

Beyond Cost Per Use: Exploring Multivariable E-Resource Assessment

Courtney R. McAllister
The Citadel, cmcallis@citadel.edu

Author ORCID Identifier: <https://orcid.org/0000-0001-8566-4444>

Follow this and additional works at: <https://docs.lib.purdue.edu/charleston>



Part of the [Collection Development and Management Commons](#)

An indexed, print copy of the Proceedings is also available for purchase at:

<http://www.thepress.purdue.edu/series/charleston>.

You may also be interested in the new series, Charleston Insights in Library, Archival, and Information Sciences. Find out more at: <http://www.thepress.purdue.edu/series/charleston-insights-library-archival-and-information-sciences>.

Courtney R. McAllister, "Beyond Cost Per Use: Exploring Multivariable E-Resource Assessment" (2017).
Proceedings of the Charleston Library Conference.
<http://dx.doi.org/10.5703/1288284316690>

Beyond Cost Per Use: Exploring Multivariable E-Resource Assessment

Courtney R. McAllister, The Citadel

Abstract

The converging pressures of dwindling budgets, increasing subscription costs, and shifting user expectations has intensified the impact of collection management decision making. Assessing e-resource subscriptions is an integral part of any library's collection management process, though it is especially important in academic environments. While cost per use (CPU) can be a straightforward and informative measure to consider, that lone data point might not reveal the true value of an e-resource. This paper outlines a multifaceted assessment strategy that considers the various merits of an e-resource, such as supporting accreditation, providing access to material not easily obtained through resource-sharing channels, discoverability, platform ease of use, and the quality of vendor support or responsiveness.

Incorporating CPU data into a more holistic rubric might require additional time and energy, but the resulting decisions to renew or discontinue subscriptions will be more nuanced and compatible with a library's underlying commitment to curating distinctive and accessible e-resource collections. While the proposed rubric is not a panacea, it is an inherently flexible tool that can be customized at the local level to help libraries define and articulate their priorities, analyze value as a multifaceted concept, and strategically invest their collection budgets into resources that resonate with long-term goals and needs.

Subscription Assessment and Decision Making

Each year, academic libraries must evaluate their current and prospective database and e-journal subscriptions. Flat or dwindling budgets, combined with price increases and user demand for immediate access, place a great deal of pressure on acquisitions or collection management librarians to determine which subscriptions are essential and which can or should be discontinued. This process requires that librarians quickly and efficiently assess an existing subscription's current value and speculate on its potential importance to the campus community. However, assessing value is not as straightforward as it may seem upon initial inspection. Although there are common, naturalized standards that influence

how value is determined, it is important to contemplate the implied definition of value embedded within these popular assessment strategies.

Cost per use (CPU) is an especially popular metric for defining a resource's value and determining its status as an ongoing subscription need or candidate for the drop list (Scigliano, 2000). CPU is calculated by dividing the total cost of a resource by the number of views or downloads it attracted. Typically, this metric reflects one year's worth of cost and usage. For some, CPU has become the default assessment criteria for e-subscriptions. Others have looked to impact factor, or conducted peer group comparisons to distinguish between essential and disposable subscriptions (Chung, 2007). While each of these data points can be a worthwhile area to explore during the assessment process, no one variable should be considered in isolation or situated as the sole factor in the renewal decision-making process.

The concept of value is inherently complex and messy. It is subjective and lacks a universal definition. As a consequence, librarians need to utilize assessment techniques that can accommodate complexity. One way to analyze value in a meaningful, comprehensive manner is to employ a multivariable rubric that contextualizes a popular metric like CPU alongside other variables and data points.

Multivariable Assessment: Possibilities and Permutations

In a multivariable assessment scenario, a library starts with CPU, but adds other criteria to the assessment rubric, based on the values that resonate at the local level. When combined, this assemblage of variables should reflect the library's organizational objectives and defining philosophies.

To identify what other criteria should be incorporated, it is beneficial to examine cultural artifacts that reflect and shape organizational priorities and values, such as a strategic plan. It is also worthwhile to consider institutional assessment benchmarks and goals, review qualitative data such as user feedback, and consult with colleagues in other departments or

operational areas to gather input on what variables are most important to them.

At The Citadel’s Daniel Library, CPU is being assessed along with qualities like administrative overhead, interlibrary loan (ILL) activity, and accessibility. Administrative overhead is extremely important at the local level because of the limited human resources allocated for e-resource management and assessment. With personnel stretched thinly, time becomes an extremely valuable commodity. If it takes more than a single e-mail to get an issue like missing content or link rot resolved, there are often negative repercussions for another task or responsibility. Therefore, the personnel involved with e-resource management track the overall responsiveness of content and service providers, and factor it into renewal assessment.

Interlibrary loan is also a high priority at the Daniel Library. Due to the library’s small size (3,600 FTE) and modest collection, borrowing from other institutions plays an indispensable role in meeting users’ research and information needs. Since reciprocity is the cornerstone of resource sharing, ILL lending data is also incorporated into e-resource assessment. This data point gestures toward a resource’s value to the larger library community and helps the Daniel Library perpetuate positive relationships with resource-sharing partners.

A burgeoning addition to the Daniel Library’s multivariable rubric is vendor commitment to accessibility or universal access. In light of recent litigation against colleges and universities, it is important to consider how a vendor’s accessibility accommodations comply with Web Content Accessibility Guidelines (WCAG). While a Voluntary Product Accessibility Template (VPAT) can be useful to consult, it is self-disclosed

and not legally binding. The Daniel Library has begun to consider which accessibility measures are specified in license agreements, since these documents represent a more formalized, and enforceable, commitment to universal access (Fernandez, 2017).

These three variables, along with CPU, reflect the needs and priorities of one small academic library. Other institutions might consider alternative factors, such as accreditation support, the quality or accuracy of a resource’s metadata, and a resource’s relevance for new or expanding programs and degree offerings. A resource’s compatibility with the local Web Scale Discovery layer could also be worth considering, since usage is dependent on discoverability.

A Rubric to Streamline Multivariable Assessment

Assessing diverse data points can involve complex negotiation and interpretation processes. In order to make multivariable assessment more streamlined and feasible for overburdened library personnel, the rubric structure in Figure 1 consolidates multiple variables and reflects the local needs and priorities of an individual library or consortium.

When applying this multivariable rubric, the lower the score, the better. The actual value of CPU is the starting point, and then other variables are incorporated to inform the resource’s overall score. In areas where a resource excels, points are subtracted to lower the score. In areas where the resource underperforms, points would be added to reflect that deficiency. If a variable is not relevant for a specific resource, the overall score would not be affected. Entering a zero in that field is recommended for clarity.

Variable	Good	Neutral or N/A	Bad
Administrative overhead	-1	0	+1
Accessibility	-1	0	+1
Accreditation	-1	0	+1
Quality metadata	-1	0	+1
Interoperability with discovery layer	-1	0	+1
Uniqueness	-1	0	+1

Figure 1. A closer look at a multivariable rubric.

At the Daniel Library, the actual number of ILL lending transactions is subtracted from CPU, because resource-sharing activity is a priority. Other institutions might not choose to place this kind of emphasis on ILL. One alternative would be to set a threshold for ILL activity. For example, if fewer than 10 ILL requests were fulfilled from a resource, points would be added to the overall score. If more than 10 requests were fulfilled, points would be subtracted. The individual institution can determine its own definition of success or failure, based on local trends and usage patterns.

Figure 2 provides one example of a rubric being applied to facilitate the comparison of two e-resources. Although they begin with the same CPU value, their respective scores in other categories alters the comparative dynamic. One is used to meet the needs of other libraries through ILL, while the other is not. One has very low administrative overhead, while the other underperforms in this particular area. As a result, the two resources end up with very different overall scores. If a librarian were to assess these resources based solely on CPU, they would seem to be of equal value. However, as Figure 3 demonstrates,

Variable	Score	Same CPU Different overall score	Variable	Score
Cost Per Use	15		Cost Per Use	15
ILL	-4		ILL	+1
Administrative overhead	-1		Administrative overhead	+1
Accreditation	0		Accreditation	0
Accessibility	-1		Accessibility	+1
Total score	9		Total score	18

Figure 2. A rubric in action.

Variable	Score	Different CPU Same overall score	Variable	Score
Cost Per Use	20		Cost Per Use	16
ILL	-2		ILL	+1
Administrative overhead	+1		Administrative overhead	-1
Accreditation	-1		Accreditation	0
Accessibility	-1		Accessibility	+1
Total score	17		Total score	17

Figure 3. Another example of a rubric in action.

when the other criteria are applied to the analytical framework, a more nuanced portrait of value emerges.

When evaluating e-resources, comparisons are rarely so straightforward. In the above example, the resources begin with different CPU scores. However, the resource with the slightly higher CPU becomes more competitive when its performance in other areas is taken into consideration. The two resources end up with the same overall score, which can aid renewal decision making.

Strategic Application of Multivariable Rubrics

A multivariable approach to resource assessment might be philosophically relevant for determining and evaluating the complex nature of value, but, realistically, the process is generally too time consuming to apply to every subscription or renewal. However, a library can strategically incorporate a multivariable rubric into the assessment cycle by establishing local criteria that constitute a trigger condition. Perhaps subscriptions that account for more than a certain percentage of the overall collection budget are assessed in this manner. The threshold could also be based on a dollar amount. Even if this more nuanced approach is only selectively applied to high-cost subscriptions, the rubric can add depth and nuance to the decision-making process.

One of the merits of a multivariable approach is that it helps contextualize usage. While it is not generally beneficial to maintain subscriptions no one is utilizing, usage only tells one part of the story when it comes to value. Usage can be impacted by temporary changes, such as a power user going on sabbatical, or a research-intensive course not being offered in a given semester. Usage patterns are also closely tied to brand recognition and familiarity. Users tend to click on what they recognize and what they have used before, even if there are more relevant resources at their disposal (Fry & Rich, 2011). These factors can disrupt usage, but a higher CPU might not fully capture the resource's holistic value and potential to meet the needs of the library's community in the future.

Assessment and Communication

The fluidity of usage has a positive side, too. Because usage patterns are malleable, librarians have an opportunity to embrace a more active role in

promoting resources with high overall value to help bolster visibility and subsequent usage. Utilizing outreach and liaison channels, instruction sessions, and social media can make high-quality resources more recognizable to users and potentially improve CPU scores. The multivariable rubric can help librarians identify candidates for promotion and advocacy, based on their overall value in the areas that matter most to the institution and its community.

In addition to communicating with users about the resources at their disposal, it is imperative that librarians pursue open communication and dialogue with publishers and content providers about the variables that inform the local instance of a multivariable rubric. Whether a library chooses to continue or discontinue a subscription, it is worthwhile to be candid about the reasoning that went into that decision. If the resource attracted solid usage, but the platform's incompatibility with assistive technologies was a deal breaker, it is important to share that input, so platform enhancements can be prioritized during the next development or upgrade cycle. If publishers and content providers are unaware of what librarians prioritize at the local level, both sides miss opportunities to collaborate and work toward mutually beneficial objectives.

Thinking Long Term

Renewal cycles can obscure the true impact that subscription decision making can have on the industry as a whole. Annual renewals and short-term contracts emphasize the short term, but, in reality, the investment decisions libraries make by maintaining subscriptions have long-term, cumulative impact. Multivariable rubrics can help redress this tendency to underestimate the effects of subscription assessment. Although CPU is generally calculated based on a single year's worth of usage activity, another approach to nuanced assessment would be to average several years' worth of usage data, to construct a more longitudinal portrait of use over time (Verminski & Blanchat, 2017). This strategy can make a basic data point more complex, enables trend recognition, and helps contextualize misleading outliers, such as a year with uncharacteristically low usage.

Multivariable rubrics also encourage librarians to conceptualize subscriptions as investments, which places the library in a more active, collaborative role than that of a mere consumer. By designing a multivariable rubric that represents local priorities,

and communicating those values to content providers in the form of substantive feedback, libraries can optimize their influence and help shape the industry

around accessibility, responsiveness, and other values that resonate at the local level and benefit the profession.

References

- Chung, H. K. (2007). Evaluating academic journals using impact factor and local citation score. *Journal of Academic Librarianship*, 33(3), 393–402.
- Fernandez, M. (2017). *How accessible is our collection?: Performing an e-resources accessibility review* [PowerPoint slides]. Retrieved from <https://www.slideshare.net/NASIG/how-accessible-is-our-collection-performing-an-e-resources-accessibility-review>
- Fry, A., & Rich, L. (2011). Usability testing for e-resource discovery: How students find and choose e-resources using library web sites. *Journal of Academic Librarianship*, 37(5), 386–401.
- Scigliano, M. (2000). Serial use in a small academic library: Determining cost-effectiveness. *Serials Review*, 26(1), 43–52.
- Verminski, A., & Blanchat, K. M. (2017). *Fundamentals of Electronic Resources Management*. Chicago, IL: American Library Association.