How do researchers use online journals?

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Figure 1:

Last Monday I was listening to a very interesting presentation by Ian Rowlands, reader in scholarly communication in the Department of Information Studies at University College London. He and his colleagues are interested in how researchers find and use information, and how this has changed with the internet, especially for the Google Generation (people born after 1993). If you want to be part in this research (and have some fun), you can take part in the BBC Web Behaviour Test. The test will help you discover which species of web animal you are (I'm a **fox**).

In another project, funded by the Research Information Network (RIN), Ian and his colleagues are studying how researchers are using electronic journals. The findings of the first part of the project were presented and discussed in a workshop last July. The presentations are available as PDF download, and as podcast with interviews of the speakers. The findings were summarized in a paper also published last July: **Online use and information seeking behaviour: institutional and subject comparisons of UK researchers**.

In the paper, the use of Oxford Journals by 10 major UK research institutions was analyzed in the fields of life sciences, economics and history, using the server logs for the full year 2007. Some of the key findings of the study include:

One third of users access Oxford Journals outside business hours

9.7% of uses happened on a Saturday/Sunday and 30.1% between 6 PM and 9 AM. This means that about one third of users accessed Oxford Journals

Figure 2: Flickr photo by Craig Anderson.

outside typical business hours, either working late or from home (the study didn't distinguish between these two). These numbers indicate that remote access (from home, but probably also when traveling) is important for many users. This is obviously not an issue for Open Access journals, but institutions need to provide practical solutions (VPN, etc.) for subscription journals. From personal experience this remote access is still overly complicated. And these numbers also mean that librarians will not be available for support questions one third of the time.

Around 40% of sessions originated from a Google Search

In 2004 Oxford Journals opened up to Google for indexing. I didn't expect this important role that Google seems to play in finding scholarly papers, and I would be very interested in feedback from blog readers. Only 4% of sessions originated from Google Scholar (22% in economics). These results probably explain why Google Scholar hasn't seen that much development since it was launched. The search function at Oxford Journals was rarely used.

43% of users of history journals, but only 16% of users of life sciences journals used navigational tools (table of contents, etc.) provided by the journal. This statistic obviously doesn't look at users getting the table of contents via email or RSS, but it again shows that access via search now probably is more common

than via browsing.[1]

Most users spend little time on journal webpages, but return often

The average number of articles viewed per session was 1.1, and the average session time was just over 4 minutes. Users rather return often, usually via a search. These numbers indicate that journal webpages are not a place where users spend a lot of time. Unless journals change this (e.g. by more active involvement of users via comments and other social networking features, etc.), they probably can't expect to generate significant revenue from online advertising. The internet has not only dramatically changed the role of libraries, but also for journals, as users are mostly interested in single articles, rather than the journal as a whole.

The median age of articles was 48 months (life sciences), 73 months (economics), and 90 months (history)

In the life sciences only 25% of the articles were no more than 16 months old, but another 25% were over 104 months old. I would have expected that the median age of articles would be much lower in the life sciences (it was two years in a similar study with ScienceDirect2). It seems as if most papers are not accessed when they are published (in the first few months after publication), but rather as the result of a search strategy, e.g. when writing a paper.

Life sciences users rarely read abstracts on publisher platforms

This should not come as a surprise, as life sciences users typically read abstracts in specialized databases, particularly **PubMed**. But maybe Journal publishers should stop displaying papers in an abstract view, saving users and themselves some effort. PLoS journals don't have an abstract view, but the Biomed Central journals (which are also Open Access) do. Subscription journals (including Nature) typically display the abstract instead of full-text to users without subscription access, so there is also no need for a separate abstract view for them.

The number of PDF views was higher than the number of full-text HTML views (178,152 vs. 106,582). This difference was much more pronounced in economics and history journals, probably indicating that here most papers were printed out and not read on the computer.

References

Nicholas, D., Clark, D., Rowlands, I., & Jamali, H. (2009). Online use and information seeking behaviour: institutional and subject comparisons of UK researchers *Journal of Information Science, 35* (6), 660-676 https://doi.org/10.1177/0165551509338341

[1] My July 2008 blog post Do online journals narrow science and scholarship? discussed potential consequences.

[2] CIBER, Evaluating the usage and impact of e-journals in the UK. Working paper 5. Available at http://www.ucl.ac.uk/infostudies/research/ciber/