

Altmetrics and Library Publishing

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Abstract:

Altmetrics are a valuable offering that can enhance the services provided by a library publishing program and attract potential publishing partners. This paper will describe the use of altmetrics in the 38 journals published by the University Library System, University of Pittsburgh, as part of its library publishing program. By using a widget from Plum Analytics, altmetrics from each journal article are displayed on abstract pages; furthermore, journal editors have access to a robust dashboard of metrics that allows editors, authors, and readers to access full information about the journal's impact. Librarians who are part of a library publishing operation have a valuable role to play in training and supporting journal staff and users in the meaning and potential applications of altmetrics, which transforms altmetrics from a component of a publishing program to a service.

Keywords: altmetrics, library publishing, scholarly communication, library as publisher

Introduction: Library Publishing

The Library Publishing Coalition defines library publishing as “the set of activities led by college and university libraries to support the creation, dissemination, and curation of scholarly,

creative, and/or educational works,” and the publishing activities of libraries are as varied and individual as the libraries themselves, as described by (Lippincott 2016),

“Responding to current gaps in scholarly publishing, libraries are providing necessary services to host and disseminate gray literature, data sets, theses and dissertations, and new media. They are publishing niche and esoteric work that is unlikely to find a market. They are supporting experimental and student work. Finally, a growing number are publishing high quality, peer-reviewed e-journals and monographs on a par with university press and commercial scholarly publishers’ outputs.”

To do this work, some libraries collaborate with university presses to do publishing, while others have added publishing as part of the services offered in the library itself (Bonn and Furlough 2015). Because of the unique resources and expertise situated in libraries, as well as their direct connection to the academic community, libraries are well-positioned to enter the field of publishing and add unique value to their publishing services; furthermore, publishing has been said to be the next “core value” of library services (Gilman 2015). Furthermore, library publishing can be seen as one part of the response to the continued consolidation of publishers, which has resulted in more than half of the published literature coming from five publishers (Larivière, Haustein, and Mongeon 2015). Library publishing has gained momentum in recent years; the Library Publishing Coalition has over 60 member institutions (Lippincott 2016) and 118 library publishers are listed in the 2017 Library Publishing Directory (Neds-Fox et al. 2017).

Regardless of the motivation, specific activities, or organizational structure, library publishers enhance the scholarly publishing landscape by offering diverse projects, products, and choices. To do this work, library publishers follow current trends in the broader publishing climate in order to offer competitive and complementary services for their publications. One of these trends that has gained the attention of library publishers is altmetrics.

Altmetrics Services and Publishing

Altmetrics, a blend of the words “alternative” and “metrics,” show the use of an article beyond citation counts, which are a method traditionally used to evaluate the impact of an article. Altmetrics, when employed in conjunction with citations, can show a wider impact of scholarly work; citations track formal, acknowledged influence, and altmetrics track the informal and social attention given to an article (Cronin 2001; Priem, Piwowar, and Hemminger 2012). Altmetrics can include measures of downloads and bookmarks, social media mentions, and references in news articles, blogs, and outlets like Wikipedia. Because these measures typically happen soon after the publication of an article, altmetrics can give an early indicator of attention and interest in a publication and provide added value for authors, readers, and publishers.

Many publishers now offer alternative metrics in addition to information about citation counts as a way to demonstrate and track engagement around their publications. For example, the publisher Taylor and Francis embeds altmetrics information provided by Altmetric.com on each article page (Taylor and Francis, n.d.). Public Library of Science (PLOS) embeds their in-house Article Level Metrics (ALMs) into each article published in a PLOS journal and give authors guidance on how to use ALMs in grant applications, tenure portfolios, websites, and more (of Science, n.d.). The draw of altmetrics for publishers is enough that the publisher Elsevier acquired the altmetrics provider Plum Analytics earlier this year (Michalek 2017). With the increasing activity of commercial publishers in the area, altmetrics was one area identified by (Skinner et al. 2014) as a target for capacity building in library publishers.

Library publishers distinguish themselves from traditional publishers in many ways, offering services to journals that fulfill different needs. Examples include assisting print journals in moving to electronic formats, offering low-cost publishing options, offering more flexibility in format and file types, and accommodating the unique needs of student-run journals (Busher and Kamotsky 2015). Additionally, there has been some research into how library publishers improve the user experience through engagement with readers. Daniel Tracy's study on this topic found that library publishers attempt to engage with readers, but are often limited by platform and resources when attempting to engage with readers (Tracy 2017).

Altmetrics show engagement with the published works and encourage readers and authors to have a conversation around the publication; users can see how the work they are reading has been discussed or re-used and participate in the conversation. For example, when viewing an altmetrics profile for an article, a reader could see social media discussion happening around an article and go to the social media platform to engage directly in the conversation. This information helps the author as well, because altmetrics provide a way to track that engagement that does not require a large investment of the author's time and energy. This tool to boost the visibility of engagement is an example of the added value that altmetrics bring to a library publishing program.

Being able to provide altmetrics helps library publishers compete with corporate publishers who are offering a variety of metrics for their journals. Librarians armed with expertise in interpreting and communicating the meaning behind altmetrics, can provide an added service by alerting editors to the benefits and opportunities of altmetrics. By educating their editors and authors about altmetrics, library publishers also help to raise consciousness about the value of altmetrics as a useful tool and contribute to the broader use and acceptance of altmetrics.

Altmetrics Tools Available for Library Publishers

The two main altmetrics providers, Altmetric.com and Plum Analytics, both offer services to publishers for tracking their articles' and journals' altmetrics. Both companies track metrics on the article level, with results visible on both their web platforms and through tools—Altmetric.com badges and the PlumX widgets—which can be embedded on an articles' webpage.

Altmetric.com offers a free badge for Institutional Repositories, and a subscription badge available for publishers. A badge embedded on an article's webpage shows the Altmetric score and attention details. Publishers who subscribe also have access to Altmetric Explorer for Publishers, which allows publishers to view the scores and corresponding details for all their publications in one location and provides the option to compare an article's metrics to a competitors'. (<https://www.altmetric.com/products/explorer-for-publishers/>) Any published article can be searched with the Altmetric.com bookmarklet, which will search based on a DOI. (<https://www.altmetric.com/products/free-tools/>) The University of Pittsburgh shows the Altmetric.com badge in its Institutional Repository, D-Scholarship, but does not subscribe to Altmetric.com.

Plum Analytics offers a subscription to its PlumX product to universities, including three customizable widgets that can be used to show artifact, author, or group altmetrics. The artifact widget provides an overview of the altmetrics for that particular article, the author widget shows altmetrics for the output of one particular author, and the group widget shows altmetrics for an entity such as a department, lab, or journal. Through the web interface, a journal is treated much like a school or department, where one can see a list of articles which are associated with

that journal. These journals can further be divided by volume and again by issue. The web interface and the embedded widget are visible to the public. Those with editor privileges have access to additional analytics, which provide more detailed analysis of the journal. For example, tracking metrics by publication year and usage by issue or artifact type. The University of Pittsburgh chose PlumX because of its capability to track many different types of scholarly output and the large number of metrics that it can track. These aspects made PlumX a valuable tool to track social science and humanities scholarship, which describes the majority of the departments served by the ULS as well as the content in our ULS-published journals. In the following section of this paper, we will describe in more detail the use of Plum Analytics at the library publishing program at the University Library System, University of Pittsburgh.

Case Study: University Library System, University of Pittsburgh

After building an extensive digital library drawn from its own unique collections and several early forays into publishing born-electronic scholarly content through preprints archives and subject-based repositories, the University Library System, University of Pittsburgh (ULS) launched a journal publishing program in 2007 (Deliyannides and Gabler 2013). At the beginning, the goal was to assist small, at-risk journals in the humanities that were struggling with the high costs of print publication and distribution and did not have the technology infrastructure or expertise to transition to electronic publication. Through a steady organizational commitment to the open sharing of research and to technological innovation in order to change in the current publishing landscape, the program has grown rapidly over the past decade. The ULS now publishes 38 scholarly, peer-reviewed journals with partners around the world that include teams of independent researchers, scholarly societies and professional associations.

The ULS acquires new journals through a selective process. Prospective new journals are required to submit a detailed proposal for review and approval by an external Publications Advisory Board. New journals must commit to being fully Open Access with CC BY license terms. The ULS offers a full range of publishing services, including server and software hosting, a secure and feature-rich editorial workflow management system using Open Journal Systems (OJS), professional graphic design, consultation and training for best practices in Open Access publishing, digital preservation, marketing, promotion, and assistance with indexing and abstracting and other added value services. One of these added value services is altmetrics.

PlumX and OJS

The University Library System developed a plugin for Open Journal Systems (OJS) that allows a journal manager to embed and configure the PlumX artifact widget (<https://plu.mx/developers/widgets>) within the OJS user interface in order to display PlumX altmetrics on abstract pages for articles published using OJS (<https://github.com/ulsdevteam/ojs-plum-plugin>). The PlumX artifact widget was piloted in 2014 with the International Journal of Telerehabilitation (<http://telerehab.pitt.edu>) and then released to all ULS journals in 2015 (Collister 2014). The OJS PlumX Plugin makes it easy for any journal running OJS to embed and configure the PlumX artifact widget without any programming expertise.

Training Materials for Editors

After the introduction of the PlumX widget by e-mail to journal editors in 2015, we noticed low uptake of the altmetrics indicators now offered to our publishing partners on the article abstract pages of their journals. Many editors and readers did not seem to understand the value

of altmetrics or how to use them as part of their scholarship. In response, the ULS piloted the development and delivery of educational and training materials for editors on how to use altmetrics for their journals in 2017. The editors of the Journal of World Systems Research (JWSR) (<http://jwsr.pitt.edu>) introduced their readers to altmetrics in the journal in a 2015 editors' introduction (Smith, Bair, and Byrd 2015); because of their existing interest and familiarity, they were chosen to pilot use of the journal's PlumX dashboard page.

The JWSR editorial team were given accounts with administrative access to their journal's dashboard in PlumX. Training with the journal's Editor-in-Chief and Managing Editor was conducted to explain not only how to access PlumX information, but also what that information is describing and how to use it accurately and ethically to show the impact of the journal. A document describing the details discussed in the training was created and given to the journal's team at the meeting (<http://d-scholarship.pitt.edu/32923/>). After a brief overview of the PlumX platform, the journal's dashboard, and the public metrics, the training focused on the statistics found under the "Analytics" tab. For each of the five reports available—Artifacts by Publication Year, Subgroups Overview, Artifacts Overview, Productivity, and Sunburst—we reviewed each graph and how to use the data it contained. It was especially important to emphasize that PlumX divides its statistics by publication year rather than the year of usage.

Through the pilot, we have also been able to investigate ways to further improve the data that PlumX captures and thus the overall picture of the journal. One example of this improvement is capturing links to prior versions of the journal. Prior to the ULS acquisition of JWSR in 2015, the journal did not have DOIs for each article and instead used a URL. As a result, PlumX was only able to capture a small segment of citations for content prior to 2015 since it was only seeking citations by DOI. Through data mapping of defunct URLs to current DOIs, we hope to be able to add information about citations using URLs instead of DOIs to be able to generate a more accurate picture of the altmetrics for the journal.

The editorial team of JWSR collects and compiles data, including altmetrics, each year to report and present to the Political Economy of the World-System Section of the American Sociological Association, which provides support and funding for the journal. Additionally, the team is also using altmetrics to show the journal's impact alongside traditional metrics as part of the process of encouraging high-quality submissions and expanding the readership of the journal.

Another ULS-published journal, the Journal of the Medical Library Association, introduced altmetrics and the PlumX widget to authors in an editorial immediately upon moving to publication with the ULS (Akers 2017). This editorial introduces the concept of altmetrics, orients readers to the widget, and suggests uses for altmetrics in professional practice and self-promotion.

Based on the success of this initial pilot, the rest of the journals in the ULS portfolio will receive altmetrics training and education starting in the fall of 2017.

Conclusions and Lessons Learned

Altmetrics are a valuable addition to a library publisher's offerings for its journals and can add extra value. However, without the training and education surrounding these metrics, editors and readers may not understand the information that they are seeing or realize the ways that they could potentially use this information. This is the area where the "library" aspect of a library publisher makes the difference; librarians who are trained to work with scholars and

explain these concepts can provide not only the service, but the training and support that makes the service truly valuable. In turn, since altmetrics services are most often chosen, developed, and deployed by libraries, feedback from the editors to the librarians is valuable for refining and assessing different options for providers and services and improving the altmetrics landscape.

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