Evidence Based Library and Information Practice

Evidence Summary

Personal Publications Lists Serve as a Reliable Calibration Parameter to Compare Coverage in Academic Citation Databases with Scientific Social Media

A Review of:
Hilbert, F., Barth, J., Gremm, J., Gros, D., Haiter, J., Henkel, M., Reinhardt, W., & Stock, W.G. (2015). Coverage of academic citation databases compared with coverage of scientific social media: personal publication lists as calibration parameters. *Online Information Review 39*(2): 255-264. http://dx.doi.org/10.1108/OIR-07-2014-0159

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Abstract

Objective – The purpose of this study was to explore coverage rates of information science publications in academic citation databases and scientific social media using a new method of personal publication lists as a calibration parameter. The research questions were: How many publications are covered in different databases, which has the best coverage, and what institutions are represented and how does the language of the publication play a role?

Design – Bibliometric analysis.

Setting – Academic citation databases (Web of Science, Scopus, Google Scholar) and scientific social media (Mendeley, CiteULike, Bibsonomy).

Subjects – 1,017 library and information science publications produced by 76 information scientists at 5 German-speaking universities in Germany and Austria.

Methods – Only documents which were published between 1 January 2003 and 31 December 2012 were included. In that time the 76 information scientists had produced 1,017 documents. The information scientists confirmed that their publication lists were complete and these served as the calibration parameter for the study. The citations from the publication lists were searched in three academic databases: Google Scholar, Web of Science (WoS), and Scopus; as well as three

social media citation sites: Mendeley, CiteULike, and BibSonomy and the results were compared. The publications were searched for by author name and words from the title.

Main results – None of the databases investigated had 100% coverage. In the academic databases, Google Scholar had the highest amount of coverage with an average of 63%, Scopus an average of 31%, and lowest was WoS with an average of 15%. On social media sites, Bibsonomy had the highest coverage with an average of 24%, Mendeley had an average coverage of 19%, and the lowest coverage was CiteULike with an average of 8%.

Conclusion – The use of personal publication lists are reliable calibration parameters to compare coverage of information scientists in academic citation databases with scientific social media. Academic citation databases had a higher coverage of publications, in particular, Google Scholar, compared to scientific social media sites. The authors recommend that information scientists personally publish work on social media citation databases to increase exposure. Formulating a publication strategy may be useful to identify journals with the most exposure in academic citation databases. Individuals should be encouraged to keep personal publication lists and these can be used as calibration parameters as a measure of coverage in the future.

Commentary

Measuring coverage and impact of information scientists work is ever changing in the advent of scientific social media (Bar-Ilan *et al*, 2012). This study used a new calibration method of personal publications lists to compare coverage of publications from information scientists in both academic citation databases and scientific social media. The study was appraised using the EBL Critical Appraisal Checklist (Glynn, 2006). The strength of this study lies in the use of new calibration parameter of personal publication lists. The study scored high for data collection and for study design meaning that the study could be replicated. Contacting the information scientists of the institutions to confirm that the authors had full publication lists ensured that they could achieve fairly accurate analysis of results although use of identifiers, such as ORCID, may have provided stronger accuracy.

The objectives and research questions of this study were clearly focussed. The methodology builds on an approach used in a previous study (Kirkwood, 2012) and clearly described the design, data collection, and analysis. However, it is not wholly explained why the particular three academic databases and three scientific social media databases used were selected over others, but the methodology would be easy to replicate and the limitations were also discussed.

This study focussed on information scientists working in German-speaking institutions and highlights the potential limitations of publishing in non-English language journals. The research found that the coverage of papers from Dusseldorf were low in Web of Science due to the fact that many information scientists publish in German information science journals, which are not indexed by the database. Though the authors acknowledge that there is no recent evidence on language skills of information scientists, it is possible that this is the deciding factor when information scientists are at the research publishing stage. This suggests that library and information professionals should continue to promote their work, particularly where work is not indexed in traditional databases and in instances when non-English language publications have less coverage.

The study limited the search to scholarly publications and not informal published documents. Exploration of differences in coverage between document type and coverage of papers in library specific databases such as LISA and LISTA, would be interesting areas for further investigation.

Glynn's critical appraisal checklist advises that if overall validity of a study scores >75% then

the study is valid. Overall this study scored 77%.

The methodology used in this study will be of interest to information and library practitioners who want to show their research impact both on academic citation databases and social media. The research also highlighted the need to keep personal publication lists and the value of self-indexing on appropriate scientific social media for library and information professionals.

References

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