

# the **Generation** game



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# the **timeline** ...

2005: what is a **generation**?

2001: digital **natives**, digital immigrants ...

2007: in their **own words** ...

2007: student **expectations** study ...

2008: great **expectations** report ...

2008: the **google** generation ...

2009: **becoming** digital literate ...

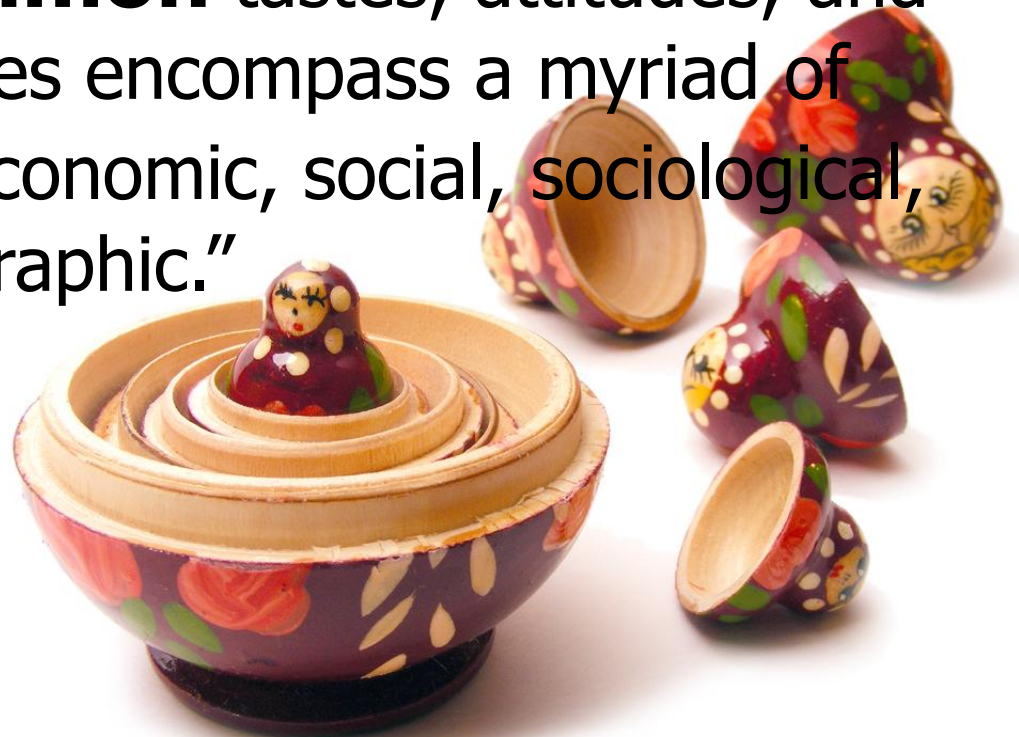
now: the **generation** game ...

now: any **questions** ?



# what is a **generation**?

“In addition to coincidence of birth, a **generation** is also defined by **common** tastes, attitudes, and experience...Those times encompass a myriad of **circumstances** – economic, social, sociological, and, of course, demographic.”



# some **generalisations** ...

	<b>Silent Generation</b>	<b>Baby Boomers</b>	<b>Generation X</b>	<b>Net Generation</b>
<b>Birth Dates</b>	1900-1946	1946-1964	1965-1982	1982-1991
<b>Attributes</b>	<b>Technologies</b> Cinema	<b>Technologies</b> Television	<b>Technologies</b> Video Games	<b>Technologies</b> The Internet
<b>Likes</b>	Telegraph Biro Pen	Telephone Telex	Walkie Talkie E-mail	Cell Phone I.M.
<b>Dislikes</b>	Radio <i>Extended Family</i>	Vinyl Record <i>Nuclear Family</i>	Compact Disc <i>Individual</i>	MP3 <i>Online Communities</i>

**Source:** Oblinger, D.G., & Oblinger, J.L. (2005). [Educating the Net Generation](#).



meet **Marc**



# who is **Marc Prensky?**

**Marc** is an internationally acclaimed **thought leader**, speaker, writer, **consultant**, and **game designer** in the critical areas of education and learning. He is the **founder** and **CEO** of *Games2train*, a game-based learning company. He holds an MBA from Harvard and a Masters in Teaching from Yale.



# the digital **divide** ...

	<b>Silent Generation</b>	<b>Baby Boomers</b>	<b>Generation X</b>	<b>Net Generation</b>
<b>Birth Dates</b>	1900-1946	1946-1964	1965-1982	1982-1991
<b>Attributes</b>	<b>Digital Immigrant</b>			<b>Digital Native</b>
<b>Likes</b>				
<b>Dislikes</b>				

Source: Oblinger, D.G., & Oblinger, J.L. (2005). [Educating the Net Generation](#).

enter the  
**Digital  
Natives ...**





have **grown up** and **surrounded** by digital technologies ...

**ubiquitous** digital **environment** has resulted in **thinking** and **processing** information **differently** ...

suggests that their **brains** have **physically changed** ...

... **native speakers** of a digital **language**

have **parallel processing** & **multi-tasking** abilities ...

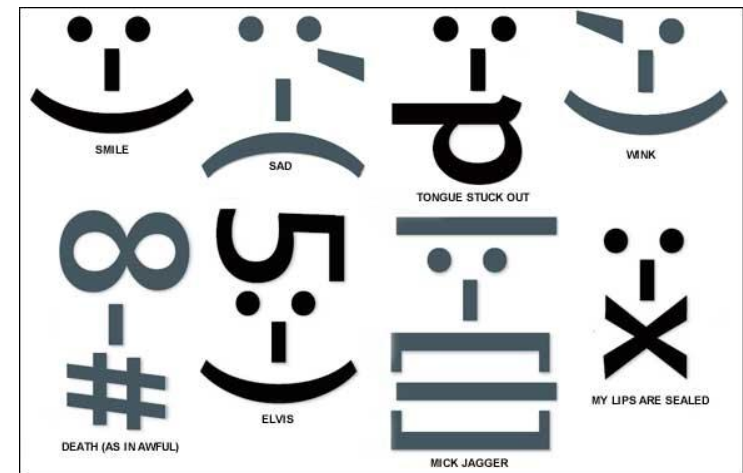
have **hypertext** minds ...

**zero tolerance** for step-by-step instruction ...

prefer **visual** information ...

# the digital **language** ...

“Today's teenagers **live** and breathe the **wired** world of the **internet** ... They dig MoSoSo, Moos and **MySpace**. They can **Google**, Bebo, Skype, blog or **podcast** - frequently **all at once**. They log on to the internet daily, sometimes hourly, seeking anything from **entertainment** to **therapy**. For teenagers, the internet is not just an information tool or a way to send emails. It has become a **creative** and **dynamic social force**.”



exit the  
**Digital**  
**Immigrants ...**



have **sequential processing** & **linear** abilities ...

don't **understand** the **new ways** in which the Digital Native **learns** ...

... **speaks** with an outdated **language**

**speak** with an **"accent"**...

**teaching** should **not** be fun ...

**prefer** step-by-step instruction ...

prefer **textual** information ...



# the digital **continuum** ...

digital native

digital colonist

digital refugee

digital savage

digital settler

digital dissident

digital explorer

digital pioneer

digital immigrant





under **investigation** ...



# a basis for **research** ?

“Why suddenly is there greater demand for [the] drug [Ritalin] for **attentional** problems? This might, and I stress might, be something to do with the **increased exposure** of young **children** to unsupervised and lengthy hours in front of a [computer] **screen** ... they get used to and their **brains** get used to **rapid responses.**”



# what the **papers** say ...

## TIMESONLINE

NEWS COMMENT BUSINESS MONEY SPORT

UK NEWS WORLD NEWS POLITICS ENVIRONMENT

Where am I? > Home > News > Tech & Web

From [The Times](#)

December 2, 2008

### Man or mouse: the danger of the computer's memory

Roger Boyes: Commentary

Our Latin teacher, Captain Hogarth, a psychologically scarred veteran of some great, distant battle, would whack us over the palms with his leather-bound swagger stick if we so much fudged a dative. "Sine labore nihil!" he would bawl – nothing without work. Yes, those were the days. How much black energy pumped into drilling us – quick! 93 times 82 – with the aim, perhaps, of sharpening our reflexes, training us to obey our Content was not as important as speed of recall, the unfilial recital under pressure. That is the way wars were won and empires lost. author Don Tapscott is to be believed, empires lost.

We were aware at the time that rote learning had only limited value in the outside world. Even the football sage Bill Shankly had the measure of it: "Me havin' no education, I had to use my brains." But after leaving school the brighter pupils burst into creative flower while the thicker nonetheless had a toolset that could multiply in their head, recite verse, understand chemical formulae, spell, sometimes play music by ear – which stays with them for a lifetime.

## TIMESONLINE

NEWS COMMENT BUSINESS MONEY SPORT

UK NEWS WORLD NEWS POLITICS ENVIRONMENT

Where am I? > Home > News > Tech & Web > The Web

From [The Sunday Times](#)

July 20, 2008

### Stooooopid .... why the Google generation isn't as smart as it thinks

The digital age is destroying us by ruining our memory



Bryan Appleyard

On Wednesday I received 72 e-mails, not counting junk, and two text messages. It was a quiet day but, then again, I'm including the telephone calls. I'm also not including the dull and pointless announcements on a train journey to Wakefield. I use a screen, jerks – the piercingly loud telephone conversation of unsocialised adults and the screaming of untamed brats come to think of it, why not include the junk e-mails? The interruptions. There were 38. Oh and I'd better throw in the 40 news alerts that I receive from all the websites I monitor via my iPhone.

## TIMESONLINE

NEWS COMMENT BUSINESS MONEY SPORT LIFE & STYLE TRAVEL DRIVING

EDUCATION FOOD & DRINK HEALTH PROPERTY COURT & SOCIAL WOMEN MEN

Where am I? > Home > Life & Style > Education

From [The Times](#)

December 2, 2008

### Google generation has no need for rote learning



Alexandra Frean, Education Editor

School Gate blog: [Tips for remembering facts...](#)

Memorising facts and figures is a waste of time for most schoolchildren because such information is readily available at a mere mouse click away, a leading commentator has said.

The existence of Google, Wikipedia and online libraries means that there is no useful place in school for old-fashioned rote learning, according to Don Tapscott, author of the bestselling book *Wikinomics* and a champion of the "net generation".

#### EXPLORE EDUCATION

- > SCHOOLS
- > GCSE & A LEVEL RESULTS
- > GOOD UNIVERSITY GUIDE
- > SUNDAY TIMES UNIVERSITY GUIDE
- > STUDENT
- > YOUNG TIMES

#### TIMES RECOMMENDS

- > Google generation has no need for rote learning
- > Left-handers do 'less well' in exams
- > Nativity comic books for multicultural Britain

#### EDUCATION NEWS

- > Thousands more students to have grants cut



# a moral **panic** ?

A lit match is shown burning a piece of paper. The match is positioned vertically, with the flame at the top and the head of the match at the bottom. The paper is being consumed by the flame, and the text on the paper is partially obscured by the fire. The background is dark, making the bright orange and yellow of the flame stand out.

“proponents arguing that **education** must change dramatically to cater for the **needs** of these **digital natives** have sparked an academic form of ‘**moral panic**’ using **extreme** arguments that have **lacked** empirical evidence.”

## In Their Own Words

Exploring the learner's perspective on e-learning





# about the **report** ...

A **two phased** study ...

looking at the **learner experiences** of  
**e-learning** ...

synthesises the **LEX project** report and

**learner voice** video case studies ...

captures e-learning **experiences** across a **wide range** of  
**age groups** (16 to 65+), **sectors** (HE, FE, ACL & WBL) and  
courses (economics, languages, medicine & computing) ...

data capture consisted of **face-to-face** interviews, focus  
groups, **digital artefacts** (e.g. blog or e-portfolio) ...

lead complex lives, requires sophisticated **time management** skills ...

**boundaries** between learning and **life** is becoming blurred ...

**control** & **choice** important – **personalise** learning environment with technologies (mobile phones, laptops, PDAs, iPods) that **support** learning and are **meaningful** to learner ...

**want** tutors to be **fully engaged** with e-learning ...

**effective e-learners:** flexible, resourceful, self aware & highly motivated ...

search engines **preferred** to libraries ...

**use** standard software to **create, manipulate** & **present** content ...

**peer support** provided by family & friends using e-mail, texting, instant messaging & Skype – providing an “**underworld**” of communication & info-sharing **invisible** to tutors ...

# Student Expectations Study

about the **study** ...

small **study** made of **interviews** (n=27) and **online survey** (n=501)

15 – 18 years of **age** ...

varying ICT **abilities** ...

mixture of **school / sixth form** & further  
education students ...

**expectations** of ICT provision in University ...

generally **technologically adept** and  
**integrated** it into lives ...

**cautious** about publishing work for public scrutiny ...

**not interested** in technology for “own sake”,  
only as a means to an end ...

**face-to-face** interaction with a  
lecturer is a “back bone” to learning ...

**suspects** that learning mediated  
through technology could **diminish**  
the **value** of learning ...

unable to make the **connection** on how  
technology can help them **learn** ...



# **Great Expectations of ICT**

## **how Higher Education Institutions are measuring up**

Research Study Conducted for the Joint Information Systems Committee (JISC) - Report June 2008

# about the **study** ...

follow up of **student expectations study** ...

**online survey** (n=1111: cohort=112; booster=999)

17 – 19 years of **age** ...

respondents are **already receptive** to technology ...

cohort group **perceived** to be more **technologically fluent**  
than booster group ...

cohort group invited to **online focus group** ...

HEI's are **perceived** as providing a good basic level of ICT ...

student expectations are met, sometimes **exceeded** ...

certain **technologies** (e.g. online quizzes) can appear familiar and hence **comfortable** for new students to use ...

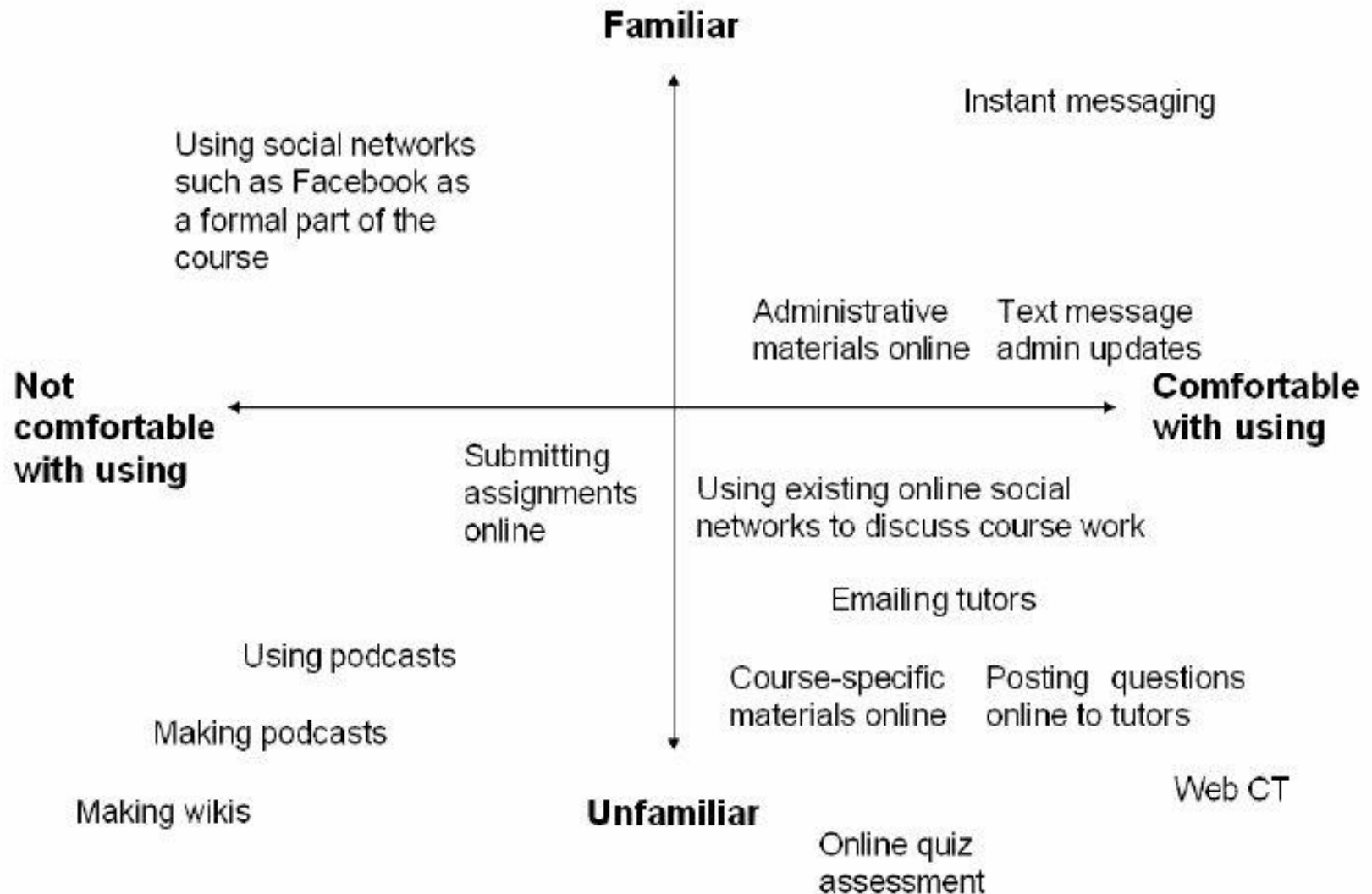
students who set up their own **collaborative learning** mechanism are more **engaged** with it than when tutors set them up ...

students don't perceive HEIs are leading the way in **developing new methods of learning** that will encourage them to **think differently** about information, research and presentation ...

**emerging** evidence that student-driven ICT, e.g. Web 2.0, is very **beneficial** in their **learning** ...

**69%** of students **believe** they **critically evaluate** internet sources used for research ...

# challenges for HEIs introducing **ICT** ...





a ciber briefing paper

information behaviour of  
**the researcher of the future**

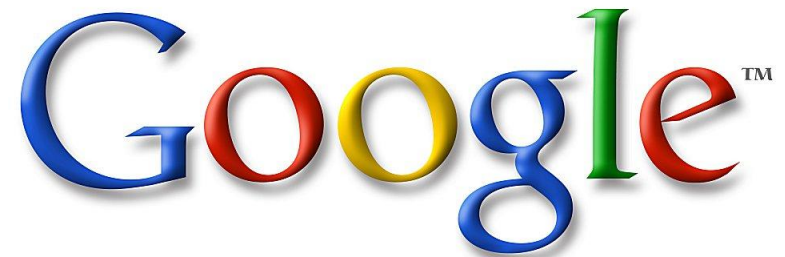
11 January 2008





# who are the **google generation** ?

“... a phrase that refers to a **generation** of young people, born **after 1993**, that is growing up in a world dominated by the internet; whose first port of call for knowledge is the **internet** and a **search engine**, Google being the **most popular**.”



... unlike **earlier** generations who “gained their knowledge through **books** and **conventional libraries**”.

# about the **report** ...

commissioned by **JISC** & **British Library** ...

examines how **researchers** of the **future** will access & interact with digital resources, i.e. **information seeking behaviour** ...

“virtual” **longitudinal study** ...

**critical review** of published  
researched over the **past 30 years** ...

**deep log analysis** of two live systems  
aimed at a **range of age groups** ...

**older users** catching up fast with technology usage ...

parallel processing may be **well developed**, but what about sequential processing abilities? (i.e. reading)

prefer **visual information** over text, but text is still important ...

all generations have **“zero tolerance”** for information delays ...

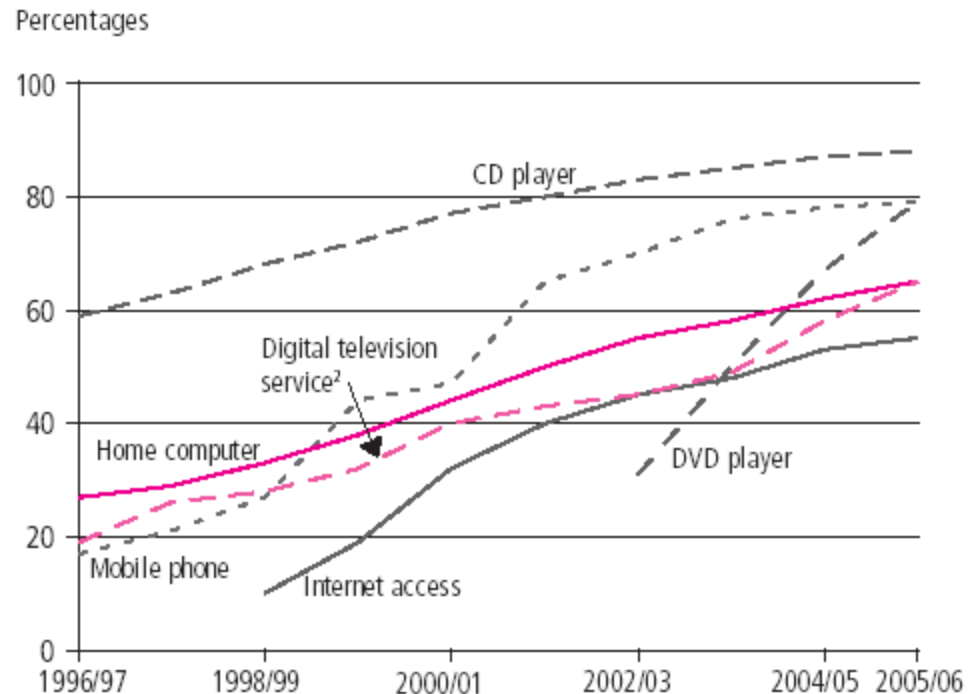
**internet usage** – determined by individual / personality  
/ background **NOT** generation ...

value **authority figures** over the Internet for information ...

more people are doing quick, shallow searches, i.e. **“power browsing”** ...

# what is **digital literacy** ?

“the **ability** to use **digital technology**,  
communication tools or networks to  
**locate**, evaluate, use and **create**  
information.”



**Source:** New Zealand Government. (2005). [The Digital Strategy](#).

**Source:** National Statistics. (2007). [Focus on the Digital Age](#).

developing **digital literacy** skills ...

trust

risk

**understand** textual,  
visual, auditory &  
kinaesthetic **information**

evaluation

**identity**

responsibility

awareness

adaptability

**authorship**

reflection

**copyright**

communication

accountability

privacy

ethics

technology

confidence

**criticality**



# becoming **e-literate** ...

“if you think about **learner experiences** across the curriculum through the life path, as something learners have to **understand** and **make sense** of themselves and of **empowering** learners to be effective, then we start to think about **digital literacies** ... This really is the area that ... institutions and anyone interested in learning **needs** to be thinking about.”



# digital **britain** ...

“Giving children and young people the skills and **tools** that they need to **participate** in Digital Britain is of critical importance from both a social and economic perspective. If we are to truly **maximise** the **potential** of these digital economy and the **benefits** it can bring to all sections of society, we must ensure that children and young people are **confident** and empowered to **access, USE** and **create** digital media.”



# concluding thoughts ...

terms like “digital native” and “digital immigrant” are **neither** useful nor appropriate – just reinforces the **stereotype ...**

“digital efficacy” is **determined** by individual / personality / background / opportunity factors ... **not** a generation!

parents, teachers, governments could do more to **understand** the digital world that our children live in and **influence** the way they interact with it to build a better digital future – through **digital literacy ...**

**rigorous** research is needed to **understand** how today’s student **learn** and how learning is being enhanced with technology – studies need to show students from **all spectrums** of the learning continuum ...

let's play, the **generation** game ...



# what's your **generation?**

0 – 1 pnts      Silent Generation

2 – 6 pnts      Baby Boomers

6 – 12 pnts     Generation X

12 or over      Net Generation





any **questions**

