

# A personal perspective on accessing academic information in the Google era, or ‘How I learned to stop worrying and love Google’

Based on a breakout session presented at the 32nd UKSG Conference, Torquay, March/April 2009 by Claire Duddy, who submitted the winning essay in response to UKSG’s invitation to give an original and personal perspective on being ‘born native’

As a young librarian and student, it is easy to feel pulled in two directions. I grew up on Google and it is naturally my first port of call when I identify a gap in my knowledge. However, as a librarian-in-waiting, the idea of a ‘quick and dirty’ search with Google is an illicit thrill. It is almost too easy.

This paper discusses some of the most commonly perceived disadvantages of the new ‘Google era’ for students and researchers, and frames them in a new light. Issues such as the comprehensiveness and quality of web-based information are important both to those using this information and to those facilitating access to it – the librarians. Here, it is suggested that there is a tendency to overestimate the problems associated with the Google era – and to underestimate the new benefits we can reap by including web search in our information gathering strategies.



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As a young librarian, I feel pulled in two directions. I grew up on Google and it is naturally my first port of call when I identify a gap in my knowledge. This seems the norm for most of my peers.

I have even heard Google described as “an extension of my memory. I don’t have to keep facts in my head”, capturing its function as the ultimate reference tool.

As a librarian (in-waiting) even the idea of a ‘quick and dirty’ search with Google is an illicit thrill. It is almost too easy: shouldn’t there be some effort involved in finding useful, valid information? And if librarians use Google, aren’t we just undermining ourselves?

It is a difficult thing then to admit: Google is my first stop for all my information needs, whether I am researching my dinner or my dissertation.

It would seem that I am not alone. Talk of the ‘Google era’, populated by a ‘Google generation’ has been around now for several years. The ‘Google era’ is one of unrestricted access to a vast amount of information for many people. The rise

of web search engines has signalled an era where information is cheap: plentiful and simple to access.

The definition of a ‘Google generation’ has changed a great deal. John Harris, writing in *The Guardian* (2006)<sup>1</sup> supposed that the phrase was first coined to describe the behaviour of a new generation of school and university students for whom plagiarism had become a norm. Google (and its often highly-ranked Wikipedia results) took the brunt of the blame. The past few years have seen the term ‘Google generation’ metamorphose into a much broader and all-encompassing term. ‘Google’ has become synonymous with search, but for many, the ‘Google era’ is a way of describing a whole raft of developments: from search, to Facebook, to iPods.

## Google = search

Google is clearly the predominant force in the world of web search as any figures representing its

market share clearly show<sup>2</sup>. This naturally attracts our attention. However, as with the term 'Google generation', the notion of a 'Google era' implies more than a universal preference for the Google corporation's services. It is really the 'Search era' that Google has come to represent that is the fundamental change we are coping with today. This new era is characterized by easy, convenient access (via search engines) to a vast information space on the web.

For myself and my peers, Google is the obvious first step in attempting to answer any question. For many queries, it will have provided the answer within the first search result; for others, it can only give a starting point. The question about where to begin looking for information is largely a given. Surveys of users tend to confirm this preference. For example, the 2005 OCLC 'Perceptions of Libraries and Information Resources Report' surveyed library users about where they begin an electronic information search. 84% confirmed that they begin with web search engines. Among college students, this figure increased to 89%<sup>3</sup>.

### Google generation

The simplicity and ease of accessing and sharing information is imagined by many to have spawned a generation of young people characterized by lazy search skills, a lack of respect for intellectual property and a gullible willingness to accept everything they read online as Gospel truth.

Many of these aspects were delineated in the CIBER team's 2008 report<sup>4</sup> for the British Library and JISC on the 'Google Generation', or 'researchers of the future', which sought to explore the situation and dispel much of the unsubstantiated 'myth' surrounding the behaviour and habits of this group. The report is long and comprehensive and makes interesting reading, but perhaps what is most clear after reading it is that it is not so simple to generalize about a 'Google generation'.

One of the key things to take away from work in this area is that, upon examination, many different types of people behave in similar ways. I suspect that the term 'Google generation' is a misnomer, since its associated behaviours do not only apply to those of a particular age group. (Other agree, such as Ashling: 'We're all members of the Google Generation'<sup>5</sup>.) Rather, they seem to apply universally at their broadest level and, in relation to the

internet, to those most familiar and active in their use of computers.

Various problems are identified by those who feel that the Google era is an unwelcome development. They range from practical points to sweeping concerns for our intellectual development and cognitive abilities (see Appleyard<sup>6</sup> and O'Brien<sup>7</sup>). However, the most commonly identified problems with web search can often be exaggerated and do not form compelling arguments for avoiding Google and its contemporaries altogether.

### Google problems?

One such concern centres on the worry that 'Googlers' will assume that what they are searching is exhaustive. It is often pointed out that there is a lot of material that Google is not indexing – the 'deep web' or information protected from the public domain by its publishers.

This deep web is made up of information in many different forms. Search engines use crawlers to scan across and index web pages and they can be stopped in their tracks. For example, since they use hyperlinks to navigate the web, any unlinked content will be missed. In addition, those in control of writing websites can add HTML code to exclude search engine crawlers and prevent them from indexing their content. In the early days of web search, only HTML content was indexed; now a great number of formats can be crawled and indexed.

Uncovering academic information can, however, come up against other barriers. Much academic material is available to users on a subscription basis; they need to be authenticated before they can gain access. If material lives behind a username and password on the web, a search engine crawler would need to fill in these details to get to the material to index it. Another problem arises where academic information is often located within databases that users must query. Normal web search engine crawlers cannot query these databases to get to their results. These results are often presented to users with a dynamic URL – one that changes for each query and disappears after it has fulfilled its purpose. Material like this can only be indexed by search engines if separate, stable URLs for its location also exist.

However, we need to contrast these issues with the benefits of Google: of course it is not indexing

everything on the web, but it is indexing a lot. No tool for uncovering academic information is entirely comprehensive in its coverage. Google and other search engines are ideal tools for uncovering material that lies outside information indexed in more traditional subject-based databases, such as blogs or newer open access scholarship. In addition, there are very strong incentives acting to encourage initiatives designed to expose more of the web's contents to search engine crawlers. For the commercial search engines, these incentives are most obvious, as they compete with each other to increase the size of their indexes. Libraries, too, pursue initiatives of their own<sup>8</sup>. It is unquestionably beneficial and desirable to have academic information exposed in this way – both for those searching for it and for those publishing it. Google Scholar is of course an initiative that addresses these issues head-on.

One of the other most common issues raised when it comes to academic research in this area (and particularly by librarians and information professionals, as this is very much part of their expertise) is that the information on the internet is too vast and unco-ordinated to be trusted. The ability to assess information in terms of relevance, quality and context is an important skill and a key component of what is termed information literacy. It is especially important online, given the sheer volume of the material available, and the democratic nature of net publishing.

Librarians have always used their particular skills and experience to help assess information along lines of quality and relevance to particular subjects. Part of the discomfort with the 'Google era' is that it makes it so easy for anyone to have access to such a wide range of facts, with no seal of approval (e.g. inclusion in a peer-reviewed journal) and no intermediary (librarian).

It is difficult to explain exactly how one decides what is useful and valid and what is not – but this applies to the information turned up by any technology, and these evaluative skills have always had to be learnt. The issue here is really with the variable quality of information found online; Google is in the firing line only because of its own success. However, it is important to realize that it is practice in navigating the WWW that helps develop the skills needed to assess information. This practice is certainly something that is easily achieved, and having to sift through such a large volume of material of variable quality is perhaps

the best way to develop information evaluation skills.

In addition, the increasing read-and-write nature of the web, with its new emphasis on collaboration and user contribution, can only be helpful: users who understand that content is often created by people like themselves can instinctively apply some caution in how they approach what they read online.

There is something of a paradox in the assumption that the 'Google generation', whoever they may be, are stupid enough to believe that the answer to every question lies in the first two pages of search results, while simultaneously being able to multi-task and master a huge variety of technology with no problems. We have to remember that the popularity of Google searching itself is not an indicator of its being used for all information-seeking behaviour – and certainly not as a one-stop-shop for academic research. There is no reason to assume that all users who do not look beyond the first page of search results are at risk of using false or incorrect information.

Anecdotal evidence from my own peers and an examination of my own behaviour tells me that most Google searching is for basic facts: dates, names, places, citations half-remembered. Google is by far the quickest, simplest and most convenient way to locate these facts. Ultimately however, it's much the same as trekking to the library to consult a few dictionaries and encyclopaedias. Of course, the risk of inaccurate information appearing on the web will never be entirely mitigated: it is the necessary corollary of a system that allows free publishing of information on such a grand scale. But we can move to educate users that some information must be taken with a pinch of salt.

It is important to remember that Google doesn't create the information it locates and indexes. It is only a search engine and so only a tool. I can use it as a student to help with research, but equally I should be able to approve of it as a librarian. Why would I shun a technology that allows vast amounts of information to be indexed and recalled almost at the touch of a button?

Can we not now reconceptualize some of these 'problems' as opportunities? If librarians view Google searching as a valid means of accessing academic information then we can start to concentrate on helping the users who turn to it automatically. Sometimes the best advice will be to look elsewhere: at the very least, Google Scholar might be a more appropriate tool (but with a

familiar and similarly easy-to-use interface) and sometimes users need to be redirected to more traditional sources of information. However, there is no requirement that we view things in such 'either/or' terms: the choice is not between Google and libraries. Both have their strengths and weaknesses.

Librarians who accept the importance of Google in their users' academic lives are easier for users to relate to. They can use their position to help educate users in how to search better, and can keep reminding and helping users with the need for constant evaluation of information from the web (without sounding like they just don't trust that 'series of tubes'.) They can also help to encourage research that takes in a wide variety of sources and types of information.

Indeed, there is much to Google itself and the so-called 'Google era' that we can embrace as librarians. Applying the simple Google search and excellent ranking mechanism to the academic world via Google Scholar is creating a new wave of students who are finding they can have the best of both worlds. Librarians need to keep in touch with these developments and enhance them (for example, by providing local library linking within Google Scholar). As ever, user education is key, but also important is a positive attitude towards these services. We cannot afford to behave as if this is all 'either/or'. We can promote internet searching and Google alongside more traditional literature searching and A&I databases; the use of a wide range of searching skills and information sources can be encouraged and developed.

The mistake would be in assuming that keeping Google as a first port of call means that for a 'Google generation' it becomes the *only* source of information. Academic research has always involved the need for many sources and many tools. The web is a source of information we cannot ignore, as librarians or researchers: Google indexes thousands of pages every day that are outside the realms of 'traditional' literature and academic discourse.

My own research and study would be seriously lacking if it did not include other dimensions – what is called 'grey' literature, or information I can chase through blogs. Or, the increasing volume of high quality, openly accessible scholarship that is still waiting to be noticed by traditional A&I providers or the gods of the 'impact factor'. There is information out there that doesn't exist anywhere else. Google is a superb tool for locating it.

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