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Get It From the Source: Identifying Library Resources and Software Used in Faculty Research

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Abstract

Libraries and Information Technology departments aim to support the educational and research needs of students, researchers, and faculty members. Close matches between the resources those departments provide and the resources the institution's community members actually use highlight the value of the departments, demonstrate fiscal responsibility, and show attentiveness to the community's needs. Traditionally, libraries rely on usage statistics to guide collection development decisions, but usage statistics can only imply value. Identifying a resource by name in a publication demonstrates the value of that resource more clearly. This pilot project examined the full text of articles published in 2016–2017 by faculty members at a mid-sized, special-focus institution to answer the questions "Do faculty members have university-provided access to the research tools they need to publish?" and "If not, where are they getting them?" Using a custom database, the presenters indexed every publication by author, publication, resources used, availability of the identified resources, and more. This pilot study can be adapted to projects at other institutions, allowing them to gain a better understanding of the strengths and weaknesses of their own institution's offerings. In addition, they will be able to identify ways to use that data to negotiate for additional resources, inform strategic partnerships, and facilitate open discussions with the institution's community.

Background

The idea for this project started in the summer of 2017 when a faculty member asked a librarian for recommendations regarding software that could be used for a specific type of analysis. The library did not have a ready-made list of resources to refer to. While librarians were able to suggest some possibilities after searching for projects similar to what the professor had in mind, finding that information and assessing how feasible those options would be was not a simple process. It showed the need for more detailed information about the availability of research resources at the university. This pilot project identified the software and databases that faculty members were using for their research and where they were getting it.

Project Planning

The initial scope of this project, looking at the software and databases faculty researchers were using, was expanded to include documenting and analyzing several factors regarding faculty-published research. The list included the type of article, publishing journal, library resources used, and the research tools used. The study also looked at whether the research resources and tools were provided by the library, the university, or through a coauthor or their institution. It was also recorded if the resources were personally owned or available for free.

While the team members believed that several years' worth of data would give the best data, the team decided to begin analyzing just one academic year's worth of publications as a pilot before embarking on the full project. The pilot phase allowed the team to develop and refine procedures while verifying that the project provided enough useful information to justify doing the full project. The pilot study included records from July 1, 2016 to June 30, 2017.

After Institutional Review Board (IRB) approval was received, IRB071618W, university administration was contacted for a scholarship list of current faculty publications. Since then alerts have been placed in PubMed, Google Scholar, and Scopus and results are compared to the scholarship list for missed publications. The university's technology group

was contacted for a list of software available for installation.

Content was reviewed and the project started in August 2018. It was decided to collect all of the data using Microsoft Access. Regular meetings were scheduled to discuss each member's progress. Records were reviewed in multiples of five to start. Decisions were made as to what was going to be included and what fields were needed in the Access file. A tracking spreadsheet was created to help organize the process. The spreadsheet included the citation information, Access record number, data reviewer, and checker. Many questions were raised during the weekly meetings. The majority of questions raised concerned both the resources and software used.

Access Database

Reasons for selecting Access for this project included that the institution already had a license for Access and a team member was proficient in its use. Additionally, it was interactive and allowed users to choose from and add to drop-down menus for several fields. Each time a team member encountered a missing item for a specific field, they could easily add it to the list of options. All team members could work on the project via a shared drive. Access also had built-in reporting features to facilitate analysis.

Access was not the most intuitive system. The team member who was most familiar with Access and another team member created tutorials and walkthroughs to train the rest of the team. These guides helped make data collection seamless.

Process

Iterative weekly meetings kept the project moving forward and progression was made in small steps. These meetings were essential to make sure the team was on the same page. Content was clarified and decisions were made with majority consensus. Questionable content discussed included a letter to the editor that reported study results and if book reviews were going to be used. Some articles were identified that required subject knowledge of research equipment or chemical tests that were part of the methodology and not a resource. This is something to keep in mind when team members are being selected for a project like this.

Some takeaways include the need to remove duplicate entries if a single article has multiple authors from the same institution and the entry is listed once for each author at the institution. Also, it is recommended to save copies of reviewed articles with annotations so they can be reviewed at a later date if questions arise. Keeping clear internal deadlines is recommended. This project is labor intensive and if one team member does not meet their commitment, other team members cannot complete their work either.

Challenges included papers where faculty members provided incorrect citations in their scholarship list or identified a software category in the publication but not the specific tool. It was also observed that authors typically neglected to identify databases used unless it was a systematic review.

Results

Within Access, basic lists of schools, tools, and resources were identified as data was entered. This raw data revealed which faculty members were publishing, the resources used, and in what journals they were publishing. The pilot study contained approximately 100 records that identified 53 library resources. The most common databases identified were PubMed, Embase, and MEDLINE Ovid. Few of the items in this list were surprising. Most of the library resources identified were either already in the collection or were available for free. The list of software used was much longer and largely focused on various types of statistical analysis tools. While many of the tools were provided through the university or freely available, the list included a few resources to be investigated further by the team members.

The robust querying and reporting features in Access allowed for more complex questions to be asked about how the resources were being used. Several queries and reports paired information from one section to another, exploring questions such as: "Which schools are using which types of resources?", "How frequently is this resource being used?", and "What institutions do the authors tend to collaborate with?" Highlighting that data could potentially affect collection development decisions. Answers to these questions will allow team members to identify departments for potential collaborations. Librarians can also develop strategies for partnering with other institutions to share resources effectively.

Application

Since the inception of this project, the institution's technology group has created a web page that

clarifies what software is supported for different types of users on campus. It differs slightly from the initial list that was provided in the beginning of this project. While that list helps researchers and students know if they can access a tool once they have identified it, it does not make it easy for them to decide which types of software would be useful for a specific research project. To fill that need, the library plans to create webpages to guide users in software selection. The pages will include links to university-provided software (making it clear that the library may not be the source of those products) as well as to freely available software. In addition, the pages will highlight content from the university's collection that relates to using those resources, such as manuals for using SPSS or other statistical analysis tools.

Going forward, conversations can be initiated with different schools on campus regarding the types of resources they are using. These conversations may lead to effective relationship-building and increased reference and instruction support. Sharing the findings with people in other department establishes that the library is interested in who they are, what they do, and what they need, which can drive further discussions and collaborations. Learning more about motivations for using specific resources will help develop an understanding that may lead to increased support for specific programs.

Future Projects

Future plans include purchasing additional resources based on what was learned from this study. For example, the EconLit database, which could support courses in both Pharmacoeconomics and the Healthcare Business programs, will be trialed. Through follow-up conversations with those departments, it can be determined if EconLit is the best fit for the department's needs or if an alternative economics database or collection would be more appropriate. Some possible funding sources have been identified, such as NAHSL's Jay Daly Technology grant that might be used to purchase software that is not currently available at the institution.

Alternately, team members have identified other departments on campus that the library might partner with to provide resources. They have different funding pools, contacts, and background knowledge that can help the library obtain content that is not directly library-related. Ultimately, sharing the data from this project with other departments may influence their purchasing decisions.

Enrollment figures, anecdotal evidence, the institution's strategic plan, and other contextual information provide helpful background information for framing discussions with potential campus partners. Each conversation will be unique, but that contextual information plus team members' knowledge of the potential partner's purpose, goals, and interests provide some starting points for pitching the collaboration. The examples below demonstrate possible templates for conversation with specific groups on campus, but the actual conversations will be much more organic.

Template for a Conversation With an Academic Department

"Several people in this school have worked on projects using this piece of software / resource that our institution does not provide. Only one project outside of this school used it. The tool would directly support one course, which has been offered for the past several years and continues to have steady enrollment. We have heard from several professors that they are also working on projects that would use this type of software / resource. Students are increasingly being expected to know how to use it once they graduate. The accreditation standards for this discipline now include a competency that having access to this software / resource will directly support. How can we work together to get this software / resource? The library can offer staff time, negotiation support, some funding, or other incentives if you can add other assets we need, such as funding, expertise, or appropriate communication methods for working with the vendor."

Template for a Conversation With the Institution's Technology Group

"In looking at faculty members' research projects, we noted that several people across the institution were using this software, which the institution does not provide. Although the institution provides similar software, this product has an additional feature that would be valuable to our faculty members. The only way to approximate that feature now is to go through a convoluted, multistep process that has many possible fail points. We have heard from faculty members who rely on our existing products that they often need to contact you for help with getting those steps to work correctly. Adding this piece of software will free up your time to focus on this other big project we know you have underway. How can we help you to get this software?"

Limitations

The information gathered from the project is, in some ways, an estimation. Faculty members have multiple simultaneous appointments, change roles within the institution, and move on to new positions elsewhere. Some of the research identified through this project may reflect work that was actually performed at another institution or that no longer represents current needs. Similarly, the availability of resources is not fixed. Library subscriptions change and software also evolves over time. The list of software used was simply a snapshot at one point in time, and it is already slightly out-of-date. The information collected indicates the value—or at least potential value—of different resources, but clarifying conversations with researchers are necessary to fully understand value.

If and how people at other institutions implement the project depends on their local context. At the time this project began, the institution did not have an institutional repository, which could provide some of the base information about who at the institution is publishing and where they are publishing. While faculty members at the institution are expected to contribute to scholarship, it is not a research-intensive institution. It may be more feasible to focus on a single department or program at another institution. Since the project team's institution has a special focus on health sciences, the results may not be generalizable to other institutions. People at typical colleges and universities may find a broader scope of resources being used or may find that the programs their institutions rely on do not have as much need for software.

Conclusion

The publications an institution's faculty members create provide insights into the types of resources that faculty members need. While extracting that data takes time and energy, it can provide useful information for collection development decisions, especially with regard to software options. The insights collected through this type of project can be powerful when combined with other contextual details.