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Introduction

Most altmetric studies compare how often a publication has been cited or mentioned on the Web. Yet, a closer look at altmetric analyses reveals that the altmetric tools employed and the social media platforms considered may have a significant effect on the available information and ensuing interpretation. Tools generate available information in different ways. This project will present results from a comparative altmetric analysis conducted employing four well-established altmetric services. Our study reveals that for several data sources the coverage of findable publications on social media platforms and metric counts (impact) can vary across altmetric data providers.

Methods

Data basis: 1,717 proved DOIs from publications of different Leibniz-Sections in 2011/2012 (Figure 1).

Data providers: ImpactStory, Webometric Analyst, Altmetric Explorer and Plum Analytics. Queried on the same day August 8th 2014 (due to software problems data from Webometric Analyst was downloaded on August 12, 2014).

The aim of the study is to test the altmetric analyses provided by the four services on the same multidisciplinary data set to find out which services allow for the most comprehensive analysis.

The data providers retrieve data only from a few social media platforms similarly: Mendeley (4/4), Reddit (3/4), Facebook (4/4), Twitter (4/4), Google+ (3/4), Blog Posts (3/4). As figure 2 shows, the actual number of DOIs found for each metric (coverage) and per Leibniz section differs between the tools.

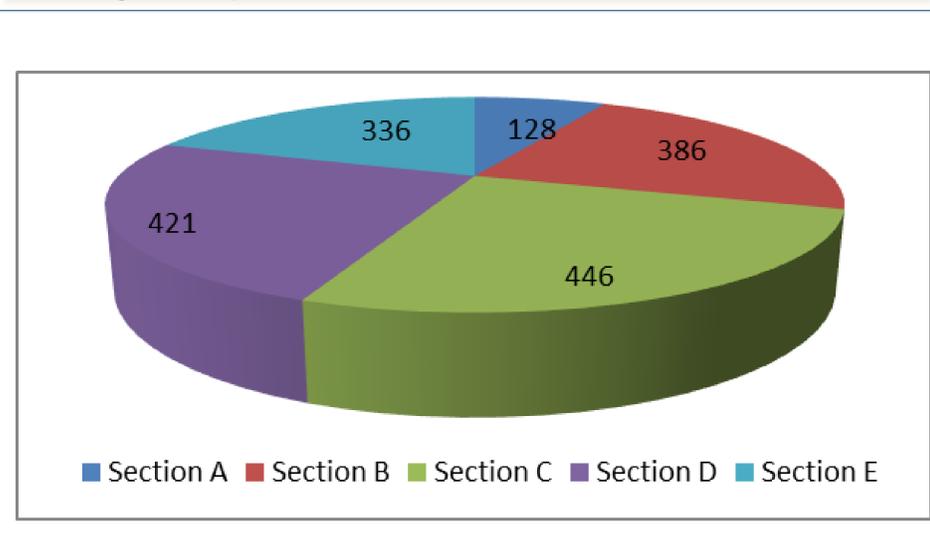


Figure 1. Distribution of DOIs across disciplines in searched data set (absolute numbers, n=1,717). The sections are A) Humanities and Educational Research, B) Economics, Social Sciences, Spatial Research, C) Life Sciences, D) Mathematics, Natural Sciences, Engineering, and E) Environmental Sciences.

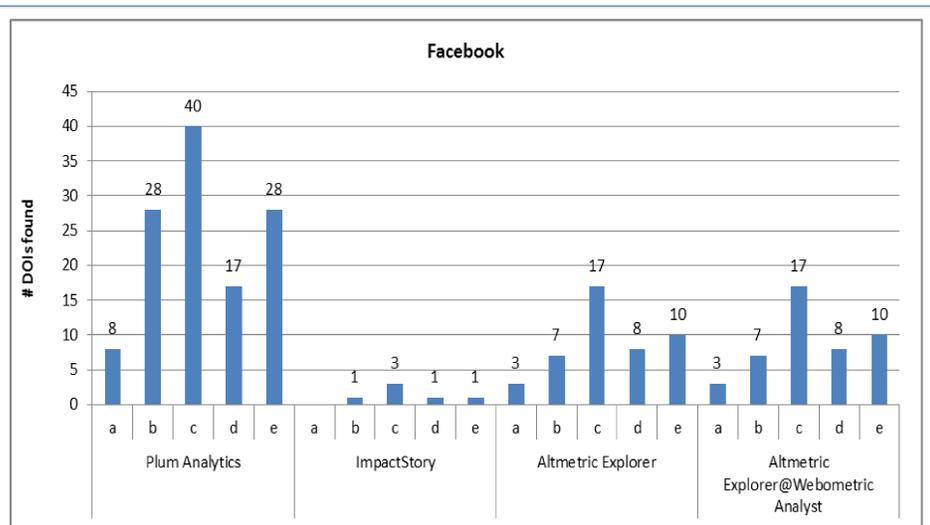


Figure 2. Coverage of DOIs on Facebook for each section found by the data providers.

Selected Results

The available metrics per service on the same social media platform is different, too.

I.E. Twitter: Plum Analytics does not retrieve any tweets for DOIs from section C. However Altmetrics Explorer and Webometric Analyst identify 318 tweets, and ImpactStory 274 tweets (Figure 3).

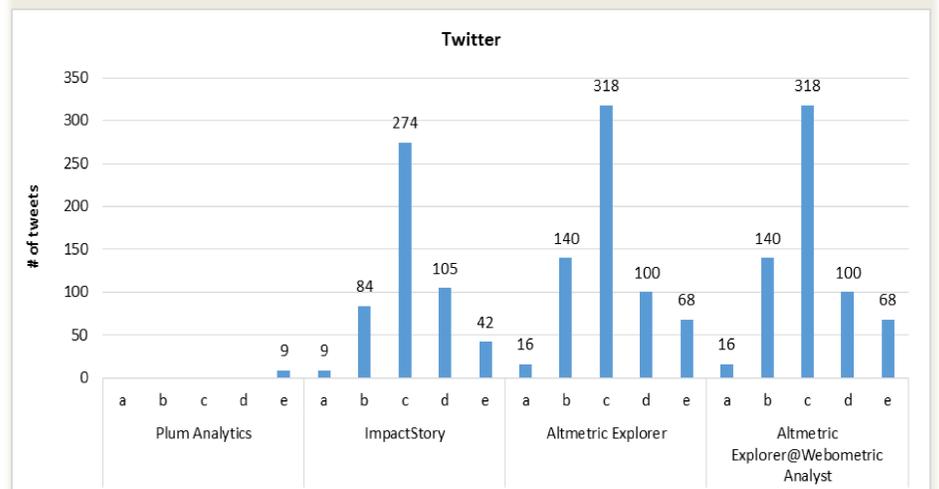


Figure 3. Twitter counts for each section found by the data providers.

Problems

While using the tools we encountered several problems and limitations, most of them were of a technical nature.

Some data providers restricted simultaneous DOI-searches and the response time is different. Several of them draw some of their metrics from aggregated data sources.

Conclusion

First, for some data sources the coverage and metric counts (impact) can vary on several levels across the studied data providers. Data providers fetch altmetric data with varying levels of detail, i.e. Plum Analytics registers the most metrics for the most platforms (it retrieves Facebook likes, comments, and shares, whereas ImpactStory only collects number of shares). Second, the data providers differ in the number of DOIs they find on the social media platforms. Although the data providers also cooperate in altmetric data collection, the results for shared metrics may differ. This raises the question how the different data providers actually collect the metrics' values and how often they are updated.

Links & Acknowledgment

Data providers:

- <http://www.impactstory.org>.
- <http://www.altmetric.com>.
- <http://lexiurl.wlv.ac.uk>.
- <http://www.plumanalytics.com/>

The complete findings of our study are published in: Peters, I., Jobmann, A., Hoffmann, C.P., Künne, S., Schmitz, J., Wollnik-Korn, G. (2014): Altmetrics for large, multidisciplinary research groups: Comparison of current tools. *Bibliometrie – Forschung und Praxis* 3, 12.1-12.19, Retrieved from: <http://www.bibliometrie-pf.de/>

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