Education by Google search: popularity vs. truth.

A lot of attention in the e-learning industry focuses on the push side of information and knowledge. We design the content and the delivery systems and push them out to learners. There is less focus on the pull side; the tools that people use to get knowledge or skills quickly. Although there are excellent social learning platforms and intranets in some workplaces, for the majority of learners there is only one tool that they go to again and again when they need quick information or knowledge...Google's web search engine.

The ability to have knowledge at one's fingertips like this is great, but is the information they get accurate and valid? This is particularly important when children and students use it a lot as part of their education.

Nowadays kids don't tend to reach for encyclopaedias and dictionaries the way earlier generations did. Google has a dictionary, so kids type in a misspelt word and if is incorrect, the correct spelling and definition automatically comes up. For homework, they simply type the set question into the search box and see what comes up. However kids are not skilled at determining which webpages in the search results are more likely to be accurate or valid. What does this mean for their education?

Balancing popularity and reputation
Google search tries to strike a balance between the popularity of the page (how many people access it) and the reputation of the page (a rating on how up-to-date, valid and correct the information is likely to be). But these are not the only things it is looking for; the exact search algorithm they use is a trade secret, but it is understood to be made up of at least 200 different components.

Popularity
If you follow the 'wisdom of the crowd' approach, a popular page, one that lots of people are accessing, means it is likely to contain correct and valid information. YouTube and Yahoo both score highly on this component, so a lot of searches display relevant YouTube videos or links to threads in Yahoo's answers discussion forum (uk.answers.yahoo.com).

The trouble with popularity as a tool for educational resources is that just because a page is popular, it may not necessarily contain completely true and valid information. When people type questions into Google search, Yahoo answer forums are often displayed in the results. For example, 'what is the difference between vaporisation and evaporation?' gives links to forums where users have asked similar questions. In the forums other users try and answer these questions, then all the answers are rated by the users and the 'best' one is the one most users like. This may seem like a validation technique on the truth of the answer, but in fact it may be just one or two people's view on the validity, since very few users rate the answers. So when students and children use these sites as reference material they may actually just be getting half-truths.

Interestingly, a new search engine called Buzzsumo, who have Steve Rayson MD of C&G Kineo on their board, completely focuses on popularity. Their engine looks for how often a page is shared via social media such as Facebook, Twitter and LinkedIn. The concept is that people are more likely to share 'good' content, so the more a page is shared the better, or more interesting, it is. However Buzzsumo's real power is as a content marketing tool; to see what is shared and by whom. If an organisation knows what kind of content is resonating with

people, they can adapt their own content to pick up on that and so increase their reputation and ultimately their financial success.

Reputation
Another component of Google's algorithm is believed to look at the domain name and rate it for its reputation for hosting correct and valid information. So for example, Wikipedia and the BBC score high on this component. However Encyclopaedia Britannica does not because all its information is behind a subscriber-based login.

Well-curated content on certain topic areas are also likely to be rated highly for reputation. These may be wikis or personal hobby pages on a very tightly defined subject area. The algorithm is believed to measure the level of curation by how often the content is updated, how long visitors stay on that page and how many other sites link to it. All these factors indicate that people regard it as a useful and valid reference site.

Search education
If children and students are using Google for their education, ideally they should be getting valid and true information. However the search results they do get are a mix of popular and reputable webpages and it is up to them to determine the truth.

Worryingly, there is a general lack of knowledge among children about how to validate the search results they get. This should to be addressed by the search engines themselves. Google does have pages helping you use its search engine, but given its growing use as a research tool for education, perhaps there should be dedicated 'how to validate search results for education' page for children and students?

Secondly, we need more educational resources on 'how to validate personal internet research'. Then teachers can use these resources to deliver lessons to help children make the best use of their time spent on internet research for homework.

Richard Naish
Lead learning designer

First published in June 2014 in e.learningage magazine
http://www.elearningage.co.uk/home.aspx