



**Citations of electronic resources in scientific publications :  
comparative analysis and strategy of links**

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Libraries now spend a large part of their budget on acquiring electronic resources<sup>1</sup>. While numerous actions have been taken in recent years to develop these at the french level, few studies have investigated the integration of these resources into researchers' citations, a possible indicator, among others, for appreciating the usages. At the international level, there are some studies<sup>2</sup> in specific contexts, but the results should be updated regularly.

As part of a study funded by the French Ministry of Research from June 2007 to February 2008, we conducted a comparative study of citations of electronic resources in scientific publications in three fields: Molecular Biology, Applied Physics and Economics-Management. In each field, the sample analyzed related to a recent issue of 4 or 5 major journals selected (9000 citations in all), 3 recent proceedings, texts from 4 to 5 thesis. The regularity of practices in the other issues of journals or thesis browsed leads us to believe that the conclusions that we draw from this sample could be extended. This paper will present the main results of the study.

A first type of results is related to the measurement of citations of electronic resources in the footnotes and bibliographies of publications compared both by scientific field and by publication type (journals, thesis, congress proceedings). We will characterize by field the type of electronic resources mentioned.

In addition, the very high rate of the links automatically generated by publishers or digital facilitators led us to appreciate the added value of these intermediaries on the bibliographic references. We will identify and quantify in our sample common generic models (Crossref, Isi, Scopus, Google scholar...), models specific to each area and associated with disciplinary reference databases (Pubmed, Chemport...), specific models to publishers. The study also identified initiatives for sharing platform of links between publishers from the same field (in the case of Applied Physics). Exploration of field Economy-Management has also pointed the current mismatch between francophone resources and anglophone resources on these mechanisms of links and a quality of service still low in some aggregators of journals. The development of linking mechanisms in the citations must therefore be assessed according to each context. Our study enriches other explorations already published on the topic<sup>3</sup>.

In conclusion, we will insist that the study has shown, in all three areas (slightly less in Economics-Management), and in all types of publications (journals, thesis, proceedings) a great normativity of citations on traditional resources (articles, books). Opening of web-specific resources is not very observable and automatic formatting links provided by on-line publishing intermediaries masks original writing of the author (citation of the print or electronic journal).

<sup>1</sup> See in particular the survey ERE of the sub-directorate of french university libraries, <http://www.sup.adc.education.fr/bib/Acti/Electro/accueil.htm>

<sup>2</sup> In particular: an article of 2006 (Dalbello) analyses citations in journals of english literature. It highlights the scarcity of electronic resources cited in relation to traditional sources and the persistence of traditional practices, [http://dlist.sir.arizona.edu/1638/01/Dalbello\\_posterrev.pdf](http://dlist.sir.arizona.edu/1638/01/Dalbello_posterrev.pdf)

One study (2005, De Groote) is related to the impact of electronic journals on the profiles of citations in medicine and shows that the citations in electronic journals have not increased at the expense of those in print journals, <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1082939>

<sup>3</sup> Jacso (2004) analysed the establishment of the links associated with citations by publishers and aggregators (EBSCO, CSA) in psychology, <http://www.emeraldinsight.com/10.1108/14684520410553804> and JISC (2007), Link Resolvers and the Serials Supply Chain, <http://www.uksg.org/projects/linkfinal>

On another level, the study has helped to point the strategic dimension of the mechanisms of links between resources. The services in place are not built uniquely in a logical scientific strategy. Libraries must pay particular attention to the quality and completeness of these links which are now important in the practice of reading.