



## GOOGLE GENERATION RESEARCH AT UNIVERSITY COLLEGE LONDON



The virtual revolution is in full swing and it is transforming many aspects of our lives: the ways in which we socialise, shop, entertain ourselves, obtain knowledge and information, manage our health, and interact with public services, have all undergone profound change.

These transformations have taken place in a remarkably short period of time, leading many to wonder whether today's children and teenagers, the 'Google Generation', who have little or no recollection of

a life before broadband, mobile technologies and ubiquitous search transformed our lives.

The really big question that fascinates us all is whether this new generation will turn out to be fundamentally different from older generations in their attitudes, expectations and behaviour? Will they even 'think' differently perhaps?

These are the questions driving CIBER's Google Generation Research programme.



## WHO ARE THE GOOGLE GENERATION?

The 'Google generation' is a popular phrase that refers to a generation of young people, born after 1993, that is growing up in a world dominated by the internet.

*Most students entering our colleges and universities today are younger than the microcomputer, are more comfortable working on a keyboard than writing in a spiral notebook, and are happier reading from a computer screen than from paper in hand. Constant connectivity – being in touch with friends and family at any time and from any place – is of utmost importance.*

According to Wikipedia, the phrase has entered popular usage as “a shorthand way of referring to a generation whose first port of call for knowledge is the internet and a search engine, Google being the most popular”. This is offered in contrast to earlier generations who “gained their knowledge through books and conventional libraries”.

## GOOGLE GENERATION PHASE I

### BACKGROUND

In January 2008, CIBER published the findings of a study jointly commissioned by the British Library and JISC: *Information Behaviour of the Researcher of the Future*. This ground breaking research revealed for the first time that much of what we had assumed about the information-seeking behaviour of 'digital natives' or the 'Google Generation' was so much hot air. The report attracted international press coverage and was quickly translated into Spanish, Portuguese and Russian. It clearly struck a nerve.

The aim of the study was to profile the information-seeking habits of today's teenagers, those born from 1993 onwards, who have grown up in a world of ubiquitous search, rich and involving multimedia, high bandwidth connections to the internet, incredible choice of information, communication and entertainment media, affordable mobile devices, games consoles and the like. Is there any evidence that this generation has different aptitudes, attitudes, expectations and even different communication and information literacies? If so, what are the implications if young people bring these values with them into the way that they use libraries and information services as they enter higher education or research careers? Only time, of course, will tell, but the research exploded much of the lazy and simplistic thinking that attaches to populist labels like 'digital natives', 'Net generation', 'Millennials' and so on.

Our thinking needs to be much more nuanced and more sophisticated than this: the Google Generation study found that the differences *within* generations are sometimes as big or greater than the differences *between* generations. Like the rest of us, young people show enormous diversity in their tastes, preferences and behaviours.

# GOOGLE GENERATION PHASE I

## KEY FINDINGS

CIBER approached the research for the *Information Behaviour of the Researcher of the Future* project by systematically analysing the literature on young people's use of new technology over a thirty year period and by conducting an inter-generational experiment to see how people of different ages used educational web resources.

A number of consistent themes quickly emerged:

- ★ the information literacy of young people, has not improved with the widening access to technology: in fact, their apparent facility with computers disguises some worrying problems
- ★ internet research shows that the speed of young people's web searching means that little time is spent in evaluating information, either for relevance, accuracy or authority
- ★ young people have a poor understanding of their information needs and thus find it difficult to develop effective search strategies
- ★ as a result, they exhibit a strong preference for expressing themselves in natural language rather than analysing which key words might be more

These points relate both to the current use of the internet by young people and, a technology generation earlier, to their use of early online systems and CD-ROMs. There is little direct evidence that young people's information literacy is any better or worse than before. However, the ubiquitous use of highly branded search engines raises other issues:

- ★ young people have unsophisticated mental maps of what the internet is, often failing to appreciate that it is a collection of networked resources from different providers
- ★ as a result, the search engine, be that Yahoo or Google, becomes the primary brand that they associate with the internet
- ★ many young people do not find library-sponsored resources intuitive and therefore prefer to use Google or Yahoo instead: these offer a familiar, if simplistic solution, for their study needs

The big question raised above is whether, and to what extent, the behaviour, attitudes and preferences of today's Google generation youngsters will persist as they grow up and some of them become academics and scholars? It is very dangerous to stereotype a whole generation and, in a real sense, we are all Google generation now: the demographics of internet and media consumption are rapidly eroding this presumed generational difference. The reality is that more people across all age groups are using the Internet and Web 2.0 technologies widely and for a variety of purposes. The young (not just the Google Generation but also Generation Y, the next one up) may have been the earliest adopters but now older users are fast catching up ... the so-called Silver Surfers. In many ways the Google generation label is increasingly a diversion: our research finds that it is not even accurate.

## FURTHER READING

*The Information Behaviour of the Researcher of the Future*. British Library, January 2008.  
[Available online at [www.bl.uk/news/pdf/googlegen.pdf](http://www.bl.uk/news/pdf/googlegen.pdf)]

Ian Rowlands, David Nicholas, Peter Williams, Paul Huntington and Maggie Fieldhouse, Barrie Gunter, Richard Withey, Hamid R. Jamali, Tom Dobrowolski and Carol Tenopir, *The Google Generation: The information behaviour of the researcher of the future*, *Aslib Proceedings*, 2008, Vol. 60 No. 4, pp 290-310.



## GOOGLE GENERATION II

### BACKGROUND

CIBER is currently working with BBC2 and BBC Lab UK to roll out an online experiment across the nation (and beyond) to find out more about searching and viewing styles and, especially, age-related differences in information-seeking behaviour. The experiment went live at the end of BBC 2's groundbreaking *Virtual Revolution* series, on 20 February, and is generating massive interest (see [bbc.co.uk/virtualrevolution](http://bbc.co.uk/virtualrevolution)).

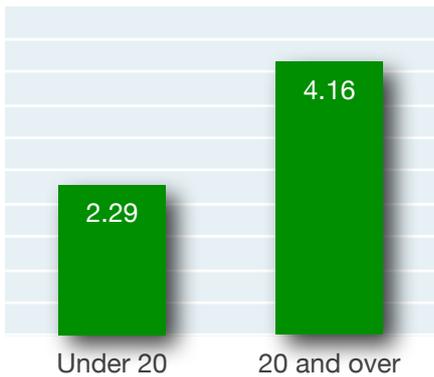
### KEY PILOT STUDY FINDINGS

Some very challenging findings came out of the extensive piloting for the international online experiment. They reveal some profound differences between younger and older members of the general public when given a set task: find the answer to the question "Where did the first commercial flight land?" using a search engine of their choice.

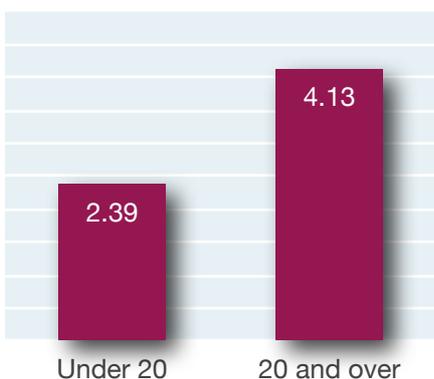
On average, older respondents took a lot more time (3 minutes 34 seconds) combing the internet for information than those aged under 20 (38 seconds). They performed almost twice as many searches, visited almost twice as many domains, and viewed two and half times as many pages. The average time spent 'reading' each page was 20.4 and 7.5 seconds respectively for the over- and under-20s!

The knee-jerk 'digital natives' interpretation of these findings is obvious: young people are whizzes at technology, and searching information is almost as natural as breathing to them. However they were much more likely to enter a search statement that bore a close resemblance to the question: making them, perhaps, the 'cut and paste' generation?. Also, importantly, after they had answered our question (factual, but a more difficult one than one might imagine), respondents were asked to rate their confidence in their answer on a ten point scale, where 10=Highly confident. Despite their speed and apparent facility, younger people were very much less confident (mean rating=2.52) in their answers than older people (5.99). This raises questions that we urgently need to find answers to about the information skill of the Google Generation.

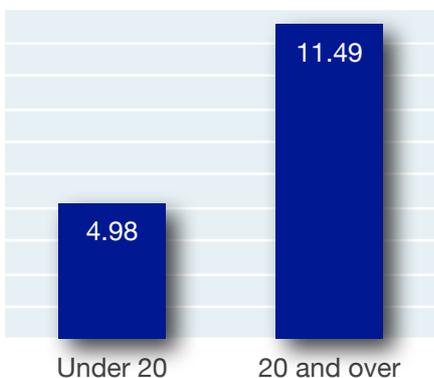
### Number of searches



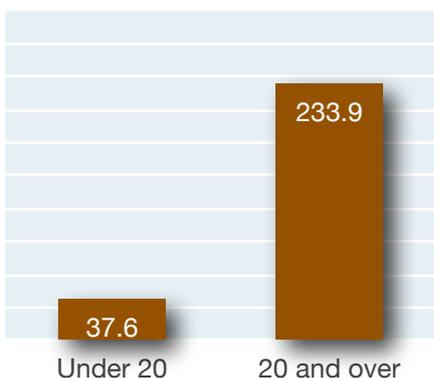
### Domains visited



### Pages viewed



### Time taken (seconds)



# WHAT KIND OF WEB ANIMAL ARE YOU?

TAKE THE CIBER TEST AND FIND OUT

CIBER has developed an online experiment with BBC Lab UK to find out more about how the web behaviour of the general public. The test explores serious themes but presents them in a fun way. Based on the time taken to complete a search, their multi-tasking ability, and the importance they attach to social networking, respondents are assigned a 'web animal':



## WEB BEAR

Web bears browse the internet at a leisurely pace. Like real bears, web bears tend to be solitary animals and highly adaptable multitaskers, able to do several things at the same time.



## WEB ELEPHANT

Web elephants browse the internet at a stately, methodical pace. They are highly social and adaptable and well-suited to carrying out several different tasks at the same time.



## WEB FOX

Web foxes are great at finding information quickly. They are highly social animals, and highly adaptable multitaskers, able to do several things at the same time.



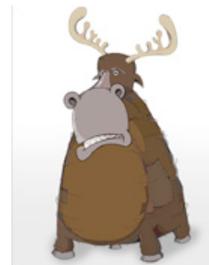
## WEB HEDGEHOG

Web hedgehogs are careful internet users, taking their time to find the right information. They prefer to go it alone, rarely relying on social networks and are specialised web users, best suited to concentrating on one thing at a time.



## WEB LEOPARD

Web leopards are adept at getting information from the internet very quickly. The web leopard likes to go it alone when looking for information, and they are best suited to performing one task at a time.



## WEB ELK

Web elks take their time finding exactly the right information. They are social creatures but perform best when they focus on one thing at a time, rather than trying to multitask.



## WEB OCTOPUS

Web octopuses surf fast and when looking for information they tend to go it alone rather than rely on social networks. Web octopuses are highly adaptable and show a range of sophisticated online behaviours, successfully keeping track of several different things simultaneously.



## WEB OSTRICH

Web ostriches are speedy surfers and take full advantage of social networks when looking for information. The web ostrich is a true specialist. They might not be at risk from lions when browsing the web, but they are still very focused and do best when they concentrate on one task at a time.



## TAKE THE TEST

You can find out what kind of web animal you are by logging on to

[tinyurl.com/ciber-animals](http://tinyurl.com/ciber-animals)

# FUTURE RESEARCH

## UNDERSTANDING WEB BEHAVIOUR

The information science of how people behave on the web is a long way behind the application curve: as a society we are rolling out major investments in online systems with little or no real understanding of how people actually consume and use information.

Society is being fast-forwarded people into cyberspace, and nobody knows what the consequences will be.

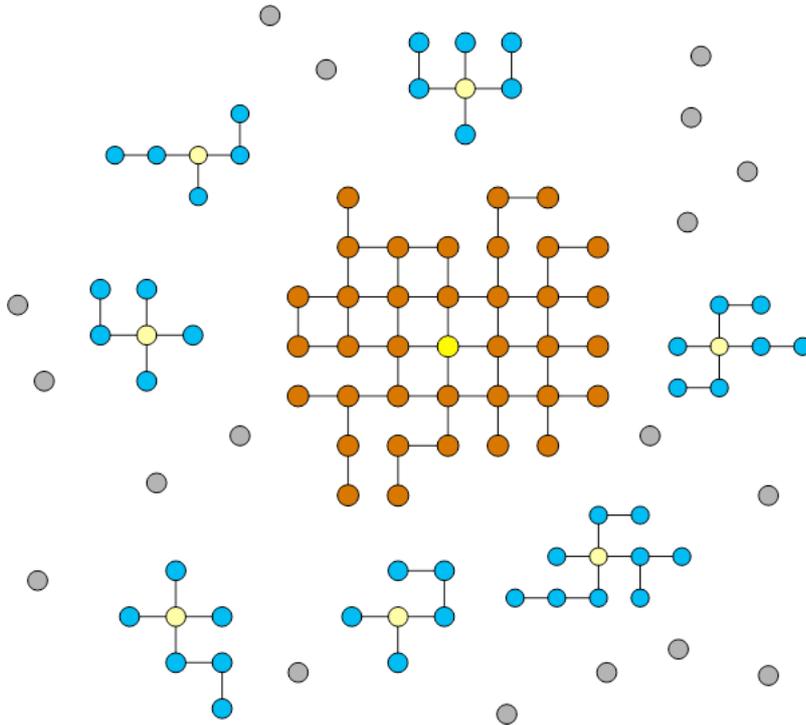
In the second phase of our research CIBER is addressing some fundamental questions, especially focusing on age-related differences:

What do people trust online and where do they first turn for information? Which brands deliver credibility in 2010?

To what extent do people assess information relevance on the basis of the content of search postings or blind faith in the search engine itself?

To what extent do working memory and multitasking abilities influence and shape the ways we work online when searching for answers to questions?

Do people behave differently online when given a set task and are there fundamental underlying patterns, archetypal web behaviours, that all of us share?



## CONTACT US

CIBER  
Department of Information Studies  
University College London  
Gower Street  
London WC1E 6BT

+44 20 7679 2477 [David Nicholas]  
[david.nicholas@ucl.ac.uk](mailto:david.nicholas@ucl.ac.uk)

+44 20 7679 7205 [Ian Rowlands]  
[i.rowlands@ucl.ac.uk](mailto:i.rowlands@ucl.ac.uk)

[www.ucl.ac.uk/infostudies/research/ciber](http://www.ucl.ac.uk/infostudies/research/ciber)