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The Never-Ending Evolutionary Saga of Assessing and Demonstrating the Value of Information Services in a Biomedical Library

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ABSTRACT
Demonstrating added value can be very challenging, yet it is becoming important in academic libraries. The current literature primarily discusses citation analysis and usage reports to demonstrate return on investment for collections or impact on scholarly activity. However, value is not only in our collections but also in the library staff who support the institutional mission. Vanderbilt University's Annette and Irwin Eskind Family Biomedical Library and Learning Center has been experimenting with several methods to supplement the collections data with services performed by the staff. This article discusses the project’s four phases as part of the goal to strategically demonstrate the biomedical library’s added value to the university and medical center.

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Introduction
Demonstrating the value of an academic library can be a daunting and somewhat ineffective task. This difficulty is primarily derived from the innate subjectivity of the term value. In addition, the literature on library value is discussed and quantified in so many ways that it is hard to generalize across main campus and departmental libraries. Regardless of the challenge, library administrators are required to measurably demonstrate the library’s contributions to their institution’s research and educational activities. For the purposes of this article, it bears noting that biomedical or health sciences libraries have an added domain, which is their role in the institution’s clinical enterprise. The current literature primarily discusses various numerical calculations, citation analysis, and...
usage reports to demonstrate return on investment for collections.\textsuperscript{8–14} To further complicate matters, the inclusion of the term \textit{impact} as it relates the library’s activities within the institution’s mission is becoming a popular topic.\textsuperscript{5,15–17} It, too, is presenting challenges in communicating from the librarian to library director to library administration to institutional administration. Nevertheless, whether the research endpoint is value or impact, it is essential for the library community to investigate and develop methods through which libraries can correlate their collections and services as they relate to the library’s role in the institution’s scholarly output, teaching and learning activities, student success, faculty recruitment and retention and, in some cases, health care outcomes.

The purpose of this paper is to demonstrate and discuss the process in which Eskind Biomedical Library’s (EBL) informationists have attempted to compile data and communicate their added value to the education, research, and clinical enterprise at Vanderbilt University (VU) and Vanderbilt University Medical Center (VUMC). The overall project described in this paper was divided into four phases: (1) the pilot survey, (2) the revised survey, (3) the inclusion of selected content from the survey into the full library statistics form, and (4) the development of a library LibGuide documenting EBL informationists’ scholarly activity through various collaborations with users. Each phase is discussed in a separate section and includes the issues encountered and lessons learned during the respective phases. The web links to each data collection instrument are listed in Appendix 1.

\section*{Background}

In May of 2016, VU and VUMC officially separated into two entities. The EBL is one of several former VUMC departments that now report to the university. The biomedical library is fully integrated into the Vanderbilt University Libraries and Special Collections and is actively involved in supporting the missions of both institutions, with guidance from the University’s Strategic Plan and the Medical Center’s Strategic Directions. Service-level agreements between the two institutions allow access to resources and services from all libraries, though EBL is perceived as the medical center’s primary information provider. The agreements also mandate the medical center contribute a specific percentage toward the budget of the entire library system each year.

EBL is one of nine campus libraries within the Vanderbilt University Library System. It is the primary information resource for the Vanderbilt School of Medicine, Vanderbilt School of Nursing, and VUMC. The EBL director officially reports to the university librarian but maintains strong relationships and accountability with the Dean of the School of Medicine, Senior Associate Dean for Health Sciences Education, Associate Dean of
Graduate Medical Education, Dean of the School of Medicine–Basic Sciences, Dean of the School of Nursing, and Medical Center Leadership. The School of Medicine offers graduate and professional education throughout three branches: the MD/clinical program, the nonclinical graduate programs, and graduate studies in basic sciences. The School of Nursing consists of graduate programs for students seeking a master of science in nursing (MSN), doctor of nursing practice (DNP), and PhD in nursing science. The VUMC main campus consists of four hospitals: adult, children’s, psychiatric, and rehabilitation. Several satellite clinics and multispecialty centers are located throughout the Middle Tennessee region. There are 1,000+ medical residents and clinical fellows training in more than 100 programs. Overall, the biomedical library’s primary users compose the Vanderbilt health sciences community, which consists of 29 degree programs, 1,596 students, 3,234 faculty, and nearly 30,000 medical center personnel. The respective educational, research, and clinical care missions are supported by the library through information and instruction services, collection development and management, and document delivery.

Phase I: Pilot survey

The idea of developing ways to compile and communicate data on the biomedical library’s added value originated because of several events. First, the library’s integration into the overall university library system prompted a need to identify ways to better distinguish itself, from a service perspective, to balance and justify the high cost of its recurring collections. Second, the biomedical library prides and markets itself as a partner with the institutions, as opposed to a support unit, and is heavily involved with the research and clinical enterprise. Reporting on those activities related to scholarly output and clinical care would further validate the partnership mindset. Last, medical center communications during the electronic medical record (EMR) implementation in 2018 repeatedly emphasized the initial investment, the added value of this technology, and its immediate and future benefits in the clinical, research, and academic domains. That communication strategy was very appealing and provided an impetus to re-envision the library’s role and mission within the institution. Since 2018, the biomedical library has reframed its mindset away from proving its relevance and, instead, focused on identifying content that supports the concept of added value it brings to the university and the medical center. Similar to the EMR strategy, added value acknowledges the substantial cost of library collections while communicating the benefits and results of the investments by the institutions. Furthermore, that value is expressed in
the demonstrated knowledge, skills, and abilities of the informationists and the quality of their work.

Unfortunately, surveying library users from the university and medical center is very challenging. The number of surveys sent out annually, particularly to students, is astounding. Past attempts include printed surveys at the Information Desk, with or without snacks, and random pop-up questions on the library’s homepage. With limited success, it was time to rethink this strategy. Because this instrument would be utilized solely for the biomedical library’s purposes, it was deemed necessary to develop questions that truly reflected the objectives for communicating library value. This opportunity motivated the health sciences informationists to think differently and methodically about what to collect, how to collect it, and how to disseminate the data to the university library administration and other stakeholders.

Understanding the challenges with soliciting survey feedback from users, it became evident that any instrument that was developed must be informative and relevant to the library’s needs in the most concise way possible. One of the authors was serendipitously introduced to the Tailored Design Method (TDM) while assisting a faculty member. After further research, TDM was deemed the perfect guide to help with survey development using the following principles:

- Customize the survey design to the situation particular to the EBL.
- Utilize the informationists’ institutional and professional knowledge.
- Remain focused on the types of people who would be surveyed.
- Take note of the resources available.
- Develop relevant questions that build positive social exchange and encourage responses.
- Motivate all types of sample members to respond within resource and time constraints.\(^\text{18}\)

The primary goal of the instrument was to document the various projects library stakeholders are involved in as well as the library’s role in those projects.

The following databases were consulted: Medline (PubMed/NCBI), LISA (ProQuest), LISTA (EBSCOhost), and Science Direct (Elsevier) to develop the survey. A pilot survey was developed in 2018 using REDCap electronic data capture tools.\(^\text{19}\) The study period ran from Fall 2017 to Spring 2018. As in many other studies, questions about scholarly output and library usage were included, but they deviated slightly from the literature by inquiring about librarian assistance in the form of consultations, literature searching, or resource training. If consultations, searching, or training were
selected, branching logic was added to determine whether the informationist was acknowledged or a coauthor in the project. This last area was of most interest to the authors because it was very unique and strengthens the library’s perception as a research partner.

The pilot survey was introduced to the deans of the School of Medicine–Basic Sciences and the School of Nursing during the library director’s annual one-on-one meeting. After approval, each school’s communications director sent it to the students, staff, and faculty. Each participant was instructed to answer questions based upon any and all publications, presentations, or other projects since the separation of VU and VUMC in 2016.

**Results of pilot survey**

Twenty-eight users completed the survey. The pilot instrument (mistakenly) did not ask for specific schools, but the respondents consisted of faculty \( n = 17 \), staff \( n = 6 \), fellows \( n = 3 \), and students \( n = 1 \), and one did not provide an answer. Twenty-two (78%) indicated they used the library for their projects. Of these, 50% utilized library materials, general support (i.e., finding full text, how to submit an interlibrary loan request, locating databases or journals), and searching services; 22.7% used document delivery; 18.2% received consultations; and 4.5% received training (Figure 1).

When searching, training, or consultations is selected, the survey inquired about the particular project (Figure 2). A librarian was either acknowledged or assigned authorship in 14.3% of responses. Respondents who indicated they did not use the library stated they used online resources or journals. It is possible that everyone utilized the library but misinterpreted the library solely as a physical space.

**Phase II: Revised impact survey**

The pilot survey project and its results were presented at the Medical Library Association South Central and Southern chapter meetings in the Fall of 2018. After the conference presentations and ensuing discussions with attendees, the survey was revised to add a question about the responder’s department, expand the status categories, and change the date of publication/presentation from a drop-down to fill-in box. The types of resources or assistance used by respondents were made more granular by offering additional response options using branching logic, and a comment box was added at the end. The instrument was placed on the library’s homepage, advertised in library communications, mentioned in instructional and orientation sessions, and included in the informationists’ email signatures.
Reminders were also sent to users in hopes they would complete the survey upon publication or presentation. Appendix 2 shows the final survey questions and the additional branching options. Nevertheless, the response rate was quite low: exactly 44 responses were received from Fall 2018 to Fall 2020.

Results of the revised survey

Out of the 44 responses, 41 (93%) of respondents indicated library use (Figure 2). Of these, 64% utilized journals, 80% utilized print or electronic
books, 64% utilized library databases, 33% scheduled consultations with informationists, 33% utilized the library’s searching services, 11% utilized training services, 22% utilized the Document Delivery Service, and 18% contacted librarians for general support.

When searching, training, or consultation was selected, the survey branched to inquire about the particular project. Twenty-two respondents used library resources or staff to assist with publications, 17 received assistance with research posters, and 1 received assistance with writing practice guidelines. Three respondents selected “Project Type–Other” and listed course work, systematic review, and fellow research project. A librarian was either acknowledged or assigned authorship in 20% of responses.

**Discussion**

Expanding the data variables was a tremendous help with clarifying and describing the breadth of services provided to library users. Though the original survey had been on Information Services, the revised data created a more inclusive report because it enabled the entire library staff’s contributions to be reflected in the survey rather than just the informationists. In addition to improving the quantitative data, the comment section proved to be valuable. Listed below are a few comments which are great sources of content for EBL’s annual reports and staff evaluations:

- “[Staff member] was very helpful in helping to assemble a strong collection of articles in the literature for our review. Although [our work is] not published yet, we are confident that we can push this through and much of that will be thanks to help from the library.”
- “Outstanding support from [staff member] for large and complex literature search for novel book chapter.”
- “[Staff member] is an amazing resource for our systematic review. Currently in progress—no publication yet. But she will certainly be recognized as coauthor.”
- “This work has not been published yet, but the librarian services were very helpful.”
- “Will be acknowledged in publication, not on poster.”
- “Have not submitted for publication yet but plan to in near future and will acknowledge librarian as a contributor.”

Comments such as those listed above in the revised version uncovered a possible issue with the focus on publication. Several respondents noted that the research had not been completed or submitted by the time the Impact Survey was sent to them. It is also worth noting that many projects,
specifically systematic reviews, meta-analyses, scoping reviews, and clinical guidelines, may take up to two years to complete, which can also be associated with investigators forgetting to complete the survey after such a substantial amount of time.

**Phase III: Adding the impact survey categories to the EBL reference statistics form**

The aforementioned issues prompted a reevaluation of the feasibility of the project. Limited data were not sufficient to satisfy the aims of the library, nor did it appear that the frequency of responses would be sustainable enough for annual reporting or longitudinal analysis. The revised Impact Survey is still available on our feedback page and via our email signatures, but its utility remains questionable. The recently implemented EBL Information Services online statistics form, also developed in REDCap, was serendipitously identified as a viable alternative to “guarantee” capturing some of the essential components of the Impact Survey data. It gave the authors an opportunity to tabulate more than traditional reference tick marks and have the reference statistics “say something.” The customized biomedical library online statistics form is supplemented by the questions received via the library system’s centralized LibAnswers (Springshare) platform. However, due to their increased detail, the EBL Information Services data provide a better indication of the types of projects informationists are working on and with whom.

A recent review of this fiscal year’s Information Desk data uncovered 1,372 transactions (60%) limited to reference or consultation. This provided a treasure trove of data to analyze, summarize, and report on regarding the types of projects librarians are involved in throughout the university and medical center. While it appears the issues related to longitudinal data capture and low response issues have been resolved, the form will not capture the librarian attribution (acknowledgement or coauthorship). Additionally, preliminary data analysis has identified a need to standardize, as best as possible, the open-ended sections of the form. With a research-intensive institution, it is impossible to conceive of every endeavor; thus, these sections are often areas comprising new projects that are not included in the original checkboxes. Last, constantly logging in to REDCap and downloading spreadsheets is quite cumbersome, so the librarians are working with the REDCap DataCore team to create an application programming interface and search interface which will allow all biomedical library staff to pull the added Impact Survey content from Information Desk data more efficiently.
Phase IV: Development of the EBL scholarly activity and collaboration LibGuide

The last phase of this added value project originated during a staff discussion about helping Vanderbilt’s departmental administrative assistants develop saved search strategies and alerts to document the scholarly activity of the faculty and medical residents. Librarians noted this has been a very popular request for librarian assistance throughout their careers but has not been utilized within the library itself. To publicly communicate librarian activities, services, and personal research interests, the EBL Scholarly Activity and Collaboration LibGuide\(^\text{20}\) was created in the Fall of 2020. The Scholarly Activity LibGuide has been a great reference when reporting to library, school, and university administration and serves as a marketing tool when informationists are asked about previous collaborations with university and medical center researchers. The LibGuide is categorized into three areas: publications, presentations, and acknowledgements. Publications and presentations include projects where Eskind informationists are authors or coauthors. This research can be related to library or information science and conducted by library staff or non-library-related, in which informationists collaborated with university or medical center researchers. Additionally, it cannot be understated how important acknowledgements can be in the library’s communications with its stakeholders. Thus, a separate tab includes all university and medical center research projects where informationists or staff members are acknowledged for their contributions. Each EBL staff member will perform a name and affiliation search in biomedical literature databases and Google Scholar throughout the year to complete this webpage.

Conclusions

Universities have a multitude of needs and limited resources. In the context of a library system, it is imperative for the libraries to demonstrate their value to the university, as well as for each campus library to do the same. This project and its unanticipated evolution were part of an intentional and strategic effort to identify processes and platforms to meaningfully communicate the various endeavors in which EBL informationists are called upon to participate. Biomedical libraries have a unique patron base, high demands, and expensive resources and collections. Sustaining the library’s ability to address the health sciences information needs of two institutions requires calculated and creative data collection, visualization, and dissemination.\(^\text{21}\) Furthermore, these time-intensive and sometimes time-sensitive endeavors enable staff to grow professionally, which strengthens the perception of the unit and solidifies its value to the institution(s) while incessantly avoiding the perception of expendability.\(^\text{22}\)
Initial test analyses performed for this manuscript and the upcoming campus library update at the University Libraries Town Hall are very promising and indicative of the project’s goals in improving methods to document and disseminate the biomedical library’s value (or impact) to its users, library administration, and university administration. Later this year, the EBL will disseminate its first post-separation annual report that was submitted to the deans and library administration.

Since 2016, the EBL staff have adapted admirably to the organizational and technological challenges that resulted from the separation. The library is unique among the VU Libraries in that it directly supports two phenomenal health sciences schools and an innovative academic medical center every day, in-person and online. Through understanding of the service-level agreements, the library supports the institutions’ missions by providing the best possible resources, collections, and services and remains focused on its goal to continuously demonstrate its value by engaging with users and be perceived not as a support unit but as an integral partner in the academic, research, and clinical enterprise.

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References


Appendix 1: Links to the data collection instruments mentioned in each phase

I Pilot Survey: https://redcap.vanderbilt.edu/surveys/?s=DYYYDP97HP.
II Revised Pilot Survey: https://redcap.vanderbilt.edu/surveys/?s=NJK3LWLR3Y.
III Library Statistics: https://redcap.vanderbilt.edu/surveys/index.php?s=KKWMDK8EMW.
IV EBL Staff Scholarly Activity and Collaborations: https://researchguides.library.vanderbilt.edu/eblscholarly.

![Eskind Biomedical Library Research Impact Survey](image)

**Figure A1.** Survey instrument.
Figure A2. Survey branching options.