

Opinion Pieces

In Praise of Yellow Pages

What is the point of referencing, and why do students find it so difficult?

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It has been said that 'Google Makes Us Stupid' (Carr, 2008), and certainly when it comes to referencing academic work it is clear that the ready availability of Internet search engines means that some students see no point in providing the source of their information. In some cases this is in the hope that tutors will not recognise that the work is plagiarised. In others it is that they assume the reader could also use Google to find the document themselves if they so desired. Or maybe it is because they just do not "get" the point of referencing. This opinion piece explores some possible reasons for this, and also considers why many students find it difficult to reference even if they appreciate its purpose.

We have yet to reach the stage foretold in the science fiction short story 'Answer' (Brown 1954) where all the computers in the entire universe are connected together to answer the ultimate question "Is there a God?" with the response "Yes, *now* there is a God!" followed by a bolt of lightning that fuses the circuits to prevent humans undoing what they had just done. But maybe we are not so far off. Google has made considerable effort to digitise information (the Google Books digitisation project being the one area where issues of copyright have hampered their progress) and development of the semantic web promises a more "intelligent web" that students will undoubtedly embrace, but with even further detachment from and lack of understanding of what "is under the bonnet". Information in the "deep web", behind paywalls or security logins and in scanned document images, databases and "big data" (where extraction of information requires sophisticated tools and knowledge), will remain beyond the scope of search engines, but it is often this information that students need to access as part of their academic studies.

Referencing is a high level skill that many students at university will never attain, in the same way that others will never learn to drive no matter how hard they try. Understanding the difference between assumed (tacit) knowledge and being explicit by using a reference is a big issue (Sternberg and Horvath 1999). For example, deciding whether a reference is needed to Pele or Messi, depending on the audience, is something many students would not even consider. Students are also mostly stuck in the "NOW" and cannot appreciate the temporal aspect of knowledge. Those of us who use jokes from Monty Python or The Hitchhiker's Guide to the Galaxy in our lectures are aware how tacit knowledge changes over time, and are now having to provide citations for the current generation of students, or move on to South Park or whatever is trending in Twitter.

Simple referencing is something many students do not get, even though a basic concept of the World Wide Web that they use every day is hypertext (cross-referencing the web). Students often think that "cut and paste" is necessary, whereas all that is needed is a reference to the source. Students who use automated referencing tools, without an understanding of the purpose of referencing, often cite material that is inaccessible to anyone but themselves, and many confuse the author with the publisher or other information

provider. Most lecturers will have examples of students who have given a reference to Wikipedia.org without specifying which bit of Wikipedia they meant. A single entry in their bibliography to "the Internet" would be just as helpful.

Even students who appreciate the point of referencing find it difficult to do it well. Identifying the correct format for names (in particular extracting the surname) is a significant problem for students from some countries. I use my name as an example in lectures (Stoneham, R. J.) in order to minimise the number of variations on "Ray, S." I get, but I am reluctant to correct students who greet me as "Dr Ray" at their first meeting. Perhaps this is something guidebooks to studying in the United Kingdom should consider, and maybe it should be part of induction for all university students from countries without the British convention for personal names. Trying to find a resource to refer students to, to help them with this aspect of referencing is something where my own research skills using Google have failed. If anyone knows of a suitable resource to help with this, please let me know.

The concept of citing the date accessed for web pages is easy to convey to students, although those who put the time of access to the nearest second are probably missing the point. However, referencing web pages where there is no named author or date information is a particular issue for students who are trying to reference properly. Blindly following rules, such as Anon. for anonymous, and n.d. for no date, can lead to masses of irrelevant detail. URLs that wrap around several lines of text, or which have been copied incorrectly, are a particular issue for web references.

Once students can identify the surname of the author and the date of publication, there is then the problem of them appreciating why listing the bibliography in alphabetical order by surname, and then by date, is important. I have often seen students find their name on the class register by starting at the top and working down until they find their name, even if it begins with X, Y or Z. Having all the websites grouped together under the author "Anon." is not very helpful for this.

Lecturers and librarians know that many students have little idea of the difference between a reference and a bibliography, despite there being clear guidance provided throughout their academic career. Many students never "get it", but at least it is easy to refer the student to the appropriate guidance for whatever referencing system they should be using.

Automated referencing tools in the hands of users who do not understand the purpose of referencing can lead to strange results. Students who put 'Data Protection Act' as the author and then find the reference listed under the surname "Act", and do not question it, is just one example. Automated indexes are another example where the use of a tool can lead to useless output in the hands of someone who does not "get it".

In conclusion, maybe we should all bemoan the loss of the printed phone book, which gave those of us born last century a sense of the importance of knowing the alphabet, an understanding of why alphabetical order matters, skills with common search techniques and an appreciation of the different formats for names. The loss of the printed Yellow Pages has also meant a loss of common understanding of how things can be categorised and

organised. To quote Bowman (2008), maybe 'Stupid Makes Us Google', or should it be 'Google Makes Us Google?'

References

Bowman, J. (2008). 'Is Stupid Making Us Google?', in *The New Atlantis*. [Online]. Available at: <http://www.thenewatlantis.com/publications/is-stupid-making-us-google>. (Accessed 19 March 2013).

Brown, F. (1954). 'Answer', in *Angels and Spaceships*, Dutton. [Online]. Available at: <http://www.roma1.infn.it/~anzel/answer.html>. (Accessed 19 March 2013).

Carr, N. (2008). 'Is Google Making Us Stupid?' in *Atlantic Magazine*. [Online]. Available at: <http://www.theatlantic.com/doc/200807/google>. (Accessed 19 March 2013).

Sternberg, R. J, and J. A. Horvath (1999). *Tacit Knowledge in Professional Practice: Researcher and Practitioner Perspectives*. Mahwah, NJ: Lawrence Erlbaum.

Bibliography

Bemoan, <http://www.thefreedictionary.com/bemoan> [Online]. (Accessed 19 March 2013).

Big Data, <http://www-01.ibm.com/software/data/bigdata/> [Online]. (Accessed 19 March 2013).

Deep Web, <http://www.internettutorials.net/deepweb.asp> [Online]. (Accessed 14 March 2013).

Google Books Digitization Project (2013), *The Chronicle of Higher Education*. [Online]. Available from <http://chronicle.com/article/Google-Begins-to-Scale-Back/131109/> (Accessed 19 March 2013).

Semantic Web, <http://semantic-web-journal.org/sites/default/files/swj51.pdf> [Online]. (Accessed 14 March 2013).

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