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How research becomes impact: Librarians helping faculty use scholarly metrics to select journals

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Abstract

Many librarians support faculty with the publishing process, which includes journal selection and evaluating the impact of their scholarly output. While large universities have the resources for entire departments devoted to bibliometrics, the authors of this article give strategies for faculty publishing support at a smaller liberal arts university. The authors created a LibGuide with publishing resources and presented the initiative to several academic divisions. Faculty were surveyed, and the results indicated that the majority of respondents were interested in assessing journal quality and viewed the library as a resource for help with the publishing process.

Keywords

Bibliometrics

Altmetrics

Scholarly publishing

Faculty-Librarian collaboration

Research impact

Introduction

“How many times has my work been cited?” “Is this a good a journal to publish in?” These two questions from faculty exposed a mysterious world of finding, evaluating and interpreting data

about journal prestige, acceptance rates, h-indexes, altmetrics, bibliometrics, impact factors, and citation tracking. After receiving these questions, the authors suspected that faculty could benefit from librarians' expertise with bibliometrics which tracks scholarly citations for journals, articles and authors. Specifically, librarians could help faculty increase their scholarly productivity by helping them identify journals for publication and measure the impact of their academic works. A literature review revealed that other libraries recognized similar needs. However, most were larger research universities that created new departments devoted to generating metrics reports for both academic divisions and individual researchers; such large-scale services would be impractical for many smaller liberal arts universities.

Two reference librarians launched a faculty publishing initiative by creating a LibGuide that addressed common questions on scholarly metrics and directed faculty with specific publishing questions to librarians for one-on-one consultations. The LibGuide and new services were promoted to the faculty at their division meetings. Following the presentations, faculty were surveyed to determine their need for, and interest in receiving assistance from librarians with scholarly metrics. This paper sought to ascertain if faculty at a small liberal arts university will view librarians as a resource for metrics, rankings, and information on the publishing process when libraries expand services to include assistance with journal rankings, research impact, and related issues.

Background

Pepperdine University is a liberal arts institution with about 7,800 students and just under 400 full-time faculty. Seaver College primarily serves undergraduate students and Pepperdine's graduate schools offer degrees in business, education, psychology, public policy and law.

Literature Review

A survey of the literature revealed that many libraries support faculty by providing publishing assistance. The research that is most relevant to the current study relates to bibliometrics but also includes publishing ethics, acceptance rates, and other journal selection considerations.

Libraries' bibliometric and publishing assistance for university faculty revealed varying levels of support. Levels of staffing for these services varied drastically from one or two part-time librarians to whole departments with several full-time staff dedicated to citation tracking and journals selection support. Moreover, research suggested librarians have different reasons for offering bibliometric and publishing services to individual scholars and departments. For some the motivation is a strategic means of staying relevant; others view providing additional services as the natural progression of professionals who are evolving to meet the information needs of faculty.

Strategy

Ball and Tunger (2006) believe that because libraries' significance is no longer measured by collections, they need to function like businesses by adding value with innovative services. They explained that bibliometric analysis is a value added service, and librarians are uniquely situated to provide bibliometric services because they are independent of other academic departments and possess the necessary skill sets.

Echoing Ball and Tunger (2006), Bladek (2014) explained that universities are under pressure to prove their worth, while libraries must demonstrate their relevance. She concluded that as universities increasingly rely on bibliometric measurements to make promotion, hiring and funding decisions, librarians have an opportunity to reestablish their value by using their traditional knowledge of bibliometrics in a new context to meet universities' needs.

Several authors add their support to the viewpoint that librarians need to redefine their role by using bibliometric skills to provide new services (Hendrix 2010; Drummond and Wartho 2009; Astrom and Hansson 2013).

Duty

While Luey's (1996) article predated trends such as altmetrics and the academic assessment culture, she argued that serial librarians, who were most familiar with publishing practices and the acquisition of books and journals, were best equipped to educate faculty about publishing ethics and copyright law. Luey (1996) explained that because faculty publication is vital to scholarship, librarians should assist professors by helping them understand the ethical best practices of publishing. The authors of the present study agree that librarians should possess the skills to help faculty with publishing questions in addition to answering research questions and believe any librarian, not just serials librarians, can provide assistance.

Gumpenberger, Wieland, and Gorraiz (2012) explained that embracing new tasks is the responsibility of all academic librarians because adaptation is part of the job. The University of Vienna accomplished this goal by establishing a Bibliometrics Department that researched publishing trends, identified resources for faculty promotions, offered workshops, and partnered with other departments to publish findings. Gumpenberger, Wieland, and Gorraiz (2012) made the case that obtaining a thorough understanding of bibliometrics is essential for academic librarians striving to support their institution's competitive scholarly standing. Astrom and Hansson (2013) agreed that librarians should evolve to meet emerging information needs by incorporating bibliometric services into their workflow.

What (bibliometric services and tools are libraries providing)

How are libraries meeting faculty publishing needs? The literature discusses the types of questions librarians are answering as well as the bibliometric tools used to assist faculty. Astrom and Hansson (2012) studied the differences in bibliometric services offered between large research universities (which often have mandates from government or university administrators) and smaller universities in Sweden. They found that a majority of the universities surveyed were providing some type of bibliometric services, but the extent of the assistance differed. The most common service provided by large and small universities alike was citation tracking. Libraries serving smaller institutions tended to provide point-of-use assistance and educational outreach to faculty while libraries serving larger universities were more likely to have full-time staff dedicated to producing bibliometric reports for academic divisions. These full-time departments also contributed to the field of bibliometric research and even created specialized bibliometric products.

According to a study by Corral, Kennan, and Afzal (2013) that reviewed bibliometric services at universities in Australia, Ireland, New Zealand, and the United Kingdom, the most common services were bibliometric educational efforts, followed by citation reports that calculate research impact. Libraries were less likely to produce reports on research trends for specific academic departments, candidate recruitment reports, and tenure evaluations.

Suiter and Moulaison (2015) examined university library websites and LibGuides in the United States to identify which bibliometric tools libraries were promoting. The investigation revealed that traditional scholarly citations were still king, with Impact Factors being the most frequently referenced metric and appearing on nearly every website (with newer journal metrics such as Eigenfactor and SCImago appearing on 80% of library websites). The *h*-index was the

next most discussed scholarly statistic mentioned in 90% of websites. Altmetrics were the third most referenced set of metrics, appearing in 80% of websites. On a related note, the reviewers identified ORCID as the unique identifier being adopted by a majority of users and platforms. These findings revealed that librarians recognized that faculty have questions about measuring impact, interpreting altmetrics, and finding statistics.

How (libraries are providing bibliometric services)

A majority of the literature described libraries undergoing massive restructuring to develop a department of full-time staff dedicated to bibliometrics, scholarship rankings, creating individual reports, and conducting large-scale trend analysis. The libraries undergoing massive restructuring usually serve research universities with large science departments; faculty at these research universities are being required by their administrators or governments to produce metrics which require the assistance of librarians.

Gumpenberger, Wieland, and Gorraiz (2012) explained that the University of Vienna, Austria, leads the country in providing bibliometric services. Their bibliometric department, called the “Sciencemetric Group,” emerged from a working group whose members represented university departments utilizing bibliometrics such as the library, research services, etc. This new group offered courses for faculty; additionally, they provided individual consultations for assistance using bibliometric databases or questions about journal selection. The Sciencemetric Group was created solely to support the university's science departments. However, the authors of the current study were interested in providing bibliometric and journal selection services at a liberal arts university to professors in a variety of disciplines.

Like the University of Vienna, the University of New South Wales (UNSW) library was restructured to form a department dedicated to providing bibliometric services such as

developing a method for calculating *h*-indexes. Drummond and Wartho (2009) reported that in 2005, the Australian government gave universities a directive to provide evidence of their research impact. Before the restructure, the UNSW described their library services as traditional such as document delivery, reference, and library instruction. After restructuring, a team of librarians could focus on supporting faculty assessment requirements by compiling research impact measure (RIM) reports for professors. UNSW is a large research university with enough demand to warrant having a whole department producing time-consuming reports; Pepperdine, on the other hand, is a small private liberal arts university that does not have the same level of demand for such reports but does have faculty with bibliometric questions.

The literature also shared examples of smaller universities providing bibliometric services. Hendrix (2010) explained that while the University of Buffalo (UB) is a research university, it is smaller than large research universities like UNSW. UB does not have library staff specifically dedicated to bibliometric questions; instead, reference librarians have added bibliometrics to their other responsibilities. Entry level workshops addressed citation tracking, finding impact factors, and utilizing *Google Scholar*. The advanced workshops focused on specific topics like the *h*-index. However, the librarians realized that workshops were not the best format because professors usually had specific questions which could be better addressed individually. The authors of the current article also encourage one-on-one consultations; furthermore, because faculty often have trouble finding the time to attend workshops, an online tutorial was created and presented to the faculty at their division meetings.

Bladek (2014) supplied a guide for creating small-scale bibliometric services to universities that cannot restructure departments and devote staff to full time large-scale bibliometric programs. John Jay College of Criminal Justice in the City University of New York

(CUNY) system added a promotion requirement; candidates would need to provide bibliometric measurements to help tenure committees understand the quality and reach of faculty's work.

However, the new requirements lacked instructions on how to collect and present the information. In anticipation of faculty questions, librarians educated themselves about bibliometrics and created an online guide that discussed bibliometric tools. They partnered with the administration to promote their new services. Additionally, Bladek (2014) provided bibliometric resources for librarians interested in creating small one or two-person bibliometric support teams. Bladek (2014) advised librarians to collect feedback and usage statistics on their services at the one-year anniversary to evaluate the service. The authors of the present study provide small-scale bibliometric support similar to services described by Bladek (2014); faculty were surveyed to gather feedback on the services and resources.

Cautions

Some authors disagreed with the mantra that libraries will prosper from embracing bibliometric services; they cautioned that librarians should understand that by offering bibliometrics they may shift their service emphasis from faculty to administration and possibly damage existing relationship with professors. Corral, Kennan, and Afzal (2013) were interested to learn that the United Kingdom has less bibliometric services than their Australian, Irish, and New Zealand counterparts; furthermore, they showed little interest in developing any programs. Corral, Kennan, and Afzal's (2013) study cited reports by the *Higher Education Funding Council for England* (2009, 2011) warning against universities relying on bibliometric data to evaluate either faculty for promotions or university departments.

Astrom and Hansson (2013) also voiced concerns that as a result of providing bibliometric services that are used to evaluate faculty and allocate funding for academic

departments, librarians run the risk of being associated with negative bibliometric reports and lost funds. Libraries may transform from ‘faculty supporter’ to the administration’s ‘evaluating arm.’ When asked who their bibliometric services were helping, a larger percentage of libraries surveyed identified university administrators or faculty management as their main “customers” instead of individual researchers. Astrom and Hansson (2013) asked librarians to consider if they are prepared to shift their “customer” from scholars to administrators. While they cautioned librarians that being associated with evaluation reports could backfire, they do not advocate abandoning bibliometrics completely. Instead, they emphasized that if bibliometric services were managed wisely, librarians could strengthen their position within the university by providing bibliometric support.

Brown (2014) had concerns that promotion boards were relying heavily on impact factors to evaluate the worth of journals and scholars. She argued that using metrics to evaluate journals or scholars is inappropriate. Because it’s a quantitative rather than qualitative method, these statistics do not tell the whole picture since there are many reasons besides quality that articles are cited. Furthermore, the current tools cannot provide complete metrics on every scholarly work, and therefore should not be used to evaluate professors. Brown (2014) asserted that librarians helping faculty find metrics for promotion portfolios should educate themselves about alternative measurements that may fill in the incomplete picture created by citation indexes.

Faculty attitudes toward bibliometrics

While much of the literature discussed the tools and services that librarians used to assist faculty with bibliometric questions, less has been written about faculty attitudes toward the growing trend of using metrics to assess the value of scholarly works.

DeSanto and Nichols (2017) surveyed faculty to explore their understanding of bibliometrics and to assess their attitudes toward using these methods to evaluate scholarly work and influence promotions. Regardless of academic discipline, when asked whether or not they thought departments should place a high value on metrics, only 5% of faculty thought tenure and promotion decisions should place a “great deal of weight” on bibliometrics while 70% agreed that “little weight” should be placed on bibliometrics. When surveyed about finding help, 19% of faculty were unsure where to find help. Faculty shared they would appreciate resources that explained how to track metrics, gather article level altmetrics data, and identify relevant metrics for their discipline.

DeSanto and Nichol’s article had similar aims to the present study. The authors wanted to know what aid faculty needed and created a guide to help professors. Every academic division has different promotion standards; by presenting this guide to faculty at their division meetings and asking them to complete a survey, the authors hoped to learn if the guide was meeting their needs.

Research Questions

The present study sought to determine if faculty at a liberal arts university will view librarians as resource for journal selection, rankings and publishing related issues if librarians expand services to include bibliometric assistance.

In order to answer this aforementioned question, the authors created two sets of survey questions; the goal of the first set of questions was to ascertain faculty awareness of bibliometric resources to determine the potential need for these services:

1. What resources do faculty use to select journals for publication?

2. How knowledgeable are faculty about the prestige of the journals that they publish in (as measured by citation metrics)?
3. How aware are faculty of sources other than Thomson Reuters' Impact Factor for evaluating the prestige of journals?

The second set of survey questions were crafted to determine faculty interest, and thus likelihood of them asking librarians for assistance with the publishing process:

4. How interested are faculty in knowing how many times their work has been cited?
5. How likely are faculty to view the library as a resource for help with the publishing process?

Method

The authors created an online resource addressing the journal selection process and other publication questions in an initiative to support faculty in the publication stage of their scholarship. Between Fall 2014 and Spring 2016, the authors delivered brief, targeted in-person presentations about their faculty publishing initiative to the following academic division meetings at Seaver College: Social Sciences, Business, Humanities & Teacher Education, Religion & Philosophy, Communications, Fine Arts and Natural Sciences. However, the authors were unsuccessful in meeting with the International Studies & Languages division. The authors launched their faculty publishing initiative to Seaver College with hopes of expanding the service to reach Pepperdine's other schools. However, Pepperdine's graduate programs are geographically dispersed and present challenges for locating suitable venues for outreach.

During these 10-minute presentations to academic divisions, bibliometric resources were discussed, and the presenters expressed their willingness to help professors with the publishing process and gave an overview of the LibGuide on faculty publishing resources. After the

presentations, a link to a survey created with Qualtrics software was emailed to all of the faculty in a particular division. A reminder email was sent one week after the initial email. Because academic division attendance is voluntary, surveys were sent to all the professors, including those who were not at the presentation.

The survey contained Likert-scale multiple choice questions and simple yes-or-no questions (See Appendix). Questions inquired about faculty knowledge and interest in bibliometrics, awareness of predatory publishers, resources consulted for journal selection, interest in supporting undergraduate research, and whether the faculty were likely to seek help from librarians for assistance with publishing. Skip logic was used because some questions were only relevant to faculty who attended the presentations. A link to the LibGuide on faculty publishing was included in the survey to help familiarize faculty who did not attend the presentation with the resources and services. In light of the fact that some of the divisions have relatively few faculty, the survey was limited to demographic information about the respondents' academic division because more detailed data such as tenure status, age, gender, or academic rank could endanger the anonymity of the survey. Before distributing the survey, the authors consulted with the assessment librarian who provided feedback and revisions.

Demographics of Participants and Response Rate

The survey was distributed to 186 faculty, with 74 professors beginning the survey and 66 completing it, giving us a response rate of 40%. Of the completed surveys, 44 were from faculty who attended the presentations and 22 were from professors who were not present. Some respondents did not answer every question, but any responses they did provide were included in the analysis. Table 1 shows the number of responses by academic division and the number of faculty who were invited to participate.

Table 1: Responses by Academic Discipline

Academic Division	Faculty Invited to Participate	Respondents	Response Rate
Natural Sciences	37	18	49%
Social Science	26	11	42%
Communications	27	10	37%
Business	15	8	53%
Humanities & Teacher Education	34	8	24%
Religion & Philosophy	14	7	50%
Fine Arts	33	4	12%

Survey response rates for the Humanities & Teacher Education and Fine Arts divisions were much lower than for the Social Sciences, Communications, Business and Natural Sciences divisions. One possible explanation for the lower response rates of humanities and fine arts professors is that researchers in these disciplines are less likely to publish journal articles than faculty from the natural sciences and social sciences, and the LibGuide and presentations emphasized journal selection and metrics. This assumption was confirmed by searching Scopus for journal articles published by Pepperdine authors from 1971 to 2017 and discovering that only 10.9% of the articles were from the arts and humanities disciplines. The publishing preferences of Pepperdine's humanities and fine arts faculty are consistent with national trends. The Ithaka S+R 2015 Faculty Survey (Wolff-Eisenberg, Rod, and Schonfeld 2016) revealed that humanities professors were less likely to publish their research in journals compared to other disciplines, and they stated a stronger preference for monographs than faculty from other fields. Many of the fine arts faculty were adjuncts or visiting professors who instructed students in applied skills such as theatre stage design, sculpture or vocals. These faculty are not required to publish articles or monographs. Even the fine arts tenure-track faculty are more likely to direct performance or create artwork in lieu of traditional forms of scholarship that can be measured with bibliometrics.

Results and Discussion

The results of the survey will address the research objective and sub-questions.

What resources do faculty use to select journals for publication?

In order to better understand their journal selection preferences, faculty were asked which resources they currently used to locate journals for publication. Faculty had the option of selecting multiple responses, and responses indicated that library article databases were the most popular source at 44%, followed by recommendations from their colleagues at 42% (table 2).

While faculty used library databases extensively to locate journals, relatively few (11%) consulted librarians. However, combining both of these data points means that over half the professors view the library as a resource for locating journals for publication, either by providing databases or assistance from librarians.

Table 2: Resources to locate journals for publication.

Resource	Count
Library article databases	28
Ask colleagues for advice	27
Google Scholar	23
Other	18
Publisher website	17
Ask librarians for advice	7
Cabell's Directories of Publishing Opportunities	5

Google Scholar was the third most popular resource. This concerned the authors because, when compared with library databases, Google Scholar is less efficient at identifying journals publishing articles on a topic. For example, EBSCO and ProQuest databases, as well as Scopus, provide a list of the journals that publish the most articles on a given topic. Moreover, Google Scholar is more interested in enlarging its database than ensuring the quality of the journals indexed (Aguillo 2012). A possible explanation for several faculty using Google Scholar is a

lack of familiarity with the library databases. The authors' LibGuide provides resources for helping faculty identify journals for publication.

Interestingly, *Cabell's Directories of Publishing Opportunities*, which is a database specifically intended to help faculty select journals to publish in, was only used by 8% of respondents to select journals for publication. A possible explanation for the relatively low usage of *Cabell's* compared to other resources is that Pepperdine's subscription only included coverage for the disciplines of business, computer science, psychology and education. Pepperdine's *Cabell's* subscription does not provide coverage for the humanities and sciences.

How knowledgeable are faculty about the prestige of the journals that they publish in (as measured by citation metrics)?

To determine professors' knowledge and interest of journal ranking metrics, faculty were asked if they were aware of the prestige of the journals that they published in. Almost two-thirds of respondents answered "yes," indicating that most faculty perceive that they have at least a basic understanding or awareness of journal level metrics (Table 3).

Table 3. Awareness of the prestige of the journals (as measured by citation metrics) where faculty have published.

Response	Count
Yes	40
Not Sure	24

Compared to national trends, Pepperdine faculty appear to be less aware of the prestige of journals in which they publish. Ithaka S+R's 2015 faculty survey (Wolff-Eisenberg, Rod, and Schonfeld 2016) revealed that 80% of professors identified the impact factor and academic reputation as an important factor when selecting a journal for publication. Research from Brown and Tucker (2013) at the University of Nevada at Las Vegas discovered that 86% of their faculty

consider the impact factor to be an important consideration when selecting journals for publication. Given that many faculty, both at the national and local levels consider the reputation and impact factor of journals to be important, the authors' presentations and LibGuide covered resources for journal rankings and offered to provide assistance in helping faculty evaluate the prestige of journals they were considering for publication. Moreover, efforts in educating faculty about journal metrics were especially important because Pepperdine's faculty are less aware of journal prestige than professors in national surveys.

By helping faculty become more aware of the prestige of journals, the goal was to help professors identify the journals that were the best fit for their research goals. For example, some faculty explained to the authors that they are not necessarily interested in publishing in the top ranked journals in their disciplines, and they are more interested in identifying journals that had a "respectable" ranking that were more likely to publish their manuscripts.

How aware are faculty of sources other than Thomson Reuter's Impact Factor for evaluating the prestige of journals?

An important goal of the faculty publishing initiative was to educate faculty in locating the metrics that would best evaluate the journals that they were considering for publication. The survey asked faculty if they were aware of metrics other than Thomson Reuter's impact factor following the presentation or after viewing the LibGuide. Table 4 shows that after combining the results of these two survey questions, two-thirds of respondents answered "yes."

Table 4. Awareness of alternatives to Thomson Reuter's Impact Factor for evaluating the prestige of journals.

	Based on presentation	Based on LibGuide
Yes	31	4
No	7	0
Not Sure	5	3

The oldest and best-known metric for evaluating journals based on how often their articles are cited is the Impact Factor from Thomson-Reuter's (recently purchased by Clarivate Analytics) Journal Citation Reports (JCR) database. The authors' presentations to the divisions and the LibGuide explained that the Impact Factor was only one of several metrics for evaluating journals and resources such as SCImago's Journal Rankings and EigenFactor were also viable options. Prior to designing the survey, all of the questions that the authors received from faculty concerning the quality of journals specifically mentioned the Impact Factor from JCR. Apparently, faculty were drawn to the name recognition and branding of the Impact Factor and were unaware that there were other sources that provided journal ranking metrics. In some cases, the professor inquired about a journal that was not evaluated by the JCR (which indexes about 12,000 journals) but was included in SCImago, another resource for ranking journals, which evaluates more journals (over 29,000 journals).

Research has shown that journal ranking resources such as JCR, Eigenfactor, and SCImago produce comparable journal rankings (Elkins et al. 2010). Because of the ambiguity concerning which resource for ranking journals is the most accurate, researchers have recommended calculating the composite score of several journal metrics sources to provide the most accurate ranking of journals (Bradshaw and Brooks 2016). The takeaway from this research is that there is significant overlap between the journal ranking resources making it difficult to state that one metric is more authoritative than the others.

How interested are faculty in knowing how many times their work has been cited?

In addition to helping professors locate suitable journals for publication, the authors also wanted to support professors who were interested in measuring the impact of their scholarly works. The survey asked faculty if they were interested in knowing how often their work was cited by other

researchers. All but five responses indicated that faculty were at least moderately interested in knowing how often their work has been cited, and 40% were “very interested” (Table 5).

Table 5: Interest in knowing how often work is cited by other researchers.

Interest Level	Count
1-Very interested	26
-2	15
3-Moderately interested	19
-4	1
5-Not interested	4

The authors’ presentations and LibGuide explained that while Scopus could measure how many times their work has been cited, the database excludes many journals and is much less effective for obtaining citations appearing in monographs. Due to these limitations for Scopus, Google Scholar was recommended as the most comprehensive resource for locating citations because monographs are included in addition to indexing the greatest number of journals. However, the authors provided the caveat that Google Scholar lacks transparency about the publications that are indexed, and it includes citations from lower quality journals and working papers. When professors asked us about the number of times their work had been cited, they often expressed frustration that their most recent works had not received any citations. The authors explained that due to the lengthy peer review process, it often takes at least two years for articles to receive very many citations. While the project initially focused on scholarly citations, in response to these concerns the LibGuide and later presentations were updated to include altmetrics indicators which provided more timely metrics on the impact of scholarly works. Research from Brown (2014) explained that many librarians assist faculty who are up for promotion with identifying how often their work has been cited. While Brown’s article did not survey faculty about receiving assistance from librarians with locating citations, the Ithaka S+R Faculty Survey (Wolff-Eisenberg, Rod, and Schonfeld 2016) revealed that just under 20 percent

of respondents indicated that their libraries assist professors with assessing the impact of their work.

How likely are faculty to view the library as a resource for help with the publishing process?

A major goal of the faculty publishing initiative was to promote the library as a resource for assisting faculty with locating journals to publish in, evaluating the prestige of journals, and discovering how often their work has been cited. Faculty were asked if they were more likely to view the library as a resource for help with the publishing process after hearing the presentation on faculty publishing resources. If faculty did not attend the presentation, the survey used skip logic to ask faculty if viewing the LibGuide on faculty publishing made them more likely to view the library as a resource for assistance with the publishing process. Combining the results of these two questions revealed that about two-thirds of the professors now viewed the library as a resource for help with publishing (Table 6).

Table 6. Likelihood of viewing the library as a resource for help with the publishing process.

	Based on presentation	Based on LibGuide
Yes	26	6
No	11	0
Not Sure	6	0

The LibGuide on faculty publishing resources has been viewed more than 2,500 times since being introduced to the faculty in August, 2014. Therefore, there is evidence of faculty interest in these services.

Since designing the LibGuide and presenting at divisions, the researchers have experienced an uptick in questions from faculty on topics such as selecting journals and citing

sources. Prior to the faculty publishing initiative, librarians answered about three to four questions a year on topics such as journal metrics and scholarly citations. Pepperdine Librarians have answered over 40 research questions relating to the publishing process between August 2014 and January 2017 since creating the LibGuide and reaching out to faculty.

Other published surveys have also inquired about the likelihood that faculty will turn to the library for help with publishing questions and bibliometrics. According to the Ithaka S+R 2015 faculty survey (Wolff-Eisenberg, Rod, and Schonfeld 2016), 30% of faculty think that library assistance with assessing the impact of their work is “highly valuable”, and 25% of professors responded that library help with finding out where to publish their work is “highly valuable.” Research from DeSanto and Nichols (2017) asked professors where they seek help with scholarly metrics on campus, and the highest percentage (41%) identified the library, which surpassed other leading sources such as colleagues (22%) and the Internet (8%).

In addition to the positive survey results, the authors received requests for help with bibliometrics and publishing. For example, several months after the initial presentation, one of the academic divisions invited the authors to provide a short workshop on selecting journals. Another noteworthy request asked the librarians to determine how many times tenure-track faculty in one of the divisions had their works cited.

Study Limitations

Because Pepperdine University is a doctoral university with moderate research activity according to the Carnegie classification system, the findings of the current study might not be applicable to universities with higher levels of research activity. Moreover, the current study only surveyed faculty at Pepperdine’s Seaver College which primarily consists of undergraduate students. Faculty at Pepperdine’s other schools primarily work with graduate and professional students

and might have different levels of awareness and interest in bibliometrics and publishing support from librarians.

Another limitation of the current study is that the survey focused on faculty knowledge and attitudes toward bibliometrics which emphasize scholarly citations and journal level metrics. The primary reason for the initial emphasis on bibliometrics is that prior to the faculty publishing project the authors received questions about evaluating the prestige of journals and identifying how often faculty works were cited. As the faculty publishing initiative evolved, altmetrics resources were incorporated into presentations and the LibGuide, but the survey did not contain any questions about altmetrics. Future research efforts will survey faculty attitudes and knowledge toward altmetrics. In addition, surveying the importance given to altmetrics by academic departments and tenure committees will be relevant in assessing if faculty interest in altmetrics is from professional advancement or curiosity. Research from DeSanto and Nichols (2017) indicated that over 70% of faculty they surveyed were either “not familiar” or only “marginally familiar” with altmetrics, and the results of their survey suggested that librarians have a possible role in raising faculty awareness of altmetrics.

Implications

The results of the survey indicated that the majority of Pepperdine faculty have both an interest in and awareness of bibliometrics. The presentation and LibGuide provided tools and discussed important considerations for faculty, such as journal quality, acceptance rates and journal rankings, when they select journals for publication. Even faculty who have prior understanding of bibliometrics can gain a deeper understanding of publishing resources from the LibGuide. For example, a professor who was previously aware only of the Impact Factor from JCR could learn

about additional resources for evaluating journals. In a similar vein, a professor who was vaguely aware of predatory publishers might have struggled to identify potentially predatory journals.

Librarians have experience evaluating journals and assessing the impact of scholarly works, and the survey revealed that faculty are interested in taking advantage of these skills. However, without concerted outreach efforts, professors might be unaware that librarians can provide these services. Prior to the faculty publishing initiative, some faculty would ask colleagues for advice with journal selection, and the librarians would occasionally be asked to evaluate journals and determine how many times professors' works were cited. However, there was no formalized effort at Pepperdine University to raise awareness of trends such as impact factors and scholarly citations. By launching the faculty publishing initiative, the authors successfully established the library as an authority on bibliometrics and altmetrics. In recent years, professors at Pepperdine have been urged to increase their scholarly output, and the faculty publishing initiative was a great opportunity for librarians to reach out to faculty and align themselves with the strategic direction of the University.

The authors realized that the project's heavy emphasis on journal publishing and scholarly citations was a better fit for the social sciences and natural sciences than the humanities and fine arts. Future steps will involve meeting with faculty in the humanities and fine arts to determine if there are altmetrics indicators that could better assess their scholarly works. For example, rather than focusing on scholarly citations, librarians could introduce professors to altmetric indicators such as reviews from Goodreads, library holdings in WorldCat, and readers in Mendeley to evaluate the impact of monographs.

An important future expansion of the project will be to learn more about the tenure requirements of Pepperdine's academic departments. This will help tailor content to the

particular needs of each academic division. The authors could even work with academic divisions to help establish criteria for journals that will be acceptable for faculty seeking tenure and promotion. In addition, ongoing research will discuss the types of metrics that will be most helpful in evaluating the impact of scholarly works for specific disciplines.

Due to the rapidly changing landscape of scholarly publishing and metrics, the LibGuide on faculty publishing is likely to be an important campus portal for publishing issues and trends. For example, the guide updates faculty about important trends such as the removal of Beall's List of Predatory Publishers. Another example of an important new development is the CiteScore journal ranking metrics from Elsevier. The guide provides information on this new resource and provides cautionary advice. An important goal is to take a neutral issue on scholarly metrics and give faculty the information to make informed choices.

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Appendix: Survey Questions

1. What is your academic division?

If you do not already have a journal in mind, which resources do you use to locate journals to publish in (Select all that apply)?

- Google Scholar
- Library article databases
- Cabell's Directories of Publishing Opportunities
- Ask colleagues for advice
- Publisher websites

- Ask librarians for advice
- Other

2. I am aware of the prestige (as measured by citation metrics) of the journals that I have published in:

- Yes
- Not Sure

3. I am interested in knowing how often my work has been cited by other researchers:

- 1- Very interested
- 2-
- 3- Moderately interested
- 4-
- 5- Not interested

4. Thinking of the students at Pepperdine, how important are resources that assist undergraduates in finding suitable journals to publish in?

- 1- Very Important
- 2-
- 3- Moderately important
- 4-
- 5- Not important

5. Were you present for the presentation by the librarians on faculty publishing resources?

- Yes
- No
- If No is selected, skip to 11

6. After the presentation on faculty publishing resources, are you more likely to view the library as a resource for assistance with the publishing process (e.g. selecting journals to publish in, evaluating the prestige of journals, and finding out how often your work has been cited)?

- Yes
- Not sure
- No

7. Prior to the presentation on faculty publishing resources, were you aware of predatory publishers that publish low quality academic journals?

- Yes
- No

8. As a result of the presentation on faculty publishing resources, are you more aware of resources other than Thomson Reuters' (ISI) impact factor for evaluating the prestige of journals?

- Yes
- Not Sure
- No

9. How easy was it to locate the information you needed on the InfoGuide on faculty publishing resources (<http://infoguides.pepperdine.edu/facultypublishing>)?

- 1-Very Easy
- 2-
- 3-
- 4- Difficult
- NA

10. Have you viewed the InfoGuide on faculty publishing resources

(<http://infoguides.pepperdine.edu/facultypublishing>)?

- Yes
- No
- If No is selected, skip to the end of the survey

11. After viewing the InfoGuide on faculty publishing resources, are you more likely to view the library as a resource for assistance with the publishing process (e.g. selecting journals to publish in, evaluating the prestige of journals, and finding out how often your work has been cited)?

- Yes
- Not sure
- No

12. Prior to viewing the InfoGuide on faculty publishing resources, were you aware of predatory publishers that publish low quality academic journals?

- Yes
- No

13. After viewing the InfoGuide on faculty publishing resources, are you more aware of resources other than Thomson Reuters' (ISI) impact factor for evaluating the prestige of journals?

- Yes
- Not sure
- No

14. How easy was it to locate the information you needed on the InfoGuide on faculty publishing resources (<http://infoguides.pepperdine.edu/facultypublishing>)?

- 1- Very Easy
- 2-
- 3-
- 4- Difficult