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## Employing a Use Factor to Distribute Monographic Funds

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### Abstract

In the fall of 2012 East Carolina University's Joyner Library was looking to create a new fund allocation formula. The current one at that time had been in use since 1982, and we felt there might be a better way of distributing money—a way that took into account current needs. To create the new fund allocation formula, we took a collection evaluation concept and married it with knowledge gained about fund allocation formulas through research of the literature and investigation into our own past. We ended up with a fund allocation formula that employs Bonn's use factor and the average price paid per title per fund to achieve a more equitable distribution of funds.

### History

In 1982 the Faculty Senate at East Carolina was concerned with creating a fund allocation formula that accurately portrayed a measure of faculty productivity. They had tried for several years to come up with a factor that could in some way account for creative and scholarly output of faculty, but had ultimately failed in this attempt. Instead, they came up with a very large weighted variable formula that made extensive use of proxies of utilization. (For more on different types of formulas, please read Catalano and Caniano's "Book Allocations in a University Library: An Evaluation of Multiple Formulas" in *Collection Management*. The authors provide a very good explanation of what a weighted variable formula is.) For example, instead of actual usage of the collection, factors thought to be predictive of use, such as faculty FTE and number of credit hours, were part of the formula. Some factors, such as average price per item and faculty FTE were weighted, while others, such as undergraduate credit hours, were not. The result was a beastly formula that was unwieldy to use and for which it was difficult to gather all the necessary statistics.

### New Formula

In going forward with the investigation of a new fund allocation formula we had a few requirements. First all of the data necessary for calculating the formula must be readily available

to us. Second, all of the data must be from the same reporting cycle. We had also been heavily researching collection evaluation methods and felt there might be a way to employ Bonn's use factor as representative of actual use, rather than rely of proxies of use, as had been done previously. Bonn's use factor is the percentage of circulations divided by the percentage of holdings. (Aguilar, 1986; Bonn, 1974) Using percentages like that avoids the problem of a small collection always having less use than a large collection simply because of its size.

One of the things we had to do in order to make this work was to break up every bit of the LC classification scheme into a subject fund. We have 42 subject funds, of which three are completely interdisciplinary and cannot be covered by LC class numbers. That means that every part of the LC class system had to be assigned one of 39 fund codes. Some subjects are quite easy: psychology is all of the BFs. History is the Ds, Es and Fs. Some others get into rather tedious breakdowns: biology is comprised of 14 different call number spans and English is comprised of 11. In the end, we relied heavily on a document that was used years before to pass out yellow slips from book vendors to the correct selectors.

Another piece of our equation was the number for average price paid per title per fund. This was easy to find as our Symphony ILS has a function that keeps track of this information. For FY 2014

we used data from FY 2013 as that was the most complete year, and then for FY 2015 we used data for FY 2014. Although Bowkers and YBP can provide industry normative figures, we found our ILS's statistics to be a truer representation of what we actually spend in each fund, especially since we prefer paper bindings and both Bowkers and YBP's figures are based on hardcover costs.

In the end, in 2013 we found Bonn's use factor for four years: books added in 2008–09, 2009–10, 2010–11, 2011–12. We stopped at 2011–12 because we felt books added later to the collection might not have had time to circulate much. Then, we took an average of those four years and added it to the average price paid per title number for each fund. The resulting figure was expressed as a percentage of the whole each fund was entitled to.

## Results

Some funds, such as education and business, showed steep declines in funding. Both of these subjects were heavily funded under the old weighted variable formula because they have such large programs. What we found when we ran our formula, however, is that neither see the kind of use that would bear out such funding. Other funds, such as nutrition sciences and interior design and marketing, showed steep increases in funding. These are relatively small programs that cover very small ranges of the LC call number scheme. Even though these programs are relatively small, usage in these areas is heavy; therefore they were entitled to larger amounts of funding.

After we developed the formula in early 2013 we had two main objectives for the upcoming fiscal year. We wanted to trial the funding allocations suggested by the new formula for a year to see what selectors thought of them. We also wanted to present our findings to the Senate Libraries Committee and have them vote on whether to adopt the new formula, go back to the old formula or start over on the search for a more equitable means of distributing funds. The selectors were mostly pleased with the new allocation amounts, especially when we explained that use was the deciding factor in most cases.

The selector for chemistry and nutrition sciences, however, mentioned that she had a hard time spending out her funds that year because they were larger for those two subject areas. The Senate Libraries Committee unanimously voted to adopt the new use factor-based formula going forward.

When it came time to do the allocations for FY 2015 we collected data and ran the formula again, this time for 2009–10, 2010–11, 2011–12 and 2012–13. We also included two new figures in our calculations: in-house use and e-book use. Getting in-house use statistics was much easier than we thought; it was only a matter of pulling the report in the correct way. E-book statistics, however, were challenging because of the question of how to accurately measure use.

## How We Incorporated E-Book Statistics

The vast majority of our e-books purchased as firm orders with subject allocation money come from ebrary. As well, beginning in October 2011, we implemented an e-book DDA plan with ebrary. We pulled usage statistics by running reports from the administrative module of the ebrary interface. Like we did with print books, we gathered usage for titles bought in 2009–10, 2010–11, 2011–12, and 2012–13 and assigned each title a subject fund based upon LC call number. For DDA titles we only included statistics for titles that triggered a purchase; however we are investigating whether to include DDA untriggered to the allocation formula in the future.

The ebrary report provided a variety of usage figures such as pages viewed, pages copied, pages printed, number of user sessions, and chapter or book downloads. We decided to have the number of user sessions be our count of usage. We believe that for the purposes of our allocation formula that the number of ebrary user sessions is equivalent to the check-out and in-house usage we gathered for printed books. Generally speaking, the number of ebrary user sessions equals the number of "circulations" with the caveat that we subtracted one user session from all titles because cataloging and activation in our ILS means that Joyner staff are verifying access to the title by viewing it from their

workstation. We would have artificial use of each book if we did not take this library workflow into account. In the end, we did not count titles which only had a single user session of only a few pages viewed. We equated that to be comparable to a printed book only being opened and read by a staff member in order to catalog the book, apply a label or barcode and then the title never having any checkouts after being placed in the library stacks.

### **How E-Book Statistics Impacted the Use Factor When Included in Year Two**

With the addition of e-book statistics, we tried to analyze the changes it made on each subject's use factor percentage. It is a bit hard to draw a firm conclusion this first year. There is uneven adoption of e-books as a substitution for paper and for many subjects the inclusion of e-book data did not significantly alter the use factor percentage. However, for a few subjects, where there is high e-book adoption and also a high number of user sessions then adding e-books did improve the use factor, perhaps due to the very fact that an e-book can "circulate" many more times in a year than a print book.

### **Music Fund**

Over the course of two years, our music fund is an interesting case study. Traditionally our music library has been very well-funded because it is a stand-alone library serving a large and active department. When we first ran the formula for fiscal year 2014 we did not include in-house use statistics because we did not know we kept them. The funding projected for music that year was much lower than it had previously been. After talking with employees of the music library, we realized that in-house use statistics were a valuable source of data for them, as a good portion of their collection is in-house use only. The music librarians assured us they were very diligent about keeping in-house use statistics in our integrated library system. We revised the music allotment upwards thinking that we were missing a vital piece of the picture. Then, for FY 2015 we ran the formula again, this time with in-house use statistics and e-book usage included. Music still was allotted a rather small number:

approximately half of what it had been allotted under the old formula. We delved deeper because that seemed counter-intuitive to us. It is, however, correct. One of the things that brings the amount allotted for music down is that its average price per title is under \$30, which is quite low compared to the overall average price paid for title of approximately \$65. Music also received a large gift in 2012–2013. Although the usage for that year is close to what it was in other years, the number of items that it was counted against was much higher because of that gift. And finally, a third factor which artificially drove up the amount music was allotted to under the old formula was that we were counting number of classes as part of the previous equation. Music, as a discipline, has a large number of small classes, many of them graduate level classes that were weighted twice what undergraduate classes were. In short, we found that music is entitled to a much smaller percentage of the whole than previously thought. It should be noted that when the director of the library agreed to let us develop a revised formula, she placed a monetary cap on drastic changes to a subject allocation as a result of our work. What this means is that if the use factor allocation formula indicated a significantly increased or decreased subject allocation from the amount they were entitled to under the old formula we would implement the changes by no more than \$2000 per year.

### **Things We Would Add or Do Differently**

Eventually we'd like to add in ILL data to our formula to represent that amount of borrowing we do for certain funds. There is another use factor: ratio of borrowings to holdings that can be used to express this concept as a number. (Aguilar, 1986). We believe adding this number would give us an accurate description not just of the funds that are heavily used, but also those for which there is heavy borrowing, indicating a higher percentage of the pot should be devoted to them. We tried doing this for fiscal year 2014, but were stymied by a query that returned incomplete data. We have asked our Interlibrary Loan Librarian to look into this problem to see if it can be fixed.

Another thing we might do differently next year is to use a respectively later four-year average of the use factor. By this we mean instead of using 2010–11, 2011–12, 2012–13 and 2013–14 for fiscal year 2016, we might continue to use instead our previous years of 2009–10, 2010–11, 2011–12 and 2012–2013. The reason for this is that we have noticed that the most recent year's worth of circulation statistics is much lower than the previous years. We plan to investigate this and see if there is such a sharp circulation drop-off if all the books in the study have had more time to circulate. We are loath to do this, however, because it means our data is one year older.

We could also add additional e-book vendors next year. This year, we only added ebrary. We chose

to add it because it is our primary vendor for demand driven acquisitions (DDA) and it has been our preferred vendor for firm order e-books. We have recently added both EBL and JSTOR and so we could count them as well next year. And finally, we do have a few e-books from EBSCOhost, so we could factor those in, too.

### **Conclusion**

Overall, we are pleased with this new use factor-based allocation formula. We feel that it provides a more accurate representation of usage in monetary terms than our previous weighted variable formula gave us.

### **References**

- Aguilar, W. (1986). The application of relative use and interlibrary demand in collection development. *Collection Management*, 8, 15–24. [http://dx.doi.org/10.1300/J105v08n01\\_02](http://dx.doi.org/10.1300/J105v08n01_02)
- Bonn, G. S. (1974). Evaluation of the collection. *Library Trends*, 22, 265–304. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=llr&AN=521800407&site=ehost-live>
- Canepi, K. (2007). Fund allocation formula analysis: Determining elements for best practices in libraries. *Library Collections, Acquisitions, & Technical Services*, 31(1), 12–24. <http://dx.doi.org/10.1016/j.lcats.2007.03.002>
- Catalano, A and Caniano, W. (2013). Book allocations in a university library: An evaluation of multiple formulas. *Collection Management*, 38(3), 192–212. <http://dx.doi.org/10.1080/01462679.2013.792306>