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Creating a New Collections Allocation Model for These Changing Times: Challenges, Opportunities, and Data

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Creating a New Collections Allocation Model for These Changing Times: Challenges, Opportunities, and Data

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Abstract

This presentation focuses on the development of a formula for potential use in allocating the collections budget for Penn State and the questions that arose during the process. The Associate Dean for Collections, Information, and Access Services charged a Collections Allocations Team to examine the development and use of a collections allocation formula. The team used a variety of methods to guide the development of the formula including a literature review, a survey of ARL Chief Collection Development Officers, and discussions with fellow selectors within the University Libraries. In addition, the Team developed other recommendations related to the allocation of the collections budget, especially focusing on the process of collection development, duplication of materials across the University Libraries, and the rewriting of collection development policies.

Background

Penn State University, the land-grant institution for Pennsylvania, has a total enrollment of over 98,000 students. There are 46,000 students enrolled at University Park, 31,000 at the 20 campus locations around the Commonwealth, and just over 13,000 are enrolled in the World Campus, the online location. The campuses range in size from approximately 470 to almost 4,500 students. Each campus has a library that reports to the Dean of University Libraries and Scholarly Communications. In addition, the law library and health sciences library have separate budgets. The University Park Libraries consist of the Pattee Paterno Library and four branch libraries (Architecture and Landscape Architecture, Earth and Mineral Sciences, Engineering, and Physical and Mathematical Sciences). The Libraries are truly "one library, geographically dispersed" and because this philosophy is embraced and IP numbers across locations are comingled, electronic resources are licensed for all locations.

Introduction

The collections budget for the Pennsylvania State University Libraries has been allocated in a similar manner for over a dozen years based upon a historic allocation model. Part of the budget, specifically the allocations for the Commonwealth Campus locations (i.e., the libraries at campuses outside of University Park), had used a formula for a number of years. During recent years, much has changed in the budgetary and fiscal environment of all universities, including Penn State. Of special concern has been the growth of expenditures for electronic resources. Since around 2000, expenditures for electronic resources have increased from 20% of the collections budget to nearly 70%. Within the academic sphere, departments have been consolidated or eliminated while new programs have been implemented. Interdisciplinary research is becoming the norm. Yet, the basic allocation model has not reflected those trends. Thus, the Associate Dean for Collections, Information, and Access Services charged a Collections Allocations Team to examine the structure of the budget and to begin the development of a collections allocation formula.

The composition of the Collections Allocations Team was limited to a small group with assistance from members of the Serials and Acquisitions Services and with analytical help from the University Libraries' data analyst. The overall goals of the team were to:

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1. Gain an understanding of the current collections budget structure.
2. Benchmark collections budget allocation methods with our peer institutions.
3. Devise a collections allocation model that reflects the priorities of the University and the University Libraries.

Steps in the Process

To fulfill its first charge, the team engaged in several meetings, including a full day retreat, to begin to address a variety of questions related to collections allocations, to understand the current budget, and to look at other means of allocating the budget. As part of the information gathering process, the Team held a general forum on collections allocations, surveyed the libraries faculty about issues that they have observed regarding collections, met with individuals and groups to discussion allocations, and sought input through the University Libraries' internal newsletter, *Interview*.

The following steps were undertaken by the team to address the charges presented to it:

1. Determine why the University Libraries is undertaking this process.

The ultimate goal of this process is to have a logical, data-driven method for allocating the budget. This begs the question, "should our allocations be data driven?" Such a question also requires a specific institutional direction as defined by the University Libraries administration. What is the goal of the collection? What role will historical print collections play?

2. Understand the current University Libraries budget system.

With the assistance of members of Serials and Acquisitions Services, the Team undertook an examination of the current budget structure.

3. Examine the literature to determine the use of budget formulae within academic libraries.

The team undertook an examination of the literature related to the use of budget formulae within academic libraries, focusing primarily on larger research university libraries.

4. Benchmark with research universities.

The team, with the assistance of Associate Dean for Collections, Information, and Access Services, devised and conducted a survey of the Association for Library Collections and Technical Services Chief Collection Development Officers of Large Academic Libraries Interest Group members to ascertain changes in their budgeting models and their use of formulae, if any. See Appendix for survey instrument.

5. Examine the previously used campus formula and the partially developed UP formula.

For several years, the materials budget for the Commonwealth Campuses was allocated using a formula which included the following factors: headcount of students; credit hours at various levels (0-300, 400-499, 500+); number of Science and Engineering programs; and other programs (AA, BA/BS, Master's, graduate certificates, and Doctoral). A draft formula based upon the factors used in the Commonwealth Campuses' formula had been developed for use at the University Park campus, but never implemented. The formula included the following factors: enrollment count by program, faculty count, student credit hours, research expenditures, and average college book price.

6. Develop and test a formula to use in an exercise in allocating the University Libraries' materials budget.

Based on the existing draft formula, the Commonwealth Campus formula, and information drawn from the literature review, the team, with the assistance of the data analyst and a student intern, created a sample formula. Data from the 2011–2012 budget year were used in creating the formula; sample weights were assigned to individual factors; and a comparison between the actual allocations and those provided by the sample formula were generated.

7. Address related topics.

The examination of the budget allocation process and the budgets themselves raised many questions, such as: How do retention policies affect the allocations? How will reference services be affected by changes in the collections? How will the time of librarians be used if the amount of time devoted to collection development declines?

Other issues addressed included:

- Approval plans: Work more closely with selectors to re=examine the use and breadth of the approval plans. How much duplicate work is being done by selecting individual items for the collections?
- Serials and standing orders: How should serials and standing orders be accounted for in the formula?
- Endowments: How are endowments best used and allocated?
- Money for special projects and to hold in reserve: Can money for contingency purposes and special projects be set aside prior to the formula?
- Purpose of collection (one collection, geographically dispersed): Should the purpose of the collection be redefined? If so, what is that purpose?
- Role of campuses: How can we change the role/purpose of the campus libraries? What should the role of the campus libraries be? What should the role of the University Park libraries be? Do we want to allocate by subject and not by location?
- Structure of budget: Should the structure of the budget be changed? Can the materials budget be simplified into Collection Development Group Budgets and then let the groups actually devise their own sub-budgets? Should the structure mirror the organization of the University itself? Can there be fewer budget lines that cover broader subject categories?

Present the Completed Model to the UL

First, the completed model formula was presented to the Collection Services Advisory Group to determine if any changes needed to be made or if there were glaring errors in the development process of the formula. Then, the model formula was presented to the faculty and staff at a forum. Finally, the report was presented to the administration of the University Libraries.

Literature Review

One of the guiding principles in the development of formulae to help in the allocation of materials budgets has been equity. According to Walters (2007), the principle of equity states that "departments with the same characteristics should receive the same allocations." But is this true or does it really depend on the purpose of the collection, for example, the difference between a teaching institution or a research institution? Walters states that the use of a formula reduces "the likelihood that allocations will be assigned on arbitrary or purely political grounds."

In a subsequent article, Walters (2008) describes a method for deriving a formula based on demand, cost, and supply and applies the formula to a budget consisting of 33 different academic disciplines. Similarly, Kaay and Zimmerman (2008) developed an allocations formula based on percentages but used five factors: undergraduate population, graduate student population, faculty population, use of the collection, and book price. They also advocated reviewing the formula every 5 years. Another application of a percentage-based formula is given by Guarria (2009).

Canepi (2007) summaries a variety of articles on collection formulae and present 23 different formula elements that are often used in determining allocations in order of the frequency of use:

1. Enrollment/number of students
2. Cost/price of materials
3. Use/circulation

4. Number of faculty
5. Courses (number/nature)
6. Graduate versus undergraduate
7. Programs
8. Research budget or output
9. Publication output
10. Credit hours
11. Scope of existing collection
12. Historical
13. Adequacy of current collection
14. Citations
15. Library or university goals
16. Formats
17. Faculty needs or wants
18. Interlibrary loan
19. Subjects published
20. Other weighted factors
21. Honor students
22. Inflation
23. Faculty research

Canepi points out that many of these are highly correlated and, therefore, all may not be needed in a good formula. She also summarizes Budd and Adams (1989) who surveyed libraries for their use of fund allocation formulas:

> The most frequently cited factors in the Budd and Adams survey were number of students (or number of student credit hours), cost of materials, number of faculty, circulation by department or subject, number of courses offered by a department, and number of students majoring in a department or subject. Often these factors were assigned different weights for graduate students, student credit hours, majors, and circulation.

Paris (2007) makes an excellent point: "It seemed obvious that a formula, no matter how carefully derived, would not be perceived as fair in all its components by every member of the campus community." Thus, there are always "winners" and "losers" in any budget allocation methodology.

In a recent article, Lyons and Blosser (2012) discuss the Comprehensive Allocation Process (CAP) that has been put in place at Northwestern University. CAP is a decision-making structure that assists in allocating new collections funds, for reallocating funds within budgets, and for cutting budgets due to reduced funding levels. At its core, it seeks to devise a budget that incorporates all fund types and material formats and establishes a budget based on demand and costs. The CAP was used to allocate funds which remained after the annual commitments were taken off the top of the general allocation. Northwestern divided their budget into three major categories: collections for academic departments, collections of distinction, and "all others." The major variables used focused on supply, demand, and cost. Supply included unrestricted funds, endowments, approval plans, serials packages, and e-book packages. Demand included measures of faculty, enrollments in graduate and professional schools, undergraduate degrees conferred, and course enrollment. Costs were measured as the average cost of nonrecurring expenses paid with unrestricted funds, average cost of books received through approval plans, average recurring costs paid with unrestricted funds, and average cost of subscriptions in serials packages.

Other Issues

It must be noted that most of the articles discussing the use of formulae for allocating the collections budgets limit their use to allocating money for monographs. Serials and electronic resources are generally allocated using a historical model. If Penn State would wish to include both monographic and serial funds, and possibly funds for electronic resources, different variables/factors may need to be used. Other considerations are:

1. E-resources: allocate first and then run the formula?

2. Set aside contingency funds and consortial cooperative purchase funds prior to running the formula?

3. Set aside demand-driven acquisition funding prior to running the formula?

4. Should Commonwealth Campus and University Park funds be kept separate or combined into one budget?

5. Alternatively, should all funding be based on subjects with a different mechanism used for the determination of where materials physically reside, that is, their location in a campus library or in a University Park library?

6. Should the budget lines be redefined into broader categories rather than in narrow subjects? If this is done, then library heads and their librarians could determine actual budgets for specific subject lines.

7. How should endowments figure into the budget? One option is to include all funds in the allocation process and then rebalance the actual allocations taking into account the specific subject endowments.

8. How should the University Libraries deal with approval plans? One option is to expand the approval plans to acquire more desired materials automatically, reducing the need for so many librarians to examine the same list of materials (such as in YBP) for selection. The current process wastes human capital since many librarians perform the same functions related to selection. Funding for the approval plans, however, should be assumed to be part of the allocations to subject areas.

9. How should the formula take into account the "spectrum of information available"? This spectrum includes visual data, sound data, spatial data, and data sets, in addition to print and electronic resources.

10. Should preservation, special collections, the costs of annexing materials, and the costs for services such as OCLC be included in the overall budget and, hence, the allocation formula?

11. How should we define a comprehensive research library collection?

12. How do we address our traditional organizational structures and practices?

13. How does our spending on electronic resources affect our thinking about the future of the collection and the need for print based resources (and the allocation formula)? Ownership versus access will be a continuing philosophical conundrum.

14. How do we instill the attitude that the collections budget supports the curricular needs of ALL students and the research needs of ALL faculty regardless of location, not just the needs of "my" liaison department(s).

15. How do we incorporate institutional priorities and direction into the formula?

16. How should weights be assigned to the factors included in the formula?

Recommendations

After a careful analysis of the literature, the results of the discussions with colleagues within the University Libraries, the results of the survey of "Big Heads" collection development officers, and sample runs of the formula, the Collections Allocations Team made the following recommendations:

1. The University Libraries needs a coordinator of collection development who can take a broad view and make quick decisions on collection-related issues across the University.

2. Collections decisions and budget allocation models must be made to maximize flexibility so that the University Libraries can react to changing demands in an expeditious manner.

3. The concept that the collections of the University Library are truly one collection, geographically dispersed, should be emphasized.

4. The collections budget should align with the academic structure of the University, such as the colleges and schools. This will permit the collections budget to reflect the changing mission of the University more easily.

5. Major e-resources that provide coverage across disciplines should be taken "off the top" of the collections allocations.

6. A specific amount should be reserved for contingency funds.

7. A formula should be used as part of the allocations process, but should not be used as the only determining method. Other issues such as collection strength, changing curricula, research trends, and University priorities must also be considered.

8. After the "off the top" allocations are made, the remaining budget should be allocated by broad subject areas representing the academic structure of the University.

9. The use of approval plans should be expanded and broadened to include more materials desired by selectors including those for libraries outside of University Park.

10. A small group such as Collection Services Advisory Group or an ad hoc committee should review the large electronic packages annually and they should solicit the input of all selectors.

11. The "Floating Collection" should be expanded to all locations to reduce duplication.

12. A method for distributing new materials should be determined so that these items can be broadly available before becoming a permanent part of a specific library, for example, being part of the floating collection for a predetermined amount of time.

13. Collection development plans should be rewritten so that the needs of campus libraries can be integrated into the goals of the subject collections.

14. Collection development teams, consisting of subject selectors from various locations, should have responsibility for the broad subject areas.

15. All libraries should receive some minimal level of funding to accommodate local needs that cannot otherwise be handled by larger subject groups.

16. Ongoing assessment of the collections allocations process should be implemented, and data from the collection assessment program should be integrated into the allocation process.

17. In accordance with the University Libraries strategic plan, the acquisition of materials in electronic format should be pursued aggressively.

18. The collections budget should support new and expanding models of publishing.

19. The collections budget should provide additional support for nonprint forms of scholarly research such as data sets and streaming media.

20. Communication regarding the collections budget to both the faculty and staff of the University Libraries and to other constituent groups such as faculty and administration of academic units of the University should be open and transparent.

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Appendix

A Survey of Chief Collection Development Officers

The Penn State University Libraries are beginning to examine the way collection development funds are allocated. As part of this project, we wish to find out how other research libraries allocate their budgets. We sincerely appreciate your completing this survey. It is only 8 questions and should take less than 5 minutes to complete. If you wish to receive a copy of the results, please indicate your e-mail address at the end of the survey. Thank you!

1. How do you allocate your budget?
    a. Based on historical allocation patterns
    b. Formula
    c. Base formula with additional money available by request
    d. Other, please specify
2. Can you provide us an example of your budget allocation? (for example, a weblink, a file, etc.)
3. What is the level of granularity or specificity of your budget?
    a. Individual subject funds
    b. Larger aggregated funds (such as college/school based)
    c. Mixture
    d. Other, please specify
4. How do you allocate funds for electronic resources?
    a. Included in subject/college/school budgets
    b. Included in separate budget
    c. Other, please specify
5. How do you allocate funds for serials/periodicals?
    a. Included in separate budget
    b. Included in subject/college/school budgets
    c. Other, please specify
6. Have you changed your approval plans over the last few years?
    a. No changes
    b. More restrictive
    c. More expansive
    d. Other, please specify
7. How do you prioritize desiderata, especially larger purchases such as electronic resources?
    a. Special Committee
    b. Chief Collection Development Officer
    c. Collection Development Group
    d. Other, please specify
8. Are there any comments you would like to make concerning your allocation process?
9. If you would like a copy of the results of this survey, please provide your e-mail address.