



# Technology

Friday, January 18, 2008

## The 'Google generation' myth



A bunch of sources are reporting on a [University College London study](#) into how people born after the arrival of the internet - sometimes dubbed the Google generation - handle information. The top line is, they're not very good at it.

Although skilled at quickly searching for information they are bad at processing it, the study concludes, mentioning their "impatience in search and navigation, and zero tolerance for any delay in satisfying their information needs". This

worries the researchers who say libraries and educational institutions have to react.

An important issue. But I am more interested in knowing what, if anything, the Google generation are better at. It seems fair to say that their unprecedented technological environment will have made them think in different ways. So what abilities does growing up in a connected world enhance?

My first guess is that one example is multi-tasking - since the internet and communication technologies encourage you to stretch yourself across many activities.

Can any readers shed any more light on what the "Google generation" may excel at that older folk can't do so well? And what might newborns today - the "Web 2.0 generation" perhaps - be able to do that oldsters born before the web never will?

*Tom Simonite, online technology reporter*

Labels: [web2.0](#), [web3.0](#)

Posted by Tom at 5:22 PM | [Permalink](#) | [del.icio.us](#) | [digg this](#) |

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perhaps they would be more tolerant of new things and be less afraid of different scenarios. After all, you never know what kind of page you're going to see until you click on a link. Another possibility is a greater ability to see patterns in usage and function as they come across many and varied online environments.

By  Eric on [January 18, 2008 7:19 PM](#)

The internet is by far too young to say anything reliable about changing ways of thinking. I doubt any sensible comments can be made about the mental state of "the Google Generation". They are, quite literally, a generation of children.

By  Wii on [January 18, 2008 9:06 PM](#)

I would think that multi tasking information would be powerful enough in itself. picture it as a multi-core CPU vs a single core CPU, the multi-core can do more at once.

The more we stretch ourselves to do more at once the greater our capacity for information processing. One thing they have found is that teens who play at least one hour a day of a FPS have greater reflexes and eyes last longer against those who don't.

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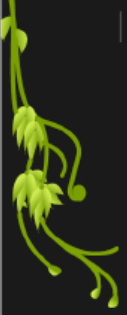
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How to achieve the UK's emission targets for 2050?

Climate change: Join the debate

We are more use to change in the world, taking on new technologies and ideas faster than previous generations have, which is good considering the rate at which technology changes.

By  [Lostpinky](#) on [January 18, 2008 9:07 PM](#)

I'm challenged in information processing and from the library age. It use to be impossible for me to find info that i needed. Now that i have the internet to use i can find things i need when i need them. It requires less hunting skill. I would say that likely the internet is more of a moderator than a killer. It closes the gap between those who would otherwise be gifted and those who would be challenged. From my perspective a fair trade indeed! It may not give skill but it give opportunity.

By  Anonymous on [January 18, 2008 9:10 PM](#)

I think some of the characteristics the researchers found apply not just to kids born after the arrival of the internet, but also those of us for whom it's now the primary information source.

I'll admit, now when I need to know about something, my first reaction is to google it, and then scan rapidly through the most promising of the resulting pages.

One result of this is that there are fewer authoritative resources - in a way I've let page-rank(tm) be the first authority filter.

By  [ac](#) on [January 18, 2008 10:04 PM](#)

What on earth does "bad at processing" mean? That is way too vague to have any meaning at all.

If you consider "processing" to mean the retention of information - then yeah - I'm not surprised the younger generation isn't memorizing and retaining as much of what they read.

If it means comprehension then that is a whole different issue, and a serious one.

By  Anonymous on [January 18, 2008 10:04 PM](#)

They may be better at tuning things out rather than multitasking them in. The zero-tolerance for delays suggests they want the fastest and most convenient technology, and see "slower" processes as backward, or at least are unwilling to explore them.

If anything, I think the Googlers and the video game generation may have a harder time distinguishing between reality and electronic-enhanced reality, or even between what's real and what's fake.

By  Anonymous on [January 18, 2008 11:22 PM](#)

I suppose I am in your "google generation".  
I don't think multi-tasking is our skill...I don't think it is anyone's skill really. What is different, and perhaps technologically evolutionary (?), is the way we search for info.  
An experienced "googler" will know how to search by imagining what they expect to find, before they search.  
You can't search for what you want anymore because of the "size" of the internet. You really do have to imagine what you're looking for before you get it...and adapt your search for that.  
For most, a simple search in google will get you what you want. Anything more than simple and you have to think before you look. Google's metasearch may not always help.  
Anon at 11.22pm is right to a degree. It's not the zero-tolerance though, it's the quick realisation that the search and the result isn't what they're looking for.  
LI

By  [Chris](#) on [January 19, 2008 12:24 AM](#)

I guess I also class as a member of this "Google Generation" (18 and been using Google for information as long as I can remember) and I agree with Chris.

I'd like to add on the multitasking idea - being able to remember progress in each task seems more like it. This links to the delay tolerance idea - when something is taking a long time, I can switch to another task (such as reading a New Scientist article) and know that when I've finished and return, it will be done. I certainly can't multi-task.

In general, I think better at finding information, remembering short-term progress in various tasks, learning new technology, and filtering out the

important from the unimportant.

Though I imagine learning new technology has always been easier for the young.

And I don't have a harder time distinguishing between what's real and what's fake, nor does anyone I know, and I'm tired of hearing comments like that.

By  Dave on [January 19, 2008 12:38 AM](#)

As a 'google generation' teenager, I'll offer my 2 cents. To me, the growing up with the internet is by far making the youth impatient.

I play online games aswell, and hearing the voice chat of other teams when a bit of 'lag' (latency in a game's connection) boy do they go off. Swearing and carrying on. Its abit silly but I think that this is becuae we grow up now in a world that if the information isnt instant, its too slow.

Easily it has improved multitasking. Even now I am writing this, listening to my music, watching tv, I have a few msn chats currently active that I can continue a conversation in without being jumbled, and all this without breaking a mental sweat. Im sure many other kids are doing more at once.

To add from below me, eric said we are more tolerant, and I agree. Google and the Internet has made us more adaptable. Especially in technology and life. I mean, I can basically pick up any technology equipment and know the basics to operating it in the first few seconds.

But it has made us retain less information. By far. But this can't just be blamed on the internet. We are, this day, say, exposed to more adverts to. So we need to retain less and chose carefully what we do retain. Becuase there is so much. I find studying alot harder that my parents describe it. They say they used to get the book, highlight and bookmark it, and thats studying. I have to read it many more times, and focus on the content alot more than they seemed to have to.

But to me at least, I feel that that isnt a bad thing. Although I don't retain as much, I can get the information again so much easier then say someone earlier in history. Not to mention I can even just get the info off my phone, or iPod etc. We dont retain as much now because we dont need to. Its human laziness at its finest, and cant be blamed on google.

By  Anonymous on [January 19, 2008 2:18 AM](#)

"Bad at Processing" means they are likely to ask a question like: "What does 'bad at processing' mean?" Thank you for bringing it to our attention.

By  Texas Bubba on [January 19, 2008 2:26 AM](#)

The google generation knows everything. If they didn't, they'd google it. Knowing everything allows them to do anything. They are a generation richer and more accomplished than all who came before them.

By  Anonymous on [January 19, 2008 2:35 AM](#)

Googling info is over played. The world has changed, how many people grew up with so many wives tales that almost everyone believed.. for e.g  
 1) Cracking your knuckles gives you arthritis (no evidence for that)  
 2) Swimming on a full stomach and you will drown (no evidence of this)  
 3) Eating carrots improve vision at night (WWII propaganda to hide British radar)

And many more, before the internet, youd have almost no chance to disprove all these because the work involved in staggering, now it???'s nothing.

However, another myth that continues to exist is that knowledge equates to intelligence. Which is completely nonsense. If albert enstien grew up in a remote village with no books our outside information, he would still be a genius. Knowledge just allows you to do something new that no one else has done rather than working out ever y step that???'s already been done by all the generations before us. What the internet lets us do is spend far less time memorizing and researching information and more time using it. Better communication between people has always improved productivity. Nothing has changed, but we all like to think this is something new, for millennia scientists have collaborated to share knowledge. No single person can do anything of interest, its our pooling of knowledge that gives us everything we see around us. Should you take all technology away, in a few generations we would be back to cavemen. Take for example a vaccine trial.. you could have every country perform one, come up with their own results or you can pool that information and save a lot of time. The internet is just about as efficient as we can get. I can imagine having libraries in your town was exactly the same sort of revelation as the internet. If the information is not available, it???'s not

available, you could never know about much. Before that, the written word, its a truly ground breaking development, more so than the internet. The internet is just the first global real time information resource. Never before has so many people pooled resources, and exactly the same thing will happen. Scientific knowledge will increase exponentially due to the time saved not having to do something that 10 other people already have done to see what the result is.

By  Daniel on [January 19, 2008 8:24 AM](#)

To Daniel above...Well said.

By  Tunk on [January 19, 2008 8:52 AM](#)

Daniel, that comment was so spot on. You have an impressive grasp of the "bigger picture".

By  Franchesca on [January 19, 2008 5:44 PM](#)

I agree with Will, and I also have nothing but contempt for the ever increasing number of 'scientists' who interview 25 people and then make claims in the order of: "Our research clearly proves that..."

Maybe a gigantic study in ten years time may shed some light on the matter, the rest is just academic masturbation...

By  joost on [January 19, 2008 8:07 PM](#)

To dave above he gave the perfect example of what i meant by multitasking... very few times do the google generation get overwhelmed by so much happening at once, I'm 25 so google didn't hit the net until i was like 13 but i see so many things happening that my wife and my mother both go "hold on too much happening" that i think what are you talking about and can handle more inputs of information at once than they can. I think the google generation are training themselves in multitasking, information sorting, and retention of the most important stuff relevant to their lives.

Most humans retain the information more relevant to their lives, this generation has to deal with far more information at the same time than any before. So the memory retention issue has not changed we still retain as much as the generation before we just have to deal with more than they did i think.

By  Lostpinky on [January 19, 2008 10:04 PM](#)

The "Google generation" are much more dependant on the Web than the elder generation, including information, public services, education, work and entertainment. These are two very different types of people, each having its own advantages and disadvantages.

The Web however is so dynamic in its development, that it is hard to forecast what differences will be expected in these two generations. Most probably the "Google kids" will be more impatient, neurotic and anxious when things Offline does not work the same way as things Online do. That is one thing for sure.

By  kalinko on [January 19, 2008 10:46 PM](#)

The vast majority of kids in the world aren't googling much. If growing up with the web really does alter ways of thinking, is a deeper, abiding wedge driven between the haves and have-nots? I'm not sure how the 'every child will have a computer' plan is coming along, of course...

By  azzatwirre on [January 20, 2008 2:59 AM](#)

Being a 17 year old tech obsessive i think that its safe to say that our generation is more likely to do more of less.

I can track anybody down based on a first name and city only. Just give me a computer and half an hour.

But if you asked me to write an essay on the middle ages i would be clueless.

I'd say that we ( i ) do alot of small things at once, rather than one big thing.

By  AutoTom on [January 20, 2008 9:39 AM](#)

As a 16 year-old living in a relatively connected city (Toronto), I'd consider myself the "Google generation". Personally, I don't believe Google has

done anything that's much different from libraries. Consider this, can't libraries be considered "Google" of the earlier ages? In effect, what we do in the library is the same as what we do on Google, internet just saves the energy to run and get books (not to mention having a lot more "books" cataloged). So if libraries revolutionized researching at one point in time, just as Google is doing, why do we not see the earlier generations suffering from the same problem?

I don't believe that Google has anything to do with our inability to handle information, and lack of tolerance. On the contrary, I believe it is the "I" culture that hit the hardest. Nowadays, everything seems to be about I, myself, me, and personifying the things around us, to such an extent that the newer generation is so used to having everything work for them that they see themselves as being the big picture, rather than being a part of it. Many of us have lost our problem solving skills, and rarely use our brains to do anything other than complain and shopping.

If anything, the REAL Google generation should be extremely patient. With the increased volume of information comes more and more of sifting through them to get to the ones you want. I regularly spend hours on research projects (or just for fun), cross referencing the validity of data and looking for bias from within the thousands of pages of Google search results that is presented to me with any given research term.

And here is my 2 cents on Google, and I truly believe that in the right hands, Google is an extremely powerful tool for enrichment, but if you have lost all curiosity of things beyond clothes and iPods, then you are just as likely to spend your time on YouTube and make everybody else blame Google for it.

By  Daniel on [January 20, 2008 3:47 PM](#)

Some 40 years ago I studied for 9 'O' Levels followed by 3 'A' Levels. I built model airplanes, model boats, shortwave radios and a camera. In my spare time I played sports and developed an interest in beer and girls. I think that this could be considered multi-tasking. Essential to multi-tasking is good time management. I see no indication that Google or the internet teach time management.

I assume that "processing information" is modern parlance for critical thinking. Critical thinking comes with experience, but can be introduced by teaching the basics of philosophy.

The internet and indexing systems such as Google allow us to obtain more information then ever before and quicker than before. This increases the importance of critical thinking and must be why we are closing philosophy departments and replacing them with management schools.

By  Anonymous on [January 20, 2008 4:36 PM](#)

Multi-tasking is a computer term generated when a single processing core was shared by multiple users. This was to maximize the computing time of the computer, which, at that time in history, were very expensive. Poster Dave gives a nearly perfect example of what multi-tasking is, and then states he doesn't multi-task (sorry Dave).

Dave, like so many others is actually thinking of parallel processing when they say multi-tasking.(lostpink) Using waiting time to do something else is multi-tasking, doing two things at the same time is parallel processing - eg. walking while talking.

Could it be that the very skill of multi-tasking that the G Gen does so well, is the very thing that has spawned the 'I' generation concept? Or is it pride in their ability, so they must always be seen as doing something....and sitting ruminating is seen as doing nothing. Or is it their teachers and parents (pick me) who encouraged them into their continual stimulation mind set by prodding them not to be "sitting there doing nothing"?

I forget that I get my best insights and actual new ideas with my feet up on the desk and my eyes closed.

By  Richard's Rants on [January 20, 2008 7:21 PM](#)

They will certainly excel at using Excel.

By  Anonymous on [January 20, 2008 9:29 PM](#)

Basically, I think multi-tasking is hard-wired into the brain, although you can jumper around the hardwiring to some degree.

What I think the google or Yahoo or whatever search engine generation is missing out on is, quiet time. That is, time alone when you have to interact with only your own thoughts. I had to do this as a child and it has, I believe, given me the ability to see a situation from both within, and

without. I consider myself integrated somewhat into the wired world, although I do not, and will not, text! But walking outside and viewing the wildlife and even the ambiance of the air that surrounds me is what tingles my toes.

By  Anonymous on [January 20, 2008 10:49 PM](#)

I certainly agree with Daniel's comments. As a 60 year old Google user, but coming from a pre computer background, the internet has just made my life a lot easier, but the basic skill of finding information doesn't change. The most profound change has been having instant access to information; this improves my ability to "connect" ideas, not so easy when each bit of research might have been separated by several weeks of visits to libraries. "Multi-tasking" isn't new - it's just the way most busy people work!

By  CarolA on [January 20, 2008 11:42 PM](#)

I dont think Google has or can replace libraries. Most of the material available on the web is cursory and casual. It is easy to find superficial references and some (good) introductory material. But it is difficult to find follow up material. Good content is not available unless paid for (unlike in the libraries). So, I dont think youngsters who depend only on the web take a close look at anything. Yes, there is a lot of pedagogical material with animations etc, which may help in smart learning. But I suspect that too many visualization tools actually dull the mind's capacity for understanding abstract ideas. So, the youngsters may be actually losing out. And when it comes to things they write (chats and postings on blogs), it is mostly unstructured and casual (if not outright senseless). I have seen few samples of good composition skills, but very few.

By  pendkar on [January 21, 2008 7:06 AM](#)

At nearly 50, I'm often disturbed at the poor quality of information available to the internet searcher and amazed the eagerness of (particularly younger) people to accept commercial propaganda as gospel, regardless of conflicting hard evidence.

Sometimes it seems as if we are plunging into a new dark age with instant gratification of ignorant behaviour, lack of interest in what makes things tick and a desire to believe in some kind of magic or other.

By  Jef on [January 21, 2008 10:13 AM](#)

Maybe Dave demonstrates that it damages long term memory.

"I guess I also class as a member of this "Google Generation" (18 and been using Google for information as long as I can remember) and I agree with Chris."

When was google launched, 98/99, 10 years ago at most.

By  Steve on [January 21, 2008 11:27 AM](#)

One thing that doesn't change is older people looking at the younger generation to see what's "wrong" with them or "different". I'm not saying very early interactions with technology don't shape our brains (and not just our habits but our physical brain), but we still don't have much to show (or good controls for comparison). Oldsters have been accusing young people of being impatient, etc since well before electricity. Being 44, I'm from the generation that had a taste of both pre and post digital culture. Fortunately, I can still remember being young so it doesn't seem so alien. I believe it was television that was destroying/mutating my generation back then, and before that it was electric guitars, and back in the 20s it was that evil jazz. It's worth looking at how technology and living "wired" has an impact upon us, but the hyperbole around these things is one thing that never seems to change!

By  Lucinda Catchlove on [January 21, 2008 3:35 PM](#)

I'm not sure if this study is relevant. Constant availability to information - as well as constant exposure - has a tremendous impact. You can't help but retain the important themes, ideas, and facts. Or the ones you use alot for work, fun, or anything. The key issue is that much of the information we need in the name of progress is often urgent, but in the long run relatively unimportant.

I think the overall reliance on internet information is a monumental change in the way of thinking. For example if you run a company and want some long term employees, you can hire the best and brightest over the ones with slightly more specialized knowledge, knowing full well the former can "look it up" without sacrificing months of training. At first this may seem naive, but when you take into account the wealth of information and the factor of time, some specialization becomes less important compared to

other skills.

This caters to and supports individuals that are good at abstract and critical reasoning, because they can assess a wide variety of sources, even those conflicting, and formulate more complete perspectives. I think this scales up to teams as well.

Did anyone's parents ever buy an encyclopedia set, that was left to sit on a shelf forever? There is an excitement to learning, and the immediacy of internet queries satisfies that excitement. The multitude of sources takes away the authoritative nature of a single viewpoint - which lowers the chance that its awfully mistaken or inaccurate.

By  Michael on [January 22, 2008 3:27 AM](#)

I do think it is a spur to on-going social adaptation for the species, & it may well accentuate differences between haves & have-nots.

From a less task-oriented perspective, it seems to me that we've been moving further into non-physicality since folks plopped down in front of the TV. Google-generation people are perhaps a bit less passive than the couch potatoes from the 50s on, having tons of toys to use their hands & now Wii et al to move with. But all that tech still interacts with internal constructs, in a way that's analogous to the comment re having to visualize what's being looked for rather than discover it while slogging through the resource piles.

Rather than being a part of the physical world, one is the center of it, commanding and responding to a controlled environment. That's likely why the slowdowns bring on such frustration- There goes the precious illusion of command! This "at my fingertips" solipsism is likely to intensify the rising self-centeredness of the First World.

Furthermore, the non-real virtual reality increasingly acquires the status of primary reality by virtue of immersion in it. This thin prophylactic against the Real World also increases self-centeredness (with resulting inadequate social resources), anxiety-provoking alienation, & persistent recourse to more of the same, in an addiction-instilling pattern.

These all may engender low tolerance to spontaneity and sensation, both in- & external, along with superb attentiveness to associative vs. linear thought flow. At least this is how it's all affecting me! From my ADHD perspective, it's a high-tech return to a "Hunter" style of thinking.

Communally, rather than relying on the village elders to remember what the community does each year or in a particular ritual, we will consult the Great Big E-Elder, Brother Google or whatever platform results from these initial information silos. I LOVE not having to retain all the details, so I can focus on just designing or following the process or system. It's the same as using one's phone to redial, rather than laboriously recalling the code.

By  Kate on [January 25, 2008 1:54 AM](#)

I think as in all ages it mainly depends on the personality: an analytical, methodic sort of thinker will become far more productive thanks to internet, because (s)he can now more quickly find and evaluate (the quality of info on) alternatives, and build on the knowledge gathered from that.


A more externally driven, superficial sort of mind will easily get carried away to just surf for the kick of surfing, becoming actually less productive, because losing focus even more than without internet.

I do not think it has to do with some sort of 'google generation' at all.

By  Anonymous on [January 25, 2008 8:11 AM](#)

"don't think multi-tasking is our skill...I don't think it is anyone's skill really." What do you mean? Everyone knows women can multi, parallel and pan task (that is, do everything at once). If they couldn't, we men would never leave the front door, at least wearing trousers and socks.

To this debate, all I can say is:  
100101101010101010101001...

By  The anonymous man on [January 25, 2008 8:21 PM](#)

I'm 20, but have been an active computer/internet/search engine user since I was a kid so I suppose I'm part of the google generation as well. I'm not exactly sure the gap between the Google gen. and other generations comes purely from the fact that kids today have access to the internet. The way things are being taught in school has also dramatically changed over the last 30-40 years. There's less focus on memorization, more focus on understanding and conceptualizing.

Add to this the easy access to cursory/casual information that the internet gives, I think we end up with people who have a tendency to quickly understand how things work, and what relation they have to each other, rather than exactly how the specific mechanics are.

I'm not sure if this is a good or a bad thing, and some memorization is definitely necessary, of course depending on what field of study you're looking at it varies how much.

By  Anonymous on [January 26, 2008 2:14 AM](#)

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