
Emily K. Chan
San Jose State University, emily.chan@sjsu.edu

Suzanna K. Conrad
Towson University

Daina E. Dickman
University of Washington

Nicole D. Lawson
California State University, Sacramento

Follow this and additional works at: https://scholarworks.sjsu.edu/faculty_rscac

Part of the Higher Education Commons, and the Scholarly Communication Commons

Recommended Citation

This Conference Proceeding is brought to you for free and open access by SJSU ScholarWorks. It has been accepted for inclusion in Faculty Research, Scholarly, and Creative Activity by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.
Measuring Campus Engagement for Scholarly Communication Services

A Mixed Methods Study of U.S. Public Teaching Institutions

Emily K. Chan¹, Suzanna K. Conrad², Daina E. Dickman³, and Nicole D. Lawson⁴
¹San José State University; ²Towson University; ³University of Washington; ⁴California State University, Sacramento

Introduction

Over the past several decades, new technologies and paradigms have impacted the creation and sharing of work; scholars across all fields have seen changes in research output, publication, and preservation of the scholarly record, as well as emergent publishing models and an emphasis on the measurement of impact. Libraries have broadly defined their efforts to support the research and dissemination lifecycle as “scholarly communication” services. Despite investing significant resources -- personnel, technological investments, and budget -- to develop scholarly communication programs, evaluation of the outcomes and impact of these activities has largely consisted of quantitative measures, like consultation counts, workshop attendance, or repository growth and usage statistics. A more comprehensive or holistic approach to scholarly communication assessment has remained elusive.

The literature indicates a lack of consensus on performance indicators for scholarly communication services. Criteria have ranged widely and have focused on multiple and disparate elements. For the institutional repository (IR), Cassella (2010, pp. 211-219) advocates the application of various perspectives to holistically evaluate its performance. A user perspective provides context on the level of engagement from the targeted community, where important metrics may include the number of researchers who are contributing to the IR, content distribution among disciplines or departments, and download counts. Internal measures could include annual deposits to the IR, availability of items in full-text, and active collections, while the financial perspective determines the cost per deposit and cost per download. Finally, Cassella (2010, pp. 219-220) advocates staffing headcount and associated personnel and training costs as important data points when considering the learning and growth perspective. Even IR data, widely seen as objective and straightforward, may not be easily compared, due to platform differences (Macintyre and Jones, 2016, p. 100) and undercounting (OBrien et al, 2016, p.856).

To ensure capacity to serve new scholarly communication services, many institutions have begun to strategically plan and prepare their organizations and workflows to accommodate these new activities. Brown et al (2018, pp. 340-341) outline the various ways in which University of Queensland Library modified their organizational structure to facilitate expanded researcher services. Leveraging their existing liaison system with employees that had more functional responsibilities, the library was able to increase staffing for their program and establish strong intra-organizational communication channels to deliver research support services. Bjork, Cummings-Sauls and Otto (2019, p. 23) detail how their two libraries transitioned from a full-text institutional repository to including metadata-only records as a method to improve campus awareness of scholarly research, reduce information silos, increase visibility of scholarly research beyond those that were available in full-text, collocate campus publications in one centralized location, and facilitate a comprehensive collection of campus scholarly output. Craft and Harlow (2020, p. pp.178) present their library’s interdepartmental efforts to provide systematic and programmatic training to faculty and students on open access, researcher identity management, scholarship metrics, scholarly communications, research data management, and citation management through the open source program Zotero. A common tenet was that scholarly communication support required awareness and some measure of facility among library employees who interfaced with faculty, staff, and students.

Additionally, outreach and promotion efforts serve vital functions and reflect a maturity of services. Wu et al (2019, p. 14) outline a comprehensive plan for the expansion of their institutional repository services, including significant investments in marketing, promotion, and education of campus stakeholders of the IR’s capabilities. Krier, Premo and Wegmann (2019, pp. 171-172) emphasize the roles that librarians can play as advocates and educators in improving scholarly communication
topics awareness to campus constituents: one-shot instruction to students on varied topics, including information creation, ethical use of information, and the variability of access to information; workshops to faculty on research productivity numbers, copyright, and fair use; and improvements to the library discovery system to signify availability to freely open access materials.

It is clear that academic libraries are actively responding to campus scholarly communication needs through critical investments in institutional repositories, promotion and education of library services and programs, and even in restructuring their organizations to further facilitate this work. Despite these activities and general discussions of metrics and reporting since the inception of institutional repositories, the library community has not put forward national standards or best practices.

Recognizing this gap, Sacramento State University and San José State University sought and were awarded an Institute of Museum and Library Services (IMLS) National Forum grant (LG-35-19-0066-19) to assess scholarly communication programs at “M1: Master’s Colleges and Universities -- Larger programs” institutions of higher education in 2019. From 2019-2020, an assortment of library practitioners, campus stakeholders, and assessment experts discussed engagement with scholarly communication programs and the possible evaluative criteria for reporting on their outcomes. This conference proceeding provides the results of the grant’s conducted focus groups, interviews, and national forum on scholarly communication assessment.

Purpose / research question

Academic libraries have increasingly and significantly invested in scholarly communication services and programs through the allocation of staffing, resources, and establishing institutional repositories. Despite these expenditures, quantifying and contextualizing the outcomes or impact of these scholarly communication activities continue to be ambiguous and inconsistent.

To better understand the full range of perspectives on the assessment of scholarly communication, librarians, campus stakeholders, and assessment experts participated in focus groups, interviews, or a forum to discuss engagement with library services and programming that support the research lifecycle. Furthermore, participants were asked to identify the metrics that might be used to benchmark growth and development of scholarly communication programs. This paper will present the metrics suggested by these different groups, common themes, and considerations in the assessment process.

Design, methodology or approach

Data collection for this IMLS-funded project was composed of three phases with distinctive audiences: 1) focus groups with scholarly communication librarians, 2) individual interviews with non-library campus stakeholders from various offices of research, sponsored programs, or research development and grants support, and 3) an interactive, online National Forum that featured planned presentations and moderated breakout sessions. Participants were recruited to meet the eligibility criteria of being currently or formerly employed at a Carnegie classification of “M1: Master’s Colleges and Universities -- Larger programs” institution of higher education, though there were a few assessment experts whose backgrounds extended beyond the M1 experience.

During Phase 1, one in-person and two virtual focus groups were convened and conducted with twenty scholarly communication librarians and practitioners. Participants responded to a short questionnaire listing the variety of scholarly communication services offered at their institutions and rated them in terms of maturity of service and staffing models. A facilitator then led the focus groups to discuss scripted questions using the University of Central Florida (UCF) research lifecycle diagram (see Figure 1) and individual examples compiled during the survey as frameworks. Focus group participants answered the following questions:

- How are the library’s scholarly communication programs and services supporting campus goals?
- Are your library’s assessment efforts addressing scholarly communication?
What are the success metrics for your campus’ scholarly communication services?

Figure 1. University of Central Florida Research Lifecycle Diagram

(https://library.ucf.edu/about/departments/scholarly-communication/overview-research-lifecycle/)

As a second phase of the research, one-on-one interviews with thirteen campus stakeholders were conducted in Zoom using a guided script and the UCF research lifecycle diagram. Campus stakeholders represented administrative personnel who supported research, grant development, and post-award compliance activities. They responded to the following questions for every stage of the UCF lifecycle:

- How is the library providing services to support this stage?
- What are ways in which the library may support this stage?
- What might be some measurable outcomes to that service?
- What evaluative data generated by the library might be particularly useful to you?

In the third phase of the project, the virtual Scholarly Communication Assessment Forum (SCAF) was held; several Phase I focus group participants presented services from their institutions and selected Phase II campus stakeholders served on a panel. Over the course of the two-day forum, forty-three attendees engaged and discussed the myriad of tangibles and intangibles that influence the assessment of scholarly communication services. Again, the UCF research lifecycle diagram was used to frame the conversations. In breakout sessions, SCAF participants were asked to consider:

- How do we measure scholarly communication intangibles?
- How could rubrics enable and facilitate academic libraries’ ability to identify and flexibly respond to their local campus’ needs?
- What elements could appear on an evaluative rubric for scholarly communication development and success?
All phases of the project were recorded. The authors analyzed transcribed interviews, developed a normalized codebook, and determined themes and metrics drawn from the collected qualitative data.

Findings & limitations

Across all phases of the study, participants shared their recommendations for elements that could and should be accounted for when reporting on the success of scholarly communication programs and services. An analysis of the collected qualitative data indicated that suggested metrics and criteria revolved around three thematic areas: Education & outreach, Support for open access, and Impact.

Education & outreach

Education and outreach were the most prominent discussion points among all participant groups. It was generally understood by all scholarly communication librarians, campus stakeholders, and SCAF participants that reaching out to faculty and educating them on evolving trends, their rights, and new software platforms would be foundational to fulfilling any strategic research initiatives.

In the focus groups, the scholarly communication librarians shared a range of services and programs offered at their institutions that largely centered on providing constituent groups with knowledge and information, including group (workshop) and individual instruction (consultations) on authors’ rights, “Where to Publish,” searching funding/grant opportunities databases, and researcher identity management, like ORCID identifiers. Informational pages on these topics that augment workshop instruction were also identified as resources with their pageviews as a potential metric.

To assess workshops and educational consultations, scholarly communication librarians suggested tracking the following elements:

- Number of sessions offered;
- Attendance, knowledge acquisition (via pre- and post-surveys), affect (satisfaction), and confidence in carrying out one’s research agenda, and follow-up requests for more information and their corresponding complexity;
- Presentation topics; and
- Collaboration or cosponsorship with campus partners.

Beyond the immediate assessment of the value of and response to an individual workshop, focus group participants emphasized that the latter two suggested criteria -- presentation topics and collaboration or cosponsorship -- indicated the maturity of programming and the extensiveness of campus relationships. A variety of workshop topics reflects a depth and breadth of librarian expertise, as well as a recognition of that experience and a corresponding faculty/campus need for that rich content. Collaboration or cosponsorship reveal strategic relationships with other campus units that support the research and scholarship enterprise, and that value working with the library. Focus group participants stated that every workshop was an opportunity to reinforce perceptions of librarian expertise and value, and contribute to ongoing collaborative efforts with campus units.

External stakeholders expressed during their individual interviews similar metrics about workshop attendance and user satisfaction (e.g., counts, further requests for consultations, needs met, would attend again or recommend to a colleague). They additionally honed in on the funding database Pivot, and DMPtool for data management plan (DMP) creation. Specifically, external stakeholders wanted to know if faculty were building better searches in Pivot and finding more relevant funding opportunities, and knowing how to respond appropriately to the data management plan requisite to many grant applications. With the ease of use in creating DMPs and a stronger awareness of the funding landscape, external stakeholders suggested higher grant submissions and awards as potential evaluative metrics. These would stem in large part from improved proposals that featured stronger literature reviews, using impactful citations in connecting one’s work to the problem statement, and robust DMPs that the campus could reliably support. External stakeholders expected follow through,
as well, citing the need for faculty to fulfill their DMP responsibilities and ensure that datasets and project output were deposited and preserved.

The external stakeholders also struggled with assessing the short-term and long-term effects of educational and outreach activities. In the short term, external stakeholders sought to collect baseline information on faculty perceptions of feeling supported in what many acknowledge to be a complex process. Some longer term considerations included training the faculty to holistically consider the grant application process and the multi-level approvals required; a metric echoed by external stakeholders was meeting internal and external deadlines for proper proposal routing.

Another educational area of focus for external stakeholders was “Where to Publish” workshops, as they placed a lot of emphasis on faculty’s understanding of which venues would be most appropriate for their work to minimize rejections, maximize acceptance rates, shorten time to publish, and improve dissemination opportunities. Along with these metrics, external stakeholders suggested measuring the quality of the journals where faculty ultimately published their work, tracking citations of the output, and analyzing web analytics and page views.

External stakeholders emphasized that the library was uniquely positioned to assist with establishing learner communities, archiving of unique local content (e.g., student symposia), convening community gatherings to celebrate faculty achievement, and educating faculty and administrators on the value of a campus-wide open access policy. Having a campus-wide open access policy was consistent with advocacy for author rights, ensuring enduring impact on local and global communities, and promoting awareness of faculty scholarship for further cross-pollination, interdepartmental collaboration, and synergies.

Among the SCAF participants, availability of library-supported software programs and the corresponding ability for librarians to support the use of those programs were cited as important assessment metrics. These included databases for literature review, funding opportunities and finding collaborators, citation management, and citation abstracting and indexing to obtain research impact measures. In facilitating the use of these resources, a point of tension was identified in using freely available training materials or creating local educational materials, and the resulting opportunities and savings from one’s selection.

Support for open access

Another major theme from the constituent conversations involved support for open access. Depending on the group consulted, open access was a narrow or wide topic area for action. Among the focus group participants, discussions centered on benchmarking and assessment of the following elements:

- Availability of a campus institutional repository (IR), data repository, or journal hosting capabilities;
- Improved awareness of these services, their associated brands, and corresponding positive associations with the platforms;
- Capability to create faculty author profiles and the associated uptake of this service;
- Higher faculty deposits of both publications and datasets to the IR, and facility with the platform, particularly if faculty are encouraged to self-deposit and self-mediate their works; and
- Greater campus support for open access, including open access journals, open educational resources (OER) creation and adoption, uptake of open access fund programs, and local campus-wide policies on open access.

With open access initiatives, metrics identified for tracking included deposit counts, download counts, distribution of deposits across departments, number of open access journals hosted, types of open access journals hosted and populations served (e.g., undergraduate and graduate student researchers), and OER utilization with its corresponding savings to students.

Some focus group participants were heavily involved in educating their campus constituents about open access to dispel myths about quality and to further efforts on passing an institutional level, Harvard-style open access policy. Participants
acknowledged that their efforts to sustain continuous educational conversations about the scholarly publishing ecosystem were significant investments, but did not lend well to metrics and reporting.

Several focus group participants indicated that their campuses provided institutional support of open access through article processing charges (APC) waivers. In these cases, the metrics identified were dollars expended for the APCs, number of APCs funded, article downloads, and citations of the open access articles.

When referring to open access topics, external stakeholders focused on DMPs and IRs to facilitate compliance with open access/data mandates. With DMP support through a service like DMPtool, faculty could adapt existing templates for use in their own grant applications. An important metric included evaluation of reviewer responses for any mention of deficits or strengths in the data management section. Additionally, external stakeholders emphasized that the number of datasets placed in the repository, in accordance with funder mandates, could be another important metric, as well as their eventual use and access by the global community.

The SCAF participants echoed many of the metrics already identified, including existence of open access mandates, analyses of IR publication and data deposits, download counts, and understanding faculty behaviors through the lens of discipline distribution. SCAF participants emphasized the need to approach metrics with sensitivity to disciplinary scholarly and publication norms, given that they also impact promotion and tenure system valuations. There was some hesitation about how research impact activities could be misconstrued and, ultimately, serve to reinforce biased systems.

Integration with library systems and discovery layers were also cited as important factors to facilitate accessibility, visibility, and findability. SCAF participants emphasized how open access systems and platforms could help in furthering undergraduate and graduate researchers’ understanding of author rights, intellectual property, and the larger scholarly publishing ecosystem. They also expressed how education could help to equalize or surface important conversations between faculty researchers and their students who may be contributing to their research projects.

Impact

Impact was another frequent discussion topic among Phase I, II, and III groups. Among the scholarly communication librarian focus groups, impact was contextualized in the number of items that were available in the IR for downloading (more open-to-read items), the number of downloads in a given time period (as a proxy of demand), and the geographic distribution of those downloads (to demonstrate global and local, community impact). Other metrics expressed as important in the scholarly communication practitioner groups were the number of accessible (American with Disabilities Act of 1990-compliant) documents, and a notable emphasis on education, creation, and adoption of OER. A number of focus group participants cited the tremendous impact that OER could have on changing faculty perceptions and acceptance of open access materials, the sizable student savings that widespread OER adoption could realize, and addressing student equity concerns through free access to course materials.

External stakeholders also emphasized impact, as measured by the quality of grant proposals, the journals to which faculty publish, and the ability for individuals to access research output.

Limitations

In Phase II of our study, external stakeholders were selected from units that represent offices of research, sponsored programs, or grants development and support. Other external stakeholders that represent important functions of the academy, like centers for faculty development or teaching and learning, would likely have resulted in different metrics and areas of emphasis.

Additionally, external stakeholders’ responses may have been tempered by their lack of awareness or reticence in providing success criteria for another unit. Numerous external stakeholders expressed their lack of familiarity with the entire suite of services offered from the library and felt it inappropriate to determine another unit’s priorities.
Conclusions and application of the results

Poor structural supports for reporting

Focus group participants pointed out the inadequacies of library reporting. For example, a scholarly communication librarian would record one presentation in the library’s statistical reporting program for a workshop on the retention of author rights, negotiation during the publishing process, and the application of a Creative Commons license to a work. These activities, though, could be quite impactful in their subsequent application. Faculty could learn about their rights and, through that education, become empowered to request some measure of rights retention from the publisher. In reserving some rights, they could further assign a Creative Commons license to more widely disseminate their work, which could lead to greater visibility, higher readership, and overall impact. A common complaint was that the tally of one presentation in the library’s records was a short-term data point that would ultimately fail to capture the potential long-term effects of that education. This reporting inadequacy is inherent to many of the elements of scholarly publishing and communication, particularly in the areas of improved understanding of author rights, online identity management, data management, and perceptions of open access, where author behaviors take time to manifest, materialize, and yield demonstrable results. Libraries have lacked a comprehensive reporting system that accommodates the delay in these processes.

Moreover, scholarly communication librarians’ efforts in Education & Outreach -- providing workshops, presenting, and having 1:1 consultation meetings -- were generally subsumed by the library’s larger reporting framework of counting. That is, many librarians indicated that their scholarly communication activities were reported in the overall instructional statistics and there was little differentiation between services to students and services to faculty. Scholarly communication librarians cited a lack of awareness of how the scholarly communication metrics might be used programmatically and, consequently, some opted to not collect them at a more granular and information-rich level.

External stakeholder recommendations and areas of tension for libraries

External stakeholders identified areas of need that libraries could consider in their future planning, including preservation of annual reports and the tail-to-end reporting of awarded grants, the deposit of datasets and resultant publications, and the subsequent impact or use by the local and global communities. Additionally, external stakeholders pointed out that there is significant support for funded research, but unfunded research and scholarship are largely absent from conversations. There is a tremendous need to track and learn of all faculty interests, as institutions of higher education seek new and potential opportunities with donors, industry, and other funding agencies. Library efforts in this arena would help to provide a centralized information source on an institution’s activities, content, and reach, which could be used to contextualize the return on investment from structural and formalized assistance, like course releases. Connecting impact to high performers to ensure continued support was highlighted as important; it was recommended that libraries provide databases and education on citation and alternative metrics for faculty.

Librarians who participated in the focus groups and SCAF cautioned against the wholesale adoption of metrics as a proxy of value and importance, particularly when allocating resources and making promotion and tenure decisions. Using metrics in an uninformed manner could weaponize the library’s efforts to the detriment of many faculty. For example, low journal impact or citation numbers do not mean that one’s work is not valuable. Librarians noted that there is tension between the perception of the library as an objective and neutral institution and its adoption and education of systems that are not comprehensive nor always valid.

External stakeholders recommended that libraries be more proactive and engage with faculty first. Recognizing that libraries may be among the first units to learn of new publications (via alerts), there is an opportunity to promote faculty adoption of scholarly communication services and improve campus engagement. External stakeholders expressed some confusion about the discipline-specific liaison librarian system and its ability to meet the challenges of the evolving research enterprise. Finally, external stakeholders recognized that many library services and programs targeted students and that faculty acceptance and use was much lower. Improved promotion and marketing were suggested to ameliorate this phenomenon.
Application of the results

This IMLS-funded grant facilitated the collection of scholarly communication librarian focus group discussions, structured interviews with campus stakeholders, and a national convening on assessment of scholarly communication services and programs. Participants from across the research lifecycle were asked to provide their perspectives on contextualizing and measuring campus engagement with library services. Continued refinement of library scholarly communication services and programs can be achieved through ongoing conversations and collaboration with campus constituencies. This paper brings together suggested metrics and their concurrence among key constituent groups: scholarly communication librarians, external stakeholders, and assessment experts. Further, this paper provides context on how disparate campuses are supporting their local scholarly communication needs, as well as suggestions from external stakeholders on how library services may evolve and develop to support all facets of the institution’s scholarly and research enterprise.

The IMLS-funded white paper and rubrics that were developed from the convening of the SCAF will be disseminated in January 2022. It is highly recommended that those who are interested in applying flexible rubrics to evaluate their scholarly communication services and programs consult these materials when available. Please refer to the program website for updates: https://library.csus.edu/scaf. This project was made possible in part by an Institute of Museum and Library Services (IMLS) National Forum grant (LG-35-19-0066-19).

References


