



*Evidence Summary*

**Positive Perceptions of Access to Online Library Resources Correlates with Quality and Quantity of Scholarly Publications among Finnish Academics**

**A Review of:**

Vakkari, Pertti. "Perceived Influence of the Use of Electronic Information Resources on Scholarly Work and Publication Productivity." Journal of the American Society for Information Science and Technology 59.4 (Feb. 15, 2008): 602-12.

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**Abstract**

**Objective** – To investigate the relationship between academics' use of library electronic resources and their opinions regarding how these resources have impacted their work, and to investigate the association between this perceived influence and publication productivity during the previous two years.

**Design** – Two specific questions added to an annual online user-survey questionnaire; additional data mined from survey

**Setting** – Twenty-two Finnish Universities served by FinELib, the Finnish Electronic Library.

**Subjects** – Seven hundred and sixty seven academic staff and full-time doctoral students.

**Methods** – A questionnaire was posted in April 2007 on FinELib's homepage and advertised on each university library's main page, and focused on respondents' experience in the previous two years. Participants selected answers either from a list of category choices, or, when measuring

perceptions, by rating agreement with statements along a four-point scale. Controlled variables measured were the respondents' academic position, their discipline, membership in a research group, whether their literature use was discipline-specific or interdisciplinary, and their perception of the availability online of the relevant core literature.

The independent variable measured was the scholars' perception of the impact of the use of electronic library resources on their work. The dependent variable measured was the scholars' self-reported publications in the two years preceding the survey.

**Main Results** – Participants reported a positive impact on the efficiency of their work, most strongly in areas of ease of access, with lesser impacts in the range of materials available to them and the ease with which they can keep up-to-date in their field. To a lesser extent, the scholars perceived a positive impact on the quality of their work.

Upon analysis, the study found that access to online library resources improved scholars' work by the interconnected mechanisms of the ease of access and breadth of resources available positively impacting their ability to keep abreast of new developments and inspiring new ideas.

The study found mixed results between perceived improved access and number of publications. Although representation in national publications was not significantly impacted, there was a positive correlation with the number of international publications. There were interesting differences among disciplines and academic status, with a decreased impact among scholars in the humanities, and greater impact among lower-status or novice academics.

**Conclusion** – There are positive perceptions of the accessibility of online information and of its impact on the quality of work, and a correlation between these perceptions and the number of international publications, thus validating the investment in providing access to digital information resources to Finnish academics.

### **Commentary**

This study seems to present significant evidence for positive results in scholarly output in an environment of easily accessible online library resources, but concerns about the methodology limit its usefulness.

The setting for the study was FinELib, a licensing consortium of Finnish universities providing the major channel for accessing online journals and bibliographic databases to university faculty. Two questions were added to an annual user survey, which were used in conjunction with data mined from the rest of the survey. The first question measured "how has the use of electronic resources affected your work/study/" by presenting eight statements to be ranked along a four-point scale. The second gathered information about publication productivity by asking for the number of peer-reviewed publications in the previous two years, categorized as national or international publications.

The participants self-selected, the population was validated against the total Finnish academic population as reported by Kota Online University Statistics, and the author states the sample serves as relatively good model of Finnish academia. However the sample is small, about five per cent of the population, and skewed, both in terms of status and discipline. Thus, the statistical techniques used in the study, which assume normal distribution and equal variance

among groups, are inappropriate to the sample.

One area of concern is the decision to combine data elements which are inequivalent, e.g., the grouping of participants self-identified as full-time doctoral students with those identifying as assistant/researcher in order to better compare to a national data set. This action distorts the sample population.

Another instance of concern is the analysis of respondents' perceived influence of e-resources. The participants rated each of eight statements along a four-point scale: "considerably," "to some extent," "not at all," or "don't know." Because of the small number of responses in each of the latter two categories, responses of "not at all" and "don't know" were collapsed into a single category; however these two response categories are too dissimilar to warrant this approach.

There is also evidence of straining for statistical significance. At one point the author states, "The coefficients in natural sciences and engineering are nearly significant...." However, "nearly significant," is an irrelevant statement; the values either are, or are not, significant.

The questionable analyses of the data collected in this study unfortunately weakens both the validity of the author's conclusions and the value of this study to evidence based practice.