

JASIST@Mendeley Revisited

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Introduction

At the altmetrics12 workshop, I presented a study of Mendeley's coverage of the articles published in the Journal of the American Society for Information Science and Technology (JASIST) between 2001 and 2011.

In April 2012, 1600 out of the 1645 articles and reviews published in JASIST between 2001 and 2011 were located, i.e. the coverage of Mendeley at that time was 97.3%. The total number of readers (summing the readership counts of all articles) was 16,436, more than the total number of citations these items accumulated on the Web of Science (WoS) (15,970), and only slightly less than the total number of citations recorded on Scopus (20,065). These results were very encouraging, because at the time similarly high coverage was reported only for articles published in Science and Nature (Li, Thelwall & Giustini, 2012), which could be expected since both journals enjoy very high visibility. JASIST is among the leading information science journals, but still is presumably much less visible than Science and Nature.

Note that the number of citations to an item as recorded by a citation database is a monotonous non-decreasing function. The question is whether the same holds for readership counts. This depends not only on the readers, who might decide to remove items from their libraries, but also on Mendeley's policy. There are two possible approaches to handle item removals by users:

1. If a user bookmarks an item, then even if it is removed later (i.e. "un-bookmarked"), the user is still considered a "reader" of the item. The rationale for this policy is that Mendeley only provides a limited amount of space, and thus when there is no more space in the user's library she has to move some items to local storage or to discard some items in order to make room for new items. Since it is impossible to know whether the item was moved or removed, the user is still considered to be a reader of the item.
2. The second approach assumes that if an item is removed from a reader's library for whatever reason (moved or discarded) the readership count for that item

should be decreased. A user is a reader of an item only if the item is bookmarked and can be found in her library.

It is not quite clear which of the two approaches is applied at Mendeley, but both approaches have merit. To gain a better understanding of the dynamic processes, we decided follow-up on Mendeley's JASIST coverage.

Research setup

Follow-up data were collected twice, once in August 2013 and once in April 2014. Like in the first search in April 2012, we searched for the title of the item, and not for the DOI, in order to catch items bookmarked without the DOI. In most cases partial titles were searched to eliminate problems with special characters (e.g. hyphens, colons, quotation marks and question marks). In April 2014 we utilized Mike Thelwall's Webometric Analyst that uses the Mendeley API and allows carrying out title-based searches. The main advantage of using the Webometric Analyst is that the results are saved in a compact manner. However the data collection method remained the same: title searches – searching for a sub-phrase in the title which does not contain special characters. The result set was matched with the exact titles. When Mendeley results are clustered in several clusters (Gunn, 2013) the readers from all clusters were combined. The results of the Webometric Analyst were identical to the results of manual the manual searches. This was checked on a random subset of the titles. For articles where there was a dramatic change in the number of readers, the results were double-checked manually.

Results

In August 2013, the coverage dropped slightly, only 1540 items were found (93.7% compared with 1600 (97.3%) in April 2012. On the other hand the total number of Mendeley readers increased from 16,436 to 24,851 (increase of 51.2%). The most read item remained "Twitter Power: Tweets as Electronic Word of Mouth" by Jansen, Zhang, Sobel and Chowdury published in 2009. The number of readers increased from 280 to 521 (an 86.1% increase).

In April 2014, the coverage dropped to 1453 items (88.3%), but the number of readers continued to grow and reached 32,984 which is more than double the number of readers found in 2012 and 32.7% more than the number of readers found in 2013. "Twitter power" continued to be the most read article with 819 readers.

The overall observed trend was a drop in the number of covered items and growth in the total number of readers, but a closer examination reveals that there were additional

processes going on, some items disappeared in August 2013 and reappeared again in April 2014 (56 items). There were 156 items that appeared in the first two rounds, but not in the third round. It should be noted that some of these items had a large number of readers before they disappeared from Mendeley, six items had more than 60 readers before they disappeared, and only 15 items out of the 156 had two readers or less in August 2013. This means that either there were some major changes in the Mendeley database or that large number of readers decided at more or less the same time to “un-bookmark” certain items. Somewhat surprisingly more recent than older items were dropped from Mendeley, as can be seen in Figure 1.

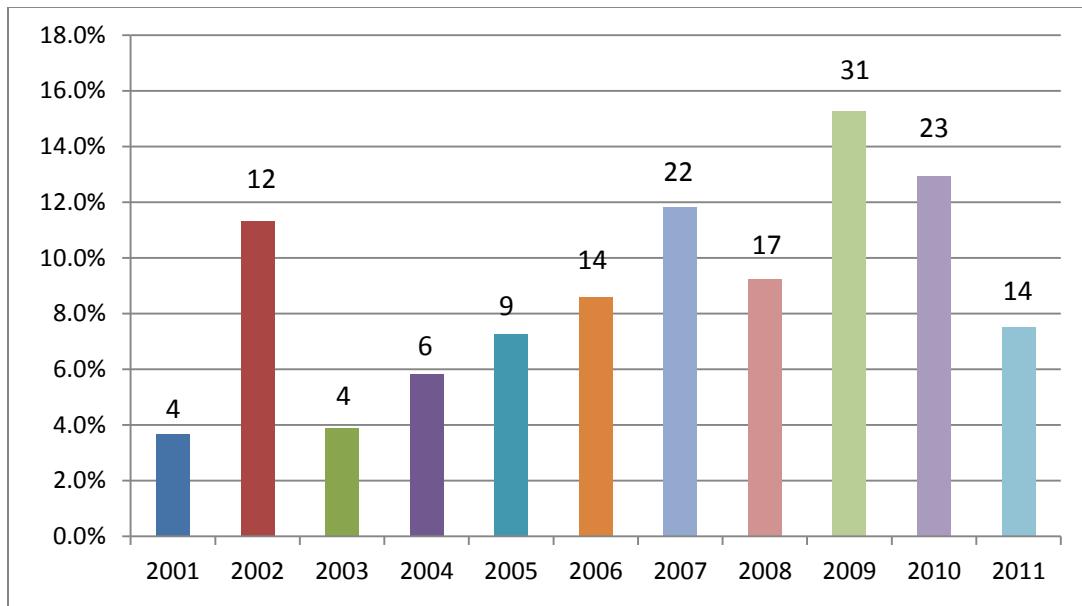


Figure 1: Percentage of items that were found in April 2012 and August 2013 that were not found in April 2014 out of the total number of articles and reviews published in the given year. The numbers of dropped items appear above each column.

Besides disappearance and reappearance, in quite a few cases the number of readers decreased. When comparing the data from April 2012 with data from April 2014, in 40 cases the items were found both times but the number of readers decreased. There are also cases where the number of readers first increased and then decreased (85 cases), or that at first the number of readers decreased and then increased again (130 cases). This preliminary analysis shows that it is not enough to consider the overall growth in the number of readers. This situation is similar to the overall growth of the Web, where are additional processes taking place, including removal of web pages, removal of links or moving webpages from one host to another (Bar-Ilan & Peritz, 2004).

Conclusion

This case study demonstrates that there are fluctuations in the items covered by Mendeley and the number of readers bookmarking those items. This finding should be followed up by additional studies.

References

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