Importance of Mendeley readership on altmetrics based on the Altmetric score

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ABSTRACT

Recent researches increasingly show the awareness and importance of altmetrics, which collect impact scores from social media. One of the most notable elements in altmetrics is Mendeley, originally one of the reference management services but currently the largest research database in the world. While Mendeley consists of several metrics, the inevitable element we could use in altmetrics tool is Readership. In this paper we analyze the importance of Mendeley Readership for altmetrics, aggregating data from Mendeley Institutional Edition and altmetrics tool.

INTRODUCTION

What is altmetrics? Being real-time aggregator of online impact of academic literature from social media, they individually interpret the scholarly assessment based on their concept.[1] A concept originally comes from Jason Priem and his colleagues, altmetrics have been essential metrics for scholarly assessment among scholarly publishers and researchers.[2] What makes altmetrics unique is their diversity: not only papers but also research data, programming codes, presentation handouts, and several types of academic literature. While ImpactStory, Altmetric and a lot of web services called altmetrics tools are in progress, scholarly publishers open access journal and researchers CVs vastly embrace altmetrics. On these awareness and importance, Mendeley stands out of other elements in altmetrics.[4] Since ReaderMeter, ScienceCard and any kind of altmetrics tool necessarily features Mendeley Readership, a metric to determine 'how many users read the literature in Mendeley,' altmetrics inevitably rely on Mendeley. Nevertheless, the importance of Mendeley Readership has been compared only with traditional academic assessment metrics, but no quantitative analysis in altmetrics has been conducted..

MATERIALS AND METHODS

On this assumption, we analyze the importance of Mendeley in altmetrics, aggregating data from Mendeley Institutional Edition (MIE) and Altmetric as typical altmetrics tool services. One of main features in MIE would monitor users activity which can be overviewed as what they are Reading, where they are Publishing, which literature had Impact. In this paper we focus the 'Impact' conducting the analysis by filtering Top100 (Highly read publications in the year begins on 15, September 2012) in literatures of the MIE group in view of altmetrics. Since of these filtered 100, 49 URLs cannot be accessed currently, we determine the rest of it, being 51 URLs, as data for analysis. An analysis on the publishing year shows that 98.0% of the literature came from the recent publishing of 2003-2013 periods. A category analysis shows that 68.6% of the literature came from Biological Sciences. There were no exceptions of 51 pieces of literature, to be registered on either DOI (60.1%) or PMID (39.2%). On Altmetric we analyzed further trace research on these IDs.

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RESULTS AND DISCUSSION

Below we determine the results and conclusion of this analysis:

(I) 73.0% of Altmetric scores come from Mendeley Readership, which stands out of other social media by the percentage. (Table 1)

(II) A categorical analysis based on whether Open Access (OA) or NON-OA literature shows that both of Mendeley Readership and Altmetric rendered higher score among OA literature. (Table 1) We may safely assume that altmetrics tends to be higher among OA literature.

Table 1: Relationship between Mendeley Readership and Altmetric score

Item	ALL	OA	NON-OA
Readership on MIE group	67.7	67.5	68.0
Readership on Mendeley	144.0	159.5	103.3
Altmetric score	14.8	16.9	9.4
readers on Mendeley	45.6	40.0	60.6
readers on Connotea	1.5	2.0	0.4
readers on CiteULike	5.6	6.9	2.1
Tweeted by	7.9	9.2	4.3
Blogged by	1.1	1.4	0.6
Reddited by	0.1	0.1	0.0
On Facebook pages	0.3	0.4	0.1
Mentioned in Google+ posts	0.3	0.2	0.4
Picked up by news outlets	0.1	0.0	0.1

It may be presumable that the results from these processing help to understand the importance of altmetrics. That being said, we admit that on these results we could access rather fewer dataset of literature and that we had to rely on Altmetric as the only analysis tool. We do not assert that these results exclude the limitation of scale, which is to be improved on further analyses.

Hence in view of altmetrics we analyzed MIE Impact scores until we found additionally that OA/NON-OA trend as analytics results. MIE also features Publication analysis monitor to conduct further analysis of data, so here we propose the possibility of research enhancement via altmetrics.

CONCLUSION

In this research it is determined that Mendeley Readership has substantial impact on altmetrics. It would be essential for librarians and research administrators who help institutional activities to conduct analyses of institutional research data in view of altmetrics, a fresh point of view, in order to achieve several kinds of academic grant and to enhance corporative research activities.

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