science 2.0
Leibniz Research Alliance

Altmetrics for large, multidisciplinary research groups: A case study of the Leibniz Association

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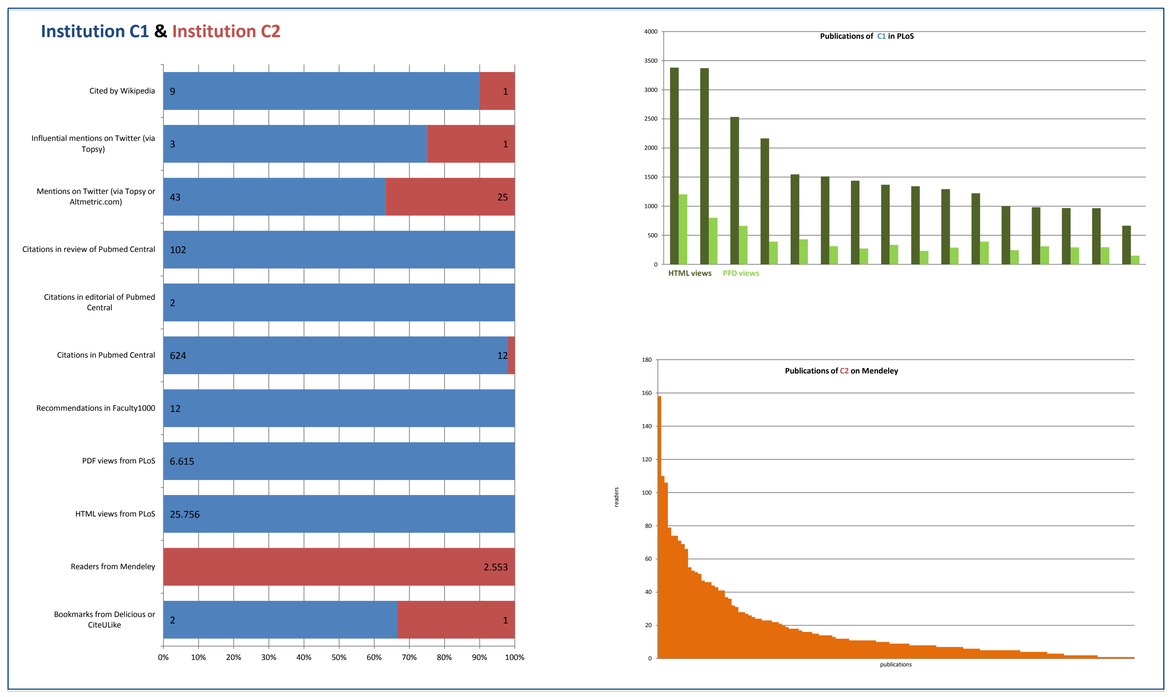
Introduction

Studies on research impact on social bookmarking systems (Haustein & Siebenlist, 2011), on Mendeley (Mohammadi & Thelwall, 2013), and Twitter (Haustein et al., 2013a; Holmberg & Thelwall, 2013) showed that there are significant disciplinary differences between the extent to which publications are found on social media platforms and the impact they have on the users. Hence, when using altmetrics those effects have to be considered.
We apply current altmetrics research to a large group of multidisciplinary research institutions, the Leibniz Association. Our study is guided by research questions derived from Bar-Ilan et al. (2012) and Haustein et al. (2013b):
1) Where and to what extent are the publications of the institutions of the Leibniz Association covered on social media platforms?
2) What impact do publications of the members of the Leibniz Association have on users (i.e., altmetrics)?

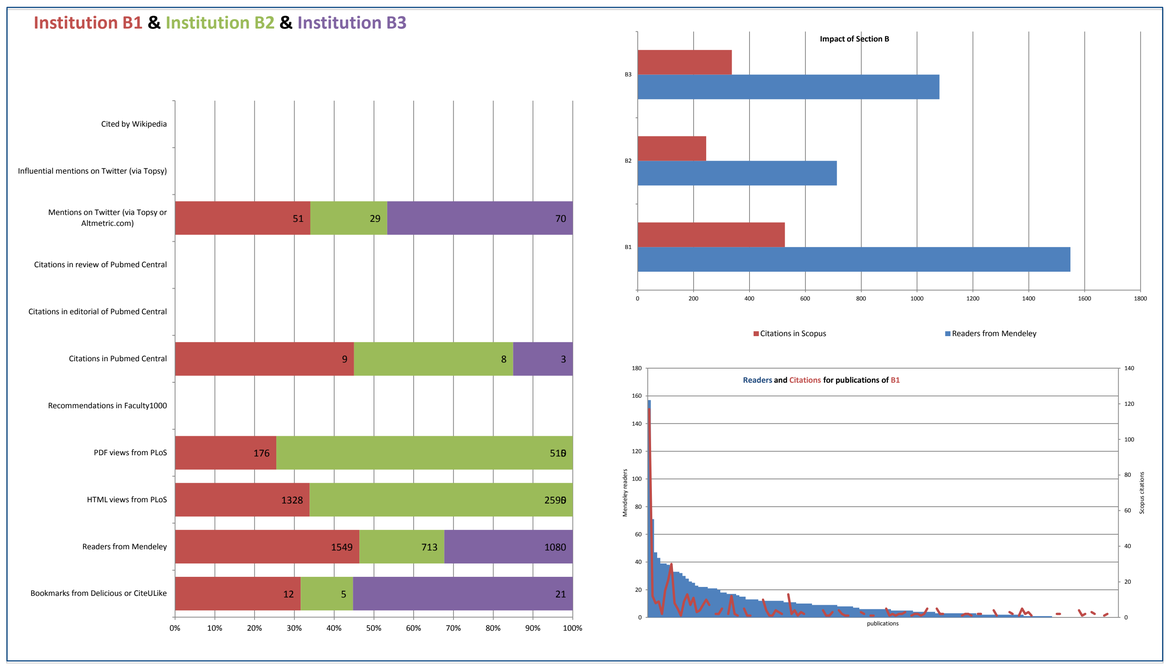
Methods

Publications from 2011 and 2012 were downloaded from two or three institutions of each discipline of the Leibniz Association. Webometric Analyst (Thelwall, 2009) was used for the collection of missing DOIs and ImpactStory for the collection of DOI-based altmetrics data (e.g., Twitter mentions, Mendeley readers, PubMed Citations). http://impactstory.org.

Altmetrics findings of the individual institutes were graphically compared and noticeable findings such as highly cited papers or the Mendeley's reading progression of publications were illustrated separately.

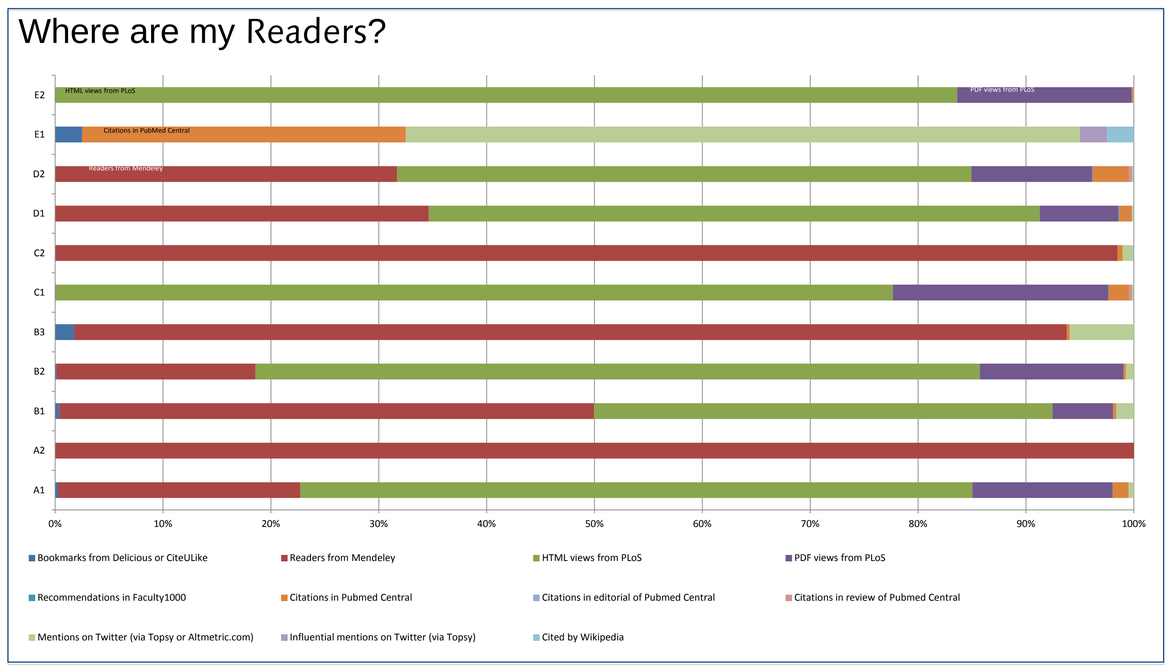


Example 1: Altmetrics Analysis of Section C (Life Sciences)



Example 2: Altmetrics Analysis of Section B (Economic Sciences)

Results



Initial findings show in which social media areas institutes can find readers for their articles.

Selected Results

First Results

The analysis of the data revealed two major findings:
1) Often only few publications generate the high popularity of an institution on social media platforms (e.g., Mendeley).
2) Institutions with similar research focus have readers on different social media platforms (e.g., Mendeley or Wikipedia).

The first finding raises questions about the validity of altmetrics when cumulated on institutional basis (e.g., for financial purposes), whereas the second result shows that when using the “wrong" platforms the actual impact on the users cannot be reflected since they have been using different platforms.

Problems

Due to the dependence of the used tools, a previously inconsistent data collection has now to be verified. Since ImpactStory is regularly updated, this makes a reproduction difficult. Therefore it seems to makes more sense to carry out the analysis, at least in sections, on the same day. Additionally, permanent changes are subject to user's conditions of social media so that new findings are being constantly generated. Moreover, the choice of an indicator is difficult, because the PubMedID is more popular in some disciplines than DOI. As well as this, there are some disciplines in which DOI only plays a minor role. Data collection was made difficult due to lacking DOIs on institute webpages as well as repeated or missing entries in publication lists.

Conclusion

We understand our work as a case study giving insights into the popularity of the Leibniz Association and also providing lessons learned assisting others when faced with similar questions.

Outlook: A possible future scenario for using altmetrics could be a demographic readership analysis – who are Mendeley users – what is their origin, their status and their discipline?
Additionally an individual institute-related analysis on request is also conceivable.

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