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Social Research Collaboration: Libraries Need Not Apply?

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Christopher Erdmann, Head Librarian, Harvard-Smithsonian Center for Astrophysics

Jose Luis Andrade, President, The Americas, Swets

Abstract

Social media was born an efficient method of personal networking. As more and more researchers took to social media platforms, we have witnessed an organic growth of collaboration among scholars, faculty, students, etc. This phenomenon has led us to a profound change in the way we conduct research through social media. Research through collaboration is now increasingly important in order to achieve a higher impact throughout the research community. But where does the library fit into this? The simple answer is that researchers are now bypassing the library.

This presentation will look at the new reality of social research collaboration and discuss what kinds of web-based tools can support the workflow and peer collaboration of researchers. The presenters will also discuss why it is essential for libraries to become part of the solution before they are left out in the cold.

Jan Reichelt

Reichelt began by describing the origins of Mendeley and how its original goal was to increase productivity and collaboration for researchers. Mendeley came about through the endeavors of two PhD students looking for a way to organize hundreds of PDFs stored on their desktops. What they created was a product that extracts the essential metadata and full text from the PDF, lets researchers organize and annotate papers, share and discuss their research in groups, and aggregates everything in the cloud. As of today there are over 2 million users worldwide, with a database of over 300 million crowd-sourced articles and over 194,000 research groups. These numbers rise each day.

While users can deposit their own PDFs it is also possible to import documents to Mendeley from other places, like external databases and publisher websites. Reichelt commented on how the data captured took on value for other sectors like libraries. All this information can lead to numerous metrics which add value to other products. Mendeley Institutional Edition, powered by Swets (MIE), was one product the presenter mentioned that used the metrics captured from the millions of articles to give the library detailed

analytics on how their researchers are using the library collection.

Reichelt went on to remark that within Mendeley, information is atomized and given back to the community. This provides value creation through sharing, embedding, and enabling the community to interact. The presenter went on to discuss Mendeley Suggest, the first personalized real-time recommendation engine for academics, a tool that recommends new papers based on a researcher's library and what similar researchers are reading. Additionally, it tracks how many people accept or reject recommendations. To further demonstrate the ease-of-use, Reichelt explained that Mendeley can easily generate a bibliography in multiple formats, for example, in Microsoft Word. The recently released version of Mendeley comes with an integrated Citations Style Editor, enabling the researcher to customize any given citation style and use it within Mendeley and for their own manuscripts.

Mendeley has more than 1,500 developers building applications through the use of an open API platform. Two examples of open science apps were discussed: ReaderMeter and Kleenk. By inputting the name of a researcher into ReaderMeter, one can get a scorecard for a particular researcher and learn the top papers

published. Additionally one can easily see a snapshot of the researchers H_R and G_R indices, total number of publications, number of bookmarked articles, top 10 lists of publications, and other metrics. Through Kleenk, Mendeley users can easily deposit their research into an innovative platform focused on connecting scientific content. It allows researchers to create smart connections between existing papers, books, image,s or anything else related to science. A researcher is notified whenever there is any new activity related to contents, kleenks, or tags that are important to him/her.

To further show the value of Mendeley, Reichelt cited three recent peer-reviewed studies that have shown that article-based readership data within Mendeley correlates highly with Thomson Reuters' citation metrics, and it's real-time. Normally it takes at least 3 years to begin to get an impact factor through Thomson Reuters; however, in the case of Mendeley it comes immediately. Mendeley is also supported by over 1,500 advisors globally, who provide feedback, teach classes, and connect Mendeley with their respective campuses. Reichelt ended by mentioning that Mendeley's goal is to increase the transparency and reuse of academic data in real-time to stimulate innovation and collaboration in academia.

Christopher Erdmann

Erdmann began by explaining why his library, the Harvard-Smithsonian Center for Astrophysics, chose Mendeley Institutional Edition, powered by Swets (MIE). MIE is a product that puts libraries back in the middle of the research process. The library integrates its OpenURL link resolver and A-Z list within MIE, and Mendeley users are linked into the library when clicking on a citation.

As a new-comer to the library, one of Erdmann's main priorities was to enable research collaboration. At his institution there is a Seamless Astronomy Group that brings together astronomers, computer scientists, information scientists, librarians, and visualization experts involved in the development of tools and systems to study and enable the next generation of online astronomical research. Current

projects include research on the development of systems that seamlessly integrate scientific data and literature, the semantic interlinking and annotation of scientific resources, the study of the impact of social media and networking sites on scientific dissemination, and the analysis and visualization of astronomical research communities.

To begin his mandate of enabling research collaboration Erdmann polled his research group to find out which bibliographic tools they used. The top three were 24%-Papers, 23%-Mendeley and 16%-BibTex. Erdmann also discussed other deciding factors used to choose MIE. First, there were the online and social aspects of Mendeley that already promoted research collaboration and the positive relationships many researchers already had with Mendeley. Next, Erdmann considered his budgets versus the cost of the product. As MIE was new and Swets was offering a competitive price and the opportunity to shape the direction of the product, Erdmann considered this a positive factor. Next, with MIE, all researchers gained access to new data and received more storage within their own Mendeley account. Erdmann also saw Mendeley itself as a good bibliographic management solution. The last factor Erdmann cited was the ability to have access to alternative metrics that Reichelt discussed along with metrics on how researchers were using the library collection.

Erdmann explained the recruitment strategy his library used to get all researchers signed up for Mendeley. First, they released an announcement of the new product and informed researchers they could now get more storage within their Mendeley account as well as more private groups in which they can share research. The library also set up individual meetings to not only assist users in learning Mendeley, but to also tweak the library's overall deployment strategy. They also held drop-in, hands-on sessions for researchers, faculty, and students.

The library refined its message during the course of the individual and hands-on meetings to point out the reasoning behind why they embarked on the MIE project: 1) the library is responsible for collecting the institutional knowledge of the CfA;

2) to share their work with the NASA ADS to make it a more complete online database for CfA-related information; and 3) overall adoption of Mendeley at the CfA will improve the findability and exposure of members and their work. Erdmann related that the next step will be to inspire a director-level mandate for the community to join MIE, and the library is building up membership to make that decision easier.

Finally Erdmann picked up on the thread posed by Reichelt of reusing of data within Mendeley. With the millions of articles in Mendeley, Erdmann considered other ways in which Mendeley might be used. Some ideas were a catalog, institutional repository, course reserves, and a marketplace for metadata and data (for example, the CODE Project).

Jose Luis Andrade

Andrade began by delving into more detail about the crowd-sourced analytics as referenced in Erdmann's presentation. As mentioned by Erdmann, signing up for the MIE powered by Swets can strengthen the role and value of the Library in the digital workflow of research, not only across one's institution but also internationally. The presenter described how MIE analytics are easily available and give the librarian qualitative and quantitative information that is otherwise unavailable. Additionally, libraries can also get a perspective and insight of their collections with trend analysis via altmetrics all while being able to access a product that showcases its researchers and members to an institution.

To explain the depth of information within MIE, Andrade described the types of dashboards available within MIE: Reading, Publishing, and Impact. The Reading dashboard screen contains information that is complementary to the data a library already receives from traditional usage statistic tools. These analytics take into account the actual use of the document and not a click or a download of a PDF. The Reading dashboard allows libraries to see if there's a disconnect between the content they are subscribing to versus the content researchers are actually reading. They can make comparisons on information that was not previously available, like reader discipline, journal to journal and article level

analysis. On account of this, MIE could be used as a collection development tool that provides gap analysis information and as a tool that ensures the library is subscribing to essential content.

As mentioned above, while usage statistics alone is a number which represents the entire institution, in MIE an institution can also drill down by user discipline in the Reading dashboard. This provides perspective on what is important to a specific discipline. Additionally, there is important information on a critical subset of individuals. Andrade emphasized that MIE indicates that this information is being used and not only clicked on.

The Publishing dashboard showcases how often researchers are publishing and also in which journals they publish. This dashboard indicates which individuals are publishing within which disciplines and can assist libraries/institutions in examining the individual researchers' contributions. It can also show information that can be critical for promotion and tenure and the return on investment in the choice of faculty.

The Impact tab plays off the previous Publishing tab. Andrade stressed that the Publishing dashboard not only shows where, when, and how often the institution is being published, but delves deeper and shows what is being read and consumed. It also shows what the institution's reach is, what papers are making a large splash, and which individuals are making large contributions to their disciplines. All this data provides excellent demographics on the type of people reading the researchers content.

To conclude, Andrade asked the audience to consider the strengths of MIE and the type of crowd-sourced data within Mendeley. Then he asked the audience how they would like to see this product evolve? Andrade mentioned that he had already had publisher feedback showing that they have an interest in ascertaining how their journals are being used. Another possibility discussed was to combine the altmetrics discussed with COUNTER statistics. Lastly, with over 300,000 million articles, Andrade posited using MIE as a discovery layer or a platform for pay-per-view.

The floor was then opened up to the audience.