

Armbruster, Chris, "Access, Usage and Citation Metrics: What Function for Digital Libraries and Repositories in Research Evaluation?" (January 29, 2008). Available at SSRN:
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The growth and increasing complexity of global science poses a grand challenge to scientists: How to organise the worldwide evaluation of research programmes and peers? For the 21st century we need not just information on science, but also meta-level scientific information that is delivered to the digital workbench of every researcher. Access, usage and citation metrics will be one major information service that researchers will need on an everyday basis to handle the complexity of science.

Scientometrics has been built on centralised commercial databases of high functionality but restricted scope, mainly providing information that may be used for research assessment. Enter digital libraries and repositories: Can they collect reliable metadata at source, ensure universal metric coverage and defray costs?

This systematic appraisal of the future role of digital libraries and repositories for metric research evaluation proceeds by investigating the practical inadequacies of current metric evaluation before defining the scope for libraries and repositories as new players. Subsequently the notion of metrics as research information services is developed. Finally, the future relationship between a) libraries and repositories and b) metrics databases, commercial or non-commercial, is addressed.

Service reviewed include: Leiden Ranking, Webometrics Ranking of World Universities, COUNTER, MESUR, Harzing POP, CiteSeer, Citebase, RePEc LogEc and CitEc, Scopus, Web of Science and Google Scholar.

Keywords: Scientometrics, webometrics, research evaluation, research assessment, citation metrics, usage metrics, access metrics, digital library, digital repository, open access

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