

Key science Web sites buried in information avalanche

March 22 2007

As more and more people are turning to the Internet to find information, important science websites are in danger of becoming buried in the sheer avalanche of facts now available online. Key science sites are failing to register in the top 30 Google search results.

New research funded by the Economic and Social Research Council (ESRC) clearly shows that anyone using the Web to make their information available must now pay attention not only to the quality of their sites but also how easy they are to find.

Dr Ralph Schroeder, Dr Alexandre Caldas, Professor William Dutton, and Dr. Jenny Fry of the Oxford Internet Institute have investigated how the Internet is changing the way in which people seek out sources of scientific expertise.

Traditionally publishers have held a central position because of the importance of academic articles, but this is changing with increasing uses of the Internet and Web.

The study focuses on how academic researchers in particular interact with the Web on topics including HIV/AIDS, climate change, terrorism, the Internet and society. These subjects are highly topical in today's society, but the findings of this study will apply much more widely to the uses of the Internet and Web for searching for information on a variety of topics.

A fundamental observation was that, despite popular perception, the Web is far from being a neutral source of information. It has a particular structure that steers the search in directions that may not be intended by the user and so makes some sites more accessible than others. Search engines such as Google play an increasingly important gate-keeping role that will influence the information that is found. They can shape "winners and losers" by means that are not always apparent and moreover do so in a manner which can vary according to subject matter.

-- The "visibility" of information on the Web is of increasing importance. Do people looking for research results on climate change or terrorism find themselves directed to a few top sites rather than a wide array of diverse sources? Do they encounter the most highly regarded researchers rather than marginal ones?

-- Interviews revealed that researchers' ideas of key networks, structures and organisations may not be mirrored by search engines. For example the HIV/AIDS researchers reported using national journals, charity organisations, statistics and public sector organisations but none of these appear in the top 30 search results for generic domain keywords. In addition, a number of institutions, people and other key organisations and resources failed to appear in the top 30 search results.

-- The role search engines play can vary according to topic. In the HIV/AIDS and the Internet and society domains, for instance, search engines such as Google was mainly used as an aide memoire for locating known sources. For researchers on terrorism, the search engine played a more central role in exploring the object of research and identifying relevant sites of information.

"This will be an issue not just for policymakers," Dr. Schroeder says, "but for educators, organisations involved in science and research communication, regulators responsible for access to the Web, and

citizens who are concerned with the diversity and richness of the information world around them."

Source: Economic & Social Research Council

Citation: Key science Web sites buried in information avalanche (2007, March 22) retrieved 3 May 2024 from <https://phys.org/news/2007-03-key-science-web-sites-avalanche.html>

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