

Cognitive Barriers in Search

Martin White, Managing Director, Intranet Focus Ltd

martin.white@intranetfocus.com

From time to time I turn into a Visiting Professor and work my way through recent papers in academic journals. Having trained as a chemist, written abstracts of several thousand papers early in my career and been a member of the Royal Society of Chemistry Publications Board for a decade, I have a high respect not only for the quality of research but for its applicability to current technical and management problems. Of course, one of our core scholarly journals is the Journal of Information Science, which CILIP members have access to as a member benefit. Recently I came across a paper by Reijo Savolainen that has the widest possible relevance to the information management community. It is entitled [Cognitive Barriers to Information Seeking: A Conceptual Analysis](#).

Professor Savolainen is at the School of Information Sciences at the University of Tampere. The School has world renown for the quality of its teaching and research and some years ago I journeyed to Tampere to present the UKeiG Tony Kent Strix award to Professor Jarvelin, one of the leaders in information retrieval research.

In the paper Reijo Savolainen addresses two challenging issues; the conceptualisation the features of cognitive barriers to information seeking and the characterisation of the impact of cognitive barriers on information seeking. The paper is not based on primary research but on a very thorough review of the literature, and the bibliography extends to over 50 citations.

From the analysis six barriers are described:

- Unwillingness to see needs as information needs
- Inability to articulate information needs
- Unawareness of relevant information sources
- Low self-efficacy, where the user feels that it will be difficult to obtain the documents
- Poor search skills
- Inability to deal with information overload

From my own experience working as an enterprise search consultant none of these barriers would be recognised by what is often a technology-led enterprise search team. The objective of the team is to develop “intuitive search”, seeking to emulate Google web search in the enterprise without understanding the futility of doing so. The issue is not one of information retrieval but of information management, and the need to train employees in how to manage their personal and professional information life cycles. It is easy to focus on the obvious issues around poor search performance (primarily content/metadata

quality) that we do not take into account more complex issues around cognition which require search managers to have a background in cognitive psychology.

Quite often there is only a single person with the responsibility for search delivery in an organisation despite the fact that search is used ubiquitously and a failure to find information can mean that a business-critical decision is made without the best available evidence base. The result is always a low level of user satisfaction and trust in search, and indeed the evidence from the 2015 [Digital Workplace Trends](#) report is that the levels of search satisfaction have been gradually decreasing over the last six years, probably because the size of internal digital repositories is increasing remorselessly.

Picking up on the low self-efficacy issue, there was a [paper given at the CKIM conference](#) (International Conference for Knowledge and Information Management) last year, which raised the issue that relevance assessments do not take into account a user's perception that a document is going to be so difficult to obtain that it is ignored as a 'relevant' result. I am certainly prone to do this. As a member of the Association for Computing Machinery (the US equivalent of the British Computer Society) I regularly look through the ACM Digital Library to track down recent research. The Digital Library includes abstracts and full text of ACM publications but only abstracts of papers from other publishers. Skimming down the results lists I often only look at the results with an ACM logo just because I know that I am a click away from the full text and not faced with paying \$35 for a paper.

One of my pleasures in life (other than writing this column and playing French organ music) is writing a [Perspectives column](#) for Business Information Review (BIR). BIR is published by Sage Publishing, who publishes a very wide range of journals, primarily in management, medicine and the social sciences. Every quarter I start at A and look through recent issues of around 50 journals. The objective is to highlight papers that might be of interest to BIR readers but which they might not otherwise be aware of. In the current issue of the Journal of Librarianship and Information Science there is a very interesting paper with the [title Scaffolding in information search: Effects on less experienced searchers](#). JLIS is another journal for which CILIP members have access rights.

The paper describes a small-scale case study in which a group of graduate students were mentored in search skills by an experienced information professional. There is a fascinating table in the paper that shows the improvements in their confidence (self-assessed) over just five periods of mentoring. To me this paper shows that search of academic resources, even to a graduate with no doubt good web search skills, is not intuitive, and requires expertise in a number of areas. The paper relates to a number of the cognitive barriers in the paper by Reijo Savolainen.

It never ceases to amaze me how few UKeIG members I speak seem to be taking the trouble to look at the research literature, especially when both JIS and JLIS are free to members. I would encourage CILIP to do a deal with Sage over Business Information Review as every issue contains papers of direct benefit to any and all information professionals.