

Altmetrics and the Role of Librarians

Library Involvement

As altmetrics have emerged and continue to grow and evolve, so too has the role that academic librarians play in supporting altmetrics, metrics, and impact, from support to professional use to advocacy. Any librarian in this field will need to continue not only filling these roles, but also ensuring that they themselves are part of the conversation as it moves forward and staying up-to-date with developments within this area.

The concept of library involvement pertaining to metrics did not originate with altmetrics. As explained in chapter 1, Impact Factor was originally created primarily for use by librarians in making collection development and retention decisions. Libraries continue to bear primary responsibility for the acquisition of bibliometrics tools, most notably Web of Science, Journal Citation Reports, and Scopus, as well as the training of people in their use. As a result, librarians are already familiar with providing support for these tools, so it makes sense that librarians have expanded to support the variety of altmetrics sources and tools discussed in chapter 2.

Additionally, librarians serve as natural leaders when it comes to altmetrics, not only due to familiarity with resources, but also because of the relationships they maintain with several disparate groups. As a result, librarians serve as a neutral voice and advocate on behalf of the needs of their community, while also providing insight about the tools and metrics they help support through their own experience and expertise.

The following sections detail some specific areas in which libraries and librarians are supporting and interacting with altmetrics.

Acquisition/Evaluation/Access

Despite the fact that some altmetrics tools are primarily marketed toward individual scholars, librarians remain the primary gatekeepers when it comes to acquiring and providing access to resources, as well as deciding which resources best fit the needs of their research community. We have already seen altmetrics begin to shift from free resources to a cost structure, and tools like Altmetric Institutional and PlumX require both a subscription and a level of backend support to be successfully implemented at an institution, roles that libraries are already familiar with providing. Thus, it's likely that libraries will continue to serve as gatekeepers for most altmetrics products. However, for products with less recognition, this may also mean some more aggressive actions to ensure that funding is available and also to increase awareness and use once the tools have been purchased, which brings us to the next role libraries play in altmetrics.

Outreach/Training/Marketing

Librarians are uniquely situated to deliver altmetrics information to researchers and to tailor this information based on the varying needs of their user population. Educating users on library tools is hardly a

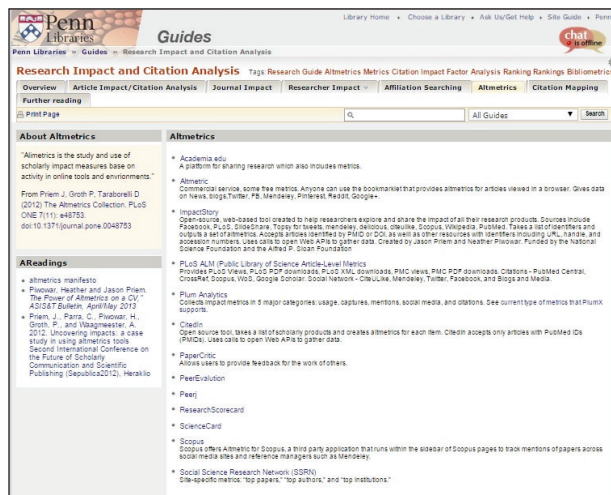


Figure 4.1
Altmetrics tab of the research guide “Research Impact and Citation Analysis” at the University of Pennsylvania. Available online at <http://guides.library.upenn.edu/content.php?pid=591965&sid=4970865>.

new role, and as with many outreach efforts, librarians must take care to present the information in a way that best resonates with their users. For many, terms like *altmetrics* may carry no meaning, conjure up overly narrow meaning (equating altmetrics with Twitter counts, for example), or carry unpleasant associations (such as the possibility of gaming). For this reason, librarians must be careful to present information regarding altmetrics in an informative and accessible way, while also taking care to differentiate it from bibliometrics and other similar concepts.

Research guides are a common way to introduce altmetrics, while also providing links to tools and other helpful sources of information. One such guide was developed by the University of Pennsylvania as part of a larger guide, “Research Impact and Citation Analysis” (see figure 4.1). This helps place altmetrics in the appropriate context, while also giving researchers links for additional information (including a separate tab for further reading).

Other common forms of outreach include workshops, one-on-one appointments with researchers, and online tutorials. Handouts can also be an effective advertising tool. A double-sided handout at Curtin University succinctly explains areas of expertise, summarizes services provided, and provides contact information and links to additional information (see figure 4.2).

Communication/Advocacy

While educating users is a vital function of librarians, they are also one of the strongest voices in the altmetrics movement, partly due to their knowledge,

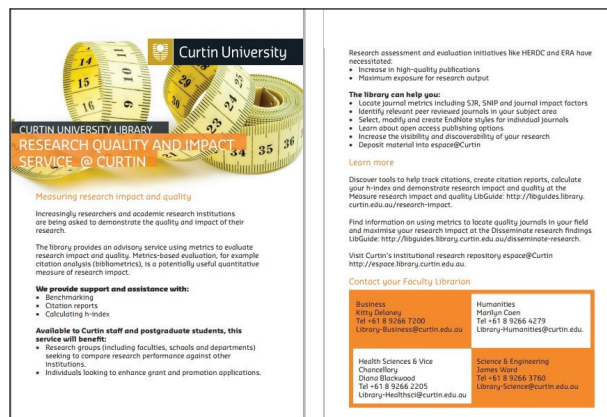


Figure 4.2
Curtin University library handout advertising Research Quality and Impact Services. Available online at <http://lgdata.s3-website-us-east-1.amazonaws.com/docs/1470/1208397/Research-impact-2014.pdf>.

but also due to their unique positioning as a neutral voice and central academic hub within their institutions. Additionally, librarians often enjoy open communication lines with many different stakeholders on campus, which places them in a perfect position to facilitate communication when it comes to issues like altmetrics. This means not only communicating with some of those groups individually, but also setting the stage for multiple groups to communicate with each other, directly or indirectly. The following are some specific groups with whom it may be particularly important to communicate and messages that it may be important to impart.

FACULTY AND RESEARCHERS

As mentioned above, awareness and understanding of altmetrics, scholarly impact, and related topics is of primary importance, but encouraging faculty and researchers to take a proactive stance among their colleagues and within their departments or research centers can be an effective means of indirect communication. For example, encouraging faculty to take a look at internal procedures for measuring scholarly impact for things like promotion, merit, tenure, or awards can help these groups consider the role altmetrics can or should play in these procedures.

GRADUATE AND UNDERGRADUATE STUDENTS

Students are an important demographic, since today's students become tomorrow's researchers and are still developing their research skills, so they are often open to incorporating new ideas into their research practice. Since they are often in close contact with other researchers, students can also be effective advocates for altmetrics tools and principles.

Research metrics are often used in evaluation decisions, and administrators are often in the position to serve as decision makers. An understanding of altmetrics can help in securing funds necessary to purchase and implement an institutional altmetrics tool and also ensures that altmetrics are used appropriately in the decision-making process. After all, encouraging faculty to incorporate altmetrics into their procedures and files (such as files for tenure) is ineffective if the evaluators reading the file cannot correctly interpret these metrics or misunderstand the context in which they are being delivered.

PUBLISHERS AND TOOLMAKERS

Librarians don't often think of publishers and toolmakers as a group in need of communication—after all, the companies that provide library tools are often in steady contact with libraries. However, a good relationship means developing two-way communication so that we are not only aware of developments from the publishers and toolmakers, but also providing feedback on these tools based on our own observations as well as the needs of the users we serve. As with many aspects of modern scholarship, publishers are unsure about the future of altmetrics or what they mean for publishers. Encouraging practices like the creation of freely available article-level metrics or the incorporation of tools like the Altmetric donut can influence the altmetrics landscape while also helping researchers measure their scholarship in different ways.

SAGE is one publisher that has implemented article-level metrics and the Altmetric donut for several of its journals (see figure 4.3), providing researchers with valuable metrics that would otherwise be difficult to collect.

Collection Development

The idea of using research metrics for their original purpose seems almost foreign in today's scholarly landscape, but metrics still serve as a powerful indicator of journal usage and impact. While librarians may be more familiar with using locally collected usage data, such as COUNTER data, careful application of altmetrics can give librarians additional perspective that can be used to make collection decisions such as journal cancellations. One tool that's particularly effective in this regard is Altmetric Explorer. As detailed in chapter 2, one of the primary purposes of this tool is to help librarians evaluate journals, with the ability to explore altmetrics-based data and create custom reports. Some researchers even advocate for incorporation of altmetrics like CiteULike's social

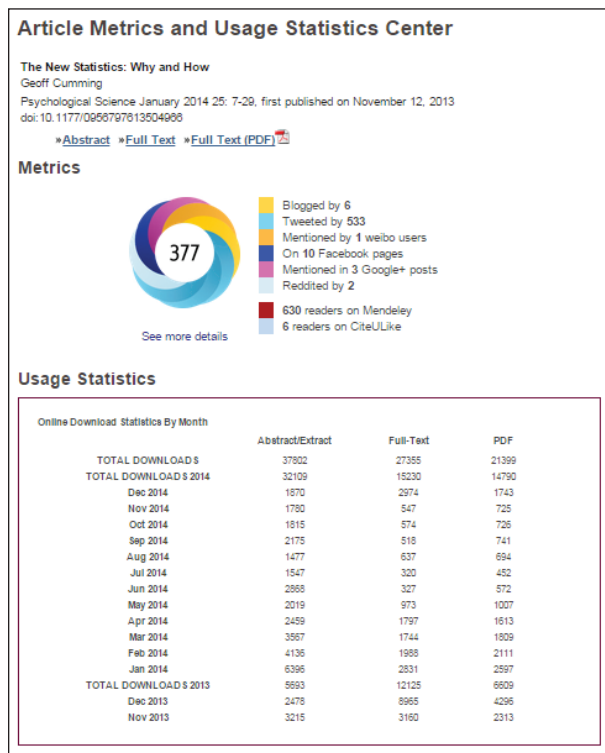


Figure 4.3

Example of altmetrics in the SAGE journal *Psychological Science*. More information about SAGE's involvement with altmetrics can be found here: <http://online.sagepub.com/site/sphelp/altmetricFAQ.xhtml>.

bookmarks or Mendeley's readership metrics into journal evaluation decisions.¹

Integration with Library Tools

One aspect of altmetrics that has excited many librarians is the ability to incorporate them into existing library tools, most notably institutional repositories. This provides an opportunity to not only bring renewed interest and attention to existing institutional repositories, but also provide an incentive for researchers to deposit their scholarship into a repository, as it can give them access to metrics that may be otherwise unavailable. These same metrics can, in turn, also give librarians additional tools for the evaluation of their own institutional repository. Two notable tools that offer some level of integration with institutional repositories are Altmetric and PlumX. Both make altmetrics data available for individual pieces of scholarship with DOIs or other digital identifiers—Altmetric through its distinctive donut, which can be displayed when viewing an item record within the institutional repository, and PlumX through the PlumX interface, which reports institutional repository metrics for all items, as well as for individual items. For more information, Konkiel and

Scherer's 2013 article "New Opportunities for Repositories in the Age of Altmetrics" provides an excellent overview on this subject.²

We are also starting to see incorporation of altmetrics into discovery system tools, with Ex Libris's addition of a Metrics tab featuring the Altmetric donut to Primo. With the help of librarian advocacy, the integration of altmetrics into existing tools is a trend that is likely to continue in the future.

Scholarly Research

Librarians who have gained familiarity with altmetrics are well-poised to then actively contribute to the scholarly landscape. Indeed, some of the most prominent names in altmetrics have ties to library and information science, including Jason Priem, a doctoral student in information science; Stacy Konkiel, who served as a scholarly communications librarian before joining ImpactStory, and then Altmetric; and Mike Buschman, a librarian and cofounder of Plum Analytics. The idea of focusing scholarly research on metrics isn't new, as a number of librarians have published articles related to bibliometrics within the past twenty years, so altmetrics research is a natural extension of the same research area. A number of librarians have already given presentations and written articles, white papers, and books on the subject of altmetrics, some of which are detailed below. As we've explored, a number of areas related to altmetrics are in need of more scholarly research and communication, including the integration of altmetrics into libraries and institutions and both research-focused and practical applications of altmetrics.

Self-Evaluation

Finally, librarians are not only educating others about altmetrics and integrating altmetrics into library tools, but are acting as consumers of altmetrics by using these metrics for their own purposes. Librarians tend to be particularly well-situated to benefit from altmetrics since altmetrics provide a mechanism for the quantitative measurement of some scholarly activities with a few methods for evaluative measures, such as the tracking of Twitter comments and conversations during a professional presentation or regarding a scholarly blog posting.

Ways to Stay Current

Given the quickly changing nature of altmetrics, librarians and library administrators wishing to stay on top of recent developments must be proactive in

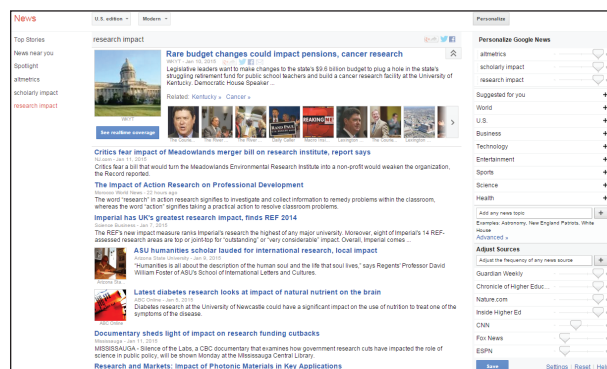


Figure 4.4

A Google News feed has been customized to display articles on topics of scholarly interest, including several specific scholarly news sources.

seeking out information since a variety of venues bring different perspectives on the latest activities and trends within altmetrics. The following represent many of these differing viewpoints, but the list is far from exhaustive.

Customized Google News

The popular treatment of altmetrics gives important insight into the translation of this topic beyond the academic realm and often gives hints at the more general and public perspective, along with practical applications of theoretical topics (e.g., an article detailing the use of altmetrics within a CV). Google News can be customized for a variety of topics and sources, so developing a News alert with an altmetrics focus, along with other topics of interest, is relatively easy but does require a Google login to save. As shown in figure 4.4, Google News has been customized: Using the Personalize feature in the right-hand column, topics of interest like "altmetrics" and "research impact" have been added, along with specific sources like "Guardian Weekly" and "Nature." The topic "research impact" has been selected along the left-hand column, displaying recent related news articles. An RSS feed can also be created based on the personalized Google News selections.

Google News
http://news.google.com

Google Scholar Publication Alerts

While Google Scholar searches can be a valuable way to discover many altmetrics publications that fall

Figure 4.5

Creation of a sample Google Scholar alert. The broad terms chosen for this alert will likely result in frequent alerts from a variety of disciplines.

outside the realm of traditional databases, including white papers, pre-publication manuscripts in arXiv, and nonindexed journals, Google Scholar can also be set up to periodically send e-mails on topics of interest. These options, shown in figure 4.5, are available in the Alerts option when logged in to Google Scholar. More sophisticated search terms such as “scientometrics,” “semantometrics,” “altmetrics and libraries,” or “altmetrics and institutional repositories” are appropriate for these alerts, based on your specific interests.

Google Scholar

<http://scholar.google.com>

ARL Publication Alerts

While less customizable than the previous two examples, ARL publications are an excellent way to keep up with the latest news, reports, research, and events related to the top research libraries in the United States and include many areas of interest to research libraries, including altmetrics and research impact. There are multiple ways to receive alerts, including signing up for the ARL e-newsletter and receiving updates through Google+, Facebook, or Twitter or directly from the ARL home page.

ARL Publications

www.arl.org/publications-resources

ARL home page

www.arl.org

Toolmaker and Scholarly Blogs

Practically all of the altmetrics toolmakers have developed blogs, which are regularly updated with news items, feedback, questions, and special looks at

specific aspects of altmetrics and related issues. These blogs often feature posts directly targeted toward librarians and can also serve as sources for opportunity, such as Impactstory’s call in May 2014 seeking applications from librarians and researchers to serve as Impactstory advisors.³ A sampling of those blogs are listed in the gray box.

Impactstory

<http://blog.impactstory.org>

Plum Analytics

<http://blog.plumanalytics.com>

Altmetric

www.altmetric.com/blog

Kudos

<http://blog.growkudos.com>

Mendeley

<http://blog.mendeley.com>

In addition to toolmaker blogs, a number of scholarly blogs serve a much-needed role within academia in providing news, opinions, and thoughtful analysis on a number of issues. There are a wide variety of scholarly blogs that serve different purposes and are written from different perspectives. Some have been created by individuals, others have a number of contributors, and others represent a company or organization. Similarly, they cover different aspects of academia, with some specializing in particular aspects, while others represent a broader view. Therefore, these blogs have all covered altmetrics information, trends, and applications to academic research in a meaningful way, but from different viewpoints and with different intended audiences. See several examples in the gray box.

The Citation Culture

<http://citationculture.wordpress.com>

The Scholarly Kitchen

<http://scholarlykitchen.sspnet.org>

Research Trends

www.researchtrends.com

Presentations, Workshops, and Invited Speakers

Often, the most useful and up-to-date information tailored to an academic library audience can be obtained

through in-person presentations. Within the past two years, the topic of altmetrics has been covered at many prominent library conferences. ACRL, ALA, Charleston, and Internet Librarian International have all featured presentations from librarians; altmetrics tool providers like Altmetric, PLOS, and PlumX; and organizational bodies like NISO. Additionally, several non-library conferences have a strong altmetrics interest, including 1:AM, the 2014 London-based altmetrics conference, and the ACM Web Science Conference series, most recently altmetrics14. These conferences focus more heavily on the information science and technical perspective, but they represent some of the most cutting-edge altmetrics developments. Finally, consider hosting your own event to increase knowledge locally. One example of this approach is the University of Washington, where the UW libraries partnered with the College of the Environment to bring Heather Piwowar and Jason Priem, cofounders of Impactstory, to their institution to speak about altmetrics.

1:AM London 2014 altmetrics conference
www.altmetricsconference.com

altmetrics14 ACM Web Science Conference
<http://altmetrics.org/altmetrics14>

University of Washington altmetrics event held April 24, 2013
www.lib.washington.edu/about/news/exhibits/archive/tracking-scholarly-impact-online

Books

Altmetrics has reached the point in development where there is now enough information and (relative) stability for monographic publications. As of January 2015, there is one published book, with two more due in the upcoming months. (Full disclosure: One of the books is written by the authors of this report.)

The published book, *Beyond Bibliometrics: Harnessing Multidimensional Indicators of Scholarly Impact*, is written from the information science perspective and focuses on the technical aspects of scholarly research metrics. As *Nature's* review of the book points out, it is far from an "accessible working narrative to guide us in our day jobs" and is aimed at other information science researchers developing and analyzing research metrics.⁴

Another book, *Altmetrics: A Practical Guide for Librarians, Researchers and Academics*, is currently

scheduled for publication in December 2015, through the United Kingdom's Facet Publishing. Its editor, Andy Tattersall, is an information specialist at the University of Sheffield, and it features chapters from UK-based researchers and altmetrics toolmakers (Euan Adie from Altmetric and William Gunn from Mendeley). This promises to be a practical guide to altmetrics with a strong European focus.

Facet Publishing page for Altmetrics: A Practical Guide for Librarians, Researchers and Academics

www.facetpublishing.co.uk/title.php?id=0105

Finally, the book, *Meaningful Metrics: A 21st Century Librarian's Guide to Bibliometrics, Altmetrics and Research Impact*, was published by ACRL in May 2015. This book takes a broader look at the field of research metrics, with chapters divided between an explanation of theory and hands-on application of the theoretical explanations, including walkthroughs, tips for getting started with different library applications, and tips and features from other librarians working in the field. Its authors are both US librarians (who like to write technical reports in their spare time), and the book is aimed at the academic librarian audience.

Conclusion

In this chapter, we reviewed the various activities in which librarians have engaged with reference to altmetrics, from providing access to the tools that encourage deeper analysis of scholarly impact to the use of altmetrics for their own core activities within research and collection development. However, with greater knowledge of the field both possible and practical, librarians are increasingly well positioned to serve an even wider variety of roles, such as that of educators and information supporters, direct consumers of altmetrics, and facilitators who create opportunities for discourse and debate.

For many, the field of altmetrics continues to be a source of uncertainty and confusion, with changes seeming to occur practically on a daily basis. Nevertheless, the potential value of altmetrics to users of all kinds makes the involvement of knowledgeable parties like librarians a worthwhile investment, not only in the future of the field, but also in the future of academic impact, scholarly communication, and intellectual diversity.

Further Reading and Resources

Chin Roemer, Robin, and Rachel Borchardt. "Institutional Altmetrics and Academic Libraries." *Information Standards Quarterly* 25, no. 2 (2013): 14–19.

This article, written by the report authors, speculates on the future for institutional-level altmetrics, and also details the roles librarians can play in the altmetrics landscape.

Lapinski, Scott, Heather Piwowar, and Jason Priem. "Riding the Crest of the Altmetrics Wave: How Librarians Can Help Prepare Faculty for the Next Generation of Research Impact Metrics." *College and Research Libraries News* 74, no. 6 (June 2013): 292–300.

"4 Things Every Librarian Should Do with Altmetrics." *Impactstory Blog*, June 25, 2014. <http://blog.impactstory.org/4-things-librarians-altmetrics>.

These two publications, an article, and follow-up blog post, present different angles on a similar theme concerning the role of librarians in altmetrics, with the *C&RL News* article taking a more research-oriented approach, while the blog post focuses more on the practical side, with more recent pictures and links.

Taylor, Michael, Jenny de la Salle, and Kristi Holmes. *Librarians and Altmetrics: Tools, Tips and Use Cases*. Library Connect webinar, February 20, 2014. <http://libraryconnect.elsevier.com/library-connect-webinars>. (Requires BrightTalk registration to view.)

This online webinar, hosted by Elsevier, brings together an Elsevier research specialist and two librarians to discuss, what else, librarians and altmetrics.

Notes

1. Stefanie Haustein, *Multidimensional Journal Evaluation: Analyzing Scientific Periodicals beyond the Impact Factor* (Boston: De Gruyter, 2012), 198–214.
2. Stacy Konkiel and Dave Scherer, "New Opportunities for Repositories in the Age of Altmetrics," *Bulletin of the American Society for Information Science and Technology* 39, no. 4 (April/May 2013): 22–26, https://asis.org/Bulletin/Apr-13/AprMay13_Konkiel_Scherer.html.
3. Stacy Konkiel, "Do You Have What It Takes to Be an Impactstory Advisor?" *Impactstory Blog*, May 5, 2014, <http://blog.impactstory.org/do-you-have-what-it-takes-to-be-an-impactstory-advisor>.
4. Jonathan Adams, "Bibliometrics: The Citation Game," *Nature* 510, no. 7506 (06/26/2014): 470–71.