past use offer the best indication of future use that we have. Library literature is fairly conclusive on this.

In order to base cancellations on high inflation/low use titles it is necessary to gather usage and subscription cost data. Both of these can be extracted from an online

management system such as NOTIS and imported to a database management system such as Microsoft Access. Usage data can be gathered by scanning the barcodes of bound periodicals before they are reshelfed in the same manner that books are discharged. The data extracted from NOTIS is divided into browses and circulations. These two figures can be combined by a simple calculation into a total usage figure in Access. Serial prices paid during the past fiscal years can also be extracted from NOTIS and merged into the Access database, and from it the inflation rate of each serial between years can be calculated. With this data in Access a search can be done to identify titles with high inflation rates (for example, above 12.5%) and low usage (for example, used less than 8 times during the semester.) The resulting list is then the preliminary cancellation list.

This preliminary list then needs to be reviewed by librarians. Titles can be added or removed. For example we removed from the list titles that had been recently added to the collection because usage data was invalid for new acquisitions and added titles supporting areas that were no longer taught at the university. We also removed titles that were heavily used in reference, but appeared as low use titles because data was not consistently gathered on them. The final list was prepared by Access in chart format for faculty review. We included title, duplication indicator, total usage, inflation rate between 1992/93 and 1995/96, and brief notes where appropriate. Because of our commitment to involve the faculty in the process, faculty members were asked to review the list and send requests for requests to “save” any titles on the list that were needed for research.

Conclusions:

Targeting high inflating/low use titles was a very successful way of selecting a preliminary list titles for cancellation. It had the advantage of targeting the cause of the problem--high inflators, while still retaining in the collection titles that had been used by the students and faculty. The usage study was a very important aspect of this method.

Both types of data, usage and inflation rates, are easy to extract from the electronic library system used in libraries. Importing this data to a database management system, Microsoft Access, made it very easy select titles for cancellation.

Librarian and faculty review added the human review to the process.

End Notes

1. Adrian W. Alexander and Brenda Dingley, "U.S. Periodical Prices--1998," *American Libraries* (1998 (May)): 82-90.
2. Emily R. Mobley, "Ruminations on the Sci-Tech Serials Crisis," *Issues in Science and Technology Librarianship* (<http://www.library.ucsb.edu/istl/98-fall/article4.html>) (1998).