Committed to assisting research and academic libraries in the continuous improvement of management systems, ARL has worked since 1970 to gather and disseminate the best practices for library needs. As part of its commitment, ARL maintains an active publications program best known for its SPEC Kits. Through the Collaborative Research/Writing Program, librarians work with ARL staff to design SPEC surveys and write publications. Originally established as an information source for ARL member libraries, the SPEC Kit series has grown to serve the needs of the library community worldwide.

**What are SPEC Kits?**
SPEC Kits contain the most valuable, up-to-date information on the latest issues of concern to libraries and librarians today. They are the result of a systematic survey of ARL member libraries on a particular topic related to current practice in the field. Each SPEC Kit contains an executive summary of the survey results; survey questions with tallies and selected comments; the best representative documents from survey participants, such as policies, procedures, handbooks, guidelines, Web sites, records, brochures, and statements; and a selected reading list—both print and online sources—containing the most current literature available on the topic for further study.

**Subscribe to SPEC Kits**
Subscribers tell us that the information contained in SPEC Kits is valuable to a variety of users, both inside and outside the library. SPEC Kit purchasers use the documentation found in SPEC Kits as a point of departure for research and problem solving because they lend immediate authority to proposals and set standards for designing programs or writing procedure statements. SPEC Kits also function as an important reference tool for library administrators, staff, students, and professionals in allied disciplines who may not have access to this kind of information.

SPEC Kits are available in print and online. The executive summary for each kit after December 1993 can be accessed online free of charge. For more information visit: [http://www.arl.org/publications-resources](http://www.arl.org/publications-resources).
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EXECUTIVE SUMMARY

Introduction
Traditional measures to quantify scholarly outputs and impact based on “counts” (number of publications, number of citations, journal impact factor scores, etc.) are not sufficiently robust for new forms of digital scholarship processes, nor are they meaningful for specific audiences such as the general public. Those measures are now being supplemented with other metrics, for example usage or downloads on publisher, repository, or other journal platforms; the h-index; or non-citation metrics that represent social or academic engagement of scholarly processes by scholarly and non-scholarly audiences. The proliferation of these new metrics is mirrored by the emergence of new resources that provide tools for tracking and reporting scholarly outputs and impact. Understanding the full array of newer metrics and tools and how they play a role in assessment of scholarly output and impact will become increasingly important for research libraries as the metrics become more widely available and employed by funding agencies, publishers, academic departments, and institutions.

In light of the movement towards reporting scholarly outputs and impact to demonstrate tangible and meaningful outcomes, the purpose of this survey was to obtain a snapshot of current activities undertaken by ARL member libraries in the assessment of scholarly output and impact, provide examples for other research libraries to emulate, and identify trends that may represent promising indicators for transformative service models for ARL libraries. The survey was distributed to the 125 ARL member libraries in early January 2015. Seventy-nine libraries (63%) responded by the February 17, 2015 deadline.

Services
Seventy-six of the respondents (96%) reported that their library provides services that relate to scholarly output assessment, such as reports, resource guides, consultation, and education. Two respondents reported that they are considering developing services, and one responded that another unit in the institution provides these services.

Consultation or guidance on bibliometrics is the most common library service (70 respondents, or 92%), followed closely by consultation on article-level metrics, database usage for tracking of scholarly outputs (79% each), and author disambiguation (75%). The majority of respondents also provide or plan to provide publication/citation reports (54 respondents) and institutional repository reports for authors (61 respondents). Some libraries are offering graphs or charts for illustrative purposes (20 respondents).

Other examples of services were impressive. One library reported that, “Liaison librarians do occasional large-scale bibliometrics projects, tracking faculty publications for a center or department.” Another reported offering bibliometrics and best practices “based upon specific disciplines and fields.” Other services include consultation on faculty credentialing, assistance with scholarly network profiles and identities, tips to enhance collaboration among scholars, text analysis, and guidance on various products such as ORCID, Mendeley, Altmetric.com, Scopus, and Web of Science. Most of the libraries offer scholarly output assessment services to all library users. Twenty-two respondents (29%) limit services to specific user groups, typically affiliated faculty, students, researchers, and staff.
There appears to be no single universal service model for scholarly output assessment services. The majority of respondents reported that services are provided informally on an ad hoc basis rather than in a coordinated fashion within the organizational structure of the library. As one commented, “It is a ‘toe in the water,’ not a fully developed service.” The service model for scholarly output assessment services appears to be in the initial phases of development and perhaps represents a promising indicator of an emergent model, “a rapidly growing area for libraries,” as one respondent noted. Others commented that, “Assessment will be a priority as it develops in areas of our new organizational structure” and “We recognize the importance of services in this area.” Some respondents also reported plans to “develop a more well-defined set of services in this area” and to hire new staff devoted to scholarly output assessment services.

**Training**

The majority of responding libraries (49 or 64%) currently provide training related to scholarly output assessment. Three reported that training is in development, and 18 others are considering it. Training includes classes, workshops, informal one-on-one training sessions, drop-in sessions, brown-bag sessions, special events, and “one-on-one conversations with faculty.” Some training is offered on a regular basis; others are ad hoc as requested by users. Only seven respondents (9%) have no plans to offer this type of training. One respondent noted that “a more integrated approach is planned for development in FY16 planning cycle.”

A wide variety of course titles was reported:

- Article Level Metrics; Building Your Academic Profile; Citation Analysis; Citation Management; Collaboration; Communicating Research; Digital Humanities; Data Management; Determining Your Scholarly Impact; Scholarly Impact: Traditional and Alternative Metrics; Basics of Citation Metrics; Impact Measurements; MyResearch graduate series; SCOPUS: A Tool for Authors; Enhancing the Visibility and Impact of Your Research; Who is Citing Your Work?; Journal Impact Factors and Citation Analysis; Measuring Your Scholarly Impact; Library Tools for the Publication Cycle; to name a few. (See Q11 in the Survey Questions & Responses section for others.)

Content descriptions for training included “highlighting one or a mix of the following: overview of bibliometrics/altmetrics, h-index and Eigenfactor, Scopus and Web of Science comparison, Google Scholar, and InCites” and the “significance of h-index for scholarly output assessment.” One description of a workshop included learning outcomes: “This hands-on and practical workshop will focus on the three areas of article, author, and journal assessments. Participants will become familiar with different multifaceted citation analysis using a variety of metrics and their implications.”

Training is provided to faculty, students, researchers, and administrative staff. Some specific target audiences reported by respondents include media relations staff, graduate students, research coordinators, and early-stage faculty. Some training efforts are also tailored for specific areas of study such as science, health science, humanities, and education.

**Software and Resources**

Survey respondents recommend a variety of scholarly output assessment software and related resources (subscription and free) to library users. The most frequently recommended resources are bibliographic citation databases, such as Web of Science, Google Scholar, and Scopus, and resources that provide journal metrics, such as Journal Citation Reports. Some respondents reported recommending or using resources that capture non-citation data such as ImpactStory (36 respondents), Altmetric.com (30 respondents), and Plum Analytics (7 respondents plus another 22 that are considering it). A few respondents recommend visualization software, such as NodeXL, Tableau, Sci2, Gephi, and Wordle. Forty-six respondents (61%) reported that they do not do cost sharing for subscription resources. Twenty-nine (39%) reported sharing costs with campus administration units such as the Office of the Provost, Office of Research, or the Office of Institutional Analysis.

**Staffing**

The survey asked respondents to list job titles for librarians involved with scholarly output assessment
services. Sixty-two respondents listed 152 job titles. The majority of respondents indicated that scholarly output assessment services are performed by subject or liaison libraries. Seventy-two titles were for liaison, subject, or departmental librarians. One respondent commented that existing “liaison librarians provide many of these services to their constituents as part of their professional assignment.” Fifty-one titles were related to scholarly communications, repository, or digital scholarship/research. Other titles were administrative, generic, or related to data, collection, or learning (see Q17).

Sixteen respondents reported that they are hiring new staff specifically for scholarly output assessment services. One library reported, “We currently are accepting applications for a new position of Scholarly Assessment Librarian.” Another is “currently building an Office of Research to support the research activities of faculty and students. This will include increased attention on scholarly analytics and collaboration with other units on campus.” Twenty libraries reported that they are reallocating staff. One commented, “It is not so much the reallocation or addition of staff as the realignment of existing subject specialist roles to support bibliometric analysis and publication analytics.”

The survey also asked what skill sets staff need to provide scholarly output assessment services (see Q13). Many respondents reported that librarians needed to learn about new resources or methodologies but few mentioned formal training. Some skills noted were data analysis and management; executing data visualization; understanding of different metrics such as the h-index, altmetrics, and the Eigenfactor, and their limits and potential applications; being aware of discipline specific scholarly output trends; and creating narratives based on analyses, to name a few. One respondent noted two specific skill sets: “having to spend time learning the new tools that are entering the market and staying vigilant on top of new trends.” Proficiency with the following resources was noted: Excel, Scopus, Web of Science, Google Analytics, Altmetric.com, ORCID, ImpactStory; Plum Analytics, InCites, Google Scholar, and social network analysis tools.

As to how library staff acquire skill sets, some respondents reported that library staff are “self-directed” and “self-taught,” and that “this is what liaison librarians do to support our learning, teaching, and research mission for the library and campus...nothing new.” Attending conferences (72 responses, or 96%) and webinars or continuing education classes (68, or 91%) were reported as common ways for staff to keep abreast of the latest trends related to scholarly output assessment services. Other ways include Twitter and other social media outlets, vendors, and involvement with different research communities on campus. Some libraries also reported providing internal seminars for librarians for training on scholarly output assessment services. (See Resources for Current Awareness in the Selected Resources section.)

**Partnerships**

Forty libraries (53%) have partnerships with other campus units for assessment activities and 20 others (27%) are in the process of planning partnerships. Only two respondents reported that they tried to initiate a partnership without success. Examples of partnerships with campus units include the Office of Institutional Analysis, Graduate School, Office of Research, Office of the Provost, and Office of Sponsored Research, among others. Partnership efforts include implementing ORCID at a campus-wide level, providing bibliometrics/research impact workshops, facilitating faculty profile systems such as VIVO, serving on tracking and evaluation teams for Clinical and Translational Science Award (CTSA) programs, reviewing scholarly output assessment software options, providing patent citation training sessions, implementation of Symplectic Elements and the connection to the institutional repository, and working on a bibliometric project to quantify monographic output of faculty, to name a few.

Several respondents reported that partnerships are important to the library and represent a growth area for library services: “It’s important to be able to show impact of our university’s research for a variety of reasons, and library staff are well placed to understand how best to do this.” Some respondents also noted issues with redundancy among campus units: “This
is complicated by the fact that other institutional support and assessment offices like Institutional Analysis and Sponsored Programs see this as their function and tend to act independently of the library.”

Marketing and Publicity
Seventy-three respondents indicated one or more methods the library uses to promote scholarly output assessment services. Of these, 54 respondents (74%) use word of mouth to promote their resources and services. The majority of respondents also use LibGuides and library websites (66% and 60% respectively), while flyers and brochures are the least used methods of promotion (21% and 16% respectively). Other methods specifically identified by respondents include emails to faculty, library-held wine and cheese events, brown bag lunches at departments, communications on electronic display boards, announcements from university public affairs, and presentations at faculty departmental meetings.

Advice
Forty-three respondents provided advice to their peers about scholarly output assessment services. The importance of faculty and administration partners to success was a common theme. As one respondent noted, providing the services themselves can help “build faculty-library liaison relationships.” The need to understand and respond to different departmental needs and disciplinary differences was another recognized theme for building successful partnerships. The number of tools and continued “flux” of scholarly output assessment services was highlighted as a challenge for librarians. Hiring or encouraging librarians to develop expertise in this area to serve as technical leads or coordinators for efforts was recommended by several respondents. One recommendation was to “have a dedicated position who keeps abreast of emerging products and resources and then provides staff development for other faculty and staff.” Another recommendation was to build programs around actual researcher scenarios such as “funding applications, dossiers for renewal and tenure, annual reports, and promotion.”

Understanding and communicating the strengths and weaknesses of available tools and measures was also recognized as an important component of scholarly output assessment services provided by librarians. One library commented that tools for scholarly output assessment services have limitations and to “be mindful and explicit about this as you introduce, discuss, and utilize them.” Another respondent advised honesty about the limitations of bibliographic tools and “to always make caveats explicit.”

Trends
Fifty-nine respondents identified future trends that have implications for scholarly output assessment services in libraries. Several respondents identified alternative metrics, author identifier profile systems, and the assessment of scholarly output beyond traditional publications, including data, as trends. The proper and evolving use of appropriate metrics across disciplines was also reported as an important trend, as was recognition of scholarly output in other formats such as data, digital humanities, or other digital objects. Concerns include the accuracy of data sources, data standardization, data aggregation, data interoperability, and author name ambiguity. Respondents identified adoption of unique author identifier profile systems, such as ORCID, as being a promising development. Other challenges noted by respondents include proliferation and cost of resources, political and discipline-specific issues related to promotion and tenure, staff development needs, and keeping abreast of trends including federal research requirements.

Conclusions
Based on the survey responses, the majority of the responding ARL member libraries engage in a variety of activities related to scholarly output assessment. These activities reflect the diversity of ways that scholars are creating and disseminating scholarly outputs to communicate scholarship, as well as the methods and tools for measuring scholarly impact. The activities range from formal programs with staff dedicated to scholarly output assessment services to providing just-in-time information on resources, tools, or metrics.

Many libraries reported partnerships with various campus units outside of the library. These partnerships demonstrate alliances with the campus community to leverage opportunities for expertise and
resource sharing to benefit all parties involved in the scholarly communication process.

Research libraries offer substantial expertise in navigating the ever-expanding array of tools that exist to illustrate a narrative based on scholarly productivity and impact. They help authors manage their scholarly identities, provide options for creating and disseminating scholarly outputs, offer strategies to enhance discoverability of scholarly outputs, help authors efficiently track scholarly outputs and impact, provide resources and tools to help authors assess their scholarly impact, create publication reports and social network maps for reporting purposes, and offer guidance and training on new trends and tools for reporting of impact.

The authors hope that the survey inspires ARL libraries to consider ways they can incorporate scholarly output assessment services into their service models. As one respondent noted, “This survey has prompted several conversations and ideas for further development in this area.”
SURVEY QUESTIONS AND RESPONSES

The SPEC Survey on Scholarly Output Assessment Activities was designed by Ruth Lewis, Scholarly Communications Coordinator & Science Librarian at Washington University Libraries in St. Louis, and Cathy C. Sarli, Senior Librarian for Evaluation and Assessment Services, and Amy M. Suiter, Scholarly Publishing Librarian, Washington University School of Medicine in St. Louis, Becker Medical Library. These results are based on data submitted by 79 of the 125 ARL member libraries (63%) by the deadline of February 17, 2015. The survey’s introductory text and questions are reproduced below, followed by the response data and selected comments from the respondents.

Research libraries offer substantial expertise in navigating the ever-expanding array of resources that exist to illustrate a narrative based on scholarly productivity and impact. They help authors manage their profiles on author-based platforms; provide strategies to enhance discoverability of scholarly works; offer multiple avenues of dissemination for scholarly works; help authors efficiently track research outputs and activities; provide publication reports and social network maps; provide resources and tools to help authors assess their scholarly output and impact; and offer training on new trends and ways of reporting of scholarly efforts.

Learning about assessment of scholarly output at research libraries is increasingly critical in light of the changing landscape towards reporting of scholarly productivity and impact to demonstrate tangible and meaningful outcomes. Traditional measures to quantify scholarly productivity based on “counts” (number of publications, number of citations, journal impact factor scores, etc.) are insufficiently robust to meet the increasing demands of accountability and return on investment. Those measures are now being supplemented with other metrics such as usage or downloads on publisher, repository or other journal platforms; the h-index; or article-level metrics that represent social or academic engagement. Understanding the full array of newer metrics and how they play a role in assessment of scholarly output and impact will become increasingly important for research libraries as the metrics become more widely available and employed by funding agencies, publishers, and academic institutions.

Scholarly output is defined for survey purposes as articles, abstracts, patents, and books or book chapters. Digital technologies have enabled research outputs and processes that stretch far beyond these print forms. Within the ARL community, the SHared Access Research Ecosystem (SHARE) is developing a working definition of research processes and outcomes that includes the following scholarly outputs: publications, conference materials, intellectual properties, digitally-enabled forms including datasets, software, databases, and hybrid and emerging forms such as web-based narration, interactive sites or scripted events, websites, heterogeneous digital objects, and a range of media beyond print and static images. Respondents should feel free to consider these examples of scholarly outputs while answering the survey questions.

The purpose of the survey is to identify current research library practices, activities, or programs related to assisting scholars or researchers (individual and/or groups) with scholarly output assessment. The survey covers services and resources, training, staffing models, partnerships with the parent institution, marketing and publicity, and future trends.
SCHOLARLY OUTPUT ASSESSMENT SERVICES

Please note that this survey does not pertain to the assessment of library programs or any other type of assessment intended to measure the value of libraries and/or personnel.

1. Does your library or any unit of your library provide services to researchers that relate to scholarly output assessment, such as reports, resource guides, consultation, education, etc.? N=79

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>76</td>
<td>96%</td>
</tr>
<tr>
<td>Not yet, but we are considering developing services</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>No, but another unit in the institution does</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Not yet, but such services are in development</td>
<td>0</td>
<td>—</td>
</tr>
<tr>
<td>No, and the library has no plans to provide such services</td>
<td>0</td>
<td>—</td>
</tr>
</tbody>
</table>

2. Please indicate which services your library currently provides or is developing and which are provided by another unit in your institution. Check all that apply. N=78

<table>
<thead>
<tr>
<th>Services</th>
<th>Library currently provides</th>
<th>Library is developing</th>
<th>Another unit provides</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation or guidance on bibliometric measures such as the h-index, journal impact factor scores, etc.</td>
<td>70</td>
<td>3</td>
<td>2</td>
<td>73</td>
</tr>
<tr>
<td>Consultation or guidance on article-level metrics other than traditional citations</td>
<td>60</td>
<td>7</td>
<td>2</td>
<td>67</td>
</tr>
<tr>
<td>Consultation or guidance on author name issues</td>
<td>57</td>
<td>11</td>
<td>2</td>
<td>66</td>
</tr>
<tr>
<td>Consultation or guidance on databases to use for capturing or tracking scholarly outputs</td>
<td>60</td>
<td>3</td>
<td>3</td>
<td>63</td>
</tr>
<tr>
<td>Reports based on usage of scholarly works in an institutional repository</td>
<td>46</td>
<td>15</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>Publication reports (e.g., publication/citation reports, h-index reports, etc.)</td>
<td>48</td>
<td>6</td>
<td>6</td>
<td>56</td>
</tr>
<tr>
<td>Graphs, charts, infographics, or social network maps</td>
<td>20</td>
<td>6</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Blogs maintained by the library</td>
<td>22</td>
<td>1</td>
<td>6</td>
<td>28</td>
</tr>
<tr>
<td>Other service</td>
<td>11</td>
<td>4</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Total Respondents</td>
<td>76</td>
<td>33</td>
<td>19</td>
<td>78</td>
</tr>
</tbody>
</table>

If you selected “Other service/Library currently provides” above, please briefly describe the service. N=15

Altmetrics reporting service

Apart from our institutional repository statistical reports, available to anyone with an item in our repository, we can work with faculty to provide services on request.
Bibliometrics and Best Practices based upon specific disciplines and fields: a) Journal-based fields, b) Fields that are driven by manuscripts, c) Performance-based fields, and d) Grey Literature/Clinical Fields; LibGuides

Digital Scholarship hosting with usage reports, digital exhibit collaborative creation and hosting with usage reports, data set hosting in the institutional repository, collaborative events with attendance statistics and other reporting, consultative services through the liaison librarians for scholarly output and impact assessment and validation. Liaison librarians do occasional large-scale bibliometrics projects, tracking faculty publications for a center or department. Then under whether we limit services to a specific user groups I would say yes with the following description: Although almost all services are available to all users, in the case of large-scale bibliometrics projects, they are often limited to those with the capacity to pay for extended librarian time working on the project.

Health Sciences Library created LibGuide for SciVal.

Most of the services checked above are not part of a formal program. They are not marketed as services but may be available upon request depending on individual librarians’ level of expertise.

Our graphs and charts are from a locally created repository download statistics service.

Our Health Sciences Library (which supports our College of Medicine and Medical Center) offers a systematic review service. The library hosts workshops to gain familiarity with the process of doing a systematic review since often times people don’t really want to do such an extensive research project. If they would like to pursue it further, a librarian can be included in the research process of performing a systematic review. This level of involvement is on a cost recovery basis for librarian time and typically requires an active grant to pay for this charge as well as gaining access to relevant information for the systematic review in databases that the library does not subscribe to.

Pilot to evaluate the effect of a program on enhancing collaboration across institutions. Also looking for other ways to evaluate collaboration.

Provide guidance on strategies to enhance dissemination of research outputs and activities.

Research support services, such as use of Mendeley and scholarly networking consultations.

Subject guide on faculty credentialing

The library provides LibGuides and other online information resources to help educate scholars and researchers about their scholarly identity and output assessment. It has also offered a number of relevant workshops on these topics.

University Library provides digital humanities consultation and implementation (multi-model narrative, text analysis, tools and platforms, digital collections).

Workshops, presentations, consultations

If you selected “Other service/Library is developing” above, please briefly describe the service. N=14

Additional ORCID-related support is in development.

Central IT provides a blogging service.

Currently developing expanding to tracking supplementary materials and implementing altmetrics.

Developing and enhancing reporting in institutional repository.

Developing web resources around assessment and bibliometrics, article-level metrics, and other alt-metrics.
Institutional repository

The Libraries is proposing that the university subscribe to ORCID to help researchers with identity management.

The library is currently collaborating with the Office of the Vice Chancellor for Research to implement the PURE Researcher Information System for faculty and researchers on our campus. This will include additional network maps and an expert “fingerprint” about scholar’s output.

The library is exploring various possibilities and is in the process of hiring an Assessment Librarian to work with library departments to develop these resources.

These are under development and in goals for the year.

We are currently building an IR that will provide usage reports for deposits.

We are evaluating software such as Altmetrics and determining how it might be used on our campus. We have librarians who can respond to specific requests in this area.

We are in the process of re-allocating resources.

We aspire to provide better analytics for the materials in our scholarly repository; we also hope to include other statistics, including downloads from SSRN. Also in the planning process is a workshop on maintaining a scholarly presence online.

If you selected “Other service/Another unit provides” above, please identify the unit and briefly describe the service. N=13

Academic departments usually provide publication reports and any associated graphs/charts.

Academic Social Media

E-Scholarship

Faculty of Medicine, Office of Institutional Research, is one example of where else this service is provided in the university, for the purposes of marketing, funding applications, performance indicators, etc.

I believe that the tenure review committees at our university develop reports about the impact of faculty publications during the tenure review process. The associate provost for research also maintains some metrics in these areas.

Office of Institutional Research (for tenure review). Not sure if service is provided directly to faculty.

The Faculty of Health Sciences is subscribing to SciVal to assess its faculty’s scholarly output.

The Office of Institutional Research and Academic Planning provides access for deans to Academic Analytics.

The Office of the Provost sponsors and the Office of Information Technology supports Symplectic Elements, which includes reports of citation counts, author h-index, and alt metrics for faculty publications.

University’s Office of Research funds and manages Elsevier’s SciVal Expert subscription.

Various campus groups provide additional resources and services related to scholarly output assessment, notably VIVO and Campus IT for blog services.

Visualizations in our VIVO system (run by the provost’s office) and Elements system (run by the library).

VP Research
3. Does your library limit any of the above services to specific user groups (e.g., affiliated scholars or researchers, specific departments, virtual or interdisciplinary research groups, administrative staff, support staff, or student categories)? N=76

Yes, available services are limited to specific users 22 29%
No, all available services are offered to all users 54 71%

4. If services are limited to specific users, please briefly describe which users may use which services. N=22

Affiliated scholars or researchers or their administrative/support staff

Current campus affiliates only

Department & school-level metrics typically requested by administrators and access limited to requestor and/or their department or school.

Faculty, researchers, administrators, postdoc scholars, and graduate students

Full time professors, graduate students, high administration employees (VPs and vice-VP's)

In the Medical Library, services are limited to authorized library users.

Library-provided resources have no limits, but Academic Analytics, provided by institutional research, is limited to deans.

Most services are available for all users but some services only available to faculty—particularly report generation for individuals.

Publication reports generated for departments are often limited to faculty authors.

Repository usage data (article download information) is only available to authors whose work appears in one repository collection, the collection housing articles under the Faculty Open Access Policy.

Research impact reports currently are only prepared to support grant applications.

Researchers whose primary affiliation is with the university.

Services are provided on an on-demand basis—there is no systematic program.

Students, faculty, and staff

Subject librarians have reported that they’ve worked with faculty. It may be that the service is available to all users, but we haven’t marketed it in a concerted way.

There are services provided by the Biomedical Library that are restricted to faculty and researchers in the Medical Center clusters; similarly the Law Library provides services for Law faculty, not available to all university faculty.

They are limited at the moment but being developed for all. There may be discipline specific services that we aren’t taking into account here.

To clarify, services are limited to specific users in the sense that they are offered only by a small set of subject librarians to faculty in departments whom they serve. Specific subject librarians know about and offer some of the information listed above, while other subject librarians are not as well acquainted with some of the topics listed. Those librarians who are familiar with these topics can assist their constituencies with them, while those subject librarians who are less familiar with those topics cannot. There is no campus-wide suite of services designed for all faculty at this time.
Training efforts are currently targeting faculty. Consultation/guidance is provided to faculty/graduate students upon request. Liaison librarians have developed one or two LibGuides, addressing scholarly outputs from specific disciplinary perspectives.

Undergraduate students and some university staff have limited access to the institutional repository, so most would not receive usage statistics.

University-affiliated faculty, staff, and students

We focus on providing services to our primary user population, which includes faculty, students, campus researchers, etc.

Additional Comments N=3

Note that services are not limited to specific users, but different groups have expressed different levels of interest.

This survey includes answers from the Legal Research Center (law) and University Library. Law provides service on request by faculty and promotion committee for internal purposes only, and thus their answer to the question above is "yes." At University Library (UL) digital humanities are available to faculty and graduate students. Other services not limited.

Though not limited, requests only come from faculty scholars.

5. Please enter any additional comments you have on scholarly output assessment services. N=20

All of the services listed above are provided by the University Libraries, but on an ad hoc basis (and mostly by subject librarians) rather than in a programmatic way. In regards to the service marked as “Library is developing,” measuring and increasing research impact is a key focus area of the developing Research Commons. Resources related to scholarly output assessment are being gathered and eventually will be made available to researchers at the university through the Research Commons website and blog.

Aside from institutional repository (bepress) readership reports, these services are delivered by subject (reference) librarians.

At this time, aside from usage reports from our repository, the above-listed services are provided on a very ad hoc basis. No library-wide programmatic approach is currently in development, however it is something that will likely be coordinated by the Research Commons in the future.

Blogs are not scholarly output focused.

Generating reports for groups may be provided as a fee-based service depending on number of authors tracked.

It is a rapidly growing area for libraries and it is beneficial for scholars as well.

My answer makes it seem as though the library is providing services at a far greater level than we are. We now have three librarians who have some training in the research impact area and a subject guide that describes our services. It is a "toe in the water," not a fully developed services.

No formal advertising of these services; assistance is available on request.

No formal program, done on ad hoc basis by librarians. Repository-related pieces are integrated into repository services.
None of these services are widely marketed but are offered on an as-requested basis.

Our librarians in the health and natural sciences offer scholarly output assessment services while our librarians in the social sciences and humanities do not. We see a higher demand for scholarly output assessment services among our health and natural sciences researchers.

Our services are informal and as needed.

Scholarly output assessment will be a priority as it develops in areas of our new organizational structure.

Services are given by patron request mostly.

Services are not currently coordinated across the library system but are handled by the individual liaison and/or department, depending on the researchers served.

Services are provided informally, usually through direct request to subject specialists, or at a service point. No distinction made among groups of users except as noted directly above (also see comment above, re Law).

The above answers generally refer to the fact that we respond to questions about these topics. We don’t currently provide a “service” related to bibliometrics, reports, etc.

We are interested in developing additional services (like those listed above) to be determined in consultation with faculty about their interests and needs.

We have had collaborations or requests from many different types of groups: editors of undergraduate student journals published through our institutional repository; Communication/Public Affairs; Institutional Planning Office; Research Office; various individual faculty members; departments; faculties; and research groups. We’ve also collaborated with graduate students in statistics and actuarial sciences for their expertise in conducting performance measurement work.

While we can and do offer assessment, there is no systematic provision or large scales requests for such information.

### Scholarly Output Assessment Software/Resources

6. Please indicate which of the following scholarly output assessment software/resources are used by library staff and/or are recommended to library user groups. Also indicate if your library is considering acquiring or using any of these tools that aren’t currently available. Please make one selection per row. N=75

<table>
<thead>
<tr>
<th>Software/Resources</th>
<th>Library recommends to users</th>
<th>For library staff internal use only</th>
<th>Library is considering acquiring or using</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web of Science</td>
<td>71</td>
<td>1</td>
<td>1</td>
<td>73</td>
</tr>
<tr>
<td>Google Scholar</td>
<td>70</td>
<td>0</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td>Journal Citation Reports</td>
<td>68</td>
<td>2</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td>Scopus</td>
<td>45</td>
<td>0</td>
<td>4</td>
<td>49</td>
</tr>
<tr>
<td>Altmetric.com</td>
<td>29</td>
<td>1</td>
<td>18</td>
<td>48</td>
</tr>
<tr>
<td>ImpactStory</td>
<td>34</td>
<td>2</td>
<td>8</td>
<td>44</td>
</tr>
<tr>
<td>SCImago</td>
<td>31</td>
<td>0</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>Book Citation Index</td>
<td>25</td>
<td>0</td>
<td>6</td>
<td>31</td>
</tr>
<tr>
<td>Plum Analytics</td>
<td>7</td>
<td>0</td>
<td>22</td>
<td>29</td>
</tr>
</tbody>
</table>
### Software/Resources

<table>
<thead>
<tr>
<th>Software/Resources</th>
<th>Library recommends to users</th>
<th>For library staff internal use only</th>
<th>Library is considering acquiring or using</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1000</td>
<td>27</td>
<td>0</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>InCites</td>
<td>18</td>
<td>2</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Publish or Perish</td>
<td>25</td>
<td>1</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Symplectic</td>
<td>6</td>
<td>2</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>VIVO</td>
<td>6</td>
<td>3</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Essential Science Indicators</td>
<td>18</td>
<td>2</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>SciVal</td>
<td>11</td>
<td>0</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Wordle</td>
<td>12</td>
<td>5</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Academic Analytics</td>
<td>2</td>
<td>8</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Digital Measures</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>PURE</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Harvard Profiles</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>NodeXL</td>
<td>4</td>
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<td>0</td>
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</tr>
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<td>Sci2</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Other software</td>
<td>18</td>
<td>3</td>
<td>4</td>
<td>19</td>
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<tr>
<td>Total Respondents</td>
<td>75</td>
<td>23</td>
<td>50</td>
<td>75</td>
</tr>
</tbody>
</table>

If you selected “Other software/Library recommends to users” above, please identify the software. N=18

- ArXiv (for physics articles)
- bepress Digital Commons, which provides download/usage reports.
- Google analytics is used by some University Library staff. Law checked “other software/for library use only” but did not provide an example; instead answered “libanalytics” in the “Other software/library recommends to users” box.
- Hein Online’s ScholarCheck. Note; several libraries cannot recommend Essential Science Indicators because they don’t have access; it is medical campus only.
- NINES.org, 18thConnect.org, and others within the Advanced Research Consortium (ARC)
- ORCID, Tableau
- ORCID, ResearchGate, ResearcherID, Mendeley
- Our institutional repository software (bepress) provides reports and visualizations.
- Our institutional repository. Also, discipline-based repositories (e.g., ArXiv, PubMed, SSRN, etc.)
- PLoS, Medical Center Faculty Bibliography
Research Gate

Research Gate, HeinOnline author profiles, SSRN author profiles, MathSciNet

Research in View (training and support provided by the university’s Office of Distance Education and eLearning.

Scholarometer

SciFinder

The university faculty survey, ORCID, Mendeley, Figshare (data)

We recommend the use of ORCID, Figshare, Research Gate, Academia.edu, Microsoft academic search profiles (particularly for visualizations).

If you selected “Other software/For library staff internal use only” above, please identify the software. N=3

Google Scholar, VIVO, and Web of Science are for library staff internal use at Law. University Library has access to Libanalytics, uses it for internal purposes unrelated to this survey’s questions.

Tableau (Form wouldn’t allow me to select Other for recommends and internal use but that’s what I needed to do.)

We also have library staff only software created in-house by our system called California Digital Library Weighted Value.

Wordle use is widespread in the library, although I don’t believe the library specifically offers it to users.

If you selected “Other software/Library is considering acquiring or using” above, please identify the software. N=4

Biomed Central

Converis, Research Gate, Data 180, Elsevier

Dataverse which provides view/download counts for data publications.

We are interested in VIVO as a tool for exploring faculty patterns of collaboration around campus and across universities. We are hoping to integrate some form of altmetrics into our institutional repository, hence our interest in Altmetric.com.

Additional Comments N=4

Eigenfactor.org

I have answered all questions as if the question reads “are used by *university* staff” as many of these services are used by colleges and academic units, not the library. Additional notes: the provost’s office uses Academic Analytics for program review. A few colleges on campus utilize Digital Measures Activity Insights for activity reporting. Library staff is not involved with these projects, and assessment is generally considered an academic issue on the campus, the purview of departments, colleges, and the Office of the Provost. However, the library is taking a leading role, with financial support from the Office of the Vice Chancellor for Research, for the implementation of the Elsevier Pure Researcher
Profile system for campus in 2015. The library has LibGuides and web pages that recommend the use of resources such as ImpactStory, Scopus, and Web of Science.


Some of these are in use by other units (like institutional research or the provost office) so are not recommended by the library per-se, but are available at the institution more generally.

7. Does your library share the cost of any of these software/resources with another unit in your institution? N=75

Yes 29 39%
No 46 61%

If yes, please specify the unit(s) that shares the cost with your library. N=29

**Academic Analytics** N=11

1–2 library staff can access but 100% of cost paid for by our Office of Institutional Analysis.

Campus Office of Institutional Research pays for this.

Full cost covered by another campus unit. Library does not control access, fund, or recommend this service.

**Institutional Research**

Office of Provost has AA subscription. Library has no access to this tool.

Our institutional research office pays for Academic Analytics.

**Provost (2 responses)**

The Office of Institutional Research and Academic Planning supports 100%.

This is service is purchased exclusively by campus administration and only available for their use.

University licensed the software at the top level of the university.

**Altmetric.com** N=1

Provost Office

**Essential Science Indicators** N=1

Paid for by library.

**Harvard Profiles** N=1

School of Medicine subscribes; Library does not yet have access.

**ImpactStory** N=1

Authors cover costs for their own profiles.

**InCites** N=4

Faculty of Medicine, Office of Institutional Research
If selected, library will look to share costs with academic departments.

Library used to pay portion when we used to subscribe; was cost shared with provost.

VP Research

**Journal Citation Reports** N=6
- Health Sciences Library
- Health Sciences Library cost shares.
- Library pays.
- Paid for by library.
- We share cost UC-wide through California Digital Library.
- With other UC’s and CDL

**Plum Analytics** N=2
- Office of Research Services; Office of Planning and Institutional Research
- Paid for by library.

**PURE** N=3
- Medical School
- Office of the Vice Chancellor for Research
- University System

**SciVal** N=10
- Faculty & Staff Information System (FASIS) Division of Office of Human Resources
- Faculty of Health Sciences (paying the subscription, giving Health/Natural Science librarians access to the tool)
- Health Sciences Library
- If selected, library will look to share costs with academic departments.
- Medical School
- Office of Knowledge Enterprise Development
- Office of Research Services
- Provost Office
- University System
- VP Research

**Scopus** N=7
- Arizona Board of Regents
- Health Sciences Library
Library pays, used for multiple purposes
OhioLink (consortial purchase)
Paid for by library.
We share cost UC-wide through California Digital Library.
With other UC’s and CDL

**Symplectic N=8**
Central IT: Office of Research
Library considers implementation jointly with central university computing. Central IT will bear the cost of sub.
Provost and HSL
Provost Office
University Data Warehouse and Business Intelligence
University Information Technology
University office of Faculty Affairs pays for this.
University subscribes to one module for harvesting OA articles.

**VIVO N=6**
Central IT: Office of Research
Division of IT, Office of the Vice President for Research, Office of Academic Planning & Assessment
Provost and HSL
Provost Office, Office of Information Technology
University CTSI supports this
University office of Faculty Affairs supports this.

**Web of Science N=8**
HSL
Health Sciences Library cost shares.
Library pays
OhioLink (consortial purchase)
Paid for by library.
Provost’s office
We share cost UC-wide through California Digital Library.
With other UC’s and CDL
Other software N=7

ARC’s groups are community supported

Digital Measures: campus site license in procurement, but not yet implemented.

Digital Measures: funded by Provost’s Office

Digital Measures: individual colleges

Math SciNet is paid for by our system-wide library consortium.

NOTE: Law does not share costs.

University Data Warehouse and Business Intelligence

8. Are scholarly output assessment software/resources integrated in your institutional repository? N=77

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>39</td>
<td>51%</td>
</tr>
<tr>
<td>No</td>
<td>33</td>
<td>43%</td>
</tr>
<tr>
<td>Not applicable, we don’t have an institutional repository</td>
<td>5</td>
<td>6%</td>
</tr>
</tbody>
</table>

If yes, please briefly describe the integration of the software/resources in the repository. N=35

A connector between Symplectic Elements and our institutional repository is the primary way faculty deposit into our IR.

Altmetric.com is integrated with the institutional repository, which is built on the Digital Commons platform from bepress. The platform itself tracks download counts and reports it on the repository homepage.

Altmetric

Altmetric scores are integrated at the item level, if the item has the proper DOI and the metadata fields are integrated. Our internal IT unit worked to develop that.

APIs to Web of Science

Authors and series administrators are provided use data on a monthly basis. Downloads are visualized on a global readership map.

Basic level: we use reporting features of the hosting software, bepress.

Bepress provides automatic usage reports directly to authors. We have the Altmetrics.com widget enabled in our DR for journal articles though what it covers is limited to articles with DOIs and with publisher contracts with Altmetrics.com.

Bepress provides Google Analytics and readership counts.

DSpace provides statistics, including the number and locations page view and file downloads.

DSpace’s statistics

Google Analytics

Google Scholar
Internal statistics from DSpace

Minimal. We can get download reports. We are working on increasing capacity.

Our IR captures the number of page views and downloads for deposited files—both for individual files that one has deposited and for the total of files one has deposited.

Our IR platform, Digital Commons, provides usage and download statistics at the object, community, and repository level.

Our library uses the bepress IR platform, which has built-in download reports that are sent to authors. The Altmetrics API is also integrated into our IR system.

Plum Analytics

Plum Analytics is integrated in our institutional repository. The view/download counts from our IR will appear with the Plum Analytics statistics in the future.

PlumX is linked to our IR. All publications in IR have PlumX metrics embedded. In addition, all university researchers can request PlumX Profile (this is currently set up by library staff). We are developing mechanism by which end users will be able to set their own PlumX profiles. Symplectic, when implemented, will streamline the process of collecting research outputs of faculty thus providing us with more robust data sets for PlumX and other analytics (e.g., feed to SciVal or InCites, etc.)

Reports for individual titles are available via http://www.escholarship.org/.

Several sources are integrated with Symplectic Elements and VIVO.

The IDEALS institutional repository provides simple metrics for each item on total number of downloads, downloads this month, and downloads today.

The IR platform (DSpace) displays item-stats for views and downloads. An additional DSpace module provides deeper, more customized reporting, and web visits are tracked through Google Analytics.

The IR software includes the ability to automatically output usage statistics.

There is an author dashboard for tracking downloads.

Top downloads, usage stats, RSS

Usage reports are a feature of the IR, and an altmetric badge is integrated into IR.

Usage statistics are automatically tracked and sent using the SobekCM Open Source Repository Software (www.sobekrepository.org).

Usage statistics are provided to authors.

We currently provide download counts by item in our institutional repository.

We have a DSpace repository that allows us to track downloads and general usage statistics.

We license Digital Commons software, which provides monthly download reports to authors.

We use Google Analytics to assess the usage of repository content.
9. **If scholarly output assessment software/resources are integrated in your institutional repository, do you provide repository usage reports? N=39**

<table>
<thead>
<tr>
<th>Yes</th>
<th>34</th>
<th>87%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>5</td>
<td>13%</td>
</tr>
</tbody>
</table>

**If yes, please briefly describe the type of usage report. N=31**

Administrators of collections are emailed brief reports with page hits and file downloads. They can also view information like metadata views and locations that engaged with the material online.

At this point, reports are limited to download counts by item.

Authors and series administrators are provided use data on a monthly basis.

Authors can request regular notification of downloads.

Authors receive an email report on the number of times each work has been downloaded.

Automated usage stats

Basic downloads and hits

Bepress provides automatic usage reports directly to authors. The Repository Coordinator also uploads Google Analytics and makes them freely available along with bepress comparisons with other repositories.

DSpace statistics

Each item and category in the repository has its own use report by default, and we occasionally generate aggregate reports for individuals, units, etc.

Faculty can elect to check their “Digital Commons Dashboard” to see readership activity and/or select to get email reports of same.

If asked, but people are encouraged to access on their own.

In addition to monthly download report emails to authors, additional reports are being set up for department chairs and college deans.

In addition to statistics noted above (the number of page views and downloads for deposited files—both for individual files that one has deposited and for the total of files one has deposited), our IR can capture other statistics that might be considered a usage report. They include the following: total number of files in IR, totals by visibility, the top file formats, and total IR users.

Individual content submitters can elect to receive usage statistics of their submissions, which provide download counts of individual records. Administrators of communities within the IR have access to download usage reports.

It goes to each author who has deposited into the IR, and it reports the number of downloads for the most recent month, and also a total downloads number.
Item-level download and view stats are freely available from the respective webpage. Spreadsheets and charts showing use for subsets of the collection are available upon request. Annual use reports are published in an IR impact report.

**Number of downloads**

**Number of downloads of article citations via Web of Science**

**Number of times content is downloaded**

**Only on request, however**

**Page views and downloads**

**Plum Analytics**

The usage report provides the number of downloads over the last month and the lifetime of the object.

There is a DSpace analytics page that sends out reports to community administrators but not authors. There are also author reports that inform the author of the number of downloads of a publication.

Users can publicly view simple metrics for their items, including total number of downloads, downloads this month, and downloads today.

Via monthly emails sent to users, and usage information is also displayed publicly for all items.

We create general repository usage reports for the dean of libraries. We can provide targeted reports upon request from departments or individuals as requested, but that doesn’t come up much.

We offered usage reports when requested by the administration.

We provide reports on views and downloads.

Yes, authors of the items deposited in the repository receive download counts by e-mail every month.

**Additional Comment N=1**

At this stage, we only produce internal reports showing growth in content and use of IR. Also, those with PlumX Profile can generate their own reports.

10. **Please enter any additional comments you have on scholarly output assessment software/resources. N=22**

Current usage reports require a lot of staff time to collect and distribute so they are offered only occasionally.

Discussions are underway regarding further development of services via our IR, including the implementation of a Google Analytics function by item so that users can get richer and more accurate download and view counts by time and geographic origin. We are also currently evaluating the possibility of integrating repository downloads to an alt-metrics widget that would be applied to our Blacklight instance.

DSpace software provides usage statistics.

Google Analytics tracks additional use and download information for our bepress Digital Commons instance.
In addition to usage statistics, citations and events related to the digital items and collections are tracked when the data is available.

In the very near future, our faculty profile system will be integrated with our digital repository, but as we are just rolling it out we have not integrated it yet. In addition, we currently only have the native DSpace statistics reports that users can see for their items in the collection. It’s not an integrated 3rd party software, but it is a statistical report.

Library administrators are currently participating in a university-wide group considering performance metric tools for purchase.

The Health Sciences library on our campus is currently working with ORCID on author disambiguation.

The IR logs activity such as browsing items and downloading files. Once scholarly content grows, it will be possible to generate usage statistics and reports as input for assessment.

The next iteration of our institutional repository will include integrated scholarly output assessment software.

The university’s central IT pays for the campus subscription to SciVal and the Program for Institutional Research & Assessment pays for the campus license to Academic Analytics.

There isn’t any cost sharing, per se, but other units (i.e., RENCI, Renaissance Computing Institute, renci.org) pay for some software/resources and make them available to the institution.

Users can generate reports but the library does not provide reports as a service.

We are currently overhauling our IR software. It’s too early to tell what functionality will be included in the new software.

We are just now getting the altmetrics donut into our press website as well as the IR.

We built our own usage statistics service that draws upon repository usage (article download) data. We have been looking at opportunities for integrating vended software/tools such as incorporating altmetric data into our repository.

We currently integrate only Google Analytics into our repository and provide dynamic reports at the article and collection level.

We don’t provide any usage reports, but usage data is available to all users of the IR.

We or IR provide reports to departments, individuals, and/or some library staff on campus based on information provided by the IR vendor and/or Google Analytics. This can include download counts at the item level.

We plan to integrate scholarly assessment resources into our digital repository in the current calendar year including usage reports related to repository items and/or faculty, students, and staff represented. In consultation with campus partners, we will be evaluating many of the services listed in the survey to determine which service(s) might best provide assessment data useful to aggregate within our digital repository.

We’re still developing a more dynamic method of providing scholarly output assessment for the institutional repository.

While our IR does not incorporate the software or resources described in your question, it does provide download counts for all objects. In addition, our IR creates DOIs for each record, providing a basis for interoperability.
11. Does your library offer or sponsor training sessions to scholars, researchers, staff, and/or students that relate to assessment of scholarly output? N=77

<table>
<thead>
<tr>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Not yet, but we are considering developing training</td>
</tr>
<tr>
<td>Not yet, but such training is in development</td>
</tr>
<tr>
<td>No, and the library has no plans to provide such training</td>
</tr>
<tr>
<td>No, but another unit in the institution does</td>
</tr>
</tbody>
</table>

If yes or training is in development, please briefly describe the content of classes or workshops offered by your library. N=44

A workshop has been offered through the Research Commons that covers information related to tracking output using Research in View and archiving scholarly content in the Knowledge Bank (our institutional repository). Jason Priem (ImpactStory) gave a presentation at the University Libraries on the topic of "Scholarly Communication and Alternative Metrics."

Answers should be Yes, Not yet but in development, and No but another unit.... UL is developing introductory workshops on impact factors; also offering "managing your scholarly identify." Law does not offer workshops.

APIs for Scholarly Resources: brief overview of scholarly research APIs available to the community with examples of current research. Overview of Citation Analysis: overview of citation analysis, including sources of data for citation analysis, common impact measures, and freely available software.

“Basics of Citation Metrics” offered to library staff covers Web of Knowledge platform tools (WoS, Journal Citation Reports, ESI), Scopus (altmetric) and journal comparison tool, Google Scholar, and My Citations. “Impact Measurements” webinars open to all—but attended mostly by university faculty, graduate students, and staff—covers the above, as well as an intro to non-citation based analytics. The MyResearch graduate series Module 4 covers all of the above. The library provides training to Media Relations Office on all of the above.

Citation Analysis, Citation Management, Collaboration, Communicating Research, Digital Humanities, Data Management, Enhancing Research Impact, Responsible Research, Scholarly Communications, etc.

“Determining Your Scholarly Impact” is a 1-hour class offered each semester to anyone who wants to come (primarily targets our health sciences campus). “Scholarly Impact: Traditional and Alternative Metrics” was a 1-hour workshop our Scholarly Publishing Committee put on to educate librarians and staff last year.

Explains concepts and demonstrates tools in workshops offered through network learning Initiatives.

Google Scholar, Publish or Perish, Altmetrics

Hands-on workshops. Topics include: using Scopus, cited reference searching, creating citation reports, Google Scholar Citation Profiles, ORCID profiles, Altmetrics (including social media, ImpactStory, etc.) We’ve also talked about possibly doing online reputation management (as it relates to increasing scholarly visibility).

Health Sciences Library conducts workshop on using SciVal, and has prepared a SciVal LibGuide.
Librarians offer classes on using tools for measuring scholarly output and understanding measures such as the h-index and altmetrics.

Library has offered in the past workshops on alternative metrics. We are developing materials to complement campus rollout of Symplectic Elements.

Metrics workshops for grad students and early-stage faculty, non-traditional scholarly communication (e.g., Twitter), workshops for administrators re: metrics for faculty assessment

Mostly tenure metrics, establishing research impact using article-level citation metrics like h-index from Web of Science, Scopus (just acquired), and Harzing’s Publish/Perish, but also noting altmetrics, especially in fields where citation metrics are not a good reflection of impact.

Much of the training that we do is in the context of upper-level library instruction. Many of our liaison librarians also consult with individuals or small groups as needed. However, the librarians in our Health Sciences Library offer a systematic review service. As part of this service, they host workshops. There are three sessions, which were promoted through local listservs (for administrative assistants and research coordinators). The content of the three sessions are: basic library overview (finding articles, ILL, website navigation), bibliometrics as it pertains to grants and P & T, and a tutorial in Endnote Web for reference management software. Additionally, one of our education librarians has offered a professional development session specifically for the College of Education on this topic.

One of our liaison librarians in the health sciences has been offering workshops on metrics to faculty, graduate students, and library staff.

Scopus, Citation Analysis, Data Management, Individual Databases, Research IDs, Altmetrics, Visualization Tools

Scopus training, SciVal Experts training, Tools for Researchers

SCOPUS: A Tool for Authors, Enhancing the Visibility and Impact of Your Research, Who is Citing Your Work? You’re in Good Company: Research Studios for Advanced Graduate Students in the Humanities (include some information on monitoring their own work). A variation of Enhancing the Visibility and Impact of Your Research is in development for non-medical campus.

The content of workshops reflect the unique needs of the participants. Content has been varied, highlighting one or a mix of the following: overview of bibliometrics/altmetrics, h-index and Eigenfactor, Scopus and Web of Science comparison, Google Scholar, InCites, etc.

The library has offered occasional workshops for graduate students on the significance of h-index for scholarly output assessment.

The project manager of the faculty profile system being rolled out trains faculty regularly. Also, information on other resources is part of classes that the subject liaisons regularly teach in their informational sessions to graduate students and faculty.

The University Library Scholarly Commons provides a wide breadth of workshops and events for researchers, staff, and students about research topics, including those pertaining to scholarly output.

This currently takes place on limited basis, only as requested by users. More integrated approach is planned for development in FY16 planning cycle.

Through the medical school’s continuing professional development series, a workshop on research metrics is offered that discusses “different approaches to assess the quality and impact of your research on other researchers in your field.” This hands-on and practical workshop will focus on the three areas of article, author, and journal assessments.
Participants will become familiar with different multi-faceted citation analysis using a variety of metrics and their implications. Content on assessment of scholarly output is also included in other workshops or instruction sessions, e.g., a session might contain information on how to find an h-index or how to find out who has cited your own work.

Traditional and alternative metrics, author disambiguation, author profiles and author identification, development of training for the use of MyNCBI tool sciENcv

Training is provided by subject specialists and scholarly communication librarian via one-on-one and small group sessions.

Training sessions are generally one-on-one with faculty, grad students, or administrators who have requested it.

Training sessions offered on an ad hoc basis and are not centrally coordinated; for example, the Health Sciences Library offers drop-in sessions on calculating the h-index.

Use of JCR, SCImago, h-index

Varies by user group

We don’t offer formal training workshops, but librarians have one-on-one conversations with faculty about assessment of scholarly output.

We have a workshop on citation tracking geared toward graduate students.

We have offered a workshop to Early Career Researchers on using Open Access and freely available services to increase research exposure and impact.

We offer this in one-on-one consultations.

We offer workshops on Web of Science, Google Scholar, and Altmetrics.

We offered a class entitled: “Impact Factors & Journal Publishing.” We invited journal editors on campus.

We run “Expanding Horizons” sessions to grad students and some departmental training.

We’ve offered a series of “increasing the visibility of your scholarship” workshops to faculty and grad students, focusing on the humanists but inviting all, for example; very successful in the last two years.

Workshop on managing your research impact

Workshops are given on citation measures with JCR and Web of Science.

Workshops on citation analysis, citation management, ORCID, Scopus and such databases as Symplectic (demo) and Mendeley, altmetrics

Workshops on how to access and use and interpret many of the above sources, especially as they are integrated into our faculty profiles system and open access deposit workflow.

Workshops: Journal Impact Factors and Citation Analysis, Keeping Current with Literature, Measuring Your Scholarly Impact, Library Tools for the Publication Cycle—humanities and social sciences and also one for the sciences—some of these are done for particular departments and other are aimed a more general audience.

Additional Comment N=1

Courses on “Article Level Metrics” and “Building Your Academic Profile” are currently offered (marketed to graduate students).
12. What resources do your library staff use for learning about and keeping abreast of the latest trends in scholarly output assessment practices? Check all that apply. N=75

- Conferences: 72 96%
- Webinars or continuing education classes (external): 68 91%
- Blogs: 66 88%
- Email distribution lists or RSS feeds: 66 88%
- Professional associations or scholarly societies: 64 85%
- Websites of other libraries: 61 81%
- Journals or books: 59 79%
- Internal education for library staff: 49 65%
- Other resource: 9 12%

Please briefly describe the other resource(s). N=9

- External workshops, speaker programs and panels, demos, conversations and special library meetings, library committees
- Grey literature, twitter, vendors
- Involvement with different research communities on campus and broadly
- School of Information & Library Science faculty
- Social media, twitter in particular
- Twitter
- Twitter and other forms of social media
- Unconference
- Vendor propaganda emails

13. What new skills have library staff acquired in order to provide scholarly output assessment services, if any? N=42

- Altmetrics
  Analysis skills for Altmetrics, Google Analytics, and Web of Science. Creating narratives based on these analyses that demonstrate qualitative impact as well (such as prestigious blogs or persons citing scholarship).
  Becoming more acquainted with social media outlets and online “publishing” tools that offer measures of “buzz”/usage/views related to altmetrics
  Content and teaching skills, scholarly communication skills, technology skills
  Data analysis and reporting and promoting discipline specific scholarly output trends. Understanding of research metrics tools, their limits and potential application.
Developing familiarity with author disambiguation, citation metrics for individuals, departments, and schools, tracking altmetrics developments, participating in development and review of institutional-level metrics including comparisons of major software packages like SciVal & InCites.

Digital humanities and data management related skills

Discovering and evaluating available metric and altmetric tools and making relevant information available to the university research community.

Familiarity with tools such as InCites, Web of Science, and altmetrics

Formal training on impact tools, visualization tools, and study of the Becker model

Given the ad hoc nature of our current level of support, most staff rely on individuals with more knowledge and experience when assisting patrons with these services.

I’m sure individual librarians have learned new skills, but since it’s done in response to questions, I’m not sure what those are. It will be different for each librarian.

In the past year, we have developed expertise in Neo4j, a graph database, with which we are looking for patterns of collaboration in our IR data.

Increasing awareness of article-level metrics

Intensive introduction course about bibliometrics offered by scientometrics professor

Just starting to learn about resources like Plum Analytics, InCites, bepress readership stats, Google Scholar Profile citation stats.

Knowledge of alternative metrics, how altmetric.com works, altmetric-it plug in, learning new resources and ways to communicate the impact

Knowledge of available tools and capabilities of tools, familiarity with the needs of users, methods of using or searching within the tools

Knowledge of new/developing tools, how to calculate h-index and other measures

Knowledge of ORCID, ImpactStory, Altmetrics, etc.

Learning about the variety of sources, pros and cons of each, caveats, and how to interpret them.

Librarians have learned to use various tools in order to demonstrate them.

Library staff have been developing and/or honing skills in utilizing tools for scholarly output assessment, and in training faculty how to use these tools for their own use.

Library staff learned to keep abreast of trends and use new tools.

None.

One librarian attended the European Summer School of Scientometrics in July 2014 and is using a train-the-trainer approach to develop programming for the rest of the staff.

One skill is having to spend time learning the new tools that are entering the market. The second skill is saying vigilant on top of new trends.
Our Publishing Outreach librarian is particularly skilled in this area; she knows this stuff. Not sure if there are any particular skills other than knowing the landscape out there.

Overview of options, experimentation with Excel and other free tools

Project management and leadership, communication with faculty and others, library publishing, product expertise, how to be forward thinking, scholarly communication focus

Scopus training

Selected examples: extracting DOIs from library databases for article-level metric analysis, creating customized reports in Google Analytics

Several staff members have received training in altmetrics.

Skills are developed as needed, but demand is currently low.

The use of metrics offered by various software programs

Understanding of Altmetrics

Understanding of different metrics; proficiency with Scopus, Web of Science, and Google Scholar

Understanding of newer measures of article impact, including h-index, Eigenfactor, altmetrics data, etc. A better understanding of how Excel can be used to manipulate citation data.

Understanding the various altmetrics measures, and understanding what our administrative units prefer for measures.

Using Endnote and Zotero to harvest citations, familiarity with h-Index

Using social network analysis tools, Excel, and other software.

We have run a number of internal seminars providing librarians with training on the principles of bibliometric assessment of research outputs as well as information on the needs and uses of such information by researchers (e.g., grant applications, tenure and promotion, etc.) Librarians were also encouraged to test research assessment tools we had on a trial period available to Pitt community.

14. Please enter any additional comments you have on scholarly output assessment training. N=16

A lot of our training is informal: one-on-one research consultations with faculty, open meetings, brown bag lunches.

An area for development for us

As above, there are individuals within the Libraries here who work to better educate themselves about scholarly output assessment, but there is no program across the Libraries to do so.

At present, the scholarly output assessment training discussed above also occurs on an ad hoc basis rather than in a programmatic way.

Hard to teach use of these tools across disciplines, perceptions are that much of this is only related to science/STEM fields, not humanities.

Interestingly, librarians perceive research assessment as a brand new skill and often do not understand why such service could be delivered from a library.

More to come
The librarians in the system who know a lot about scholarly assessment are mostly self-taught.

The majority is self-directed; librarians acquire skills as needed to perform their work.

This is considered to be a requisite skill that needs to be addressed.

This is what liaison librarians do to support our learning, teaching, and research mission for the library and campus... nothing new.

We are in the process of developing a training and outreach program in this topic area.

We don’t promote this as a “service” like circulation or reserves or instruction sessions. So it’s done as needed, when requested.

We have the potential to develop collaborative goals between our Academic Liaison Program and Scholarly Communications Task Group. We are also interested in considering research data as another element in the scholarly output landscape.

We walk a careful line between educating researchers and not stepping on any possible conflicting issues with promotion & tenure philosophies related to new scholarship measures.

Workshops for faculty were offered in Fall 2014, but were very poorly attended, so alternate approaches are currently being evaluated.

**SCHOLARLY OUTPUT ASSESSMENT STAFFING**

(Nota: This section does not pertain to library staff responsible for assessment of library-based activities.)

15. Which of the following statements describes the library staffing model for scholarly output assessment services and training at your library? Check all that apply. N=67

<table>
<thead>
<tr>
<th>Staffing Model</th>
<th>Services</th>
<th>Training</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provided by several full-time library staff</td>
<td>52</td>
<td>41</td>
<td>55</td>
</tr>
<tr>
<td>Provided by designated specialist(s)</td>
<td>26</td>
<td>27</td>
<td>31</td>
</tr>
<tr>
<td>Provided by others who work part time</td>
<td>5</td>
<td>5</td>
<td>5</td>
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</tbody>
</table>

16. Please indicate how many library staff have responsibility for scholarly output assessment activities and the total FTE these individuals represent (i.e., are they full-time or part-time). N=53

<table>
<thead>
<tr>
<th>Library Staff</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
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<th>Std Dev</th>
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<tr>
<td>Individuals</td>
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<th>Responses</th>
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<tr>
<td>10.00</td>
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<tr>
<td>&gt;10.00</td>
<td>13</td>
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</table>

17. Please list the job titles of up to three library staff who provide scholarly output assessment services. N=62

<table>
<thead>
<tr>
<th>Position 1 N=62</th>
<th>Position 2 N=53</th>
<th>Position 3 N=37</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Director Learning Services</td>
<td>Director of Learning Environments</td>
<td>Open Education and Online Learning Environments Librarian</td>
</tr>
<tr>
<td>Biology Librarian</td>
<td>Agricultural Sciences &amp; Natural Resources Librarian</td>
<td>Associate Dean for Research &amp; Scholarly Communication</td>
</tr>
<tr>
<td>Biomedical Librarian and Emerging Technologies Librarian</td>
<td>Education Librarian</td>
<td>Digital Content Specialist and Head ScholarSphere User Services</td>
</tr>
<tr>
<td>Position 1 N=62</td>
<td>Position 2 N=53</td>
<td>Position 3 N=37</td>
</tr>
<tr>
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</tr>
<tr>
<td>Branch Heads</td>
<td>Individual liaison librarians</td>
<td></td>
</tr>
<tr>
<td>Chemistry Librarian</td>
<td>Data, Network, and Translational Research Librarian</td>
<td>Assistant Director for Public Services</td>
</tr>
<tr>
<td>Clinical Education Librarian</td>
<td>Sciences Librarian</td>
<td>Education Librarian</td>
</tr>
<tr>
<td>Clinical librarian</td>
<td>Reference librarian</td>
<td>Reference librarian</td>
</tr>
<tr>
<td>Collection and Organizational Data (CODA) Librarian (UL)</td>
<td>Faculty Services Librarian (Law)</td>
<td></td>
</tr>
<tr>
<td>Collection Development Librarian/Open SIUC</td>
<td>Natural Sciences Librarian</td>
<td>Health Sciences Librarian</td>
</tr>
<tr>
<td>Digital Projects Specialist</td>
<td>Scholarly Communication Coordinator</td>
<td></td>
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<tr>
<td>Digital Repository Specialist</td>
<td>Digital Data Repository Specialist</td>
<td></td>
</tr>
<tr>
<td>Digital Scholarship Coordinator</td>
<td>Scholarly Communications Assistant</td>
<td>Graduate Assistant in Technology and Digital Scholarship</td>
</tr>
<tr>
<td>Director, Copyright &amp; Digital Scholarship Center</td>
<td>Various subject specialists</td>
<td></td>
</tr>
<tr>
<td>Director of Library Operations</td>
<td>Head of Reference &amp; Education, Education &amp; Outreach</td>
<td>Reference Librarian, Education &amp; Outreach Librarian</td>
</tr>
<tr>
<td>Director of the Institutional Repository and Scholarly Communication Librarian</td>
<td>Collection Development and Analyst Librarian</td>
<td></td>
</tr>
<tr>
<td>Director of the Office of Scholarly Communications</td>
<td>Digital Scholarship Librarian</td>
<td>Subject Librarian(s)</td>
</tr>
<tr>
<td>Director, Scholarly Communications</td>
<td>Institutional Repository Coordinator</td>
<td></td>
</tr>
<tr>
<td>Engineering Librarian</td>
<td>Collections &amp; Scholarly Communications Librarian</td>
<td>Digital Library Software Engineer</td>
</tr>
<tr>
<td>Head of Social Sciences</td>
<td>Science Librarian</td>
<td>Scholarly Communication Librarian</td>
</tr>
<tr>
<td>Head, Digital Scholarship Center</td>
<td>Scholarly Communications Librarian</td>
<td>Science Librarian</td>
</tr>
<tr>
<td>Head, Scholarly Communication &amp; Copyright Office</td>
<td>Research Data Librarian (.5 FTE)</td>
<td>Coordinator, Institutional Repository</td>
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<tr>
<td>Information Services Librarian</td>
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<tr>
<td>Informationist</td>
<td>Subject librarian</td>
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</tr>
<tr>
<td>Liaison Librarian</td>
<td>Scholarly Communications Coordinator</td>
<td></td>
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<tr>
<td>Liaison Librarian</td>
<td>Coordinator</td>
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<tr>
<td>Liaison Librarian</td>
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<tr>
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</tr>
<tr>
<td>Liaison Subject Librarian</td>
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<td>Digital Scholarship Librarian</td>
</tr>
<tr>
<td>Librarian</td>
<td>Data Curation Specialist</td>
<td>Advanced Research and Engagement</td>
</tr>
<tr>
<td>Program Manager, Scholarly Publishing, Copyright &amp; Licensing</td>
<td>Director of Research for MIT Libraries</td>
<td>Program Manager, Scholarly Repository Services</td>
</tr>
<tr>
<td>Public Services Librarian</td>
<td>Institutional Repository Manager</td>
<td>Educational Specialist</td>
</tr>
<tr>
<td>Publishing Services Outreach Librarian</td>
<td>Coordinator of IR</td>
<td>Selectors/Liaison Librarians</td>
</tr>
<tr>
<td>Position 1 N=62</td>
<td>Position 2 N=53</td>
<td>Position 3 N=37</td>
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</tr>
<tr>
<td>Reference &amp; Instruction Librarian</td>
<td>Senior Reference Librarian</td>
<td></td>
</tr>
<tr>
<td>Research &amp; User Services Librarian</td>
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<td></td>
</tr>
<tr>
<td>Research Services Librarian</td>
<td>Digital Research Services Librarian</td>
<td></td>
</tr>
<tr>
<td>Scholarly Communication and Special Initiatives Librarian</td>
<td>Scholarly Communications Resident Librarian</td>
<td>Social Sciences Research Services Librarian</td>
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<tr>
<td>Scholarly Communication Librarian</td>
<td>Digital Repository Librarian</td>
<td>Science and Engineering Librarian</td>
</tr>
<tr>
<td>Scholarly Communication Librarian</td>
<td>Head of Collection Development</td>
<td></td>
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<tr>
<td>Scholarly Communication Librarian</td>
<td>Liaison Librarians</td>
<td></td>
</tr>
<tr>
<td>Scholarly communication librarian</td>
<td>Liaison librarian</td>
<td>Library technician</td>
</tr>
<tr>
<td>Scholarly Communications and Science and Technology Librarian</td>
<td>Associate Professor &amp; Head of Science and Technology Department</td>
<td>Scholarly Communications and Social Sciences &amp; Humanities Librarian</td>
</tr>
<tr>
<td>Scholarly Communications Committee Chair</td>
<td>Assistant Director</td>
<td></td>
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<tr>
<td>Scholarly Communications Librarian</td>
<td>Science Liaison Librarian</td>
<td>Health Science Liaison Librarian</td>
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<tr>
<td>Scholarly Communications Librarian</td>
<td>Liaison Librarian</td>
<td>Coordinator of Strategic Assessment</td>
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<tr>
<td>Scholarly Communications Librarian</td>
<td>Subject liaisons</td>
<td>Collections Officer</td>
</tr>
<tr>
<td>Scholarly Communications Services Manager</td>
<td>Humanities Librarian</td>
<td>Physical and Mathematical Sciences Librarian</td>
</tr>
<tr>
<td>Scholarly communications unit head</td>
<td>Digital scholarship specialist</td>
<td>Liaison/collection librarians</td>
</tr>
<tr>
<td>Scholarly Publication Librarian</td>
<td>All liaison librarians</td>
<td>Research Services Librarian (Engineering &amp; Science)</td>
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<td>Senior Librarian for Evaluation and Assessment Services</td>
<td>Variety of reference librarian/subject librarian job titles</td>
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<td>Science Librarian</td>
<td>Reference librarian</td>
<td>Health Science Librarian</td>
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<td>Science Research Support Librarian</td>
<td>Instructional Design Librarian (medical library)</td>
<td>Education Services Librarian (medical library)</td>
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<td>Social &amp; Behavioral Sciences Librarian</td>
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<td>Subject Librarian</td>
<td>Subject Librarian</td>
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<td>Subject Librarian (Health / Natural Sciences)</td>
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<td>Subject/Area Librarians</td>
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<tr>
<td>TRaCS Knowledge Management Librarian</td>
<td>Head of Science Library</td>
<td>Library Liaison, School of Pharmacy</td>
</tr>
<tr>
<td>Visiting Project Manager, Researcher Information Systems</td>
<td>Life Sciences Data Services Librarian</td>
<td>Instructional Services Librarian</td>
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</table>
18. Please indicate whether your library has hired new staff or reallocated library staff or is planning to do so to provide scholarly output assessment activities. Please make one selection per row. N=64

<table>
<thead>
<tr>
<th>Options</th>
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<th>Library plans to</th>
<th>Library has no plans to</th>
<th>N</th>
</tr>
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<td>Hire new staff</td>
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<td>10</td>
<td>43</td>
<td>59</td>
</tr>
<tr>
<td>Reallocate staff</td>
<td>14</td>
<td>6</td>
<td>41</td>
<td>61</td>
</tr>
</tbody>
</table>

19. Please enter any additional comments you have on scholarly output assessment staffing. N=37

Above the FTE doesn’t mean they spend all of their time working on scholarly output, but that they are full time individuals at the library.

All liaison librarians play an assessment role. It’s difficult to gauge the amount, so we added their effort up to 1 FTE.

All subject liaisons are expected to have some knowledge of scholarly output assessment and be able to speak to their faculty about how to use them. Scholarly Communications Librarian is working to put together base-level service expectations and training to assist subject liaisons.

All subject librarians are expected to be knowledgeable and be able to advise and assist researchers and answer questions related to scholarly output activities. Only a handful are comfortable teaching workshops/classes on the tools and topics. (All 14 librarians with subject responsibilities are FT).

As mentioned earlier, those librarians who have expertise have mostly taught themselves. Most colleagues know who they are and can go to them for assistance if needed. We have no “dedicated” staff who are charged with having this expertise.

Expertise is very distributed across the library system and is part of the expectation for library faculty liaisons and library leadership.

Here, this is considered part of the skill set for liaison librarians. It’s something done in response to a question, or brought up in a classroom session discussion.

In addition to leveraging the liaison model for liaison librarians to assist faculty in scholarly output assessment and existing Exhibits Coordinator and Digital Scholarship Librarian positions for their collaborations with liaisons, the Libraries also hired a Scholarly Communications Librarian and is in the process of hiring a Data Librarian who will also collaborate with liaisons to provide services across all areas on campus.

In our answer above to which we answered (17,15) we are referring to the number of subject & liaison librarians on our staff. All of these librarians spend only a small portion of their time on such activities.

In our institution, the responsibilities for this area are very diffuse, each subject specialist is the initial point of contact because they know the scholarship culture of their departments. They consult with a few people on staff that have developed special expertise in metrics based on previous experience and their normal ongoing research interests. At this point, no one is specifically assigned as a general point person, though as chair of the scholarly communications committee, I function informally in that role, though it is not a specific dedicated job responsibility. Hence the questions you ask above are difficult to answer. I suspect we will move toward dedicating more staff time to this area, but it may be a while before we formally create specific staff positions to address this area. This is complicated by the fact that other institutional support and assessment offices like Institutional Analysis and Sponsored Programs see this as their function and tend to act independently of the library.
In theory, all of our librarians with public service responsibilities might have some experience with scholarly output assessment activities. However, for the purpose of this survey, I have indicated the number of librarians most likely to be involved with these activities on a routine basis: subject-specialist librarians, librarians serving our professional schools (medicine and law), and librarians serving graduate programs outside the main campus.

It is not so much the reallocation or addition of staff as the realignment of existing subject specialist roles to support bibliometric analysis and publication analytics. This survey does not sufficiently account for that possibility.

Law notes that services are provided by designated specialist. UL notes training and services. At Law, faculty services librarian may occasionally request support from other librarians. At UL, various liaisons provide these services, or they are provided at the reference desk, thus difficult to estimate FTE/staff time overall with exception of CODA librarian, who does this work.

Liaison librarians provide many of these services to their constituents as part of their professional assignment. We are looking to incorporate skills and expertise into position descriptions for new hires, particularly in STEM fields.

Liaison librarians provide support and training for scholarly output assessment upon request and through targeted workshops for faculty.

No one has specific responsibility for this, no one is specifically designated to deal with these issues, but anyone who works with faculty will provide services related to SOA.

No library employee is tasked solely with work related to scholarly output assessment. The work is done by full-time librarians but it is only part of any individual’s workload.

Scholarly Communications committee that offers programming and services about scholarly output assessment. The committee is made up of librarians from various libraries on campus.

Scholarly output assessment is considered to be an important component of the liaison role and broadening this skill set needs to be carried out in a coordinated fashion. An assessment protocol needs to be established to review the current products.

Scholarly output assessment is not an official, explicit part of any position description, however, the people who provide these services do so because they believe it falls within their responsibility.

Scholarly output assessment work with library users is part of the typical subject librarian portfolio of outreach and reference activities.

Staff has not been hired specifically for this, but a combination of new and existing staff have this as part of their portfolio.

Staffing model varies a lot in different libraries. On medical campus two librarians have responsibility; on non-medical campus all subject/departmental librarians would include scholarly output assessment services and training in their responsibilities and amount of attention varies widely by personnel and by discipline.

Subject/area librarians and other full-time staff in Research Services and Collections, Technical Services, and Scholarly Communications provide support related to scholarly output assessment on an ad hoc basis. There are no dedicated staff members whose responsibilities are only related to this area.

The University Library is currently building an Office of Research to support the research activities of faculty and students. This will include increased attention on scholarly analytics and collaboration with other units on campus.

The librarians who sometimes provide scholarly output assessment do so only very rarely and on a casual basis. There is not developed program for this.
The library has shifted from a centralized support for scholarly communication services (1 FTE faculty librarians plus 1 FTE staff) to distributed support for scholarly communication services. This distributed support is coordinated by a Scholarly Communication Committee, composed of representative members from Public Services departments (Humanities, Social Science, Science, Information Commons), Special Collections, Technical Services, and the IR manager. Each of the committee’s 10 members is responsible for being a consultant on scholarly communication issues within her/his library department. Though the committee has 10 members, the total FTE investment is likely 1–2, since each individual dedicates a portion of time to scholarly communication endeavors.

There is not one designated person who provides this kind of training and services. Instead, different librarians spend part of their time on providing the training and services.

These services fall under other new roles that were created, but the new roles were not focused on scholarly output assessment. These roles were created through reallocation.

This work has been incorporated into the existing subject specialist librarian positions.

We are creating a unit called E-Resources and Digital Services that will be more responsible for tracking a lot of these metrics. All librarians have some skill in these areas and have multiple contacts within the library from Information Technology staff who do web analytics to system-wide contacts outside the library of institutional repository staff who can provide analysis.

We currently are accepting applications for a new position of Scholarly Assessment Librarian.

We have 3 full-time librarians who work on a research guide covering scholarly output assessments, but this is a very small part of their overall responsibilities.

We have a project manager for training and implementing the campus faculty profile system, which includes training on the assessment tools provided therein. I am not sure how this breaks down into FTE percentages.

We have no staff whose primary job focus is scholarly output assessment, as any services or training are provided on an ad hoc basis by some subject librarians. The Institutional Repository does have more focused staff support.

We have staff involved in different areas of scholarly output assessment. Library administrators are involved at the planning and university-wide level, liaison librarians provide services and training to faculty and students, and a Metadata Management Librarian manages our institutional repository.

When we hire a Scholarly Communications Librarian, we expect this to be part of that position.

**PARTNERSHIPS WITH THE PARENT INSTITUTION**

20. Has your library partnered with specific units of your parent institution on scholarly output assessment activities? N=75

<table>
<thead>
<tr>
<th>Option</th>
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</thead>
<tbody>
<tr>
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<td>53%</td>
</tr>
<tr>
<td>Not yet, but planning is in process</td>
<td>20</td>
<td>27%</td>
</tr>
<tr>
<td>No, the library tried to initiate a partnership but was unsuccessful</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>No, the library has not done this</td>
<td>13</td>
<td>17%</td>
</tr>
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</table>
If yes, please identify the unit(s) and briefly describe the scholarly output assessment activities the library has collaborated on. N=39

Dean’s offices when doing program evaluation and especially the Office of Institutional Analysis
Division of IT, Office of the Vice President for Research, Office of Academic Planning & Assessment
Graduate School, and individual departments and programs

In the past the Libraries have partnered with Faculty Affairs and the president’s office on these activities.

Individual academic departments that have expressed an interest in scholarly assessment for their faculty
Librarians have been meeting with Office of Research and Office of Institutional Research staff to review scholarly output assessment software options.
Library has invited deans for research from across the institution to help assess research evaluation tools considered for purchase. Library is working closely with central IT to implement ORCID and faculty info system.

Office of Research
Office of Research, grad school, provost
Office of Research, Sponsored Programs, VP Research, colleges and schools of Arts & Sciences, Engineering and Computer Science, Graduate School

Office of Sponsored Research: creation of patent profiles for individual researchers, as well as patent search and patent citation training for students working at OSR. Media Relations Office: collaborated on the training of MRO staff. Graduate and Postdoctoral Studies as well as Teaching and Learning in the development of graduate student research training (MyResearch).

Office of the Provost: provide guidance and reports re methodologies used by college and university ranking groups. University’s Institute of Clinical and Translational Sciences (ICTS), members of the ICTS Tracking and Evaluation Team. The Office of the Vice Chancellor for Research (OVCR): provide guidance and reports for various academic/research groups. Dean School of Engineering: systematic delivery of some reports to department chairs.

Office of the Vice President for Research, Sponsored Program Services
Provost’s office is the lead for faculty profile system, and library supports major components of this. Office of Institutional Research, Office of News & Communication, and some deans and department offices collaborate with the library to use these services.

Provost’s office: assistance with search criteria and training for faculty using Elements. Individual liaison librarians work with their colleges and departments: primarily in business, engineering, and the sciences.

REACHNC: includes scholarly output assessment activities in the way of visualization tools. This is a locally developed product for the entire university system (17 units).

Research Administration
School of Medicine Office of Research [medical campus]

Several years ago collaborated campus-wide on the selection of InCites. Worked with provost, Research Office, etc. All administrators have turned over, and we have no current subscription for InCites or comparable product.

Texas Digital Libraries
The Libraries have partnered in the implementation of Digital Measures. This was originally with staff in the provost's office, who are now part of the Office of Institutional Research due to a reorganization.

The Libraries were core partners for the VIVO grant and are partners for various trainings and activities with Research Computing, the Division of Sponsored Programs, the Graduate Editorial Office, and Office of Undergraduate Research for training and assessment related activities including ORCID and more.

The library is partnering with the Office of Research Services and the Office of Planning and Institutional Research.

The University Library has primarily collaborated with other units such as the Office of the Vice Chancellor for Research to implement researcher information systems and the Graduate College to facilitate electronic theses and dissertations. The first goal of these projects is to collect and disseminate Illinois research, but over time we may see greater library collaboration with other campus units for analytics and assessment.

The University’s Grant Assist Program is offered via The Office of the Vice-President (Research). This office currently provides publicity, scheduling, registration, and assessment of bibliometrics/research impact workshops provided by librarians. In addition, some faculties and/or department contacts connect with their library liaisons to coordinate training.

The Vice President for Research helped fund our digital repository. One librarian works with the Associate Provost for Faculty Office to present faculty development workshops, which include scholarly output assessment tools.

There is currently a university working group comprised of partners from our Research Office, School of Graduate and Postdoctoral Studies, library, and various faculties. We’ve also worked directly with faculties or departments, with individual faculty, communications staff, and associate deans of research to learn about their needs and either provide information or instructions/training for them.

University’s Academic Personnel Office provides OPUS system of record for academic appointees. The library has been working on implementing ORCID at a campus-wide level and integrating with Symplectic.

University Libraries partnered with the Office of Distance Education and eLearning to present a joint workshop through the Research Commons covering Research in View and the Knowledge Bank (our institutional repository): “Undisciplined Research: Planning and Publishing Across Disciplinary Boundaries.” Looking for collaborators in other disciplines at the university? Want to hear about options for sharing your work digitally or starting a new open access journal? Join ODEE, the Libraries’ Publishing Program, and the Knowledge Bank to learn more about valuable tools for finding collaborators and making your work more accessible to researchers in other disciplines.

University system has purchased SciVal Experts/PURE for all system schools. We are currently working with Elsevier to fix bugs in one instance and then may be rolling that out to campus.

Vice-President, Research Faculty of Nursing, Faculty of Medicine, provost's office

VP executive, VP research

We collaborate with University Information Technology on the implementation of Symplectic Elements and the connection to the institutional repository.

We have more than one answer to this question. Law answered no, but UL answers both yes and no. At UL, life sciences librarian partnered with NUIT Research Computing, FASIS/HR and others to explore ORCID options. Head of Electronic Resources & Collection Analysis Department at UL sits on the Scholars/FASIS team.

We work closely with the Office of Research Services. Currently we’re engaged with them on implementing a new phase of our Tools for Research @ Queen’s (TRAQ) system for managing the research cycle that includes scholarly output assessment.
We work with the medical school quite a bit largely due to the NIH mandate.

We worked with the Office of Knowledge Enterprise Development on their evaluation and eventual implementation of SciVal.

We’ve been working with the University Data Warehouse and Business Intelligence to identify and evaluate potential software for use in a comprehensive faculty information system.

We’ve collaborated with the California Digital Library to promote and support the UC e-Scholarship repository on this campus.

**Planning is in process N=7**

Collaboration with Office of Faculty Affairs is in development. This office manages the campus instance of VIVO.

Institutional Research

Institutional Research Office: using data on publications in custom services developed on campus for tracking outputs.

Library will collaborate with academic departments and Institutional Research on the use of Digital Measures.

Office of Research

The Libraries are collaborating with the Division of Research (VPR) on an experimental basis on bibliometrics, e.g., quantifying the monograph output of faculty.

Work with different campus units on an ORCID implementation.

**Tried to initiate a partnership N=2**

Research & Innovation Services

University (provost’s office) contracted for Academic Analytics and Digital Measures. The Libraries wasn’t consulted but after the contracts we’ve worked periodically with the Digital Measures team in the provost office.

21. Please enter any additional comments you have on scholarly output assessment partnerships. N=17

Carolina Health Informatics Program has recently relocated its offices to the Health Sciences Library and provides a potential partnership in this area. ODUM institute for social behavior science located in Davis Library also provides collaborative services.

Have consulted with the Office of Research staff about potential source of faculty publication data useful for populating SciVal and VIVO (e.g., Scopus, Pubmed, Web of Science, etc.)

Instruction with SOA tools is often integrated into workshops/sessions with broader coverage. One librarian has been invited to give special presentations to university committees (appointed by the provost’s office) to educate them on research evaluation software and the differences between different tools.

Office of Institutional Research does an evaluation of a scholar’s impact as part of tenure review process, but said office does not appear to provide services directly to faculty members.

Partnership with the main campus Office of Research is likely.
Plan to explore the potential for collaboration with the university’s research services department.

The library only played a facilitating role in introducing assessment services and resources, beyond the library holdings, to various campus units.

The provost’s office subscribes to Digital Measures. We are making efforts at working with them, so that we can ingest citation information (and maybe full-text) into our institutional repository.

There has also been work done independently of the library on assessing academic programs through scholarly output assessment measurements through our Academic Planning and Institutional Research Office.

This is a growth area for library services. It’s important to be able to show impact of our university’s research for a variety of reasons, and library staff are well placed to understand how best to do this.

This is a new area and there needs to be more communication and cooperation among the various entities interested in assessing the scholarship of our institution. The other problem is that direct quantitative assessment (the numbers game) can create furor and significant push back where the validity of the metrics used, the underlying data, and interpretation of results is questioned. Librarians tend to come from a perspective of transparency and openness, but that is not always the perspective of everyone else. Understandably, this is a sensitive area and perhaps not enough care has been taken to make sure scholars and departments are assured that they will not be nor be judged by a single “magic” number.

We are in the planning stages of partnering with the provost on scholarly output assessment.

We have had very preliminary conversations about standardizing ORCIDs across campus with the associate provost for research.

We have no formal arrangements, but the library is part of the conversation at all different levels, e.g., serve as consultant on specific databases, products.

We would like to work more closely with the graduate school as well as vendors, e.g., ProQuest dissertations dashboard.

We’re seriously considering building the software for a faculty information system in-house rather than purchasing from a vendor.

Working with partners is key to understanding all of the different parts of the issue and reaching all of the different relevant groups. For us, our strategic plan and the focus on research outcomes is a driving force.

**MARKETING AND PUBLICITY**

22. What methods does your library use to promote scholarly output assessment activities and services? Check all that apply. N=73

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<td>66%</td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>Brochures</td>
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<td>16%</td>
</tr>
<tr>
<td>Other method</td>
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<td>47%</td>
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</table>
Please briefly describe the other method(s). N=34

- Campus activity/course guides
- Campus Daily Digest
- Campus media
- Departmental meetings
- Departmental meetings and emails
- Direct email to the targeted users
- Emails to faculty
- Electronic display boards
- Email (3 responses)
  - Email invitations sent directly to faculty members via central campus communications channels. Some targeted communication with deans/associate deans on metrics relevant to their disciplines, provided upon request.
- Email lists to faculty and grad students
- Email notifications sent out by university public affairs to all university community members, bookmarks given out at orientation
- Email to faculty and newsletters
- Email to faculty listservs
  - Emails to department liaisons, announcements at faculty events, blog advertising is new; only started last year
- Eventually we intend to use webguides and departmental liaisons.
- For campus awards, people are referred to librarians for citation analysis reports that are then submitted as part of the campus award application packet.
- Individual email communication, departmental meetings with faculty
- Liaison librarians, integration with other systems and processes on campus, attending academic department meetings, presentations in courses and workshops, integration of library staff with research labs
- Library-held wine and cheese event for new faculty, posters, open week events, brown bag lunches at departments, and presentations to user groups (usually as a part of long-standing series)
- Local listservs
  - Meetings between key faculty members from departments who have responsibility for these activities and the appropriate library liaisons
- Mostly through direct contact from those interested; we’re not doing a lot of advertising.
- Once we get the altmetrics donut up on the publishing/press website we will certainly be promoting it via social media, brochures, and the library websites.
- Regular publication reports include notes about new tools/features available for scholarly assessment.
Via liaison librarians and the library newsletter

We do not yet have a program to promote. Services are provided on-demand.

We do not yet promote the scholarly output assessment activities and services; we fold these activities and services into our overall scholarly communication program.

We have depended more on liaison contacts within their departments to proactively become aware of and take action on any of these assessment needs rather than formal printed or electronic materials. However, we do have a concise and I think excellent scholarly publishing web site.

We speak to faculty in meetings and for their workshops as requested or arranged.

Workshops

Workshops on metrics

**SCHOLARLY OUTPUT ASSESSMENT ADVICE**

23. What advice can you offer to your peers on providing scholarly output assessment activities or establishing a scholarly output assessment program? N=43

Although we do not have a designated scholarly output assessment program, we are able to provide these services via one-on-one consultations, workshops, targeted professional development classes, and upper-level course-related instruction.

As we develop output assessment services, we find it beneficial and insightful to think outside of the article as scholarship and outside of the h-index as impact measurement. We encourage our colleagues to gain insight in this growing area as well.

Become informed about your campus assessment tools and become involved in those efforts, as it serves the overall institution more effectively than library-only lead efforts.

Build capacity and expertise so that faculty members can create and manage their own profiles themselves. Recognize and tolerate that this area is still in flux. Build awareness, recognizing that this area has not yet gained traction and that traditional methods still prevail.

Construct outreach and training that is in line with disciplinary contexts. Align outreach materials with institutional goals.

Create resources that people within the library can use to educate themselves when they are asked to provide analytics. Provide key contacts with expert knowledge of specific sets of analytical tools. Have staff be familiar with the kinds of tools available, but don’t expect them to know how to use them unless they have an ongoing need to exercise their skills.

Current ad hoc model is not effective due to lack of “ownership.” Recommend a coordinator responsible for marketing these services and staff training.

Ensure that you have capacity to provide services (from my experiences in Australia, I have seen the demand for such services increase tremendously over short periods of time). Ensure that you are working with reliable data sources (data is cleaned and you capture as much of the outputs as possible). Be honest about the limitations of the bibliometric tools and techniques; always make caveats explicit.
Establish baseline service expectations for both subject liaisons and front-line staff. Create informational pages and training to help get all staff up to speed.

Existing roles and skills of librarians can transfer into scholarly output assessment activities with training and education.

Faculty advocates have a stronger voice in describing the value of these services than library employees.

Focus on established data that faculty are familiar with rather than new social media metrics (altmetrics) out there.

Get campus-wide input on the definition of the problem and selection of the tool.

Hire someone with expertise in this area.

Identify user needs. Provide time for staff to learn to do this. Get faculty input to plan programs; we need to understand their needs. Lesson learned: We think that “we” know scholarly communication and how output assessment will benefit faculty. But the big reveal was learning how competitive forces underlie faculty decisions on everything related to scholarly output. They think much differently than librarians.

Integrate this work into existing relationships with faculty to support their work across the research life cycle.

It is challenging and time consuming to stay abreast of the tools and methods used to assess scholarly output. We find that having a core group of librarians acquiring more in-depth knowledge in the area enables others to refer more advanced questions to assist our user population.

It is critical to have the support of the high administration; most of these issues are related to institutional repository and open access. We succeeded in presenting scholarly communication as part of a large “research life cycle” issue/project.

It is helpful to have a dedicated position or at least one faculty member who keeps abreast of emerging products and resources and then provides staff development for other faculty and staff.

It’s important to get faculty buy-in by making the workflow for assessing and tracking scholarly output as easy and pain-free as possible.

It’s very important to understand campus culture and specific researcher or administrative needs in order to have productive conversations.

Liaison model provides expert consultative services for unique concerns for each field as augmented by functional experts support.

Make it extremely easy for the scholar. Any additional effort, no matter how slight, will be met with resistance. For this reason, one must do just about all the work on behalf of the researcher. That means ultimately redeploying library staff.

Need to get other departments on campus involved in order to be successful.

None at this time.

Our institutional repository collection administrators really appreciate the regular email updates with usage statistics on their collections.

Our librarians do not recommend Google Scholar. To researchers who use Google Scholar, our librarians recommend other options such as Journal Citation Reports, Scopus, and Web of Science. While our librarians can provide reports and guide researchers in scholarly output assessment, it is easier to let researchers review citations of their works and correct inaccuracies. For example, it is not rare for a researcher to have multiple researcher profiles due to name changes. Researchers should be responsible to reconcile their multiple researcher profiles and citations. We need to remember that disciplinary differences in publishing cycles affect scholarly output, and that scholarly output of
one discipline is not quite comparable with that of another. Even within the same discipline, there is a difference in publishing cycles between theory and applied articles. It remains controversial to use summative measures like scholarly output assessments in terms of managing departments and their budgets.

Our new workshop series has been very successful, in part because a faculty member approached us with the idea, and co-presented with us. He is a well-respected faculty member and his presence drew more participants to our workshop. We now integrate portions of that workshop into other presentations to grad students (in particular) but also faculty groups.

Partnerships are important. Take a needs-based approach.

Providing such services helps build faculty-library liaison relationships. Faculty are very pleased when we are able to help them prepare for promotion and tenure reviews.

Start with one area of expertise and expand based on gaps or areas of need. Another recommendation is to identify champions such as faculty members or administrative assistants who support the library’s efforts in this area. Ask the champions for feedback when piloting new ideas or reports. When a report is requested, provide the report sooner than expected and include other information to supplement the report. Be willing to test and become familiar with new software. Be willing to review the literature on the topic. Attend non-library conferences such as the American Evaluation Association or Science of Team Science.

Stay on track and be persistent.

Tailor your programs to address actual researcher scenarios. Funding applications, dossiers for renewal and tenure, annual reports and promotion. Anticipate and address concerns and misconceptions.

The tools have limitations. Be mindful and explicit about this as you introduce, discuss, and utilize them. Publishing cultures differ by discipline, and this needs to be acknowledged and understood when taking on this work. To provide a full picture of an individual’s and/or institution’s scholarly output assessment, a broad and diverse range of scholarly impact measures needs to be defined.

The tools to do this can continue to grow. Don’t plan on learning about just a few select tools because the faculty are going to be stumbling upon other tools.

This area is growing so we should do it; seems to be a core role for liaison librarians. Library as publisher (formal or informal) also requires that we do more of this type of work. We need to be proactive.

Try to understand the needs and motivations of the researchers, and tailor the program (or at least the messaging around it) directly to that. Academic departments, news & communications staff, and subject liaison librarians are key partners, as they are already working closely with the researchers in many related areas, and have established relationships.

Understand the norms of the discipline and the expectations for faculty and graduate students in each department.

Understand the strengths, weaknesses, and appropriate use of various platforms and measures, and how to communicate this to users. Write scholarly output assessment activities into job descriptions to stress that scholarly output assessment activities are increasingly a part of many librarians’ work. If output assessment is used by admin as a contentious tool in faculty performance reviews, it’s important for the library to maintain neutrality and not be perceived as taking sides.

We are eager to learn from other institutions.
We are not very far along with this, but we have found that it is important to offer multiple opportunities for faculty to learn more about it.

We've got to partner with others. Our roles and our libraries are changing dramatically, and we have many options for the future. We can't and won't succeed by pursuing all possible directions. We need to make sure this is an area where we can have impact, have the proverbial seat at the table. We can take on every new role proposed and be successful. We need to be very strategic. That said, I do think this is an area that we should aggressively pursue. As a counter example, I am less optimistic that scholars will want and accept help from librarians for data management, except at the lowest level of doing the grunt work. Carefully document every metric and report you do. It can cause a firestorm. Report all assessment data in its full context, what you searched, how you searched, limitations, what the metric is. Know what you are doing or get out of the way. Higher-level metrics for departments, schools, and institutions can be a huge time sink. Author disambiguation and tracking work histories is a huge task, esp. if you want the metric to include all scholarship of your faculty from their first job. Again we need to partner and train others. Our engineering school has a person devoted full-time to tracking metrics. We cannot possibly do citation metrics for the entire university and keep it up to date. If we are not careful, we will spend our entire year sitting in front of a computer and retrieving citation reports.

With workshops it really helps to have someone that is a tenure-track faculty, someone who knows and understands what faculty have to provide for their department annual reports and/or their promotion & tenure portfolios. We have had a LOT more visibility with our efforts since partnering with the provost’s office staff who handle faculty development programs and also the VP for Research office. One of the struggles we have had in recent years is that there are two different areas of need; one is the tenure-track faculty promotion/tenure needs, and the other is university administrators who are compiling faculty comparison reports for accreditation or cross-institutional comparisons of faculty scholarship and grant activities. The tools the university administrators tend to need something like University Science Indicators (which has changed name now), Academic Analytics, or Plum Analytics. Faculty have more needs along the lines of finding scholarly impact for disciplines that are less well covered by Scopus & Web of Science, particularly in the humanities. We have needed to address each audience very differently in these discussions. I strongly recommend forging relationships with university committees involved in reviewing faculty promotion & tenure files ... educating them to what is “currently” available and ensuring they are involved in campus discussions about new trends in these areas. Self-promotion, online visibility, and online involvement can impact altmetrics and readership statistics and likely citation rates. It’s important to explain how using different tools (repositories, social media, etc.) can affect the visibility and reach of research outputs. Not everyone likes social media, but it is important to be aware of it and to be competent enough with these tools to be able to monitor what’s being said and done with your research. It should not be assumed that only the “sciences” are interested in altmetrics. We had more attendees from the social sciences and humanities at our workshop.

**SCHOLARLY OUTPUT ASSESSMENT TRENDS**


Administration could bypass the library by training their own people to pull the numbers from places like Web of Science, Scopus, Google Scholar, SciVal, etc.

Adoption and use of alternative metrics for scholarly output assessment

Altmetrics and unique identifiers for researchers, e.g., ORCID ID
Altmetrics for sure. But as there are more players (used to be the only citation database was Web of Science) it gets harder and harder to choose the source data, no less the metrics used. The biggest problem yet to be solved is combining results from different citation databases. This is because one not only needs to deduplicate the cited references (the faculty member’s papers) but also the citing references. No good way to do the second part. Scholarly output assessment is here to stay, it is a natural area for librarians since most of the assessment is based on citations/mentions/downloads of published material, whether formal or informal. We know scholarly publishing.

Altmetrics that focus on non-scholarly attention to scholarly output will require libraries to turn their attention to things like traditional and social media. Non-traditional scholarly output, such as data sets and code, will require new tools to track citations and impact. Librarians will need to better understand the research process in order to help researchers measure the impact of these outputs.

Arts & Humanities: Even though we think that they will benefit from Altmetrics, they want to use conventional metrics for assessment (e.g., H-index) because that’s the only way they can stand on a level playing field with scientists. The H-Index must be used for all faculty disciplines even though some disciplines may see problems with it. Librarians focus on the problems of traditional metrics like H-index and JCR. But this does not help administrators use metrics better; it only makes them annoyed (at us).

As North American universities adopt research information management and research assessment software, libraries will be more involved in explaining what it means to faculty, and will be positioned to help faculty present their scholarly outputs in the best light.

As scholarly output increasingly moves toward non-traditional platforms (e.g., blogs, social media), what are the implications for collecting and preserving the scholarly record? What types of scholarly output will be prioritized among research libraries? How might current methods and tools for assessing scholarly output reshape the scholarly record that will be available through research libraries in the future?

Author disambiguation (ORCID, Researcher ID, etc.) and related metadata are only as useful as the data source you are harvesting from is accurate, detailed, and accessible. Financial limitations and inaccurate data will continue to challenge forward progress in this area unless libraries and publishers work together to improve the situation.

Cost of the tools, difficulty aggregating the data

Currently, popular service in the sciences but will become increasingly important in the humanities. Campus administration’s increased interest in scholarly output assessment is something libraries need to be aware of and respond to.

Data (and other digital scholarship “objects”) are a big issue. Not only the preservation of data but finding ways to assess usage beyond citation metrics. There are groups examining this. Data citation is one method, but has yet to become standard practice. This is likely to be messy for a while yet. In the last few years, we have suddenly started seeing problems with researchers not understanding the difference between a “journal” and a series of publications posted on a website. Electronic journals have caused confusion with what is a volume and issue number and why is it needed ... along with being able to determine the “reputation” of a journal before submitting articles for publication. There is a need to spend time educating researchers about predatory publishing and vanity presses. One of our librarians reached out to a society publisher whose name was being “reused” by a predatory venue and it lead to the publisher producing a three-part mini-series on the topic in their society newsletter.

Data sharing and digital scholarship/humanities result in scholarly output other than journal articles. Datasets are published through repositories with digital object identifiers (DOIs) for ease of citation. Data citations should be counted in scholarly output assessment, and new types of research output from digital scholarship/humanities projects should be considered in addition to other forms of scholarly output.
Decrease in institutional budgets. Increase in cost of tools. Increase in automated harvesting of information. Increase in competition for resources and prestige. Increase in institutional silos.

Develop new tools & data sources for non-journal materials. Services and workshops are focused on promotion and tenure efforts.

Develop support to academics editing a peer review journal. Continue developing a local assessment team on the bibliometric impact of university research. Work on a unique researcher ID (e.g., ORCID type) or signature.

Different groups of scholars (e.g., digital humanists, open access advocates) decry creeping neoliberalism in academia and advocate for thinking about P&T decisions in new ways. Research libraries need to be cognizant of how SOA feeds into these other issues (and how these issues feed into SOA).

Everyone at the university is much more interested in measuring scholarly output, both for individual scholars and for the overall ranking of the university, and libraries will be recognized as being expert about metrics, citation analysis, etc. As interest grows, library faculty and staff will take on, and want to take on, new roles in this area. Since institutional repositories, open access mandates, and library publishing are implicated, all areas in which we are working, scholarly output assessment will be part of our work. We will collaborate more with publishers, we will need more resources in terms of staffing and sources, and we will recruit for and reassign to new positions.

Expanding the portfolio of liaisons to include these new services. We need to educate subject librarians, who have the most direct contact with students and faculty within the institution, about scholarly output assessment and associated tools.

Explosion of tools on market that are challenging to keep up with and support. These also have budget implications, i.e., library cannot purchase all. Rather, promote resources library has available and free tools. Another trend is use of these tools across disciplines, including to those not familiar with concepts, or where they are perceived not to be useful/accurate.

From a faculty services perspective, the evolving role of output assessment in tenure and promotion will mean that librarians acquire more knowledge and skills in bibliometrics and scientometrics. From an information literacy perspective, the shift from pre- to post-publication review and assessment will change how librarians teach students to assess sources.

Funding for expensive platforms such as Digital Measures. Proliferation of free services that do different things.

I think major library vendors and publishers will begin to offer this service as a package with other services.

I think the increasing importance of alternative metrics will continue to raise implications. For example, many tools that measure alternative metrics rely on information from the author in order to be accurate, which means that it would be difficult, if not impossible, to have a comprehensive tool assessing scholarly output that is implemented without active author involvement.

I think there are more opportunities for libraries in this area because this is using databases (Scopus, WOS) and journal information (which feeds Google Scholar) to connect with faculty profile tools that have many purposes from running metrics at individual, department, and campus levels in additional to many other purposes. If libraries are not involved in these implementations on their campus, they are losing out on an important opportunity to remain relevant to their users and to build further collaborations.

Increase in the emphasis that faculty members and researchers demonstrate success in collaborations as well as by the impact of their research means that the tools and the skills to do this are becoming increasingly important. This
Survey Results: Survey Questions and Responses

highlights the role for Information Technology in the development of self-help software and tools, and the challenge for research library liaisons to match the appropriate tool with the specific needs of the discipline.

Increased significance of altmetrics. Increased need for researchers to demonstrate qualitative impact to multiple audiences within the university and industry. New publications methods and increasing importance of non-traditional scholarly output. Increasing system and process integration. Increased importance of research data in assessment.

Increased demand and focus; open access movement and altmetrics taking greater prominence; capturing ‘non-traditional’ data about scholarly output (e.g., music performances); changes in promotion and tenure processes to reflect different scholarly dissemination environment.

Increased level of specialization within disciplines suggests necessity of training librarians of various disciplines to best communicate with a diverse faculty. Need for careful navigation of the role of libraries between that of supporting faculty and that of assisting administration in evaluating faculty.

Increasing use of article-level metrics and how those tie into tenure and promotion discussions.

Increasing use of standards like ORCID improve the quality of scholarly data and promise greater interoperability. In addition, we anticipate more campus conversations about Altmetrics.

Libraries need to be out in front and provide these services and/or partner with other departments on campus.

Making the connection between immediate needs of scholars/researchers to demonstrate the importance/value/impact of their work (a private “good”), with “openness” (a public good), seems to work very well here.

Many research libraries need to hire Scholarly Communication Librarians who can help lead the development of robust services in this area.

Many tools and measures, federal research requirements, changes possible in tenure processes

More and more funding agencies, publishers, and professional associations are using ORCID. This gives librarians an opportunity to promote ORCID.

More system integration across our campuses is needed and widespread use of standard identifiers for researchers and their outputs.

New methods for assessing and analyzing impact

Open Access; San Francisco Declaration on Research Assessment; Radical Collaboration and evaluation of collaborative activities, practices, and impacts; Digital Scholarship trends broadly including Digital Humanities; assessment and impact tracking with new programs and requirements from funding agencies and for legislative support with public institutions, and with greater emphasis on accountability

Reallocate costs for new position in this area of expertise or stop offering services of this kind.

Scholarly assessment is a niche area that represents a transformative service model for libraries. Librarians possess skill sets that are well suited for scholarly assessment activities. Librarians are familiar with bibliographic databases and have an understanding of how the data can be used for grant reporting, tenure/promotion, benchmarking for performance, to name a few. We are also familiar with the academic and research practices including funding mechanisms. Services and expertise on scholarly output assessment may help libraries to move beyond traditional publishing support to support of other sorts of output, such as data, code, informal dissemination, etc.

Scholarly output assessment tools are not advanced enough yet for the trend of team science and team-level assessment, as opposed to traditional individual scholarly assessment.
Stronger relationship between output assessment and the funding, tenure, and promotion of faculty. The integrity of data will come into question, especially when it comes to use (e.g., identifying “real” vs. robot web visits). Do the metrics actually measure what we hope they do?

The area of altmetrics poses new challenges in research output evaluation as there is still little research to the meaning of these metrics. It also provides exciting opportunities to capture impact of new forms of scholarly communication. Libraries should keep a keen eye on the developments in this area.

The big publishing conglomerates are all trying to corner the market in this space. Libraries will need to be careful not to get stuck in unhealthy relationships again, with closed standards, closed systems, and proprietary software and data. It will be important to promote open access and competition, and for universities to have control over their own data.

The development of Altmetrics is something to watch, and will likely become more important and relevant in the next five years.

The incomplete, but very interesting and easy, results provided by services like ResearchGate and Google Scholar Profile are already influencing people to accept the quick, free, and incomplete data versus data from the commercial sector like SciVal, InCites, etc.

The integration of more traditional scholarly output assessments (citation impact factor, h-index) with new methods of assessment and with new partners on campus (institutional research, office of research)

The limitations of the h-index in the shifting scholarly communications landscape will most likely demand new skills and training for library professionals to implement assessment for emerging forms of scholarship and impact.

The tracking of altmetrics will become much more prevalent.

There are so many new avenues of scholarly assessment that appear almost daily. At this point I think that it is too early to understand the value of many of them.

There is a high cost to scholarly output assessment products such as ImpactStory, Plum Analytics, etc. Many universities have Web of Science or Scopus but most campuses can’t afford both. At the campus level, which unit will be expected to pay for products such as Plum Analytics, Digital Measures, InCites, etc.? Offices on campus often point to the library to pay, but library budgets generally can’t absorb these costs. Scholarly output assessment measures are poised to shift and additional measures be added to assessment but adoption and integration per discipline or department will not occur all at once. Campus and discipline tenure and promotion processes will include new metrics but some will be slower to adapt. Also libraries are being asked to double check commercial research impact products/results, which is impossible since the commercial products use a proprietary methodology. Adoption and widespread use of ORCID identifiers will help, but this will still take several years to ramp up.

There is no one-size-fits-all solution for scholarly output assessment. There is a need to think beyond the STEM disciplines to the ways in which other disciplines, particularly in the humanities, can and should evaluate scholarly output. There is also an increased need to account for alternative methods of scholarly output, such as conference posters or the development of new technology or methods based on research.

Use of measures beyond citations in promotion and tenure decisions and departmental evaluations, including alt metrics and institutional repository statistics. Also, defining what those measures mean qualitatively as well as quantitatively.

Vendors will develop tools that we have to evaluate and budget for. Faculty will use a variety of vendors and open source software, creating a range of demands from different departments and disciplines. It will take time to develop consensus on the most effective tools. Changes in publishing will impact how output is assessed (e.g., data publications and article-level metrics).
We expect to see more and more interest in identifying and visualizing scholarly networks. We expect the role of linked data and semantic web technologies to continue to grow in this area.

We need to see more integration into traditional bibliometrics work. We also need to see more standardization of the data—that is what is being measured. All of the vendors do it differently. Glad to see that NISO is stepping up in this arena.

We should know how social networking tools might be used to support promotion and tenure cases for graduate students, newer faculty, and well-established faculty.

When libraries collaborate with other university units to host assessment tools like VIVO and semprotics, faculty will have a more formal and trusted means to rely on their use.

**ADDITIONAL COMMENTS**

25. Please enter any additional information that may assist the survey authors’ understanding of your library’s scholarly output assessment activities and services. N=24

As indicated earlier in the survey, it should be emphasized that the services available to patrons and the training activities available to patrons and Libraries staff are generally offered on an ad hoc basis rather than through established programs related to scholarly output assessment.

Most activities thus far have been related to science, engineering, and medicine groups, with some in business.

One of the successes the library system has had is the grass roots effort to develop a Health & Natural Sciences team. This is an interdisciplinary group of librarians that has led the initiative for creating activities and services of scholarly output assessment for the libraries through a series of classes branded as Accelerate Your Research.

Our activities and services in this area are largely left up to individual library liaisons. We do have an expectation that librarians will provide these services.

Our activities are not coordinated at this time but happen in various departments of the library as faculty needs arise and training and willingness on the part of library staff continues.

Our activities have been somewhat reactive to date. Support has been provided when requested, but we are working on developing a more well-defined set of services in this area.

Our response to this survey will rapidly evolve since we have started a major reorganisation of our structure from top to bottom. New positions will be created in the future while some others will disappear. This will mainly be done by reallocation of staff.

Scholarly output assessment has not been a distinct focus, but is part of our larger effort to support the scholarly publishing needs and interests of our user communities.

The university is a decentralized institution, and as a result, the collection of scholarly research outputs is taking place many times over at the individual, department, college, and campus levels. It is time consuming to collect and report on this information. Our campus is in the process of implementing the PURE researcher information system for faculty and researchers, which we hope will help to centralize data collection, automatically capture many outputs, and serve as a showcase for our research. Improving research analytics is a secondary goal of this project, but we see opportunities for sharing information across systems, simplifying data collection and activity reporting for colleges.
There are varying levels of service in scholarly output assessment in our library. The Medical Center has done a lot of forward-thinking work on this front and has been doing so for years, whereas other units are just now getting involved.

This is a major area of interest and conversation in our library system and there seem to be many opportunities for collaborating with other campus units, but such collaborations are complex politically, strategically, procedurally, and technically.

This survey is difficult to complete since we are in the early planning stages of a program. We are interested to find out if there are other institutions that have made this assessment a priority and have implemented a program.

Through our distributed model, we are building expertise across our library system and across disciplines. We are being proactive and notice the growing interest. We value the deep expertise some library faculty have already attained.

We do not have a developed program in this area, yet. This survey has prompted several conversations and ideas for further development in this area.

We do not provide or generate reports as a normal service to our faculty/researchers. We focus on teaching them how to use the tools and on their weaknesses and strengths. Often help is needed to formulate complicated queries in systems like Web of Science and Scopus.

We have strong partnerships with the Office of Research & Engagement and the Office of the Provost. They have acquired systems and look to the library to support faculty and administrators in using the systems.

We need to be more pro-active in training and development of staff in this area. Our services need a more coordinated approach; we are now too decentralized and fractured. As a result, campus units are hiring their own in-house expertise to do this work, side-stepping the library.

We offer the most limited, non-advertised, occasional support by a reference librarian to the occasional faculty member.

We recognize the importance of services in this area and are currently advertising for a Scholarly Communications Librarian to develop these services.

We’re just at the beginning, and still have a lot to learn and do.

We’ve pretty much covered it. We have an established scholarly communications program, but a new librarian in the role who is bringing a new focus on scholarly assessment. Because of this, much of the material requested is under development, and we do not have live pages to offer links for at this time.

We understand the importance of developing library services that assist researchers throughout the lifecycle of the research process, including evaluation. We are committed to developing research assessment service here and have already undertaken a number of steps in that direction. These include a series of talks and seminars on the importance of bibliometric services to support research activity of university faculty, trials of industry-standard tools, and FY16 project to develop bibliometric service.

While currently we don’t offer a dedicated advertised service called “Scholarly Output Assessment,” services of that kind are coming as we get started with our transition to campus-wide adoption of a faculty profile system (Symplectic Elements). This tool will enable scholars to track many aspects of their scholarly impact and scholarly communication. The strategic initiatives manager here at the library has done (and continues to do) training with campus faculty to understand how to use the tools available in the faculty profile system. Other assessment questions that come in are frequently directed to the scholarly communications librarian or subject liaisons.

While subject liaisons have always provided assistance with citation reports, scholarly output assessment is not an established, dedicated service at our institution. However, academic units started to express the desire and need
for assistance with the process. The library is actively engaged in consultations and conversations with academic departments to identify specific aspects of this effort where the library could play a leading role.
**RESPONDING INSTITUTIONS**

- University at Albany, SUNY
- University of Alberta
- Arizona State University
- Boston University
- Brigham Young University
- University of British Columbia
- University at Buffalo, SUNY
- University of Calgary
- University of California, Irvine
- University of California, Los Angeles
- University of California, San Diego
- Case Western Reserve University
- University of Chicago
- University of Colorado at Boulder
- Colorado State University
- University of Connecticut
- Duke University
- Emory University
- University of Florida
- Florida State University
- George Washington University
- Georgetown University
- University of Georgia
- Georgia Institute of Technology
- Harvard University
- University of Hawaii at Manoa
- University of Illinois at Chicago
- University of Illinois at Urbana-Champaign
- Indiana University Bloomington
- University of Iowa
- Iowa State University
- Johns Hopkins University
- University of Kansas
- Kent State University
- University of Kentucky
- Université Laval
- Louisiana State University
- University of Louisville
- McGill University
- University of Manitoba
- University of Maryland
- University of Massachusetts, Amherst
- Massachusetts Institute of Technology
- University of Miami
- University of Michigan
- University of Missouri
- New York University
- University of North Carolina at Chapel Hill
- North Carolina State University
- Northwestern University
- University of Notre Dame
- Ohio University
- Ohio State University
- University of Oklahoma
- Oklahoma State University
- University of Oregon
- University of Ottawa
- Pennsylvania State University
- University of Pittsburgh
- Purdue University
- Queen’s University
- Rutgers University
- Smithsonian Institution
- Southern Illinois University Carbondale
- Stony Brook University, SUNY
- Syracuse University
- Temple University
- University of Tennessee
- University of Texas at Austin
- Texas A&M University
- University of Toronto
- Vanderbilt University
- University of Virginia
- Virginia Tech
- University of Washington
- Washington University in St. Louis
- Western University
- University of Wisconsin—Madison
- Yale University
Demystifying Scholarly Publishing: Selecting scholarly publishing venues to maximize your impact while avoiding "predatory publishers"

Do you often wonder how to select a journal in which to publish or wonder about the quality of a journal? This workshop will demonstrate tools to identify potential journals in your field, how to determine impact factors for journals (Journal Citation Reports, Scimago), how to find where a journal is indexed for dissemination, and tools to evaluate the quality of journals. Reputable, peer-reviewed Open Access journals are on the rise, but so are "predatory publisher" that charge publication fees but do little in terms of peer review. Tips and tools to identify legitimate open access journals and avoid predatory publishers will also be covered, to help you determine if publishing in a specific open access journal will be worth the author fee.

Demystifying Scholarly Publishing: Selecting scholarly publishing venues to maximize your impact while avoiding "predatory publishers"

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<th>Date</th>
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<th>Instructor</th>
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<tr>
<td>Thursday, January 29</td>
<td>Noon – 1:00 p.m.</td>
<td>Sandy</td>
<td>Attend Session</td>
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<tr>
<td>Wednesday, February 11</td>
<td>3:00 p.m. – 4:00 p.m.</td>
<td>Sandy</td>
<td>Attend Session</td>
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*Enroll in the Demystifying Scholarly Publishing: Selecting scholarly publishing venues to maximize your impact while avoiding "predatory publishers" Online Workshop*
Determining Your Scholarly Impact

Roadmap for Today
- Pre-publishing
  - Determining Where to Publish
  - Determining the Impact of Journals

- Post Publishing
  - Determining the Impact of Specific Articles and Researchers
    (and maybe determining the impact of journals at this point, too)

Deciding Where to Publish Articles
- Ulrich’s advanced search screen
- Jane - http://www.biosemantics.org/jane/
- Database searching

Determining the Impact of Journals
- Impact Factor
- Eigenfactor
- Open Access
- Indexing

Impact Factor
A quantitative measure of the frequency with which the "average article" published in a given scholarly journal has been cited in a particular year or period; this is used in citation analysis.

Impact Factor for Journal X

- Impact Factor
  - 2015
  - 2014
  - 2013
  - 2012
  - 2011

Eigenfactor
Utilities data from ISI’s Journal Citation Reports.
Contains two numbers:
- Eigenfactor – Determines journal’s total importance to the scientific community. Based partially on the size of the number of articles published by a journal.
- Article Influence – Average influence of each of article over its first five years after publication. Similar to impact factor.
Determine Your Scholarly Impact

Where to find Impact Factors and EigenFactors

- Ulrich's
  - Journal Citation Reports (JCR)
  - Eigenfactor.com

Determining the Impact of Specific Articles and Researchers

- Cited Reference Searching
  - H Index
  - Altmetrics

What is H-Index OR Hirsch Index?

- Based on a formula that calculates the average number of citing articles for all items in a predefined set.
- Used to measure the productivity and impact of the published works of a particular researcher or even a group of researchers.

What do you find your H-Index?

- Web of Science – Run an author search, then create a "Citation Report."
- Scopus – Run and author search, then click "Citation Overview."
- Researcher ID
  - Google Citations
  - Google Scholar

Altmetrics

- This is the measurement of the impact an article has on social media such as Twitter, Facebook, etc.
- For more information, see http://blog.lib.uiowa.edu/needtoknow/2013/08/09/interesting-articles-on-altmetrics/
Overall Preparation Tools

- Publish or Perish
  [http://www.harzing.com/pop.htm](http://www.harzing.com/pop.htm)
- Calculates
  - H-index
  - Egghe’s g-index
  - Zhang’s e-index
  - Age-weighted citation rate and AW-index
  - Multi-authored h-index
  - Average annual increase in the individual H-index
  - And more

Librarians and Tenure

- Open discussion

Closing Words

- Bibliometrics are flawed.
- Tenure requirements can vary greatly between departments and disciplines.
- Faculty generally appreciate the knowledge and expertise we can share with them during this time in their careers.
How to Determine Your Scholarly Impact

Agenda
1. Determining Where to Publish
   a. Ulrich’s
   b. JANE http://www.biosemantics.org/jane/
2. Determining the Impact of Journals
   a. Ulrich’s
   b. Journal Citation Reports (JCR)
   c. Eigenfactor
   d. Open Access Journals
3. Determining the Impact of Specific Articles and Researchers
   a. Cited Reference Searching
      i. Web of Science, Scopus, and Google Scholar
   b. H Index
      i. Web of Science – Run an author search, then create a “Citation Report.”
      ii. Scopus – Run and author search, then click “Citation Overview.”
      iii. Researcher ID
      iv. Google Citations
   c. Overall
      i. Publish or Perish http://www.harzing.com/pop.htm
   d. Altmetrics

Services at the Library
- Assistance in determining the amount of times a publication has been cited.
- Assistance in locating the impact factor for a journal.
- Assistance with using bibliographic management tools to manage and cite references
- Assistance with other questions. Just ask!

Deciding Where to Publish
- Ulrich’s (Listed under “u” on Electronic Resources page)—Find out if a journal is peer-reviewed, who it’s published by, where it’s indexed, impact factors, and more.
- ISI Journal Citation Reports (Under Electronic Resources) – This is where you can find impact factors, Eigenfactors, and Article Influence Scores.
- Open Access Journals: The open access movement strives to make scholarly research available to everyone. These journals are free due to a different publishing model (an organization or the author pays for publishing costs. For more information, see http://www.lib.uiowa.edu/openaccess/

Determining Impact
- Web of Science—Go here to see who has cited your work or the work of someone else.
- Scopus —Another option for seeing who has cited your work or the work of someone else.
- Google Scholar (http://scholar.google.com) – This is another way to see who has cited your work. Keep in mind that is not quite as reputable as Web of Science.
• **Impact Factor**: A quantitative measure of the frequency with which the "average article" published in a given scholarly journal has been cited in a particular year or period; this is used in citation analysis (definition retrieved from http://www.library.tudelft.nl/tulib/glossary/index.htm#I)

\[
\text{Impact Factor for Journal X} = \frac{\text{Citations in 2013 to articles published in X in 2011 and 2012}}{\text{Articles published in X in 2011 and 2012}}
\]

• **Eigenfactor**: The Eigenfactor is another way to rank journals based on their influence in the field. It tries to get around some of the issues that make impact factors controversial. To find out more, see “Why Eigenfactor?” at http://www.eigenfactor.org/whyeigenfactor.htm

• **H-Index**: This number is based on a formula that calculates the average number of citing articles for all items in a predefined set. It can be used to measure the productivity and impact of the published works of a particular researcher or even a group of researchers. The h-index was developed by Jorge E. Hirsch and published in *Proceedings of the National Academy of Sciences of the United States of America* 102 (46): 16569-16572 November 15 2005. It is sometimes referred to as the Hirsch Index.

• **Altmetrics**: This is the measurement of the impact an article has on social media such as Twitter, Facebook, etc. For more information, see http://blog.lib.uiowa.edu/needtoknow/2013/08/08/interesting-articles-on-altmetrics/

### Managing References

**Citation Management Tools- EndNote and RefWorks**

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<th>EndNote desktop</th>
<th>RefWorks</th>
<th>EndNote Basic</th>
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<tr>
<td><strong>Best use</strong></td>
<td>Those with complex, ongoing research projects and planning on career of publication who are primarily using the same workstation for research and writing.</td>
<td>RefWorks will no longer be available after December 2014. Less complex projects. Ideal for those who are going to be using multiple computers for research.</td>
<td>Less complex projects. Ideal for those who are going to be using multiple computers for research.</td>
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<td><strong>Location of files</strong></td>
<td>Locally on your computer</td>
<td>On RefWorks site (server)</td>
<td>On EndNote site (server)</td>
</tr>
<tr>
<td><strong>Getting citations in...</strong></td>
<td>Automatic export from many databases. 2 step process if not available.</td>
<td>Automatic export from many databases. 2 step process if not available.</td>
<td>Automatic export from many databases. 2 step process if not available.</td>
</tr>
<tr>
<td><strong># of styles</strong></td>
<td>Over 4500</td>
<td>Over 2700</td>
<td>Over 2000</td>
</tr>
<tr>
<td><strong>Sharing</strong></td>
<td>Because library lives on your computer, sharing is through sharing of computer or compressing files. Colleagues will need EndNote installed to view</td>
<td>RefShare feature allows you to share folders or your entire library with anyone with an internet connection (though pdfs cannot be shared in this way).</td>
<td>Allows you to share folders or your entire library with anyone with an internet connection, and allows you to grant people editing rights to your citations.</td>
</tr>
<tr>
<td><strong>Overall strengths</strong></td>
<td>Great for very large amounts of citations. Also has a feature that can pull some PDF's and automatically attach them to citations.</td>
<td>Very easy to learn, use anywhere with an internet connection. Easy to share citations with others.</td>
<td>Very easy to learn, use anywhere with an internet connection. Easy to share citations with others and to allow others full access to citations.</td>
</tr>
</tbody>
</table>

**More information on citing sources**: [http://guides.lib.uiowa.edu/citingsources](http://guides.lib.uiowa.edu/citingsources)
Accessing the Database

2. Click on the link that says “Health Sciences Resources A-Z.” It is located at the bottom of the section, “Popular Databases.”
3. Select “Ulrich’s” from the list.
4. If you are off-campus, you will be prompted for your Hawk ID and password.

Searching for a Specific Journal

1. Enter the name of the journal for which you are looking and click the “Submit” button. If you have trouble, you may want to find the journal’s ISSN (unique identifier) and search for the journal that way.

Searching for Journals by Subject

Advanced Search (Recommended)

1. From the Ulrich’s home page, click on the link for “Advanced Search.”

2. When looking for journals in your subject area consider doing a “Keyword” first. The subjects are very specific and sometimes hard to guess.
3. Keep in mind that you have further options for your search including limiting to “active titles” and “refereed titles.”

Subject Search (If you know of a journal in your field)

1. From the homepage, select “title (keyword)” from the drop box and put in the name of your journal.
2. Now, click on the title of the journal you searched.
3. You will see links for the subject the journal covers. Clicking those links will display all the journals in that area that are contained in Ulrich’s.

Finding Impact Factors/Eigenfactors

1. Follow the directions for “Searching for a Specific Journal.”
2. Once you have clicked on the journal name, look to the top left of the screen. You will see a box that says JCR.
3. This page will simply have the impact factors for the journal. To see the Eigenfactor and more information, click the “Return to Journal” button.

Journal Citation Reports
Accessing the Database

1. Go to the Hardin Library homepage at http://www.lib.uiowa.edu/hardin/
2. Click on the link that says “Health Sciences Resources A-Z.” It is located at the bottom of the section, “Popular Databases.”
3. Select “Journal Citation Reports” from the list.
4. If you are off-campus, you will be prompted for your Hawk ID and password.

Searching for Journals by Subject (Recommended)

1. Once you have accessed the database, you will have options to select the science or social science database. Keep in mind that the most recent scores will be from the previous year.
2. On the right, you select “Subject Category” from “View a Group of Journals By” and then click on “Submit.”
3. Next, select your subject category.
4. Select “View Journal Data,” and then choose how you would like your results sorted from the drop box.
5. Click “Submit.”
6. Now, you will see a list of journals in the category you chose. If you look to the top left of the screen, you will notice options for sorting the journals by title, impact factor, Eigenfactor, etc. You can also decide to view the category summary list (this may help with interpreting the impact factors since those can vary greatly between different subjects.)
7. Clicking on a journal title will allow you to see more information, such as how the impact factor was determined, the number of self cites for that journal, etc. To learn more about any of the data in Journal Citation Reports, use the “i” icon.

Searching for a Specific Journal

If you are searching for a specific journal title’s impact factor or Eigenfactor, you may want to use Ulrich’s. It is a slightly easier interface. You may also consider looking for a particular journal in a subject set as in the directions above.

1. Once you have accessed the database, you will have options to select the science or social science database. Keep in mind that the most recent scores will be from the previous year.
2. On the right, you can select “Search for a Specific Journal” and then click on “Submit.”
3. Now, click on the link for “View List for Full Journal Titles.”
4. Use your computer’s find function (on a PC it is ctrl + F) to locate the journal title you are looking for. NOTE: Not all journals have impact factors.
5. Now, copy that journal title exactly as it appears in the list, and close the window with the journal titles.
6. Select “Full Journal Title” from the search page and then paste the copied journal title into the search box.
7. Finally, click search.

Web of Science: Cited Reference Searching
Accessing the Database

1. Go to the Hardin Library homepage at http://www.lib.uiowa.edu/hardin/
2. Click on the link that says “Health Sciences Resources A-Z.” It is located at the bottom of the section, “Popular Databases.”
3. If you are off-campus, you will be prompted for your Hawk ID and password.

Searching

1. The first thing you will want to do is to click the tab for Web of Science. It is located near the top of the screen.
2. Now, click on the link for “Cited Reference Search.”
3. Start with the author’s name. You want to enter it as [lastname firstinitial*]. The asterisk tells the database to search for the author if they are cited by just their initial or by their whole name or by two initials.
4. Now, for the journal title, you want to click the link that says “Journal Abbreviation List.”
5. Once you open the list, you will want to find your journal. Click on the letter of the first “Non-stop word” of the journal title. (Stop words include: A, the, or, and, etc.)
6. Now, you can scroll down the list till you find your journal (Or use Ctrl+F to search for the title). Copy the abbreviation.
7. Close the journal title window.
8. Paste the abbreviated journal title into the “Cited Work” search box. You will want to follow the name of the journal with an “*” as you did with the author name.
9. For the date, leave the box blank. This is very important as many articles are cited with incorrect dates.
10. Click the “Search” button at the bottom of the screen.
11. You will now see a list of possible articles by your author. Select all that could possibly be the article you want. For example, if you were looking to see how many times this article, M.A. Marra, S.J.M. Jones, C.R. Astell, et al. “The genome sequence of the SARS-associated coronavirus.” SCIENCE, 300 (5624): 1399-1404, May 30, 2003, was cited, you would receive the following list to select from. (See image on next page).
12. Check the box to the left of all the citations that could be the same as the one you are for which you are looking. Then, click the link near the bottom left of the page that says “Finish Search.”

13. At the left of the page, you will see options for refining your results. For instance, you may want to only see the times an article was cited in another article (see image to the right).

14. You’ll find the number of times the article was cited listed near the top left of the page.

```
Results Cited Author=(Marra M') AND Citec
Timespan=All years. Databases=SCI-EXPAN

Results: 1,124
```
Accessing the Database

1. Go to the Hardin Library homepage at http://www.lib.uiowa.edu/hardin/
2. Click on the link that says “Health Sciences Resources A-Z.” It is located at the bottom of the section, “Popular Databases.”
3. If you are off-campus, you will be prompted for your Hawk ID and password.

Searching

1. Enter the author’s name, “lastName firstInitial,” into the first search box. Change the drop box to “Authors,” then “Add Search Field” using the link below the search box.

2. Enter the name of the journal using the “Source Title” drop box option.
3. Enter the article title using the “Article Title” drop box option.”
4. Click Search.
5. The number of times the work was cited shows up on the far right of the screen. You can click on the link to see which articles have cited that work.

Google Scholar: Cited Reference Searching

1. Go to www.scholar.google.com
2. Type the title of the article you are searching for into the search box, and click “Search.”
3. If Google has information on other people citing the article, you will see a link that says “Cited by #.”
H-Index: Creating a ResearcherID Account

1. Go to [http://www.researcherid.com/Home.action](http://www.researcherid.com/Home.action) and create a free account on the left-hand side. You will enter your email address, receive an email with a link, and then enter the rest of your information.

2. Once you have created your profile, you can edit it to add more information and determine what information will be visible to members of the public.

3. To add publications to your account, click on Add Publications.

4. The two easiest options under Add Publications are Search Web of Science, and Search Web of Science Distinct Author Sets.
   a. If the author has a unique name, Search Web of Science should work fine. The name should be pre-entered. Add a middle initial if there is one. If you are unsure if the middle initial is used, enter the first initial followed by a * (e.g., J*).
b. If there are several authors publishing under the same name, try Search **Web of Science** Distinct Author Sets. As above, the name should be pre-entered and add the middle initial or * as needed. Once you perform the search, **Web of Science** will attempt to identify sets of articles that it thinks are by the same author. Use the author names, years, and journals to help determine which set is the right set. Very often there will be multiple correct sets due to the way the software works. In this case, click on the number to the right and work with the first set and then go back and work with subsequent sets.

<table>
<thead>
<tr>
<th>Set</th>
<th>Author Names</th>
<th>Publication Years</th>
<th>Source Titles (top 5 by record count)</th>
<th># of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Blevins A</td>
<td>1942-1994</td>
<td>Archives of Internal Medicine (5)</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Blevins AH</td>
<td></td>
<td>Annals of Internal Medicine (4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>American Heart Journal (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Annals of the New York Academy of Sciences (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Archives of Otolaryngology (3)</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Blevins AA</td>
<td>2002-2004</td>
<td>Abstracts of Papers of the American Chemical Society (2)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Journal of Physical Chemistry B (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>International Journal of Aging Human Development (1)</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Blevins AL</td>
<td>1976</td>
<td>Sociology of Education (2)</td>
<td>2</td>
</tr>
</tbody>
</table>

5. Once you have a set of articles, take a look at them and compare them to the list of publications on the CV. If the first few articles appear correct, I would recommend adding all of them to My Publications and then weeding out the incorrect ones. To add to My Publications, click “Select Page” and then “Add.” Repeat with subsequent pages until all citations are added.

6. If using the Distinct Author set and you need to add more citations, do so now. When you are done, click on “Return to Researcher Profile” at the top of the screen.
7. You should now see the publications on the right-hand side of your screen. Compare the citations here to those in the CV. Sort by “Publication Year” to make the comparison easier.

8. If there are incorrect citations (i.e., not by the correct researcher), you can select them by clicking “Manage List” at the top right of the “My Publications: View.” You can then select the incorrect citations and click “Delete Selected Publications” to remove them.

9. If there are citations on the CV that were not found by your first search, you can try searching again using the Search Web of Science option and entering the article title instead of the author name. Note that meeting abstracts may not be in the database.

10. If you cannot find a citation using the Web of Science tools we discussed, you can enter the citation into EndNote Web or into a tool such as EndNote or RefWorks. While EndNote Web will import directly into ResearcherID, EndNote and RefWorks require you to export the citation in RIS format and import it into your publications list using the “Upload RIS File” option under “Add Publications.” For assistance doing this, please contact the Hardin Library at 335-9150 or lib-hardin@uiowa.edu.

   a. EndNote Web ([www.myendnoteweb.com](http://www.myendnoteweb.com)) provides the fastest and easiest way to add citations to ResearcherID. Sign in using the same username and password as ResearcherID. Select New Reference from the Collect menu, then enter the citation information in the correct fields (for books, include publisher and city in the Title field as these fields will not display in
Remember to change the reference type.

Click on Unfiled on the left-hand side, select the citations you entered, and then select “My Publications” from the “Add to group…” dropdown. The citations should now be in your ResearcherID account.

b. In EndNote, select Export from the File menu, then select “Refman (RIS) Format” as your Output Style. If you do not see Refman as an option, click on “Select Another Style” from the top of the drop-down and then locate it. You can then import the records into ResearcherID.

c. In RefWorks, select Export from the References menu, indicate whether to export all citations or those from a folder, select “Bibliographic Software” export format, and export to a text file. You
can then import the records into ResearcherID.

11. Once you have entered all the necessary publications, you can calculate the h-index and other metrics by clicking on “Citation Metrics” under “My Publications.”

Google Scholar Citations
http://Scholar.google.com/citations
Another option for determining impact at an author level. There are instructions for setting up your page once you sign up for an account.

Further Assistance
We are more than happy to assist you with any questions you may have.
Feel free to contact us at 319-335-9151 or lib-hardin@uiowa.edu
Title of session
Scholarly Impact: Traditional and Alternative Metrics

Name and Position of Presenter
Ericka Raber, Research and Instruction Librarian
Amy Blevins, Clinical Education Librarian

Date, Time, Venue
Tuesday, April 29th, 2014, from 10 to 11 am in LIB 2032.

Session description:
Ericka and Amy will provide an overview of some traditional and alternative metrics for measuring scholarly impact. Some tools to be discussed include Journal Citation Report, Web of Science, Scopus, Eigenfactor, H-index, Google Citations, and ImpactStory.

Who should attend?
Library staff who interact with faculty and want to learn more about impact factors, citation counts, or alternative tools for measuring scholarly impact.

Special Instructions
This session is really geared toward those who attend, so please bring questions, examples, or supply the presenters with questions or subtopics ahead of time to get the most out of this session.
TAKING CONTROL OF YOUR RESEARCH VISIBILITY

A hands-on guide to improving research “impact” for scholars

Marc L. Greenberg & Ada Emmett

University of Kansas

Sept. 2014

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Today

1. Big picture of impact
2. Types of Article Level Metrics (ALM) and what they can do for you.
3. Recipe for Visibility
4. Time for questions/assistance
Types of article-level metrics (ALM)

1. **Usage** - How many downloads? Where downloaded?
   a. Examples: KU ScholarWorks, Academia.edu

2. **Captures** - How many bookmarks, shares (CiteULike, Mendeley)
   a. Example: how many “reads” an item in Mendeley has been

3. **Mentions** - Mentions in non-academic media (news stories, Wikipedia, etc.)
   a. Example: Altmetric

4. **Social media** - Facebook, LinkedIn, Twitter shares
   a. Example: Altmetric

5. **Citations** - Classic metric for “impact”
   a. Example: GoogleScholar, GoogleScholar Metrics

Read more in SPARC’s Article-Level Metrics Primer.
Our recipe for visibility

1. Know your rights w.r.t. copyright and keep as many as you can. [Timothy K. Armstrong: An Introduction to Publication Agreements for Authors](http://openaccess.ku.edu/open-access-initiatives-university-kansas-ku).

2. Work with KUSW*: a digital repository curates your work, makes it openly available, and it tracks usage.

3. Register with ORCiD and claim your electronically visible research, differentiate it from others’ publications with the same or similar names.

4. Claim an Academia.edu page and link there to your papers in KUSW. Academia also connects you to the global community of scholars in your areas of interest.

5. Claim and make public your GoogleScholar page. Edit it to weed out duplicates and works mistakenly attributed to you. Keep track of your h-index (the number h of your works cited h or more times).

Read more in this short blog post.

* KU Scholar Works
Next Steps:

If you have not already done so, please do the following.

- Establish a Gmail (Google) account: https://mail.google.com
Once you have opened the account and logged in, acquaint yourself with the various services that are available through Google, especially “Scholar” (scholar.google.com).

- Establish an Academia.edu account: http://www.academia.edu
Fill out some information about your academic profile, e.g., title, research interests, upload a headshot (optional).

- Find your department’s or program’s collection in KU ScholarWorks: http://kuscholarworks.ku.edu

- Register for an ORCiD ID: https://orcid.org/register
Taking control of your research visibility

A hands-on guide to improving research "impact" for scholars

Marc L. Greenberg (Dept of Slavic Languages & Literatures), Ada Emmett (KU Libraries, Office of Scholarly Communication)

Getting Set Up

Put aside a bit of time to set up several accounts, instructions for which we will provide below.

In the following, we suggest you sign up for a number of services that involve giving your name and some professional data to various entities that are "players" in the emerging field of research statistics. (Guess what? They already have some of your data!)

We are confident that these entities are focused on research data only and, so long as you do not provide personal data (birthdates, social security number, etc.) to them, they should not affect your personal privacy. In general, however, you should realize that as soon as you publish your work, your professional data is "out there" regardless of your volition, and the tools we are discussing should help you to be more in control of how and where your data is used, check its accuracy and correct it as necessary as well as, especially, to use it to your professional advantage.

The good news: once you have done this, you will have already taken a giant step towards controlling your research visibility.

Once registered for the below sites, please come to the workshop with your login/password information. We include two examples and then instructions to set-up your own accounts in the following.

Get Started:

You will be instructed below on the basic steps to register for an:

1. ORCiD id first;
2. GoogleScholar Citation account next;
3. and then at least two others below. Academia.edu best option for humanists—but see what the others do for you. Please be ready to write down new passwords, ID numbers, etc.

<table>
<thead>
<tr>
<th>ORCiD</th>
<th><a href="http://orcid.org">http://orcid.org</a></th>
</tr>
</thead>
</table>

What it does

ORCiD is an open, non-profit, community-based effort to provide a registry of unique researcher identifiers and a transparent method of linking research activities and outputs to these identifiers. ORCiD is unique in its ability to reach across disciplines, research sectors, and national boundaries and its cooperation with other identifier systems.

To register:

From ORCiD home page, go to Registration page, add name, create password, be sure to make "default settings" (middle of the page) set to public.

Accept the terms of ORCiD

Hit "register" button at bottom.

New page will appear, note your ORCiD number on left side, confirm papers listed as yours if needed. Import or add your own papers – you can come back to do this.

Once you register for other sites you may have them mapped with your ORCiD—ours has ResearcherID and Scopus also listed on left. ORCiD allows you to do this from its site.

Username:
Password:
ORCiD ID number:
### Scholarly Output Assessment Activities

#### Google Scholar

**What it does**
Tracks web-searchable references to your published works and citations to them as well as calculates citation statistics, e.g., H-index (the number of articles H cited H times).

**You must have a Gmail account:**
To set up a Gmail account go to [gmail.com](http://gmail.com) and create an account.

Once logged into your Gmail account, proceed to [http://scholar.google.com](http://scholar.google.com) and notice the option for "My citations" or an activation option. Click on that and follow directions.

Confirm papers that are yours (or are not yours)

<table>
<thead>
<tr>
<th>Username:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Password:</td>
<td></td>
</tr>
<tr>
<td>My ID and/or unique URL:</td>
<td></td>
</tr>
</tbody>
</table>

#### Academia.edu

**What it does**
"Academia.edu is a platform for academics to share research papers. The company's mission is to accelerate the world's research. Academics use Academia.edu to share their research, monitor deep analytics around the impact of their research, and track the research of academics they follow. 3,853,925 academics have signed up to Academia.edu, adding 1,633,496 papers and 818,149 research interests. Academia.edu attracts over 5 million unique visitors a month."

Also gives nice alerts when your work is accessed from its site.

<table>
<thead>
<tr>
<th>Username:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Password:</td>
<td></td>
</tr>
<tr>
<td>My ID and/or unique URL:</td>
<td></td>
</tr>
</tbody>
</table>

#### ImpactStory

**What it does**
"Share the full story of your research impact. ImpactStory is your impact profile on the web: we reveal the diverse impacts of your articles, datasets, software, and more". Provides additional ways of gathering information – for example how many "readers" in Mendeley.

Choose the large "make my impact matter" button.

Notice you can supply your ORCID and that you can import via your Google Scholar citation page more of your references.

(Go back to Google Scholar and use drop-down menu to save your records in the bibtex file format, which then you can upload to ImpactStory.)

Finish the registration process—note the new kinds of data being supplied.

<table>
<thead>
<tr>
<th>Username:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Password:</td>
<td></td>
</tr>
<tr>
<td>My ID and/or unique URL:</td>
<td></td>
</tr>
</tbody>
</table>
RESEARCHERID * http://www.researcherid.com/

What it does (plays nicely with ORCID and some of the other sites listed here.)

[Ownied by Thomson Reuters,] “ResearcherID provides a solution to the author ambiguity problem within the scholarly research community. Each member is assigned a unique identifier to enable researchers to manage their publication lists, track their times cited counts and h-index, identify potential collaborators and avoid author misidentification. In addition, your ResearcherID information integrates with the Web of Knowledge and is ORCID compliant, allowing you to claim and showcase your publications from a single one [sic] account.” NB: you can also register within ORCID once you have established your ORCID account.

Go to ResearcherID main page and look for option to register then “Join Now”
Fill out basic information.
Note options to add alternative names under which you’ve published or are known by.
On results page note your ResearcherID number and notice papers retrieved, or select option for it to retrieve your papers.
Notice the “exchange data with ORCID” (on left) and the “add publications” on right middle in orange.
Manage your profile as well with additional information.
Poke around the options to see what is interesting

ResearcherID Username:
Password:
My ID and/or unique URL:

Some further reading


Tools for Tracking Your Research Impact: Author and Article Metrics

Author IDs
Author IDs provide a solution to name ambiguity and can be used to link alternative spellings and name changes to one author.

**ORCID**
- Over 80 partners including Nature, IEEE, PLOS, Elsevier
- Integrated with ISNI and ResearcherID
- Customizable profile
- Retroactively add publications and automate new publications

**ResearcherID**
- Platform specific to Web of Knowledge
- Create a customizable profile w/ a publication list
- Researcher Labs which include some author metrics

**Scopus Author**
- Platform specific to Scopus
- Profile is automatically created but can request changes and integrate with ORCID
- Provides traditional metrics

Author Profiles
Types of Profiles:
- Researcher Communities: Academia / ResearchGate
- Reference management tools with social functions: Mendeley
- Search engines with author profiles: Google Scholar, Scopus

<table>
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<tr>
<th></th>
<th>Scopus</th>
<th>Google Scholar Citations</th>
<th>ResearchGate</th>
<th>Academia.edu</th>
<th>Mendeley</th>
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<td>Affiliations and research interests only</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
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<td>Possible</td>
<td>Yes</td>
</tr>
<tr>
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<td>via Scopus</td>
<td>Yes (not always accurate)</td>
<td>PubMed, IEEE, CiteSeer, BMC, Crossref, Microsoft AS, PubMed, ArXiv</td>
<td>Yes</td>
<td>Available via many search engines and importing RIS or BibTeX files</td>
</tr>
<tr>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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</tr>
<tr>
<td>Social Media</td>
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<td>Unknown</td>
<td>5m</td>
<td>15.5m</td>
<td>over 2.5m</td>
</tr>
</tbody>
</table>
Article Level Metrics (ALMs) vs. Altmetrics

ALMs are about the incorporation of altmetrics and traditional data points to define impact at the article level. Altmetrics are about the data sources, not the level of aggregation. The attempt to incorporate new data sources to measure the impact of something, whether that something is an article or a journal or an individual scholar, is what defines altmetrics.

Article Level Metrics

Article-Level Metrics (ALMs) are a new approach to quantifying the reach and impact of published research. Historically, impact has been measured at the journal level. A journal's average number of citations to recent articles (i.e., its impact factor) has for years served as a proxy for that publication's importance. Articles published in highly-cited journals were viewed as impactful by association. As electronic dissemination of scholarly content has surpassed print, it has become easier to disaggregate an individual article's impact from the publication in which it appeared. It's also possible to track different markers of an article's reach, beyond just citations. ALMs seek to incorporate new data sources (sometimes referred to as "altmetrics") along with traditional measures to present a richer picture of how an individual article is being discussed, shared, and used.

The Public Library of Science (PLOS) was the originator of Article-Level Metrics, and provides a robust set of resources and tools to facilitate the understanding and application of ALMs:

http://article-level-metrics.plos.org

Adapted from the SPARC ALM site and Primer
http://www.sparc.arl.org/initiatives/article-level-metrics

Altmetrics

Providers:
- Impactstory - https://impactstory.org/
- Plum Analytics (enterprise-level tool) - http://www.plumanalytics.com/

Social behavior that is being tracked includes:
- Viewed
- Discussed
- Saved
- Cited
- Recommended

For more information see:
Information Standards Quarterly (ISQ), Summer 2013 Volume 25, no. 2
http://dx.doi.org/10.3789/isqv25no2.2013
Maximizing your scholarly identity

Ellysa Stern Cahoy
March 21, 2013

Overview
Citation Analysis--Web of Science and more
Journal Citation Reports
Enriching your research presence
  ● Google Scholar 'My Citations'
  ● Academia.edu
  ● SSRN

Citation Analysis -- Who cited me?

Web of Science / Google Scholar

In the third corner...the disciplinary database

What's your journal's impact factor?

Journal Citation Reports®
  ● Indexes journals by more than 3300 publishers in 80 countries
  ● Highlights the most frequently cited and highest impact journals in a field
On 22 May 2014, the University Library System, University of Pittsburgh, held a Bibliometrics Seminar, a program detailing
several research library service models for support of research evaluation and assessment. Three of the featured speakers--from academic libraries in the USA (Mayo), the UK (Rowlands), and Australia (Thomas)--discuss the development and operation of such services in their organizations, noting the drivers for development, the process of setting up the service, and the impact of the service on both the library and the institution. A faculty colleague (Larsen) talks about his needs for research assessment as both a senior researcher and university manager. Presentation 1: "Providing a Library Metrics Service: a perspective from an academic library within an Australian University" by Dr. Amberyn Thomas, Manager, Scholarly Publications, University of Queensland, Australia. Presentation 2: "Library Research Services at the University of Leicester, UK" by Ian Rowlands, Research Services Manager and University Bibliometrician, University of Leicester. Presentation 3: "Research Connection: Expertise to Advance Your Success" by Alexa Mayo, MLS AHIP, Health Sciences and Human Services Library, University of Maryland, Baltimore. Presentation 4: "Bibliometric Research Services - an iSchool Dean's Perspective" by Ronald L. Larsen, Dean and Professor, School of Information Sciences, University of Pittsburgh. The program for the event and a recording of the presentations are also included.

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Details
Item Type: Conference or Workshop Item (Other)
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Title: Bibliometrics Seminar
Status: Unpublished

On 22 May 2014, the University Library System, University of Pittsburgh, held a Bibliometrics Seminar, a program detailing several research library service models for support of research evaluation and assessment. Three of the featured speakers--from academic libraries in the USA (Mayo), the UK (Rowlands), and Australia (Thomas)--discuss the development and operation of such services in their organizations, noting the drivers for development, the process of setting up the service, and the impact of the service on both the library and the institution. A faculty colleague (Larsen) talks about his needs for research assessment as both a senior researcher and university manager. Presentation 1: "Providing a Library Metrics Service: a perspective from an academic library within an Australian University" by Dr. Amberyn Thomas, Manager, Scholarly Publications, University of Queensland, Australia. Presentation 2: "Library Research Services at the University of Leicester, UK" by Ian Rowlands, Research Services Manager and University Bibliometrician, University of Leicester. Presentation 3: "Research Connection: Expertise to Advance Your Success" by Alexa Mayo, MLS AHIP, Health Sciences and Human Services Library, University of Maryland, Baltimore. Presentation 4: "Bibliometric Research Services - an iSchool Dean's Perspective" by Ronald L. Larsen, Dean and Professor, School of Information Sciences, University of Pittsburgh. The program for the event and a recording of the presentations are also included.

Date: 22 May 2014
Access: No restriction; The work is available for access worldwide immediately.
Restriction: No

Patent pending: No
Event Title: Bibliometrics Seminar
Event Location: University Library System, University of Pittsburgh
Event Dates: 22 May 2014
Event Type: Other
Institution: University of Pittsburgh
Referred: No
Schools and Programs: University libraries > University Library System

Date Deposited: 23 May 2014 09:59
Last Modified: 04 Jun 2014 15:43

Actions (login required)

View Item
The February 2014 Scholarly Communication and Publishing Lunch and Learn Talk focuses on bibliometrics, giving an overview of the evolution of metrics, current sources for metrics, and guidance on how library staff can assist faculty with understanding individual, journal, and institutional impact through bibliometrics.
The eighth in a series of Lunch and Learn Talks for colleagues of the University Library System, the University of Pittsburgh. Most talks include a "toolbox tip" on best practices for library colleagues to use when working with the Pitt community. Links to recordings of talks are provided when available.

**Scholarly Communication and Publishing Lunch and Learn Talks #8: Using Bibliometric (Publication and Citation) Indicators to Demonstrate Impact**

**Date:** 20 February 2014

**Access** No restriction; The work is available for access worldwide immediately.

**Restriction:**

**Patent pending:** No

**Series Name:** Scholarly Communication and Publishing Lunch and Learn Talks

**Number:** 8

**Event Title:** Scholarly Communication and Publishing Lunch and Learn Talks

**Event Location:** Pittsburgh, PA, USA

**Event Dates:** 20 February 2014

**Event Type:** Other

**Institution:** University of Pittsburgh

**Refereed:** No

**Related URLs:**

- [Scholarly Communication and Publishing Lunch and Learn Talks](http://d-scholarship.pitt.edu/20647/)

**Schools and Programs:**

- University libraries > University Library System

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- Scholarly Communication and Publishing Lunch and Learn Talks. (deposited 07 Aug 2013 11:04)
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- Scholarly Communication and Publishing Lunch and Learn Talk #18: Authors' & Other Creators' Rights. (deposited 29 Jan 2015 17:09)
- Scholarly Communication and Publishing Lunch and Learn Talk #17: Lessons from OpenCon and OpenEd. (deposited 05 Dec 2014 14:13)
- Scholarly Communication and Publishing Lunch and Learn Talk #14: Traditional Scholarly Peer Review. (deposited 04 Dec 2014 19:14)
- Scholarly Communication and Publishing Lunch and Learn Talk #16: Open Access Week 2014--What You Need to Know. (deposited 14 Oct 2014 12:22)
- Scholarly Communication and Publishing Lunch and Learn Talk #13: Open Educational Resources and Open Textbooks. (deposited 22 Jul 2014 17:13)
- Scholarly Communication and Publishing Lunch and Learn Talk #11: The ULS Open Access Author Fee Fund. (deposited 15 May 2014 15:13)
- Scholarly Communication and Publishing Lunch and Learn Talk #9: Using Altmetrics to Demonstrate Scholarly Impact. (deposited 31 Mar 2014 12:05)
- Scholarly Communication and Publishing Lunch and Learn Talk #8: Using Bibliometric (Publication and Citation) Indicators to Demonstrate Impact. (deposited 26 Feb 2014 11:59)
- Scholarly Communication and Publishing Lunch and Learn Talk #7: Copyright and Other Intellectual Property Resources. (deposited 22 Jan 2014 15:09)
- Scholarly Communication and Publishing Lunch and Learn Talk #6: Creative Commons Licenses. (deposited 22 Jan 2014 15:08)
- Scholarly Communication and Publishing Lunch and Learn Talk #3: The Public Knowledge Project and the ULS. (deposited 11 Dec 2013 10:57)
- Scholarly Communication and Publishing Lunch and Learn Talk #5: OASPA (Open Access Scholarly Publishers Association) and the ULS. (deposited 11 Dec 2013 10:54)

**Actions** (login required)

- [View Item](http://d-scholarship.pitt.edu/20647/)

**Document Downloads**
USING BIBLIOMETRIC (PUBLICATION AND CITATION) INDICATORS TO DEMONSTRATE IMPACT

OUTLINE
- Evolution of Metrics; Caveats
- Current Sources of Metrics
- Library can assist faculty with understanding:
  - individual impact
  - journal impact
  - institutional impact
- Discussion

EARLY METRICS
- Counting outputs
  - 3rd century BC: number of items held in the Great Library of Alexandria was 490,000
  - 1837 Royal Library in Paris held 600,000 and public libraries in the US – 1,294,000
  - 1841 numbers of volumes in libraries were normalized by population (Munich 750 volumes per 100 people; Florence – 313; Paris – 143 and London – 20)
- Counting usage, incl. collections development
  - 1874 an article claimed that in American public libraries ¾ of the circulation was "sensational food" to "literary food"
  - 1927 Gross and Gross from Pomona College analyzed references in one volume of Jln of Am Chem Soc and recommended a list of 22 journals (12 non-English) to become a core of the college chemistry collection
- Measuring civilizational development through volume of published outputs (Humle, 1923)
- Mapping scholarly disciplines by analyzing citation patterns (Fussler, 1948)
- "Measuring science" using scientific tools (DeSolla Price, 1963)

EVOLUTION OF METRICS
Eugene Garfield’s "association of ideas index"
- Information retrieval
- Classification and indexing

SOCIOLOGY OF SCIENCE AND THE MATTHEW EFFECT
For whosoever hath, to him shall be given, and he shall have more abundance: but whosoever hath not, from him shall be taken away even that he hath

[Matthew xiii.7]
EVALUATION OF METRICS

- Research evaluation
  - Individual researcher
  - Research institution
  - Funding institution
  - Policy maker

CAVEATS

- Proxy for academic impact only
  - Not suitable for all disciplines
  - Lagging indicator
  - May underrepresent performance of ECRs

CURRENT SOURCES OF BIBLIOMETRIC DATA

- Scopus
- Google Scholar
- Crossref

CURRENT SOURCES OF BIBLIOMETRIC INDICATORS

- Commercial
  - Academic Analytics (at PITT)
  - Digital Measures
  - Elements from Symplectic
  - AVIDAS (acquired TR)
  - Pure (acquired by Elsevier)
- Open Source
  - Vivo
  - Publish or Perish

OUR LIBRARY CAN ASSIST FACULTY WITH...

- Individual Impact
  - Advising on tools available to track publications and citations (sources of data, setting profiles, etc.)
  - Identifying relevant metrics (IF or h-index?)
  - Providing context to these metrics (baselines and normalizations)
  - Advising on how to apply metrics in various contexts (on grant proposals, tenure applications)

CREATING PROFILES
SIMPLE INDICATORS – ALWAYS NEED CONTEXT

- Number of publications
- Number of citations
- Citations per publication (mean and median)
- % not cited
- h-index and variants

WHAT A RESEARCHER MAY SAY ABOUT THEIR IMPACT… (WITHOUT CONTEXT)

I have 35 refereed journal articles, of which 33 are indexed by Web of Science. These articles have received 230 citations, giving an average citation per (indexed) paper of 7 (source: Web of Science, 01/14).

Of my 33 indexed journal articles, only 2 articles have not been cited by others (9% not cited), and these were all published in 2013.

My h-index based on these indexed papers is 10 (source: Web of Science, 02/14).

CONTEXT CAN BE PROVIDED BY USING

- Baselines
  - Impact relative to discipline (average)
  - Impact relative to journal (average)
- Ranking
  - Publications in top 0.1%, 1%, 5% or 10% of distribution
  - Normalization by discipline, publication year and document type

BASELINES AND RANKINGS – EXAMPLES OF TOOLS

WHAT A RESEARCHER MAY SAY ABOUT THEIR IMPACT… (WITH MORE CONTEXT)

I have 35 refereed journal articles, of which 33 are indexed by Web of Science. These articles have received 230 citations, giving an average citation per (indexed) paper of 7 (source: Web of Science, 01/14).

5 of these articles exceed the expected citation rates for their respective publication years, and 2 articles are in the top 1% by impact for my field. Moreover, my 2006 Cell Pigmentation paper placed in top 0.1% of all publications in my field (source: Essential Science Indicators, 01/14).

My h-index based on these indexed papers is 10 (source: Web of Science, 02/14). I also have an additional 3 papers not indexed by Web of Science, with 209 citations (source: Scopus data, 02/14).

OUR LIBRARY CAN ASSIST FACULTY WITH…

Journal Impact

- Which journal to publish in
- Identifying journals with the best impact
- Providing relevant and cost-effective collections for researchers
- Providing more context to individual impact
UNIVERSITY OF PITTSBURGH
Using Bibliometric (Publication and Citation) Indicators to Demonstrate Impact (slides)
http://d-scholarship.pitt.edu/20647/1/Bibliometrics_Seminar_Feb2014_DSchol.ppt

Representative Documents:
1. Training Material

JCR – Impact Factor, Quartiles
Eigenfactor Score – Article Influence

Eigenfactor – JSTOR
Eigenfactor – Cost-Effectiveness

Scopus – Journal Analyzer
SJR – SCImago Journal Rank
I have 35 refereed journal articles, of which 33 are indexed by Web of Science. These articles have received 230 citations, giving an average citation per (indexed) paper of 7 (source: WoS, 01/14). Ten of these citations are by Jiao Tong University, a top university in China and a leading institution in global science and technology. Moreover, my 2006 Cell (Pigmentation) paper placed in the top 0.1% of all papers published in 2006.

15 of these articles exceed the expected citation rates for their respective publication years, and 2 articles are among the top 1% by discipline for my field of research.

My h-index based on these indexed papers is 10 (source: WoS, 02/14). I have 209 citations (WoS, 02/14). I also have an additional 3 papers not indexed by Web of Science, with 29 citations based on Scopus data (02/14).

WHAT A RESEARCHER MAY SAY ABOUT THEIR IMPACT… (WITH CONTEXT AND JOURNAL METRICS)

WHAT ARE THE AREAS OF STRENGTH IN MY INSTITUTION?

RELATIVE SIZE OF DISCIPLINES

RELATIVE IMPACT OF DISCIPLINES

WHAT ARE THE AREAS OF STRENGTH IN MY INSTITUTION?

HOW GOOD IS MY RESEARCH IN AN AREA COMPARED TO OTHERS?

WHAT ARE THE AREAS OF STRENGTH IN MY INSTITUTION?

RELATIVE SIZE OF DISCIPLINES

RELATIVE IMPACT OF DISCIPLINES

WHAT ARE THE AREAS OF STRENGTH IN MY INSTITUTION?

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WHAT ARE THE AREAS OF STRENGTH IN MY INSTITUTION?

RELATIVE SIZE OF DISCIPLINES

RELATIVE IMPACT OF DISCIPLINES

WHAT ARE THE AREAS OF STRENGTH IN MY INSTITUTION?
WHO DO WE COLLABORATE WITH? WHAT IS THE IMPACT OF THESE COLLABORATIONS?

Evidence:
- Analyze your WoS articles by WoS subject category to see if this is evidenced in your research output

Researcher Statement: "My work is multi-disciplinary, spanning biochemistry, biophysics and oncology..."

Evidence:
- 34% of my journal articles are in the WoS Subject Area of Biochemistry and Molecular Biology, with 29% in Biophysics and 16% in Oncology (WoS Subject Areas, 02/14).

Researcher Statement: "I am a world leader in the field..."

Evidence:
- Are you listed as a highly cited scientist in ESI?
- Do you have any papers "highly cited" in ESI?
- Do you have any "highly cited" papers identified as being "core papers" in an area of relevance to the application?
- How many of your papers rank highly in your "topic" for any of the years of interest to the application (say last 5)?
- Where do your journals rank?
What are Altmetrics??
“the study of scholarly impact measures based on activity in online tools and environments” (Priem, Groth, and Taraborelli 2012)

Scholarly Metrics as a proxy for Scholarly Influence...

Scholarly Metrics as a proxy for Scholarly Influence...

Quantifying Scholarly Output via Citation Metrics

Traditional Tools Evaluating Journals

- Impact Factor – Journal Citation Reports
  - Avg. time articles from a journal (past 2 yrs.) are cited in past year.
  - Web of Science indexed journals & data
- SCImago Journal & Country Rank
  - Based on Scopus Data, 1996-
  - Uses GooglePage Rank algorithm
  - Citable increments include past 3 years
  - Open Access

Note: there are other indices and measures available within these resources.
Traditional Tools
Article/Author Level Metrics
- Citations to an individual article or body of work
  - Web of Science
  - Scopus
  - Google Scholar
- h-index
  - measures both the productivity and impact of the published work
  - Number of an author’s papers that have been cited at least h times by other publications

Comparisons

Limitations to Traditional Metrics
- Take a long time to accumulate
- STEM focused
- Often behind pay walls
- Measure influence narrowly
- Don’t capture a publication’s impact or influence in emerging forms of scholarly communication

altmetrics
Measure diverse impacts from articles, datasets, blog posts, slide shows, etc.
Beyond citation counts!
- Readership
- Views
- Saves
- Downloads
- Scholarly (or popular) Buzz

What can be measured?
“Evidence of Use” — http://impactstory.org
- # of Tweets
- # of “Saves” in online reference managers
- Scholarly (and popular) blog interest and activity
- Activity in social networking platforms, tools
- And…
Meaningful Interactions
Altmetrics measures diverse impacts from articles, datasets, blog posts, slide shows, etc.

<table>
<thead>
<tr>
<th>Tool</th>
<th>What is tracked?</th>
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<td>CiteULike</td>
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<td>Delicious</td>
<td>Saves</td>
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<td>Zotero</td>
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Altmetric Tools
track readership & influence

- **CiteULike** permits users to store, organize and share scholarly papers
- **F1000** is a subscription-based recommendation service for curated articles in biology and medicine.
- **Google Scholar Citations** is a service that allows authors to track their publications and influence using Google Scholar metrics.

Altmetric Tools
track readership & influence

- **Mendeley** is a free reference manager and social network that was recently acquired by Elsevier. Mendeley is described as “one of the world’s largest crowd-sourced research catalogs.”
- **Zotero** is a robust and growing citation management and sharing resource. Collaborators can share libraries of references, etc.

Make Sense of the Diversity of Research Outputs

Use an aggregator!

- Harvest data
- Automatic updates
- Showcase scholarly influence

Put it all together... with Altmetric Aggregators

- **ImpactStory**, aggregates data from research products including articles, datasets, blog posts, PowerPoint presentations and more; free, open source and open access
- **Altmetric.com** Subscription business solution that collects data about an individual article and supplies this data to publishers who present the info. to readers & authors
- **Plum Analytics** commercial product - measures influence using five categories: usage, captures, mentions, social media, and citations. Marketed to libraries.

ImpactStory
Engaging Constituents

- Don’t assume anyone knows anything about altmetrics
- Begin by engaging new scholars
- Explain limitations of both traditional citation metrics & altmetrics
- Demonstrate the power of a Google Scholar Profile, institutional profile, and an ImpactStory Profile

Scholars’ Engagement with Social Media

- Important to maintain and manage an online presence
- Outreach to the public – broader impacts criteria – required by some funding agencies
- Mentions in social media seem to lead to enhanced use of publications
- Dizzying array of social media tools

Valid data = Valid metrics

- Accurate attribution is essential!
- Scholarly authors are assigned Scopus Author Identifiers, Web of Science Researcher ID’s, etc.
- Scholars can claim and make public their Google Scholar profile
- Scholars can (and should) register for a unique ORCID number

ORCID

Open Researcher Identifier

Free service that assigns a unique number to each author and links other identification schemes.

Encourage researchers to use consistent naming conventions and register for an ORCID!

Problem: author disambiguation

Databases see all of these people as:

- J Dannenhoffer
- JV Dannenhoffer
- JF Dannenhoffer
- JM Dannenhoffer

(spouses) (siblings)
Why care?
Metrics and their relationship to social media:

- Add value to traditionally published content
- Crowdsourced peer review
- Expose questions and comments
- Enhance worth
- Increase readership
- Appear to follow the pattern of traditional metrics

References

- Appearance of the pattern of traditional metrics: Increase readership

Thank you!!
Linda Galloway
Janet Pease
Anne Rauh
Syracuse University Library

References


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Syracuse University Library
Research impact is a ubiquitous term in academia, and it informs everything from how to write a grant to how you approach marketing yourself as an academic to how a faculty member compiles their dossier.

In this workshop, we will take a closer look at the research impact and scholarly communication environment. This workshop will provide a broad overview, with plenty of time for questions and discussion. Topics include:

- Specific metrics that are used for evaluation, such as the h-index and its derivatives, the Impact Factor, and alternative metrics for nontraditional research products.
- How to use databases to discover information about people and organizations (they're not just for papers!).
- Best practices for working on your own impact goals, including the use of ORCID, the Becker Model, and research profile services.

The 17 Hillhouse room 07 classroom is on the lower level of the 17 Hillhouse building. After 5 PM, the building requires a Yale ID for entry.
The Scholarly Communications Librarian manages an active program of education, training, advocacy, support and information sharing on topics related to the sharing and barrier-free access of scholarly research products. The librarian raises campus awareness of trends in scholarly publishing, including open access to the scholarly record, alternative metrics for measuring research impact, and copyright and fair use. Additionally, this position will be an integral part of FSU Libraries digital scholarship program, and will report to the Digital Scholarship Coordinator.

Responsibilities
- Manage development and growth of DigiNole Commons, FSU's institutional repository
- Monitor advancements in scholarly communication, open access, institutional repositories, and related legislative and funding initiatives, and communicate their implications to campus stakeholders
- Maintain and build collaborative partnerships with research and administrative units on campus
- Member and support person for the Faculty Senate Library Committee Scholarly Communication Task Force
- Development and implementation of an Open Access Policy
- Manage open access fund, and explore future mechanisms for funding open access
* Liaison to the Library Publishing Coalition and Coalition of Open Access Policy Institutions
* Exploring related research topics including: measurement and impact of scholarship, open peer review, data management, new publication platforms, digital tools for scholarship, etc.
* Manage the hosting and support for University Libraries journal publishing partnerships
* Partner with library departmental liaisons to implement strategies for including faculty and student work in DigiNole Commons
* Serve as a library resource on copyright, fair use and grants compliance, especially related to publishing

**Qualifications**
* ALA-accredited masters degree (awarded or near complete);
* Previous experience in an academic library setting is desirable;
* A strong public service orientation;
* A high degree of facility with relevant technologies and systems;
* Demonstrated knowledge of trends and best practices in scholarly communications across a variety of disciplines;
* Knowledge and experience in copyright law as it relates to fair use and library exemptions, new modes of scholarly communication, open access, authors’ rights, and use of intellectual property;
* Excellent oral, written, and interpersonal communications skills.
* Ability to work effectively with faculty, students, and staff in a team environment;

**Preferred**
* Minimum two years of relevant library experience;
* Coursework or experience in digital scholarship, scholarly communications and/or digital humanities;
* Familiarity with repository platforms (Digital Commons, Islandora)

**Helpful**
The successful candidate will serve as a resource and advocate for issues that promote availability of scholarly intellectual resources. S/he will develop, implement, and assess an educational program; work with subject liaison librarians to promote knowledge about open access support to academic departments, and to assist faculty with issues related to their authored content; promote the use and utility of DigiNole Commons, FSU’s institutional repository, and good research practices in a digital environment.

The Scholarly Communications Librarian serves as the Libraries’ resource on issues related to intellectual property and its use in research and teaching, including: drafting and reviewing policies, guidelines, contracts.
and license agreements; serving as liaison to campus offices on intellectual property-related issues; analyzing copyright status and risk for digital publishing; and maintaining current information on use of copyrighted material.

The Scholarly Communications Librarian will also monitor and stay current in requirements for open access, and will develop library policies and procedures to support researchers in research compliance. Related areas of responsibility could include: the development of campus open access policies, models for open access publishing and open access financing, the role of peer review and alt-metrics in publishing, codes of research practice, and large-scale scholarly communication projects (Ex. SCOAP3, COAPI, Library Publishing Coalition).

**Contact Info**
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ecjones2@fsu.edu  
Phone: 850-644-5870  
Fax: 850-644-1659

**University Information**
Located in beautiful Tallahassee, Florida's capital city, a growing community with a population of more than 357,000, the Florida State University, a public, coeducational institution of the 11-member State University System of Florida, has an enrollment of over 40,000 students. The Library system includes ten libraries. Campus libraries have combined volume holdings totaling over 3 million volumes. The Library is a member of ARL, ASERL, CRL, OCLC, and Lyrasis. For more information about the Florida State University Libraries, see our home page at: http://www.lib.fsu.edu/

**Anticipated Salary Range**
Minimum base salary is $45,000. Offer commensurate with qualifications and experience.
UNIVERSITY OF MASSACHUSETTS
CAMPUSS: Amherst

JOB DESCRIPTION

OFFICIAL TITLE: This is the official title of the position.

Librarian V

FUNCTIONAL TITLE: This is the in-house title by which the position may be known. A functional title is usually a more descriptive title than the official title and may be required to identify very specific kinds of work. This title may be used in signing all correspondence.

Scholarly Communication and Special Initiatives Librarian

GENERAL STATEMENT OF DUTIES: Please provide a brief overview of the general functions of this position. Specific details of duties should be reserved for the Examples of Duties section.

Coordinate scholarly communication activities for the University Libraries by providing leadership and education to the university community about these issues and their impact on the nature and conduct of scholarly inquiry. Work cooperatively and collaboratively with the Director of Libraries to conceptualize, actualize, and assess special initiatives. Investigate and promote the Library's involvement and position with various campus and consortial entities. Work with the appropriate parties, developing, scheduling, promoting and implementing library initiatives. Design and conduct programs as needed.

SUPERVISION RECEIVED: Please indicate the title, but not the name, of the administrative employee or employees responsible for supervision or direction of work; describe the divergent extents of authority of each, indicating the degree, priorities, and relationships of the supervision or direction, which could range from close supervision to supervision with considerable freedom.

Report to the Director of Libraries who reviews performance for effectiveness and conformance with established policies, but have substantial independent responsibility without immediate supervision.

SUPERVISION EXERCISED: Using descriptive non-numerical terms, identify the scope of supervision, training or direction exercised (i.e., whether the supervision is over a few employees, a small number of employees, a large number of employees, etc.); also, describe the degree of supervision, indicating whether close supervision or general direction is involved, and categorize the physical conditions under which the supervision is given, such as in a laboratory or an office. Supervision of student employees should not be included in this section, but may be listed under Examples of Duties, if applicable.

EXAMPLES OF DUTIES: Please list and briefly describe several of the duties and responsibilities typically performed and assumed in this position. This list should not be restrictive but should be descriptive in such a manner as to provide concrete information representing examples of the actual work as well as the level of responsibility for the work being performed.

1. Coordinate the design and shepherd to creation a robust and innovative institutional repository system in the University Library. Monitor project progress and evaluate results. Advise management on how to make optimal use of system features.
2. Engage units across the campus in the pursuit of strategic scholarly communication initiatives including the acquisition, management, and preservation of digital assets. Advocate use of technology for scholarly communication to faculty, staff, administrators, the public and academic collaborators.
3. Play an essential role with the integration of scholarly publishing technologies and processes with digital library development, especially related to repository developments. Oversee the development of scholarly communication applications with the development of other library applications.
4. Conceptualize, actualize, and assess special initiatives in coordination with the Director of Libraries. Investigate and promote the Library's involvement and position with various campus and consortia entities. Work with the appropriate parties, developing, scheduling, promoting and implementing library initiatives. Design and conduct programs as needed.
Representative Documents: Job Descriptions

5. Provide consultation on University policies and legal and regulatory issues related to intellectual property and sponsored research as they relate to the University's scholarly communication initiatives.
6. Chair the Repository Advisory Group and participate in other Repository Committees ex officio.
7. Serve as a member of the Library's Senior Administrative Group.
8. Maintain contacts with appropriate on-campus and off-campus agencies in order to maintain current on new developments in appropriate technologies. Collaborate with library departments, the University of Massachusetts Press, and campus centers focused on research, digital libraries, and scholarly publishing.
9. Develop and maintain appropriate reports, documentation and records.
10. Work cooperatively and collaboratively with other staff to coordinate scholarly communication education and training with programs undertaken by the Libraries and its various collaborative partners.
11. May be asked to represent the U Mass Amherst Library at selected meetings and conferences.
12. Perform other related duties as assigned.

QUALIFICATIONS: Please indicate in a general way the knowledge, abilities, skills, education and experience necessary for any individual to assume this position. It is not the objective of this section to list any one person's specific personal traits and training. It is important to indicate, also, what degree of competence would be required (i.e., considerable education, extensive experience, working knowledge, etc.) to perform the duties and assume the responsibilities typical of this position.

1. Master's degree in library science – or equivalent degree – from a program accredited by the American Library Association, or its appropriate equivalent in librarianship from another country, or have appropriate equivalent experience.
2. At least ten years of experience in an academic and/or research library environment, Substantial experience working within complex library systems. Familiarity with the emergence of Institutional Repositories, including issues, policy matters, and strategies for securing appropriate content and an understanding of the changing nature of the scholarly communication environment. Experience with networked information environments and familiarity with digital imaging and database creation.
3. Excellent organizational and communication (oral and written) skills. Demonstrated ability to work effectively with culturally diverse faculty, students, and staff.
4. Excellent interpersonal skills including ability to foster a collegial work environment that encourages change and innovation; and ability to interact effectively and work productively, collegially, cooperatively, and collaboratively with a variety of individuals and groups in a changing environment.
5. Demonstrated skills in project management, consensus building and problem solving. Demonstrated experience building coalitions and maintaining collaborative relationships.
6. Commitment to collaborative work environment, and ability to set and adjust priorities in a library embracing advanced information technologies, work under pressure, be thorough and accurate, follow tasks and projects through to completion, meet deadlines, and work independently.
7. Demonstrated ability to deal with ambiguity, change and innovation.
UNIVERSITY OF MASSACHUSETTS
CAMPUSS: Amherst

JOB DESCRIPTION

OFFICIAL TITLE: This is the official title of the position.
Librarian V

FUNCTIONAL TITLE: This is the in-house title by which the position may be known. A functional title is usually a more
descriptive title than the official title and may be required to identify very specific kinds of work. This title may be used in signing all
correspondence.
Social Sciences Research Services Librarian

GENERAL STATEMENT OF DUTIES: Please provide a brief overview of the general functions of this position. Specific
details of duties should be reserved for the Examples of Duties section.
Serve as library liaison academic departments. Provide library orientation and discipline-based information
literacy sessions for assigned social science areas at all degree levels. Prepare user guides, tutorials, and other
information resource tools as needed. Offer appointment-based, in-depth research consultations. Provide
point-of-need research assistance in-person, through phone, email, web and other technologies. Provide
collection support for assigned social sciences subjects. Analyze usage and collections data to help inform
library-wide collection decisions.

SUPERVISION RECEIVED: Please indicate the title, but not the name, of the administrative employee or employees
responsible for supervision or direction of work; describe the divergent extents of authority of each, indicating the degree,
priorities, and relationships of the supervision or direction, which could range from close supervision to supervision with considerable
freedom.
Work under the general supervision of the head of Information Resources Management, and the functional
supervision of the Coordinator, Acquisitions Unit. Be responsible to the Head of Research and Liaison Services
for reference assignments.

SUPERVISION EXERCISED: Using descriptive non-numerical terms, identify the scope of supervision, training or direction
exercised (i.e., whether the supervision is over a few employees, a small number of employees, a large number of employees, etc.); also,
describe the degree of supervision, indicating whether close supervision or general direction is involved, and categorize the
physical conditions under which the supervision is given, such as in a laboratory or an office. Supervision of student employees
should not be included in this section, but may be listed under Examples of Duties, if applicable.
None.

EXAMPLES OF DUTIES: Please list and briefly describe several of the duties and responsibilities typically performed and
assumed in this position. This list should not be restrictive but should be descriptive in such a manner as to provide concrete
information representing examples of the actual work as well as the level of responsibility for the work being performed.

1. Serve as a liaison to designated academic programs, departments and centers. Engage in direct communication
   with faculty and students to learn about the needs, activities and trends in assigned liaison areas. Communicate
   information to faculty and students about the Libraries’ services and information resources that support their
curricular, learning and research needs. Compile and assess information received to identify curricular and
research support opportunities and to inform the development and assessment of library services and resources.
2. Provide instruction to support disciplinary research. Work to incorporate appropriate technology into all
   contexts. Design and teach course-related information literacy sessions and/or credit classes in a classroom or
   web-based environment.
3. Prepare user guides, tutorials, and other online learning tools to support instruction and research in the social
   sciences. Develop scripts to be used in creating these tools.
4. Provide in-depth reference and research consultation to faculty and students in designated social sciences
   subject areas and education.
5. Incorporate trends in scholarly communication and emerging technologies into instructional and research support
   services.
6. Support subject collections in a changing research environment by applying specialized knowledge to the
selection, evaluation, and maintenance of library resources in designated subject areas of the social sciences. Manage and expend allocated acquisitions funds in a prudent and timely manner, according to established guidelines.

7. Analyze and actively share usage and collections data to help inform library-wide collection decisions.
8. Provide point-of-need research assistance to library users in-person, through phone, email, web and other technologies.
9. Maintain current awareness of scholarly literature and publishing trends.
10. Represent the Library at appropriate, selected professional meetings and conferences as requested.
11. May be asked to work evening and weekend hours.
12. Perform other related duties as assigned.

QUALIFICATIONS: Please indicate in a general way the knowledge, abilities, skills, education and experience necessary for any individual to assume this position. It is not the objective of this section to list any one person's specific personal traits and training. It is important to indicate, also, what degree of competence would be required (i.e., considerable education, extensive experience, working knowledge, etc.) to perform the duties and assume the responsibilities typical of this position.

1. Master’s degree in library science from an American Library Association-accredited library and information studies program.
2. Minimum of fourteen years of experience in an academic or research library, including some collection development responsibilities.
3. Educational background in the social sciences. Graduate (Advanced) degree in subject desirable.
4. Working knowledge of at least one foreign language.
5. Thorough knowledge of the methods used in performing library research. Knowledge of scholarly literature and publishing trends.
6. Thorough knowledge of reference and information sources in all formats, especially those relating to the social sciences.
7. Thorough knowledge of educational and research programs of the University, especially in social sciences.
8. Fluency with data analysis, including the ability to identify and analyze appropriate information related to the Libraries’ students and faculty, the University, higher education as well as trends in information discovery and delivery.
9. Strong user-focused service model that is responsive to and anticipates the distinctive needs of faculty, students and staff.
10. Excellent communication skills, both oral and written; strong interpersonal skills; ability to work effectively in a team environment and independently and ability to work collaboratively with campus partners.
11. Demonstrated ability to prioritize, organize and accomplish assigned work and produce needed outputs in a timely, efficient and effective manner.
12. Ability to establish and maintain harmonious working relationships.

OFFICIAL POSITION CERTIFICATION
This is a complete and accurate description of this position.

Date __________________________ Signature--Supervisor

Date __________________________ Signature--Director of Libraries

Date __________________________ Signature--Staff Member
North Carolina State University Libraries
Vacancy Announcement

Director, Copyright and Digital Scholarship

Between the mountains of the Blue Ridge and the shores of the Outer Banks lies North Carolina's Research Triangle of Raleigh, Durham, and Chapel Hill. One of the nation's premier concentrations of academic, corporate, and public research, the area combines moderate year-round temperatures, rolling hills, championship college athletics, and a rich diversity of cultural events. The Triangle consistently ranks high on lists of desirable American communities, including a recent rating by *Forbes* as the number-one place for business and careers and as one of *Money Magazine*'s Best Big Cities. The North Carolina State University Libraries has been recognized as the first recipient of the Association of College and Research Libraries' *Excellence in Academic Libraries Award* for its teamwork, innovation, and continuous interaction with students and faculty to further the educational mission of NC State University. A major new science and engineering research library, the *James B. Hunt Jr. Library*, is under construction and expected to open in 2012/13. It will be the social and intellectual nexus for NC State’s Centennial Campus, a research and advanced technology community that includes the colleges of Engineering and Textiles, a variety of science and technology research centers, and more than 130 companies and government agencies.

The NCSU Libraries invites applications and nominations for the position of Director, Copyright and Digital Scholarship to manage its Copyright and Digital Scholarship Center. The Center provides services, resources, and guidance for the university community in matters relating to the creation, dissemination, and use of knowledge. The emphasis is on fostering sustainable models of scholarly communication, providing guidance on copyright in teaching and research, and creating new forms of digital scholarship and access.

**Responsibilities**
The Director, Copyright and Digital Scholarship leads a dynamic program that engages faculty, staff, and students in initiatives to maximize the dissemination and impact of the university's scholarship and knowledge resources. In this highly visible position, the incumbent provides guidance to the NC State community on scholarly communication matters. The Director serves as a resource on local and national policy to help the university community stay informed and involved with the changing landscape for scholarly work and publication. The incumbent works in close consultation with the university’s Office of General Counsel, Copyright Committee, Provost’s office, and Distance Education and Learning Technology Applications unit (DELTA). He or she collaborates with colleagues throughout the Libraries, providing leadership for digital scholarship and publishing initiatives, and guidance on fair use and other copyright issues related to library collections and services. He or she participates in library planning and serves on library-wide and university committees, task forces, and teams. NCSU Librarians are expected to be active professionally and to contribute to developments in the field. Reports to the Associate Director for Collections and Scholarly Communication.

**Qualifications**
**Required:** ALA-accredited MLS or equivalent advanced degree in a relevant discipline (e.g., J.D.) Relevant professional experience, including experience with scholarly communication and research
dissemination. Knowledge of digital publishing and digital repositories as applied to the creation, dissemination, and use of digital information resources. Demonstrated expertise with relevant legal and regulatory issues associated with intellectual property and copyright. Demonstrated ability to represent the interests of the academy in scholarly communication issues. Knowledge of licensing issues as applied to library collections. Excellent oral and written communication skills; excellent interpersonal skills; and ability to work effectively with faculty, students, and academic administrators. A record of ongoing professional development and contribution.

Preferred: ALA-accredited MLS plus J.D. Experience writing proposals and participating in grant activities.

The University and the Libraries
Recognized as one of the nation’s leading universities in science and technology, with strong programs in the humanities and social sciences, NC State offers degrees through the Colleges of Agriculture and Life Sciences, Design, Education, Engineering, Humanities and Social Sciences, Management, Natural Resources, Physical and Mathematical Sciences, Textiles, and Veterinary Medicine. As the largest academic institution in the state, NC State enrolls more than 33,000 students and offers doctoral degrees in 61 fields of study. The university is ranked 4th in industry research funding and 9th in total research expenditures among universities without medical schools. With more than 660 active patents, NC State is ranked 9th among U.S. universities in patent production, quality, and strength. NC State is a national leader in networking technologies and a charter member of the North Carolina Networking Initiative (NCNI), an Internet2 initiative with the most advanced operational networking system infrastructure in the nation.

The library system (http://www.lib.ncsu.edu/) consists of a central library and branch libraries for design, natural resources, textiles, and veterinary medicine. With a staff of 260+ FTE, the Libraries has more than 4 million volumes in its collection, acquires more than 62,000 print and electronic serials, and has a total annual budget of over $25 million, with approximately $9.5 million allocated to collections. The Libraries is the host site for NC LIVE (North Carolina Libraries for Virtual Education), a multi-type library initiative, making digital resources accessible to North Carolina residents.

The NCSU Libraries is a member of the Association of Research Libraries, the Digital Library Federation, the Coalition for Networked Information, the Scholarly Publishing and Academic Resources Coalition, the Council for Library and Information Resources, and the Center for Research Libraries. Duke University, the University of North Carolina at Chapel Hill, North Carolina Central University, and North Carolina State University form the Triangle Research Libraries Network (TRLN), with combined resources exceeding 14 million volumes and collections budgets totaling more than $30 million.

Salary and Benefits
The Libraries offers a highly competitive salary in recognition of applicable education and experience for this position. Librarians have non-tenure track faculty status (without levels of rank). Benefits include: 24 days vacation, 12 days sick leave; State of NC preferred provider medical insurance, and state, TIAA/CREF, or other retirement options. Additional and optional dental, life, disability, deferred compensation, and legal plans are offered. Tuition waiver program for all campuses of The University of North Carolina is available. More benefits information is available at http://www7.acs.ncsu.edu/hr/benefits/.

Application process and schedule
Applications will be reviewed upon receipt; applications will be accepted until finalist candidates are selected. Candidates are encouraged to apply as soon as possible to receive full consideration. The
POSITION DESCRIPTION

HEALTH SCIENCES LIBRARIAN
SIU CARBONDALE
LIBRARY AFFAIRS

Appointment: Assistant/Associate Professor, full-time, 12-month, continuing (tenured or tenure-track)

Environment: Library Affairs provides comprehensive library services to the Southern Illinois University Carbondale population of 18,500 students in beautiful Southern Illinois. Morris Library, the primary facility, was completely renovated and reopened in 2009. The building currently features over 200 computers, laptops to borrow, 14 study rooms, and two computer classrooms. Two additional floors that will feature highly flexible, technology-rich, collaborative spaces are under construction and will open in 2014. The building houses nearly three million volumes, three and a half million microforms, and 43,000 currently-received periodicals and serials, as well as strong collections of online databases, maps, films, DVDs, and sound recordings. Morris Library is a selective U.S. Federal Depository Library and an Illinois State Depository Library. As the center for academic support services on campus, Morris Library hosts SalukiTech (technology and computer support), the University Honors Program, the Writing Center, Learning Support Services, Testing Lab, Math Lab, and Center for Teaching Excellence. Morris Library is a member of the Association of Research Libraries, Coalition for Networked Information, Consortium of Academic and Research Libraries in Illinois, Scholarly Publishing and Academic Resources Coalition, and Greater Western Library Alliance. Librarians at SIU Carbondale are faculty and are covered by collective bargaining.

Responsibilities:
Under the general direction of the Head of Reference and Instructional Services, the Health Sciences Librarian:

• Provides reference, instruction, and library services to the University community.
• Assists patrons at the Information Desk with research and reference questions, including limited nights and weekends
• Helps patrons to identify and locate library materials and resources using both print and electronic resources—in person, via email, or online
• Teaches the general use of the Library’s resources and technology as appropriate
• Serves as the subject specialists and liaison to departments in the Health Sciences and other appropriate academic departments
• Provides formal and informal instruction in library usage for these departments
• Assists with subject-specific research queries in areas of expertise
• Serves as contact between Morris Library and the School of Medicine’s Medical Resource Center on the Carbondale campus
• Provides outreach services to off-campus students and faculty involved in all Distance Education programs
• Participates in the library’s scholarly communication initiatives, including the population of the Institutional Repository
• Maintains service contributions to Library Affairs, the University, and the profession
• Continues to develop in librarianship and subject specialty through research contributions, conference and/or workshop attendance, and other educational activities
• Performs other appropriate duties
Required Qualifications:

- ALA-accredited master’s degree in Library Science
- Familiarity with reference sources in an academic library
- Demonstrated skills in instruction and development of effective teaching materials
- Knowledge of or coursework in one of the Health Sciences
- Working knowledge of a wide variety of information technology applications and proficiency in the use of general and subject-specific print and electronic reference resources
- Demonstrated strong interpersonal and communication skills, both oral and written
- Ability to organize work and meet deadlines
- Interest and potential to meet established Library Affairs criteria for promotion and tenure, including professional service and published research

Incumbent

Supervisor

Dean, Library Affairs
POSITION DESCRIPTION

SIU CARBONDALE
LIBRARY AFFAIRS

Title of Position: Lecturer (Science Librarian)

Appointment: Lecturer, full-time, 12 month, term, renewable, Non-Tenure-Track

Responsibilities: Under the general direction of the Associate Dean for Information Services and responsive to input from the Dean of Library Affairs, the Science Librarian provides reference, instruction, liaison, collection development, outreach, and general library services to the University community. Specific responsibilities include:

- Assists patrons at the Information Desk with research and reference questions, including limited nights and weekends. Provides general reference service via face-to-face, online, email, chat, phone, and consultation means.
- Instructs students and faculty in the use of library resources and technologies, as well as in information access, evaluation, and management in face-to-face and online settings as appropriate. Assists in the development of instructional curricula (including for credit and non-credit courses), online learning modules, web pages, user guides, and assessments.
- Serves as subject specialist and liaison to departments covering Science disciplines, providing formal and informal instruction in library research for these departments. Assists with subject-specific research queries in areas of expertise. Identifies opportunities for outreach and strategic partnerships with specific SIU departments based on expertise.
- Assists with student recruitment, orientation, and retention strategies.
- Selects monographs and recommends other resources for science disciplines. Participates in other collection development activities as needed.
- Participates in the library’s scholarly communication initiatives, including the population of the Institutional Repository.
- Serves on library and university committees.
- Other duties and responsibilities as assigned.

Required Qualifications:

- ALA-accredited master's degree in Library Science (MLS) awarded by date of appointment.
- Bachelor's degree in a science or engineering discipline.
- Proficiency in the use of general and subject-specific reference resources and in conducting library research.
- Experience creating web-based guides and tutorials (e.g., LibGuides).
- Working knowledge of a wide variety of information technology applications (e.g., Microsoft Office) and databases.
- Excellent interpersonal and oral and written communication skills.
- Demonstrated strong organizational skills, including the ability to manage projects, and multiple tasks while meeting deadlines and solving problems in a complex and dynamic environment.
- Strong customer-service orientation.
- Demonstrated ability to work independently and collaboratively with diverse faculty, staff, and students in a rapidly-evolving, team-oriented environment.
Preferred Qualifications:

- Additional master’s degree in a science or engineering discipline.
- Speaking, reading and writing knowledge of a second language.
- Experience working in an academic library.
- Teaching experience.
- Collection development experience.
- Familiarity with online learning management systems and tools.
- History of working with diverse populations and college students.
- Experience writing, obtaining, and managing grants.

___________________________________________________________________________________

Incumbent

___________________________________________________________________________________

Associate Dean for Information Services

___________________________________________________________________________________

Dean of Library Affairs

___________________________________________________________________________________
SOUTHERN ILLINOIS UNIVERSITY CARBONDALE
Natural Sciences Librarian

POSITION DESCRIPTION
NATURAL SCIENCES LIBRARIAN
SIU CARBONDALE
LIBRARY AFFAIRS

Appointment: Assistant/Associate Professor, full-time, 12-month, continuing (tenured or tenure-track)

Environment: Library Affairs provides comprehensive library services to the Southern Illinois University Carbondale population of 18,500 students in beautiful Southern Illinois. Morris Library, the primary facility, was completely renovated and reopened in 2009. The building currently features over 200 computers, laptops to borrow, 14 study rooms, and two computer classrooms. Two additional floors that will feature highly flexible, technology-rich, collaborative spaces are under construction and will open in 2014. The building houses nearly three million volumes, three and a half million microforms, and 43,000 currently-received periodicals and serials, as well as strong collections of online databases, maps, films, DVDs, and sound recordings. Morris Library is a selective U.S. Federal Depository Library and an Illinois State Depository Library. As the center for academic support services on campus, Morris Library hosts SalukiTech (technology and computer support), the University Honors Program, the Writing Center, Learning Support Services, Testing Lab, Math Lab, and Center for Teaching Excellence. Morris Library is a member of the Association of Research Libraries, Coalition for Networked Information, Consortium of Academic and Research Libraries in Illinois, Scholarly Publishing and Academic Resources Coalition, and Greater Western Library Alliance. Librarians at SIU Carbondale are faculty and are covered by collective bargaining.

Responsibilities:
Under the general direction of the Head of Reference and Instruction Services, the Natural Sciences Librarian provides reference, instruction, and library services to the University community.
Responsibilities include:
• Assisting patrons at the Information Desk with research and reference questions, including limited nights and weekends
• Helping patrons to identify and locate library materials and resources using both print and electronic resources – in person, via email, or online
• Teaching the general use of the Library’s resources and technology as appropriate
• Serving as the subject specialist and liaison to departments in the Natural Sciences and other appropriate academic departments
• Providing formal and informal instruction in library usage for these departments
• Assisting with subject-specific research queries in areas of expertise
• Participate in the library’s scholarly communication initiatives, including the population of the Institutional Repository
• Maintaining service contributions to Library Affairs, the University, and the profession as appropriate
• Continuing to develop in librarianship and subject specialty through research contributions, conference and/or workshop attendance, and other education activities
• Performing other appropriate duties

Required Qualifications:
• ALA-accredited master’s degree in Library Science
• Familiarity with reference sources in an academic library
• Demonstrated skills in instruction and development of effective teaching materials
• Knowledge of or course work in one of the Natural Sciences
• Working knowledge of a wide variety of information technology applications and proficiency in the use of general and subject-specific print and electronic reference resources
• Demonstrated strong interpersonal and communication skills, both oral and written
• Ability to organize work and meet deadlines
• Interest and potential to meet established Library Affairs criteria for promotion and tenure, including professional service and published research

Incumbent __________________________ Date __________________________

Supervisor __________________________ Date __________________________

Dean, Library Affairs __________________________ Date __________________________
Transforming Scholarly Communication & Publishing

You want to publish, we want to help...

Scholarly publishing is undergoing fundamental transformations and the UB Libraries want to help you understand how these changes impact your scholarly endeavors. Here are some ways we may be able to assist:

- **Accurately measuring the impact of your work:** Librarians are available to assist you with using Web of Science, Harzing’s Publish or Perish/Google Scholar, altmetrics, and other resources to capture a more complete picture of the impact of your scholarly output.

- **Archiving your work:** The UB Libraries can provide assistance with sustainable, long-term, online preservation of your work (articles, data, and other scholarly output).
Alternative publishing outlets: stay up-to-date on emerging and alternative publishing models like open access journals, e-books, open educational resources, and more.

Understanding copyright and author’s rights: legislation regarding federally funded research, public access mandates, and data sharing requirements.

Questions about Scholarly Communication issues? Give me a try!

A. Ben Wagner
Sciences Librarian
226 Capen Hall
Buffalo, NY 14260

(716) 645-1333
abwagner@buffalo.edu

Gobbledygook (Public Library of Science, Martin Fenner)
Dr. Fenner has for many years worked as medical doctor and cancer researcher at the Hannover Medical School Cancer Center in Germany.

The Scholarly Kitchen (Society for Scholarly Publishing)
Tag line is “What’s Hot & What’s Cooking in Scholarly Communications”. Generally provides a more conservative or publisher-flavored viewpoint.

Peter Suber (SPARC)
One of the most followed open access advocate/educator holding many concurrent positions including the Director of the Harvard Open Access Project and Senior Researcher at SPARC.
WHSCL Publication Analysis Service

WHAT: Citation-base analysis service or assistance compiling publications, citation counts, and other available data to advise, inform, and highlight key areas of impact. Validated publication and impact data is collected from one of the two major citation tracking databases, Web of Science or Scopus. Additional databases and/or impact metrics may be discussed but are not included in the provided analyses. Typical commissions include, but are not limited to the following data:

- **Number of Publications** for a given time frame, institution, or career
- **Citation Statistics** such as total citations, average citations per publication, and distribution of citations over years, institutions, etc.
- **H-index** or other comparative measures of visibility and impact
- **Researcher Profiles and Alerts** can be established for increased visibility, building bibliographies, publicly available metrics, and future citation or other statistical notifications
- **Journal Impact Factors** and other metrics
- **Citing and Collaborative Fields** for each identified publication
- **Relevant and Potential Journals** for future submissions to increase publication visibility and impact.
- **Comparisons** can be provided across individuals, faculty ranks, subject areas, institutions, etc.
- **Benchmarking** graphs and analytics can be available by publication subject areas between fields and institutions.
- **Summarized reports** can reflect total individual, departmental, division, or unit publication output.

FOR WHOM: Each data analysis report or requested training can be focused around an individual researcher, research group, division, department, and/or school.

MOST USEFUL WHEN: Looking to identify areas of strength and weakness, areas of greatest impact, comparing publication impact, and highlighting potential areas of growth. Comparisons and benchmarking reports can reveal new areas of growth and collaboration.

REQUEST: Contact Life Sciences Informationist Kim Powell (krpowel@emory.edu) or use Ask A Librarian to request additional information. Please indicate specific areas of interest to be included in a report or training session.
Metrics and Impact Core (MIC)

The Metrics and Impact Core (MIC), housed in Galter Library, has expertise in bibliometrics, data visualization, continuous improvement, information systems and alternative metrics. The core provides extensive advisory services for researchers, groups or departments on topics such as:

- developing successful publishing strategies
- managing or tracking publications
- maintaining an impactful online identity
- measuring or assessing research impact by discipline
- communicating research impact to audiences

MIC uses a wide collection of resources, including Scopus, Web of Science, Google Scholar, NU Scholars, Journal Citation Reports, and more, to provide services and reports for:

- Researchers or clinicians to demonstrate impact of published works to promotion or tenure committees, or the impact of research studies to funding agencies when applying for funding
- Research groups/institutions/departments to discover how research findings are being used to promote science, or an overall view of research publications and outputs by a specific group

Our upcoming Research Impact Guide will provide information on bibliometric analysis, alternative metrics, research impact analysis, information visualization, evaluation frameworks, and more. Also, check out our Galter Classes (http://galter.northwestern.edu/classes) page to learn more about or request courses.

For questions or inquiries on services, please contact:

Dr. Kristi Holmes (http://galter.northwestern.edu/contact/Kristi/Holmes), Core Director and Associate Director of Evaluation, NUCATS

Karen Gutzman (http://galter.northwestern.edu/contact/Karen/Gutzman),
Impact and Evaluation Librarian

Methods and services

- **Advanced Bibliometric Analysis** - Provides an understanding of productivity and emerging indicators of impact. Ongoing analyses in MIC include tracking “hot” and “highly cited” papers for discipline-specific percentile ranking and assessment of productivity, recognition/influence, efficiency, relative impact and benchmarking.

- **Alternative metrics** - Enables characterization of dissemination and public engagement. This data supplements conventional bibliometrics and allows real-time social engagement data to be collected and monitored in a meaningful way for a broad array of research products.

- **Social Network Analysis (SNA) and data visualizations** - Facilitate an understanding of relationships between people, organizations, concepts, or services. SNA provides snapshots of programs, collaborations, resources, and services which can be used to describe, predict, and measure the effect of interventions.

- **Surveys** - Measure satisfaction, collaboration, effectiveness of training. Surveys may be utilized for post-consultation or service surveys; post-event surveys for training and workforce development events (courses, workshops, training events, online tutorials, seminars), and annual surveys on satisfaction, collaboration, and community engagement.

- **Micro-case studies & interviews** - Efficiently enable in-depth qualitative assessments using a modified CADTH framework [1] to facilitate effective and efficient case studies.

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The Scholarly Publishing specialists provide a variety of services and resources to assist faculty, investigators and students with publishing and evaluation needs. For more information, please contact Cathy Sarli or Amy Suiter.
DUKE UNIVERSITY
DukeSpace Statistics
http://dukespace.lib.duke.edu/dspace/handle/10161/6220/statistics

Statistics
Total Visits

Views
Tom Sawyer and the construction of value 50092

Total Visits Per Month

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</thead>
<tbody>
<tr>
<td>Tom Sawyer and the construction of value</td>
<td>74</td>
<td>42</td>
<td>43</td>
<td>43</td>
<td>28</td>
<td>19</td>
<td>0</td>
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</tbody>
</table>

File Visits

Views
Tom Sawyer.pdf 51384
Tom Sawyer.pdf 7
Tom Sawyer.pdf.txt 2

Top country views

Views
United States of America 17736
India 2589
United Kingdom 2363
Canada 1998
China 1874
Germany 1751
Spain 1474
Australia 1287
Russian Federation 1275
Brazil 1261

Top cities views

Views
Singapore 837
New York 495
London 495
Impact Factors and Citation Analysis: Introduction

http://guides.main.library.emory.edu/citationanalysis
Publication and Citation Report
Faculty Member Name
Department Affiliations

Date range: 2004-2013
Name variants: Name variant 1, Name variant 2

Number of journal articles: 27
Number of times cited: 251
Number of times cited without self-citations: 222
Average number of times cited per article: 9.30
h-index: 8

Top publications ranked by number of times cited:

Disclaimer: This report only includes journal articles covered by Web of Science (Science Citation Index Expanded, 1900-present; Social Science Citation Index, 1900-present). For more information, see http://guides.main.library.emory.edu/citationanalysis.
Robert W. Woodruff Library  April 23, 2013


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**Top publications ranked by journal impact factor:**


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**Editorial positions:**

*Journal of Mauris Dictum*, 2011 Journal Impact Factor: 4.21, Section Editor.


---

**Disclaimer:** This report only includes journal articles covered by Web of Science (Science Citation Index Expanded, 1900-present; Social Science Citation Index, 1900-present). For more information, see http://guides.main.library.emory.edu/citationanalysis.
Publication and Citation Report
Department Name

Faculty members included in report: Person A, Person B, Person C, Person D, Person E, Person F, Person G, Person H, Person I, Person J, Person K, Person L

Date range of report: 2008-2012

Number of publications: 132
Number of times cited: 877
Number of times cited without self-citations: 720
Average citations per publication: 6.64
Average career h-index: 14

Most frequently cited publications:


Disclaimer: This report only includes journal articles covered by Web of Science (Science Citation Index Expanded, 1900-present; Social Science Citation Index, 1900-present). For more information, see http://guides.main.library.emory.edu/citationanalysis.

---

### Top journals ranked by impact factor

<table>
<thead>
<tr>
<th>Impact factor</th>
<th>Journal title</th>
<th>Number of articles</th>
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<tbody>
<tr>
<td>26.12</td>
<td>Journal of Suspendisse Ullamcorper</td>
<td>1</td>
</tr>
<tr>
<td>15.65</td>
<td>Adipiscing Journal</td>
<td>2</td>
</tr>
<tr>
<td>9.32</td>
<td>Journal of Etiam Pharetra</td>
<td>2</td>
</tr>
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</table>

### Top journals ranked by number of articles

<table>
<thead>
<tr>
<th>Number of articles</th>
<th>Journal title</th>
<th>Impact factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Cras pharetra Journal</td>
<td>3.23</td>
</tr>
<tr>
<td>5</td>
<td>Donec ultrices</td>
<td>4.56</td>
</tr>
<tr>
<td>5</td>
<td>Journal of turpis</td>
<td>3.58</td>
</tr>
</tbody>
</table>

### Faculty members ranked by number of publications

<table>
<thead>
<tr>
<th>Faculty member</th>
<th>Number of publications</th>
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<tbody>
<tr>
<td>Person H</td>
<td>13</td>
</tr>
<tr>
<td>Person A</td>
<td>13</td>
</tr>
<tr>
<td>Person C</td>
<td>11</td>
</tr>
<tr>
<td>Person F</td>
<td>10</td>
</tr>
</tbody>
</table>

### Faculty members ranked by h-index

<table>
<thead>
<tr>
<th>Faculty member</th>
<th>h-index</th>
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<tbody>
<tr>
<td>Person I</td>
<td>30</td>
</tr>
<tr>
<td>Person J</td>
<td>27</td>
</tr>
<tr>
<td>Person H</td>
<td>21</td>
</tr>
<tr>
<td>Person D</td>
<td>19</td>
</tr>
</tbody>
</table>

Disclaimer: This report only includes journal articles covered by Web of Science (Science Citation Index Expanded, 1900-present; Social Science Citation Index, 1900-present). For more information, see http://guides.main.library.emory.edu/citationanalysis.
Publication and Citation Report
Name of Subject Area

Institutions included in report: University A, University B, University C

Date range of report: 1981-2011

Number of publications:
- University A: 883
- University B: 665
- University C: 272

Number of citations:
- University A: 22,077
- University B: 19,019
- University C: 6,061

Average citations per publication:
- University A: 26.20
- University B: 29.36
- University C: 22.76

Disclaimer: This report only includes publications covered by Web of Science, January 1, 1981 through December 31, 2011. For more information, see http://guides.main.library.emory.edu/citationanalysis.
Open Access Week 2013 Final Report

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1. Introduction and Background

International Open Access Week is an annual occasion for the international research and academic communities to learn about the benefits and opportunities of open access, the goal of which is to...
Florida State University Open Access Week 2013 Report

“...inspire wider participation in helping to make Open Access a new norm in scholarship and research.” Open Access Week 2013 occurred in the last full week of October, the 21st through 27th. This was the sixth year that Open Access Week was celebrated, and the fourth year it was observed at Florida State University. This year’s theme for Open Access Week was “Redefining Impact.”

As open access is generally heralded by librarians, events and initiatives around that topic are hosted by Florida State University Libraries. Following the lead of other universities that hosted Open Access Week events, the 2010 and 2011 programs included lectures, panels and discussions. While the programs were generally well-regarded and in line with current events and interesting topics, they were largely attended by open access advocates and librarians. As the goals of FSU’s open access program became clearer, the decision was made that lectures and panels hosted in the library were not achieving the desired effect of raising campus-wide awareness about open access. The 2012 initiative for Open Access Week took the form of an information campaign, including eight posters, informational brochures, and staff time spent at an information table in the main floor of the library. While unable to measure effectiveness by numbers of attendees, it became apparent that the level of knowledge about open access is increasing as outreach takes new flavors.

2. Open Access Week 2013

Brainstorming produced two campus-wide initiatives

Open Access Week planning began with the start of the fall semester. The Scholarly Communication Librarian, Micah Vandegrift, organized a committee that included members representing Undergraduate Commons, Scholars Commons, the Engineering Library, the College of Medicine Library, and Goldstein Library, led by Scholarly Communication Assistant, Josh Bolick, with assistance from Nina Rose, Intern for the Scholarly Communication Office. After initial discussions outlining previous year’s events and low levels of participation, the committee held several brainstorming sessions to explore ideas for reaching a broader audience. Two principal initiatives emerged, one directed at faculty (the traditional audience for Open Access advocacy), and the other directed at undergraduate students, who have often been neglected in discussions of open access.

DigiNole Commons Upload-A-Thon

The faculty-centered initiative of Open Access Week was a campus-wide institutional repository “Upload-A-Thon,” with the goal of at least one faculty member from each department depositing at least one article into DigiNole Commons. Beginning in October, liaison librarians began identifying and e-mailing individual faculty members to ask for their participation in the Upload-A-Thon, which was also publicized in Florida State 24/7, the FSU community news website. Twelve departments within ten colleges participated in the initiative. Highlights and illustrative charts are below.

As a result of the Upload-A-Thon and momentum achieved through other scholarly communication activities this year, we have identified five new target departments for outreach:

- Art History
- Art Education
- School of Library and Information Studies
Florida State University Open Access Week 2013 Report

- Nutrition, Food & Exercise Sciences
- Urban & Regional Planning

Highlights:

- 41 deposits were made as a direct result of Upload-A-Thon outreach efforts;
- 80 new deposits were made in October 2013, including 39 deposits from the College of Medicine;
- Social Sciences contributed 90% of the Upload-A-Thon deposits, Humanities 5%, and Science, Technology, Engineering, and Math, 5%;
- 124 hits on Upload-A-Thon deposits were registered in October 2013;
- 96 downloads of Upload-A-Thon deposits were recorded in October 2013;
- Overall downloads during October 2013 increased 43% from September and 83% from August, suggesting that DigiNole Commons promotional efforts leading up to Open Access Week had a direct impact on repository usage

Charts

Number of Deposits by Department

Total Hits on Upload-A-Thon Articles by Department, Oct. 2013

Ed Psychology
Library and Info Studies
Psychology
Library
Art History
Ed Leadership
Social Work
Art Education
Teacher Ed
Engineering
Criminology
CommSci Disorders
The Student Statement on the Right to Research

Invoking the “Redefining Impact” theme selected by the international organizers of Open Access Week, the student-focused initiative enlisted the FSU student body in open access advocacy by
asking them to endorse The Student Statement on the Right to Research, a general expression of support for the principle of open access. Outreach was targeted at Registered Student Organizations (RSOs) starting with departmental clubs and culminating with Student Government Association (SGA) Senate and the Congress of Graduate Students (COGS).

The goal of this outreach was twofold. First, we sought to disperse advocacy efforts to heighten awareness of Open Access Week. Rather than one or two centralized events, multiple conversations about open access would occur in discipline-specific settings, addressing the needs of a given audience. Second, the support of RSO’s would provide leverage for students and University Libraries to express their support for open access to faculty and university administration.

The Student Chapter of the American Library Association (ALA) was a natural starting point for student advocacy because equitable access is a tenet of librarianship. The Scholarly Communication Librarian and Assistant met with ALA Student Chapter President Laura Browning, Vice President Anastasia Meyer, and Treasurer Sarah Reeves at the Goldstein Library in late September. Their response was enthusiastic. Additionally, a student senator, Jacob Breter, was contacted through a library student assistant. Senator Breter agreed to sponsor a bill in Student Senate and arranged for Micah Vandegrift to speak at the following SGA Senate meeting on Wednesday, October 9th. The Congress of Graduate Students Speaker, Alexander Boler, was contacted directly and invited Micah to speak to the next COGS meeting. Initial meetings were followed with an email reiterating important points, providing links to pertinent documents and information sources, and inviting any further questions or concerns.

**Highlights**

- ALA Student Chapter at FSU became the 72nd organization to sign the Statement. They shared this information on their social media, and were welcomed to the Right to Research Coalition in a tweet.
- SGA Senate unanimously passed a resolution endorsing the Statement internally. Public endorsement by SGA President Rosalia Contreras is pending.
- COGS passed a resolution endorsing the Statement internally (5 ayes, 4 nays, 3 abstentions). Public endorsement by COGS Speaker Alexander Boler is pending.
- COGS sent an official announcement outlining their endorsement to senior university administrators, including the President and Provost.
- Additional organizations have expressed interest in signing the Student Statement, including Progress Coalition, which has working relationships with other progressive student organizations at FSU.

**3. Challenges and Opportunities**

**Successes**

- Substantial growth of repository holdings (outlined above).
- Heightened awareness of open access with four stakeholder groups: undergraduates, graduate students, faculty, and administration.
- Buy-in from many new faculty members:
Florida State University Open Access Week 2013 Report

- New faculty represent the majority of Upload-A-Thon submissions, suggesting a generational shift in attitudes towards OA and scholarly communication.
- Media coverage on the FSU homepage, FSU News, and FSView heavily increased exposure levels.
- Liaison involvement/investment:
  - The impact of the Upload-A-Thon was broadened by working through librarians who have already established rapport within departments. An additional benefit was training for liaison librarians and firsthand exposure to open access and the concerns of their departmental faculty.

Challenges and Opportunities

Committee Work:

- Open Access Week Committee
  - The OA Week Committee was helpful, but underutilized by committee leadership. In the future, the OA Week Committee should be involved more directly in all phases of planning and execution.
- Marketing Committee
  - Procedures for the production of outreach materials for Open Access Week had not yet been established and this caused a delay in their production. In the future, marketing plans will begin much earlier (July) and the workflow for approval of materials will be streamlined.

Partnerships within the library:

- Liaison participation in the Upload-A-Thon ranged from zero to very active. To a certain extent, apathy or non-participation is understandable in that liaison librarians already have other responsibilities and obligations. The Scholarly Communication Team must develop close partnerships with liaison librarians and provide training and information throughout the year so that when Open Access Week arrives, liaisons are informed and ready to assist. The Scholarly Communication Team must empower liaison librarians to be maximally effective with minimal investment.

Establishing trust from faculty:

- The ongoing work of Scholarly Communication Team.
- Increased exposure for the variety of partnerships and services offered by the Scholarly Communication Librarian and Assistant.
- Building reputation for libraries doing new, interesting, relevant work.

Moving forward

We have an opportunity to ride a wave of momentum coming out of Open Access Week 2013. We want to continue to present the value of open access and our Open Access Week initiatives in the light of President Barron’s Top 25 push. We should also leverage data from DigiNole, and the testimonies of contributing faculty to build a stronger outreach program to academic departments.
Future Open Access Weeks will benefit greatly from getting started earlier. As the event occurs in October, work should be well-underway prior to the start of the Fall semester. Early development of a plan, committee, and promotional materials will be crucial to the future growth of Open Access Week as a successful enterprise at FSU. As of now, there are several potential directions for Open Access Week 2014. First, we could attempt to engage the public in access to scholarship produced at FSU by working with local media and the Leon County Library System. Alternatively, we could lampoon the toll access publishing world by promoting the opposite of Open Access: Closed Access. Closed Access Week would feature promotional materials designed to invoke the early 20th or late 19th century, and talking points which highlight the ridiculous nature of hanging on to the old system given modern opportunities; a mock campaign for open access by advocating for closed access.

Contact Information:

Micah Vandegrift, Scholarly Communication Librarian mvandegrift@fsu.edu
Josh Bolick, Scholarly Communication Assistant jab11x@my.fsu.edu
Nina Rose, Scholarly Communication Intern
Scholarly Communication Office @ FSU Libraries

http://lib.fsu.edu/tads/scholarly-communication
MIT Faculty Open Access Policy turns six: readers around the world benefit

By Ellen Duranceau on March 20, 2015 in Scholarly communication

The MIT Faculty Open Access Policy was adopted by the faculty in March 2009, to share the faculty’s scholarly articles as widely as possible.

Since establishing the policy, more than 16,000 articles have been made openly available in the Open Access Articles Collection in MIT’s repository DSpace@MIT. Downloads routinely reach over 90,000 per month, with readers from all across the globe — as is apparent from the map in the new download statistics service, oastats:
One reader, a self-identified homemaker with a background in nutrition, wrote this week that:

“It is very hard to come by solid, peer-reviewed research/reviews on GMOs when you aren’t in academia or working in a medical setting. … It really is a service to the public to make scientific studies open knowledge so individuals can make informed decisions. Thank you!”

A group of researchers in Canada recently commented on the difference the open access makes:

“We are a group of kinesiology / psychology / technology applied researchers thinking to expand into design for special needs. Autism is one area of interest. Open access provides us with contact, ideas, and knowledge to achieve this on a limited budget. … Thank you.”
The Ocular Hypertension Treatment Study (OHTS), 1992-2012, was a randomized controlled multi-center clinical trial conducted in 22 clinical centers in the United States funded by the National Eye Institute of the National Institutes of Health (EY09307). OHTS was designed to determine whether lowering intraocular pressure (IOP) in individuals with ocular hypertension delays or prevents the development of primary open angle glaucoma (POAG) and risk factors for the development of POAG. The primary outcome paper was published in 2002. Michael A. Kass, MD, Professor, Department of Ophthalmology & Visual Sciences, is the Principal Investigator/Study Chairman, and Mae O. Gordon, PhD, Professor, Division of Biostatistics and Department of Ophthalmology & Visual Sciences, is the Director of the Vision Research Coordinating Center.

OHTS was the first trial to demonstrate definitively that treatment of elevated intraocular pressure (IOP) delays or prevents the onset of glaucomatous damage. OHTS also identified risk factors for developing primary open-angle glaucoma (POAG) including older age, higher IOP and larger cup/disc ratio, and was the first study to identify central corneal thickness (CCT) as an independent risk factor for the development of POAG.

To date, 51 peer-reviewed journal articles have been authored by OHTS. A full list of articles and abstracts is available in the OHTS Bibliography.

In 2007 Becker Library performed a citation review of OHTS publications (26 articles as of August 2007). Several articles demonstrated significant citation rates. As follows are examples of publication metrics that were used in 2007 as well as updated examples for 2014.

As of August 2007, several of the OHTS papers were among the highly cited papers in the field of Clinical Medicine and were core papers for the Subject of Glaucoma per Thomson Reuters Essential Science Indicators.


As of August 2007, per Thomson Reuters Essential Science Indicators, the Kass and Gordon articles ranked in the top 0.10% of papers in Clinical Medicine based on citations (339 and 267 citations respectively), with the Brandt article in the top 1.0% of papers (118 citations).
These three articles also exceeded average citation rates for papers in Clinical Medicine based on citations per Thomson Reuters Essential Science Indicators.

As of July 2014, the citation counts in Thomson Reuters Web of Science were as follows:


A search in Elsevier Scopus was also performed in July 2014. A search in Elsevier Scopus for article and review document types with the keyword of "Glaucoma" resulted in 53,534 publications, dating from 1895 to current. Two OHTS articles were in the top ten cited publications:

As of July 2014, 50 of the 51 peer-reviewed journal articles by OHTS as noted in Elsevier Scopus were cited 4,417 times by 3,069 documents in Scopus. The languages represented by the citing documents include 17 non-English languages: German, French, Chinese, Spanish, Portuguese, Japanese, Turkish, Czech, Polish, Croatian, Dutch, Slovene, Bulgarian, Norwegian, Serbian, Slovak, and Swedish. The citing author affiliations were from institutions worldwide from over 70 countries as noted in the geographic map below which demonstrates global impact and influence.
OHTS was the first study to identify central corneal thickness (CCT) as an independent risk factor for the development of POAG. This finding was published in the 2002 article: The Ocular Hypertension Treatment Study: Baseline factors that predict the onset of primary open-angle glaucoma. The term of “central corneal thickness” was searched in PubMed to determine if there was an uptake in usage of the term. While there is an increase in the term as noted in PubMed, the cause may be temporal and not directly correlate to OHTS.

The 2007 review of the OHTS articles raised questions regarding the suitability of metrics based on publication data to illustrate meaningful health outcomes or clinical applications. The project further expanded to identify and locate evidence of research impact beyond use of publication metrics. Impact includes meaningful health outcomes and other outcomes correlated with the diffusion of knowledge such as new research studies, synthesis into clinical applications, or influence on public policy. Examples of impact resulting from OHTS findings were identified and are illustrated in the Wordle image below.
WASHINGTON UNIVERSITY IN ST. LOUIS
The Ocular Hypertension Treatment Study and Its Impact
https://becker.wustl.edu/about/news/impact-ocular-hypertension-treatment-study
Content last reviewed 28 April 2015

PUBLICATION/CITATION REPORTS

Standard Language for Publication Reports

Summary Report and Disclaimer:
The Summary Report is based on publication and citation data (including self-citations) from Elsevier Scopus. Publication and citation data may be incomplete due to coverage and name variant issues. While publication data can provide compelling narratives, no single metric is sufficient for measuring performance, quality, or impact by an author. Publication data alone does not provide a full overview of impact or influence, nor is it predictive of meaningful health outcomes. Publication data represents but one facet research outputs and activities by an author. For a list of academic/research outputs and activities, see: http://beckerguides.wustl.edu/impactofpublications.

If a report is required for performance evaluation purposes, please contact Cathy Sarli or Amy Suiter.

Article-Level Metrics
This report was generated using article-level metrics provided the Altmetric.com bookmarklet provided by Scopus. "Discussion" reflects the number of times the article has been mentioned in blogs, Twitter or other social media platforms. "Saves" reflects the number of times an article has been saved to the reference manager Mendeley, CiteULike or Connotea. This number does not reflect the number of saves to the numerous other reference managers available to researchers. "Reads" reflects the number of times a PDF of the article has been accessed from the journal website. Not all journal websites provide these statistics. "F1000" reflects the number of article recommendations in F1000 Prime.

These metrics are typically only available for recent publications (usually 2007 or later) and should be used with caution. They have not yet been shown to be indicative of significance, nor are they predictive of citations.

Elsevier Scopus
This report was generated using publication and citation data from the Elsevier Scopus database and reflects only the data as indexed by the database. Scopus contains complete publication data from 1996 to current with additional pre-1996 publication data dating from 1823. Citation data is complete from 1996 to current only. Publication and citation data may be incomplete due to coverage and name variant issues. Some publication and citation data files are limited to 160 rows in Excel format.

Scopus indexes from ~20,000 different sources including journals, book series, and conference papers that have an International Standard Serial Number (ISSN). Meeting abstracts are not included. Publication types included: Article In-Press, Article, Conference Report, Book, Book Chapter, Editorial, Erratum, Letter, Note, Review, Other and Short Survey.
What is the \( h \) index?

The \( h \) index was proposed by J.E. Hirsch in 2005 and published in the Proceedings of the National Academy of Sciences of the United States of America: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1283832/. The \( h \) index is a quantitative metric based on analysis of publication data using publications and citations to provide "an estimate of the importance, significance, and broad impact of a scientist's cumulative research contributions." According to Hirsch, the \( h \) index is defined as: "A scientist has index \( h \) if \( h \) of his or her \( N_p \) papers have at least \( h \) citations each and the other \( (N_p - h) \) papers have \( sh \) citations each."

As an example, an \( h \) index of 10 means that among all publications by one author, 10 of these publications have received at least 10 citations each.

For Younger Investigators:

An alternative metric to consider is the \( m \) value.

The \( m \) value is a correction of the \( h \) index for time with \( y \) = number of years since the first publication: \( m = h/y \). According to Hirsch, \( m \) is an "indicator of the successfulness of a scientist" and can be used to compare scientists of different seniority. The \( m \) value can be seen as an indicator for "scientific quality" with the advantage (as compared to the \( h \) index) that the \( m \) value is corrected for age.

Note that the \( h \) index calculation from Scopus only uses documents published after 1995.

The \( h \) index varies among resources including Google Scholar depending on the publication and citation data included in the calculation of the \( h \) index.
Research Guides
This Guide

Basics

Conducting Your Search

Cited Reference Analytics

Altmetrics

Author Profiles

Scholarly Metrics
Tags: altmetrics, citation, citation_search, cited_references, impact_factor, journal_ranking, promotion, tenure, web_of_science

This page describes the various means of searching for cited and citing references, measures of influence and impact, altmetrics and bibliometrics.

Tracking Cited References

Cited references are the articles, books, and other resources listed in a bibliography, a “Works Cited” list, or in a “References” list. Cited references are useful for finding additional articles and books on a topic, for identifying the top researchers in a field, and for promotion and tenure decisions. Databases tracking cited references make it possible to follow the instances where an author has been cited. This technique may be useful to:
- Track the research of an individual
- Track the history of a research idea
- Locate current research based on earlier research
- Find out how many times and where a publication is being cited
- Find out who is citing a particular source
- Find out how a particular research topic is being used to support other research and to analyze its impact

Effective Strategies for Increasing Citation Frequency

Journal Reputation and Impact: Publishing a paper in a journal based on disciplinary reputation or with a high impact factor is the most well-known way of getting your paper cited. But there are many other things a scholar can do to promote his or her work and make it easy for others to find.

Utilize Open Access Tools: Open Access journals tend to be cited more than non-open access. Deposit your paper in a repository such as Scholars Archive here on campus or a disciplinary repository. Share your detailed research data in a repository.

Standarize Identifying Info: Try to use

Take the iLearn Workshop!

Come to one of our iLearn sessions for faculty and graduate students on Maximizing your Research Impact.

Academics who publish (or hope to publish) scholarly research find measuring the impact and influence of their work helps others understand its value within one’s department, institution, even throughout the discipline. In this workshop, learn how to generate unique author identifiers using ORCID and Researcher ID, and how they are used. Discover indicators such as the Journal Impact Factor, the h-index, and altmetrics, and their significance. We will also discuss issues like choosing the best journal for your research, and scholarly networking through tools such as Mendeley. The workshop length is 1 hour. The workshop is held in LI B14. See the iLearn registration page for details.

Essential Concepts of Scholarly Metrics

Altmetrics: a new form of measuring scholarly impact based on web-based and social media sources which can show influence and impact.

Bibliometrics: The variety of metrics available based on cited reference data to measure scholarly output, impact, relevance and ranking. Analytics include citation count, impact factor, SNIP, h-index, e-index, and a wide variety of related measurements.

Citation Analysis: the process of tracing various patterns of scholarly behavior through analyzing the cited and/or citing references of a body of work. This could be done on an individual article, author, journal, institution, or other group.

Citation Count: The number of times an article, author, journal, institution, etc. has been cited. Commonly accepted citation counts come from Web of Science. Each source which provides citation counts draws from a different base of resources and therefore the results may differ between Web of Science and Google Scholar, for example.

Citation Evaluation: Simply identifying the number of times someone or something has been cited does not account for certain citation patterns. For example, an author may have one or two articles early in his or her career that have very high citation counts, but later articles have substantially fewer. Another author may have a relatively steady number of citations for each article throughout his or her career.

Journal Ranking: There are a number of metrics that seek to measure the influence of a journal based on how it is being cited in other works. One such metric is the Journal Impact Factor. It should be emphasized that the ranking of a journal is not necessarily a reflection of a single specific article within the journal.
the same name throughout your career as well as the name of your affiliated institution. Using common "official" names will allow for consistency and easy retrieval of your work by author or affiliation.

Bring Colleagues on Board: team-authored articles are cited more frequently, as does publishing with international authors. Working cross-or inter-disciplinarily helps as well.

Beef Up That Paper: use more references, publish a longer paper. Also papers which are published elsewhere after having been rejected are cited more frequently.

Beyond Peer-Reviewed Original Research: Write a review paper. Present a working paper. Write and disseminate web-based tutorials on your topic.

Search Optimization: use keywords in the abstract and assign them to the manuscript. Use descriptive titles that utilize the obvious terms searchers would use to look for your topic, avoiding questions in the title. Select a journal that is indexed in the key library databases for your field.

Market Yourself: create a key phrase that describes your research career and use it. Update your professional web page and publication lists frequently. Link to your latest and greatest article in your professional email signature file.

Utilize Social Media: Use author profiles such as ResearcherID and ORCID. Contribute to Wikipedia, start a blog and/or podcast, join academic social media sites.


Quality Factors & Caveats

Journal Prestige: There are basically two approaches to assessing journal prestige: (1) Perception/ranking of the journals by experts in the field, and (2) Journal ranking metrics providing analysis of citation rates. Other factors, such as journal submission and acceptance rates are also sometimes considered. Consult your Subject Librarian for assistance in this area.

“Good” Metric Scores (citation count, h-index, journal impact factor, journal ranking, etc.): Due to the varying citation rates from discipline to discipline, and even from specialty to specialty within a discipline, it is not possible to give a blanket statement regarding “good” metrics.

Caveats: There are many reasons why an author will cite previous research in his or her paper, and not all are an endorsement of the previous research. Self-citation, disagreeing or contradicting previous findings, and other motivations may not accurately reflect the influence of that work. This holds true for altmetrics counts as well.


Comments (0)
# Citation Research

This guide is designed to bring tools, information, sources and tutorials on citation research together in one place. The field of bibliometrics is increasingly being used to evaluate the impact of a scholar's work (citation counts and altmetrics) or to determine the importance of a journal within a particular field (impact factor). We'll show you how to find bibliometric data and how to use it appropriately.

## Getting Started

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<td>How many times your book, conference paper, dissertation or patent has been cited</td>
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For information related to your specialty, contact your subject librarian.
This guide introduces resources that describe, utilize, and support the current research landscape.

Considerations of the role of author content, sources, impact, reputation, rankings, and benchmarking are increasingly important in analyzing contributions to the research lifecycle.

Information here is organized by the different methods of impact that the research landscape is defined by:

- Author Impact
- Article Impact
- Journal/Source Impact
- Institutional Impact

Tools are promoted that can be used to engage in research metrics. Since the landscape is constantly changing, Emerging Metrics are also explored. The basic information on the Science Information Lifecycle visit this tutorial.

Recommended Methods

Some recommended methods of research impact and citation metrics are detailed in the pages of this guide:

- Web of Science Citation Report (Author Impact)
- Google Scholar Author Profile (Author Impact)
- H-Index (Author Impact)
- Altmetrics (Article Impact)
- Web of Science Cited Reference Search (Article Impact)
- Journal Citation Reports Impact Factor (IF) (Journal Impact)
- Eigenfactor (Journal Impact)

Research Impacts Using Citation Metrics

Research impact is a measure of the significance and importance of academic work within a scholarly community.

Altmetrics are the use of quantitative tools to study publications and other written material.

Citation metrics focus on the statistical patterns and measurements of citations.

Citation analysis can be used as a quantifiable measure of academic output and research impact, which can help inform decisions on publication, promotion, and tenure.

Altmetrics is increasingly becoming an alternative and important method of measuring the impact of scholarly and other output and allows for social media tracking by various indicators such as number of tweets, blog posts, likes, bookmarks, etc. and more timely wider-ranging measures of scholarly and other output and allows for social media tracking by various indicators such as number of tweets, blog posts, likes, bookmarks, etc. and are more timely wider-ranging measures of scholarly and other output and allows for social media tracking by various indicators such as number of tweets, blog posts, likes, bookmarks, etc.

Because of the limitations of each method, it is important to use multiple methods, sources, and tools to get a full and complete analysis. Increasingly, the research community is studying how to assess the value of cooperation and collaboration among colleagues, scholars and scientists, with barriers being reduced and geography more global. New metrics and values will likely emerge through different sources, to complement and extend already existing methods and products.

Limitations of citation metrics:

Current causes of concern articulated by scientists in this article about the role of impact factors in determining merits of science and scientists

Limitations

Contact Info
Office: Ayala Science Library 328
Phone: 949-824-4971
Email: jgelfand@uci.edu

Ask A Librarian
For Chat, Text, eMail and to schedule a Research Consultation with a Librarian, use:

Links:
- Profile & Guides

Acknowledgements
This Guide was initially prepared by Laura Thielstrom (thielstrom@gmail.com) during her Library School internship at the San-Jose State University Graduate School of Library & Information Science, and was conducted at the University of California, Irvine Libraries in Fall 2012. Additional revision to the guide was done after consultation with Laura Bowering Mullen, Rutgers University Libraries.

Comments (0)
Errors on citing papers can lead to separate entries and missed counts.
Author and institutional naming inconsistencies can lead to separate entries and missed counts.
Different databases use different sources to generate data and some are more comprehensive than others.
Tools are skewed towards the STEM (science, technology, engineering and medicine) communities of scholarship.
Citations do not measure the number of readings of a work.
Citations are not the only indicators of the importance of a work.

DORA
The San Francisco Declaration on Research Assessment (DORA) has generated a lot of discussion since it was launched by the American Society for Cell Biology in December 2012.

Additional comments from Science, theBUZZ

Comments (0)
Guide Introduction

The goal of this guide is to assist faculty members, research staff, and graduate students in understanding how to use impact metrics tools currently available.

Considerations need to be made in regards to the role that the author, content, source, impact, ranking, and benchmark have on the research cycle.

Four main areas can be used to determine the impact of research:

- Author Impact
- Article Impact
- Journal/Source Impact
- Institutional Impact

Limitations on Impact Factors

With any statistical measurement, there will always be limitations of the data. Things to keep in mind:

- Errors on citations can lead to multiple entries and missed citations.
- Author and institutional naming inconsistencies can lead to multiple entries and missed citations.
- Different databases use different sources to generate data. Some databases are more comprehensive than others.
- These tools are highly skewed toward STEM (science, technology, engineering, medicine) scholars.
- Citations do not measure the number of times a work has been read or accessed.
- Citations are not and should not be the only indicator of the importance of a work.

The San Francisco Declaration on Research Assessment (DORA), run by the American Society for Cell Biology, has partnered with editors and publishers to ask the scientific community to stop misusing impact factors as a metric to judge scientific output.
Determined Impact from Metrics

Research impact is a measure of the significance and importance of academic work within a scholarly community.

Bibliometrics are the use of quantitative tools to study publications and other written material.

Citation metrics focus on the statistical patterns and measurements of citations.

Citation analysis can be used as a quantifiable measure of academic output and research impact, which can help inform decisions on publication, promotion, and tenure.

Altmetrics is increasingly becoming an alternative and important method of measuring the impact of scholarly output and allows for social media tracking by various indicators such as number of tweets, blog posts, likes, bookmarks, etc. and are more timely widespread measures of how people—both other researchers and the general public have demonstrated interested in an individual's work and contributions.

This guide is designed to help faculty members, graduate students and librarians use and understand the citation analysis tools available to us. At UCLA, there is access to some of the major resources used for citation metrics, for example to obtain an Impact Factor (IF) you could consult the following tools: Web of Science and Journal Citation Reports. Descriptions of and guides to these tools can be accessed using the above drop-down menu, organized according to need.

Tools and methods of citation analysis are used to determine:

- How many times a publication or author has been cited
- Who is citing a publication or author
- A journal's impact factor (relative importance in a field or discipline)
- An author's published output ranking in a field or discipline.

Because of the limitations of each method, it is important to use multiple methods, sources, and tools to get a fuller and more complete analysis. Increasingly, the research community is studying how to assess the value of cooperation and collaboration among colleagues, scholars and scientists, with barriers being reduced and geography more global. New metrics and values will likely emerge through different sources, to complement and extend already existing methods and products.

Image credit: [http://altmetrics.org/](http://altmetrics.org/)
Enhance Your Research Impact: Intro

http://guides.mlibrary.duke.edu/c.php?g=158197&p=1035857
IOWA STATE UNIVERSITY
Promotion and Tenure Resource Guide: Home
http://instr.iastate.libguides.com/tenure

Welcome
This guide is intended to be helpful to someone looking for information to showcase their academic publishing or scholarly visibility. Tenure-track faculty often struggle with ways to present information in their promotion or tenure review portfolio. This same sort of data is used to justify the existence of research programs. Traditionally, elements have included numbers of times their publications have been cited, journal acceptance rates, and journal impact factors. In the electronic age, this has expanded to include non-traditional elements such as number of weblogs visited (e.g., for lectures presented by the faculty member under review), download statistics for PDF, Excel, or Word documents, and new citation metrics such as the h-index or Eigenfactor score.

To learn how to conduct a cited reference search in the Web of Science Core Collection and many other sources such as Google Scholar, consult the Cited Reference Guides. Then use the remaining data in this guide for ideas on things that might help manage information and present it for your review. For additional information specific to a given discipline, we recommend you contact your subject libraries and consult senior faculty in your department.

Alternative Sources
Thanks to the Internet, there is an over-increasing array of resources available to provide quantitative data about a given publication (especially if it is available online). For example:

Dissertations (and other similar online communities) can tell you how many people saved a particular URL they found useful.

Google - Advanced search option will let you see who has linked to a specific URL...

Google Analytics can provide website traffic data (registration is required - but analytics are free).

Google Books will allow you to search for a citation within a book.

Journal editors and publishers often offer downloads or page hits for articles. Some editors will even tell you what the average number of downloads is for a specific journal that you can then compare to your article(s). While usage data is not the same as citation data, it is another way to show usefulness to scholars.

For some disciplines, these alternative sources of information may be unacceptable or inaccessible. Web of Science publishers are attempting to cover just the "core" journals in each discipline so being cited by this select group of core journals can often carry more weight than alternative sources of citation information such as Google Scholar. However, many interdisciplinary areas (not core fields) are not covered well by Web of Science so alternative sources may be the only way to document scholarly impact. If in doubt about what might (or might not) be acceptable in your discipline, consult senior faculty or your department chair.
What is Impact?

Traditionally, and especially in the sciences, impact has been measured by the number of times a particular article is cited in other comparable publications, or more broadly by the “impact factor” of the journal in which an article appears. While the ability to demonstrate impact can still be an important tool in the promotion and tenure process, complementary or “alternative metrics” for measuring disciplinary impact using formal and informal communications are also becoming more common. These “altmetrics” provide rich, evolving, and diverse methods to point to other kinds of impact, for example impact on the global scholarly community or the general public. The ability to measure impact is often enhanced by free and open access to scholarly publications.

Further reading

"Using bibliometrics in evaluating research." This guide to bibliometrics by Thompson Reuters gives a good overview of impact measures, and provides 10 rules for useful and realistic publication and citation analysis: http://seekinfo.com/roelia/1ntpy/UsingBibliometricsInEval_WP.pdf


A Recipe for Visibility

Professor Marc Greenberg and Ada Emmett (Head, Office of Scholarly Communication & Copyright) have shared this “recipe” in recent presentations to faculty and students:

Know your rights with regards to copyright and keep as many as you can. Timothy K. Armstrong: An Introduction to Publication Agreements for Authors

- Work with KU ScholarWorks: a digital repository at KU which curates your work, makes it openly available, and it tracks usage.
- Register with ORCID and claim your electronically visible research, differentiate it from others’ publications with the same or similar names. (see more)
- Claim an Academia.edu page and link there to your papers in KU ScholarWorks. Academia.edu also connects you to the global community of scholars in your areas of interest.
- Claim and make public your GoogleScholar page. Edit it to weed out duplicates and works mistakenly attributed to you. Keep track of your h-index (the number h of your works cited h or more times).

For More Information Please Contact:

Ada Emmett
Email Me

Contact:
Schlanskerer Office of Scholarly Communication and Copyrights
Watson Library room 450
785-864-8831

What are bibliometrics?

Bibliometrics are ways to measure the impact or influence of an article, journal, or researcher. In one way or another, most bibliometric measures look at how frequently that article, journal, or researcher is cited. Some of the greatest advantages to using bibliometrics are:

- helping researchers figure out where to publish
- finding the most important journals in a field
Types of Article-Level Metrics

- **Usage** - How many downloads? Where downloaded?
  Examples: KU ScholarWorks

- **Captures** - How many bookmarks, shares
  (CiteULike, Mendeley)
  Example: Almetric

- **Mentions** - Mentions in non-academic media
  (news stories, Wikipedia, etc.)
  Example: Almetric

- **Social media** - Facebook, LinkedIn, Twitter shares
  Example: Almetric

- **Citations** - Classic metric for "impact"
  Examples: Google Scholar, Google Scholar Metrics

- guiding students to the most important papers on
  a topic:
- learning about the impact of a paper, researcher,
  or department

There are many different ways to measure impact, and
new ways to view impact are being created now to
match changes in research, publishing, and technology.
The methods described here are some of the most
commonly used.

While each bibliometric measure provides a lot of
information, keep in mind that no one measure is
thorough enough to fully describe value of a paper,
journal, or researcher.

**Research Help**
We can help with your research questions – contact us by chat,
phone, email, text or at a Research Help desk.

**Ask a Librarian**

*Type here to chat. Press ENTER to send.*

**Contact Libraries**

- **University of Kansas Libraries**
  1425 Jayhawk Blvd
  Lawrence, Kansas 66045
- **Articles & Databases**
  Library Catalog
  e-Journals
  Subject & Course Guides
- **Locations & Hours**
  My Account
  Request Books, Articles, ...
UNIVERSITY OF KENTUCKY
Research Impact Metrics
http://libguides.uky.edu/metrics

Research Impact Metrics
An Introduction to different research impact metrics and tools for author disambiguation.

Getting Started
Author Impact
Journal-Level Metrics
Altmetrics
Article-Level Metrics

Introduction
A variety of metrics have been developed over the years to assess research impact for distinct scholarly purposes. They have different foci and their adoption rates vary. As more scholars turn to digital media to discuss research and share resources, new metrics have been brought up to account for the online interactions in hopes that research impact can be assessed more thoroughly.

This guide provides an introduction to commonly used research metrics as well as newly developed ones. As Bosken, Van de Somer, Chu, and Hugbarg noted in their study, “the notion of scientific impact is a multidimensional construct that cannot be adequately measured by any single indicator, although some measures are more suitable than others.” Researchers may want to consider the pros and cons of different metrics and use a combination of them as appropriate for assessment.

Discussions of Impact Metrics
Research Impact Assessment: An Overview
This is a brief introduction to different approaches to impact assessment.

Metrics: A Profusion of Measures
This article discusses the “metrics explosion” and provides a field guide to metrics.

The Maze of Impact Metrics
This editorial in Nature points out that research impact assessment “must take into account the effects of emphasizing particular measures — and be open about their methods.”

A Principal Component Analysis of 39 Scientific Impact Measures
This is an analysis of how accurately and completely new measures express research impact.

Citation Statistics
This is a report about the use and misuse of citation data in the assessment of scientific research.

Final Impact: What Factors Really Matter?
Below is the video of a panel discussion about appropriate ways to gauge the importance and influence of scholarly publications.

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MCGILL UNIVERSITY
Impact Measurements
Scholarly Metrics

This Guide offers an overview of scholarly metrics and the tools you can use to find them.

What are Scholarly Metrics?

Scholarly metrics are a way for the impact of an article, author, or journal to be measured quantitatively. There are different methods used in order to calculate a scholarly impact with the intent that these works will be judged solely on impact to the field as opposed to using criteria without universal standards.

There has been much debate about the use of impact factors in academia. Many academics feel that scholarly metrics place too much emphasis on the quantity of work as opposed to the quality of the work being produced. Another aspect of this debate is the thought that it pressures authors to publish “hot-topic” articles in only the most “impactful” journals as opposed to producing and experimenting with more original work. The use of altmetrics has also added fuel to this debate as many believe the mention of articles/presentations through the social web should be included in the review of their scholarly impact. See the Further Reading section below for more information on this debate.

What resources are available and what do they do?

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<td>- Author Evaluator</td>
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What are some limitations of Scholarly Metrics

What are some limitations of Scholarly Metrics?

Further Reading


Measure Your Research Impact: Introduction

Learn how to measure the impact of your research.

In This Guide

Learn how to assess the impact of your research
- Journal Impact
- Author Impact
- Author Identifiers
- Altmetrics
- Where to Publish

What is Research Impact?

Research impact is the demonstrable contribution that excellent research makes to academia, society and the economy:
- **Academic impact**: Contribution to academic advances, across and within disciplines, in understanding, methods, theory and application
- **Societal impact**: Benefit to individuals, organizations and nations by enhancing quality of life, health and creative output, and increasing the effectiveness of public services and policy
- **Economic impact**: Attracting investment, wealth creation, enhanced national and global competitiveness

The above statements were adapted from the Research Councils UK.

There are several reasons to measure your research impact:
- Application for promotion or tenure
- Quantify return on research investment for grant renewals and progress reports
- Future funding requests
- Identify who is using your work and confirm that it is appropriately credited
- Identify collaborators within or outside of your discipline

The Health and Natural Sciences Team is composed of librarians from the Health Sciences and Kenan Science Libraries.
Introduction
Citation metrics are statistics on the number of times books or articles have been cited in other publications. Aggregate citation metrics are used as a measure of the influence of authors and of journals. Individual authors track their citations to determine the influence of their work within their field, to see which of their publications are most widely used, and to support their tenure and promotion dossiers. At the journal level, citation metrics are used to measure the relative importance of titles within their fields.

Journal-Level Metrics
Some of the most commonly used journal-level metrics include:
- Impact factor—a measure of the average number of citations received by recent articles in a given journal.
- H-index—a measure of the influence of either a journal or an individual scholar that accounts for both productivity and impact.
- Acceptance rate—the percentage of submitted articles that a journal accepts for publication. (The acceptance rate is not a citation metric per se, but it is often used as a measure of a journal’s relative selectivity and prestige. In combination with data like the impact factor, the acceptance rate can be useful in assessing the title’s significance to its field.)

Article-Level Metrics
In addition to the measures that calculate the overall impact of a journal, metrics can also be used to calculate the impact of an individual article. The traditional article-level metric is the citation count: the number of times that the article was cited by other scholarly articles.

For another approach to measuring impact, see Altmetrics. This suite of metrics includes a variety of measures and tools that trace the impact of research products using metrics besides the traditional, formal citation in other scholarly sources. Some of the measures are designed to account for a wider range of research products (e.g., datasets, software, etc.), while others track impact in a broader variety of venues, especially the social web.

Web of Knowledge
The library’s main sources for citation metrics are Web of Science and Journal Citation Reports. Both are included within Web of Knowledge, a collection of databases published by Thompson Reuters.

Web of Science is the online successor to the Science Citation Index and Social Sciences Citation Index.

To access these databases, choose them from the alphabetical list on the library website or via the links above.

See the tabs for the individual citation metrics for detailed instructions on finding each one.

Other sources for finding citation metrics include Google Scholar and the altmetrics sites.
UNIVERSITY OF PITTSBURGH
Citation Searching and Bibliometric Measures: Home
http://pitt.libguides.com/bibliometrics

Citation Searching and Bibliometric Measures: Home
A discussion on topics such as the h-Index, Eigenfactor, Impact Factor, Journal Citation Reports, and other tools.

Law of Scattering
80% of the citations come from about 20% of the journals cited, identifying a core list for a local journal collection.

> Evaluating academic journals using impact factor and local citation score. The Journal of Academic Librarianship, 33(1), 393-402.
> doi: 10.1016/j.acalib.2007.01.018

What is Bibliometrics?

- The branch of library science concerned with the application of mathematical and statistical analysis to bibliography; the statistical analysis of books, articles, or other publications.
- In other words... data about publications, or citation frequency.
- Scientificometrics is the branch of information science concerned with the application of bibliometrics to the study of the spread of scientific ideas; the bibliometric analysis of science.

Liaison Librarian
Robin Kerr
Email Me

Sample Bibliometric Map
Eigenfactor Social Science Citation Relationships 2004
(click on image to enlarge)

Thomson Reuters (IS Web of Knowledge)

Why is this important?
A student asks you: What are the best journals in the field of Anthropology?
A professor asks you: Who is citing my article? How many times have I been cited?
A student asks you: How do I know this article is important?
A professor asks you: Which journal should I publish in?

Bibliometrics effects:
- People
- Journal citations
- Research Funding
- Utility
- Expertise status in the field
- Finding others in the field/subject area (using citation searching)
An Open Access toolkit to support bibliometrics training and awareness offered by four Irish academic libraries (Dublin City University, Dublin Institute of Technology, National University of Ireland, Maynooth, and University College Dublin) and funded by the Irish National Digital Learning Resources (NDLR).

All materials are available under Creative Commons license, enabling you to select, edit and re-package them to suit your local needs.

**For Librarians**

**New Directions for Altmetrics**

New research is being done to define ‘altmetrics’ that also define a researcher’s impact. The method of communication can vary but is outside of the traditional journal article.

The University of Pittsburgh has partnered with Plum Analytics to provide alternative methods of measuring research output. We are pioneering this effort.

- Plum Analytics Press Announcement
- University of Pittsburgh becomes the first institution to adopt Plum Analytics to provide other metrics for research output.

**Altmetrics in the wild: Living social media to explore scholarly impact**
By Jason Prout, Heather A. Pheney, Bradley M. Hemminger.

“In growing numbers, scholars are integrating social media tools like blogs, Twitter, and Mendeley into their professional communications. The online, public nature of these tools exposes and refines scholarly processes once hidden and ephemeral. Metrics based on this activity could inform broader, faster measures of impact, complementing traditional citation metrics.”

- Scholars Seek Better Ways to Track Impact Online

“An approach called altmetrics—short for alternative metrics—aims to measure Web-driven scholarly interactions, such as how often research is tweeted, blogged about, or bookmarked.”

- Citation by Citation, New Maps Chart Hot Research and Scholarship’s Hidden Terrain
  By Jennifer Howard in the Chronicle of Higher Education, September 11, 2011

“Imagining a Google Maps of scholarship, a set of tools sophisticated enough to help researchers locate hot research, spot hidden connections to other fields, and even identify new disciplines as they emerge in the sprawling terrain of scholarly communication.”
Citation Metrics

Citation analysis is a quantifiable measure of academic output and may help inform decisions on promotion and tenure. This guide is designed to help faculty members and librarians use and understand the tools available to us. We are fortunate to have access to the top paid resources used for citation metrics – Web of Science, Scopus and Journal Citation Reports.

We need to be aware of the limitations and incongruities of citation metrics. The databases referenced above, and including Google Scholar, do not correct errors in citing papers. This means that one paper may be cited many different ways and appear as separate entries in these tools. Also, author and institutional naming inconsistencies complicate these analyses. Comparisons between these tools should be avoided. The databases use different sources to generate data and some are more comprehensive than others. In addition, the literature suggests that these tools are skewed towards the STM (science, technical and medical) community of scholars.

The recommended methods for citation analyses are detailed this guide. Another useful metric for the h-index which can be generated in both Web of Science and Scopus. The h-index is defined as:

A scientist has index h if h of [his/her] Np papers have at least h citations each, and the other (Np – h) papers have at most h citations each.

Information for Authors

ORCID - Open Researcher ID - is an initiative to provide researchers and scholars with a persistent, unique identifier. This will enable individuals to get recognized for all their scholarly output, in both established and emerging media. With broad-based support from publishers, academic institutions, and funders, ORCID registration and services are free to individuals. Sign up here: http://about.orcid.org/.

Comparison across Databases

Useful data can be found in each tool but direct comparisons across databases are problematic. These resources use different pools of data, date ranges and may interpret citations differently. Correct attribution of authorship can also cause reporting errors. Take control of your scholarly output - check your author profiles and register for an ORCID ID.

<table>
<thead>
<tr>
<th></th>
<th>Times cited</th>
<th>H-Index</th>
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</thead>
<tbody>
<tr>
<td>Scopus</td>
<td>135</td>
<td>7</td>
</tr>
<tr>
<td>Web of Science</td>
<td>85</td>
<td>11</td>
</tr>
<tr>
<td>Google Scholar</td>
<td>279</td>
<td>10</td>
</tr>
</tbody>
</table>

This chart illustrates reporting differences. Exercising as much consistency as possible, the same author was profiled (11/2012) in each resource. The varied results are displayed above.

Librarian

Linda Galloway
Contact Info
Syracuse University
Carnegie Library
Room 104
315-443-9766
Send Email
Links:
Website / Blog
Profile & Guides
Subjects:
Biology, Chemistry, Forensic Science, Citation Metrics

Your Librarian

Anne Rauh
Contact Info
Carnegie Library
315-443-9770
Send Email
Links:
Website / Blog
Profile & Guides
Subjects:
Engineering, Computer Science
Books and Journal Articles


### Resources for Current Awareness

#### Associations

- National Information Standards Organization (NISO) [http://www.niso.org/home/](http://www.niso.org/home/)
- Scholarly Publishing and Academic Resources Coalition (SPARC) [http://www.sparc.arl.org/](http://www.sparc.arl.org/)

#### Blogs

- Impact blog (London School of Economics and Political Science) [http://blogs.lse.ac.uk/impactofsocialsciences/](http://blogs.lse.ac.uk/impactofsocialsciences/)
A Librarian by Any Other Name
http://librarianhats.net/

Scholarly Kitchen
http://scholarlykitchen.sspnet.org/

Discussion Lists
ACRL Scholarly Communication (sponsored by American Library Association)
http://lists.ala.org/wws/info/scholcomm

Medlib-L (sponsored by Medical Library Association)
https://www.mlanet.org/discussion/medlibl.html

Sigmetrics (Virtual Special Interest Group of the American Society for Information Science and Technology)
http://web.utk.edu/~gwhitney/sigmetrics.html

Journals
Evidence Based Library and Information Practice
http://ejournals.library.ualberta.ca/index.php/EBLIP

JASIST
https://www.asis.org/jasist.html

Journal of Informetrics
http://www.journals.elsevier.com/journal-of-informetrics/

Research Evaluation
http://rev.oxfordjournals.org/

Scientometrics
http://link.springer.com/journal/11192