SCIENCE DATA MEETS DATA SCIENCE

Mitja Alexander Linss and Catherine Williams look at leveraging the digital footprint of research for smarter content acquisition

There's no question about it, content is the fuel that feeds the fire of innovation. Getting the right content at the right time not only increases the speed of discovery for researchers, but can also be a real boon to the business interests of research-intensive organisations, as well.

In the continuing effort to improve research workflows, every little bit helps – particularly if that little bit can be automated. But what about automating part of the selection process in content acquisition? How can researchers eliminate the time wasted consuming articles and other forms of content that turn out to be dead ends, or otherwise don't quite deliver? What are our options here?

Of course, there are the usual metrics that researchers rely upon in evaluating peer-reviewed literature – things like impact factors, the h-index, citation counts, and the like. But, like a camera obscura, these metrics don't provide the whole picture: researchers also want to know how a given paper is being received more generally, outside of academic circles, as well as among their peers. Besides, reviewer sentiment is conspicuously absent in impact factors; a reference might praise the work or, in as many as a quarter of the citations, actually disparage it. Clearly, more information is needed to guide content acquisition decisions. That's where altmetric data comes in.

Taken together with the traditional metrics, altmetrics round out the picture on published research, providing, in addition to peer reviews, measures of influence and engagement in discussion forums and on social media, pick up in mainstream media and mentions in blogs, inclusion in public policy documents and a myriad of other content feeds – in short, a research output's broader digital footprint. Altmetrics report a single 'score' for each item to indicate the amount of attention it has received, but they also reveal the details behind that score, thus enabling a better-informed document purchase decision. And where time is money, more data and visibility is always a good thing.

Now, what if those altmetric attention scores were visible at the point of article discovery? Better yet, what if they were tied directly into the research retrieval ('document delivery') process itself? In other words, when an article of interest is found by a researcher using his or her preferred discovery platform, and that article has a high attention score (visible as a badge on the article), then streamlining its acquisition would speed things up, as well.

An integrated document delivery platform, such as Reprints Desk's Article Galaxy solution, which now integrates Altmetric's badges in scholarly content, may provide an instant link to the researcher's subscription access to a particular paper. In cases where no subscription exists, it offers other means of access, including on-demand article purchase, article rental, or automated open access filtering – all in real time, saving both time and money on what turns out to be a 'smarter' document acquisition. Automated filtering for articles that meet a minimum desired Altmetric score, in other words a high level of attention among the research community and beyond, adds another dimension to hone the search results even further.

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Closing the loop, an article's metadata – generated by a vast crowd of reviewers in a multitude of contexts (and ultimately summarised in the attention score) – feeds the data scientists, who in turn leverage that data to improve the research insights and the discovery process itself. And when that happens, the research organisation wins. Ri

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