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# Making Collection Management Manageable: A Three-Phase Approach to an Annual Subscription Review

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## Abstract

Annual subscription reviews are a normal part of many libraries' operations, but this process is time consuming and can be particularly challenging for institutions with small e-resources staffs. The approach pursued by the Michael Schwartz Library at Cleveland State University includes strategies other libraries may find helpful in moving beyond cost per use in their reviews.

In early fiscal year 2019, the Michael Schwartz Library identified a need to systematically review all subscriptions annually. The library operates with a flat budget and cancellations are often required to manage inflation.

Previously, subscription reviews were in response to immediate needs (e.g., budget cuts, changes in consortium offerings, etc.). Largely due to staffing and time constraints, examining the entire corpus of subscriptions was outside of the scope of past reviews. A new subscription review process was developed to prepare the library to make data-driven decisions regarding cancellations for the next fiscal year.

The methodology developed for the new subscription review consisted of three phases with each phase narrowing the number of resources considered for cancellation. The first phase was an evaluation of resource performance from an acquisitions perspective and incorporated cost per use and annual price increases. In the next phase, subject librarians evaluated resources in their respective disciplines based on several criteria and were required to rank resources in order of retention priority. In the final phase, faculty were surveyed on content quality, frequency of use in instruction, and other criteria for those resources deemed "cancellation eligible."

## Introduction and Institutional Context

Cleveland State is an urban public research university that serves 17,000+ students and offers 175+ academic programs (Cleveland State University, n.d.). The Michael Schwartz Library is the main library on campus and has an annual acquisitions budget of approximately \$1.5M.

The library budget is predominantly flat from year to year requiring cancellations on a nearly annual basis to counter the loss of buying power resulting from subscription increases. Historically, these cancellations were supported by a limited ad hoc subscription review that only examined the resources under consideration for cancellation. As buying power continued to decrease, the stakes became higher—there were no longer "obvious" cancellations that could be made. All print journal subscriptions, except for three print newspapers and a handful of poetry journals, had already been cancelled. High-cost, low-use databases had also been cancelled previously. The budget for monograph purchases was also cut dramatically. As a result, in early fiscal year 2019, the library determined that a systematic, data-driven annual review was required to make cancellation decisions.

## Challenges and Design

Systematic subscription reviews had not been undertaken previously due primarily to limited staff time. Subscription renewals and cancellations had been managed by the library's fiscal officer until 2018, at which point those duties were shifted to the Collections & Resource Management department. Even though the responsibilities had been reallocated, staff time was still at a premium and the process had to be managed primarily by one librarian in consultation with the Collections & Resource Management head.

A review of the literature uncovered several subscription review methods—most of which were beyond what the library was capable of in terms of both time and resources. Any method requiring the use of SNIP (Source-Normalized Impact per Paper), impact factor, local citations, as used in the California Digital Library Weighted Value Algorithm, would have taken too long and would have been too involved to implement before cancellation decisions were required (Wilson & Li, 2012).

While the library does utilize the open source electronic resources management system CORAL,

we have not yet achieved a technical implementation that fully meets our collection analysis needs. Additionally, the library does not purchase access to a commercial overlap analysis tool.

While many methodologies were not a good fit for our institutional context, we did incorporate some of the broader ideas from other subscription reviews. In particular, assigning numerical scores to different metrics as done in the California Digital Library was found to be a particularly useful way to summarize resource performance (Wilson & Li, 2012). Wilson and Li’s three categories of metrics—utility, quality, and cost effectiveness—were a useful frame for our library’s review (2012). Similarly, Moasil’s criteria of pertinence, availability, value, usage, and price influenced the design of the review and evaluation forms (2015). Finally, Metz’s advice on managing and communicating about subscription reviews was invaluable in the design and implementation of the faculty evaluation phase of the review (1992). In general, where we were unable to obtain objective data efficiently, we depended on the professional judgment of librarians and faculty.

## Methodology

The subscription review consisted of three phases: acquisitions, subject librarian evaluation, and faculty evaluation. Each of these phases had a corresponding rubric. The rubric allowed the data for each phase to be assigned a summary score and total scores could be used to rank resources for cancellation.

## Phase 1: Acquisitions

In the acquisitions phase, resources were divided into groups based on their subject area. Data on subscription cost and usage statistics were entered into separate sheets of the same Excel workbook for each subject area group for the previous five fiscal years. Any relevant information on subscription cost and the source and unit for usage statistics was included below the data (Figures 1 and 2).

Formulas were then used to calculate cost per use and inflation on separate sheets in the same Excel workbook. Conditional formatting was used to create a “heat map” of subscription performance, a technique derived from a Federal Depository Library Program webinar (Dahlen, 2019). This showed at a glance whether or not resources were meeting our expectations (Figures 3 and 4).

Once inflation and cost per use were calculated, they were scored according to the rubrics (Figures 5 and 6) for each fiscal year. The conditional formatting seen in the above sheets corresponded to these rubrics.

Once a score for each year was assigned for cost per use and inflation, the average score for the past five years was calculated. In the example shown in Figure 7, the resource had a 5-year average score of 1.2 for inflation. Years where data was not available were excluded from the averages. This meant that some resources had average scores calculated using less than 5 years’ worth of data, and that missing

	FY14	FY15	FY16	FY17	FY18	FY19
Subscription A	\$20,000.00	\$20,500.00	\$22,000.00	\$22,333.00	\$24,000.00	\$24,500.00
Subscription B	\$5,000.00	\$5,200.00	\$5,400.00	\$5,500.00	\$5,550.00	\$6,000.00
Subscription C	\$400.00	\$480.00	\$520.00	\$580.00	\$650.00	\$720.00
Subscription D	\$2,000.00	\$2,000.00	\$2,100.00	\$2,200.00	\$2,200.00	\$2,300.00
Subscription E	\$12,000.00	\$13,333.00	\$13,750.00	\$14,000.00	\$14,200.00	\$14,550.00

Figure 1. Sample subscription cost sheet.

	FY14	FY15	FY16	FY17	FY18	FY19
Subscription A	20,000	20,000	21,000	21,000	22,000	
Subscription B	1,000	1,000	1,000	1,000	1,000	
Subscription C	200	100	50	50	25	
Subscription D	300	350	400	500	550	
Subscription E	800	900	900	900	950	

Figure 2. Sample usage statistics sheet.

	FY14	FY15	FY16	FY17	FY18	FY19
Subscription A	\$1.00	\$1.03	\$1.05	\$1.06	\$1.09	
Subscription B	\$5.00	\$5.20	\$5.40	\$5.50	\$5.55	
Subscription C	\$2.00	\$4.80	\$10.40	\$11.60	\$26.00	
Subscription D	\$6.67	\$5.71	\$5.25	\$4.40	\$4.00	
Subscription E	\$15.00	\$14.81	\$15.28	\$15.56	\$14.95	

Figure 3. Sample cost per use sheet.

	FY14	FY15	FY16	FY17	FY18	FY19
Subscription A		2.50%	7.32%	1.51%	7.46%	2.08%
Subscription B		4.00%	3.85%	1.85%	0.91%	8.11%
Subscription C		20.00%	8.33%	11.54%	12.07%	10.77%
Subscription D		0.00%	5.00%	4.76%	0.00%	4.55%
Subscription E		11.11%	3.13%	1.82%	1.43%	2.46%

Figure 4. Sample inflation spreadsheet.

Cost per Use	Color	Score	
\$0.00 to \$3.00		3	Good
\$3.01 to \$10.00		2	Okay
\$10.01 to \$25.00		1	Needs Improvement
\$25.00 +		0	Poor

Figure 5. Cost per use rubric.

Inflation Rate	Color	Score	
< 2.5%		3	Good
2.5% to 4%		2	Okay
4% to 5%		1	Needs Improvement
5%+		0	Poor

Figure 6. Inflation rubric.

	FY14	FY15	FY16	FY17	FY18	FY19
Inflation Rate						
Score		1	2	0	1	2

Figure 7. Example scoring for inflation.

data did not negatively impact scores. Assigning a score for each year allows a longitudinal view for resources. Averaging the scores meant that one very bad year would not necessarily result in immediate cancellation. From casual observation, there does appear to be a pattern of increased use every two or three years for some resources. While we have not investigated the source of these fluctuations, we suspect they align with courses that are offered biannually or less.

To calculate the overall score for the acquisitions phase, the average score for inflation and cost per use were added together. There were a total of 6 points available in this phase.

The scoring thresholds for this phase were based on desired performance. For inflation, it was felt that any resource where the increase was at or below “general” market inflation could be considered “good.” Any increase above 5% constituted “poor”

performance because of our history of a flat budget. While any increase is ultimately unsustainable with a flat budget, the effect is more acute for increases greater than 5%.

**Phase 2: Subject Librarian Evaluation**

For the subject librarian evaluation, subject librarians were asked to rank all the resources in their subject areas by retention priority. They also rated resources based on frequency of use in instruction, relevance to subject, content quality, and usability. All criteria were rated on a 5-point Likert scale. All the subject librarians evaluated any resource considered to be “general education” (e.g., Films on Demand). The subject librarian evaluation form was administered online via the free version of SurveyMonkey.

To convert the rank assigned to a resource by the subject librarian into a standardized score, the resources were split into quartiles. For cohorts where the list did not divide evenly into quartiles, more resources were assigned to the highly ranked quartiles. For example, if a librarian had 14 resources to evaluate, the first quartile would contain resources ranked 1 through 4, the second quartile would contain resources ranked 5 through 8, the third quartile would contain resources ranked 9 through 11, and the fourth quartile would contain resources ranked 12 through 14.

Once resources were split into quartiles, they were assigned a score from 0 to 3 as shown in Figure 8.

Quartile	Score
Quartile 1	3
Quartile 2	2
Quartile 3	1
Quartile 4	0

Figure 8. Subject librarian ranking rubric.

As the general education resources had multiple evaluators, the average rank for each resource was calculated and the score was assigned based on which quartile the average rank would fall into. For example, if a resource had an average rank of 9.14, this rank would fall into Quartile 3 for a list of 15 resources (ranks 9 through 12) and would therefore be assigned a score of 1.

Subject librarians assigned qualitative scores to the following aspects of a resource’s overall quality: use in instruction, content quality, usability, and relevance. Scores were assigned to their responses in each area as shown in Figure 9.

As the general education resources had multiple evaluators, a score was assigned to each evaluator’s response and then averaged. The average of all the aspect scores was taken to calculate the final quality score.

Once scores for rank and quality were calculated, they were added together to determine the overall score from 0 to 6.

Resources with the lowest combined acquisitions and subject librarian scores with cumulative costs of approximately twice the estimated budget shortfall for the next fiscal year were deemed “cancellation eligible” and were passed on to the next phase for faculty review.

**Phase 3: Faculty Evaluation**

For the final phase, faculty were only asked to review resources previously determined to be cancellation eligible. Additionally, faculty only evaluated general education resources and resources relevant to their subject areas. This was a necessary restriction to keep the evaluation form at a manageable size and to save time.

The faculty evaluation form was administered online using Google Forms (the free version of SurveyMonkey

Use in Instruction	Content Quality	Usability	Relevance	Score
Almost Always	Very High	Very Easy	Almost Always Relevant	3
Often	High	Easy	Often Relevant	3
Sometimes	Medium	Medium	Sometimes Relevant	2
Occasionally	Low	Difficult	Occasionally Relevant	1
Never	Very Low	Very Difficult	Not Relevant	0

Figure 9. Subject librarian resource quality rubric.

has a response number limit). We notified faculty of the subscription review via e-mail. Subject librarians followed up with faculty to encourage their departments to respond as they felt necessary.

Faculty were asked to indicate if they were familiar with the resources under evaluation and to assign qualitative scores to aspects of a resource’s overall quality in the same manner that subject librarians had previously. Faculty response rate was also factored into the final score, in part to encourage faculty to participate and as a measure of apathy toward the resources considered for cancellation.

Response rates for each faculty subject cohort were tracked using Constant Contact and Google Forms. For general education resources or resources relevant to multiple subject areas, response rate was calculated using the total number of completed surveys divided by the total number of faculty in the survey population for that resource.

Familiarity is the proportion of faculty that reported that they were familiar with a resource out of the total sample. For general education resources or resources relevant to multiple subject areas, familiarity was calculated using the total number of completed surveys divided by the total number of faculty in the survey population for that resource.

Response rates for each resource were scored as shown in Figure 10. These scores were then averaged together to calculate the final response rate and familiarity score.

Response Rate	Familiarity	Score
75%–100%	75%–100%	3
50%–75%	50%–75%	2
25%–50%	25%–50%	1
0%–25%	0%–25%	0

Figure 10. Response rate and familiarity rubric.

Use in Instruction	Content Quality	Usability	Relevance	Use in Scholarship	Score
Almost Always	Very High	Very Easy	Almost Always Relevant	Almost Always	3
Often	High	Easy	Often Relevant	Often	3
Sometimes	Medium	Medium	Sometimes Relevant	Sometimes	2
Rarely	Low	Difficult	Rarely Relevant	Rarely	1
Never	Very Low	Very Difficult	Not Relevant	Never	0

Figure 11. Faculty resource quality rubric.

Faculty assigned qualitative scores to the following aspects of a resource’s overall quality: use in instruction, content quality, usability, relevance to scholarly activities, and frequency of use in scholarly activities. Scores were assigned to their responses in each area as shown in Figure 11.

Scores were assigned to each evaluator’s response and then averaged. The average of all the aspect scores was taken to calculate the final quality score. Once scores for response rate and familiarity and scores for quality were calculated, they were added together to determine the overall score from 0 to 6.

### Cancellation Decisions

For resources that were determined to be cancellation eligible, scores for all three phases of the review were added together. For the entire process, 18 points were possible. Resources were ranked from lowest to highest score.

These scores alone were not used to justify cancellations—only to identify and guide recommendations for action. There are several limitations for these scores that should be taken into consideration. It was possible for results to be skewed by small sample sizes; cumulative scores could obscure the sources of low performance; and all subjects and formats were treated the same. Our situation required that we examine all resources at one time regardless of subject or format because of how little there was left to cancel. Many of our resources are acquired through the OhioLINK consortium—we cannot opt out of some of those purchases without leaving the consortium.

On the positive side, a rubric-based system is highly flexible. As our needs and priorities evolve, it will be possible to adjust the scoring thresholds to reflect these changes or add new metrics as we expand our technical capabilities.

## Conclusion

Overall, the subscription review was well received. In general, staff felt there was greater transparency than in previous cancellations and the library made

cancellations with greater confidence. We also had all the data we needed to demonstrate to stakeholders that we had made good decisions.

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